



Olc.

TSPL/MIN/MoEF/ENV/17-18/1126

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 Heavy Mineral Sand Project at Mineral Sand Project at Vatsavalasa & Tonangi Villages in Gara mandal in Srikakulam District, Andhra Pradesh by M/s Trimex Sands Pvt. Ltd., submission of half yearly CRZ compliance report for the period of Apr'2017 – Sep'2017– Reg.

Ref: CRZ Clearance vide F.No.11-67/2013-IA-III dated 28-04-2015

With reference to the subject CRZ clearance granted vide reference above, we are submitting the half yearly CRZ 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.
Tel: +91 8942 283755, Fax: +91 8942 283758, E-mail: info@trimexsands.com, URL:www.trimexsands.com

CIN : U14299TN2004PTC071437



Compliance report on CRZ Conditions

CRZ Clearance Vide F.NO. 11-67/2013-IA-III dated 28-04-2015

CRZ Specific conditions:

S.No	Conditions	Compliance
1	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.	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 -1) and is valid up to 31.05.2018.
2	The Project Proponent should obtain the NOC/Clearance from the Competent Authority, as applicable with regard to conservation and management plan on Ridley Turtle.	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 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 -2).
3	Soil conservation measures shall be prepared and implemented.	Being complied as detailed in the approved mine plan.
4	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	The mined out area is backfilled using the tailings generated during separation of minerals (Annexure 3). 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.
5	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.	All conditions as stipulated by the Andhra Pradesh State Coastal Zone Management Authority are implemented (Annexure -4)
6	The Mining shall be in accordance with the Mining plan approved by AMD and IBM.	The mining is carried out in accordance with the Mining Plan approved by AMD and IBM.
7	The Project Proponent shall co-ordinate with the Directorate of Fisheries in respect of providing access to Beach for fishermen.	For the uninterrupted access of the fishermen to the beach, a 20-m width approach road is provided.
8	Ground water monitoring 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.	7 Nos. of Piezometers are constructed within ML area and water monitoring is carried out every month. In addition, water monitoring is done in 11 Nos. observation well situated within and outside the mining lease area. Monitoring is being carried

S.No	Conditions	Compliance
		out on monthly basis and there is no negative impact/sea water intrusion due to mining activity. Plan showing the locations of the piezometers and observation wells as Annexure-5 and water monitoring reports are enclosed as Annexure - 6 .
9	Plantation shall be carried out on the mined-out area, as committed.	Plantation is being carried out in refilled lands. 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 period 2017-18 is attached as Annexure -7
10	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, MoEF to CC	7 Nos. of Piezometers are constructed within ML area and water monitoring is carried out every month. In addition, water monitoring is done in 11 Nos. of observation well situated within and outside the mining lease area Annexure - 5, 8(i) . Soil analysis is also carried out once in 3 months as enclosed as Annexure- 8(ii) .
11	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, MoEF to CC	Will be complied as per the directive.
12	No drilling and blasting should be involved.	Strictly ensured.
13	There shall be no ground water drawl in CRZ area.	No ground water is tapped from the CRZ area.
14	There shall be no mining in intertidal zone.	No mining is carried out in inter tidal zone.
15	To control dust during transportation water sprinklers shall be adopted and also the sand transport vehicles shall be covered with tarpaulin sheets.	Water tankers are deployed for haul road dust suppression – Annexure-9 . Transport vehicles are covered with tarpaulin sheets to control the dust.
16	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	Being complied, reports are enclosed as Annexure -10
17	A green belt shall be developed after mining and refilling block by block.	Complied. Enclosed details of plantation as per Annexure -7
18	Project proponent shall ensure that no disturbance is caused to the mangroves/fisher folk	It is ensured and complied.
19	All the commitments made during the public	All the commitments made during the public



S.No	Conditions	Compliance
	hearing including the budget for corporate social responsibility shall be earmarked for carrying out the activities.	hearing are being implemented. Report submitted as Annexure-11 , CSR expenditure incurred during the year 2017-18 (up to September, 2017) is enclosed as Annexure-12 .
20	Mineral processing plant shall be located outside CRZ area.	Mineral processing plant is located outside CRZ area – Enclosed map with Annexure -5
21	Safety measures shall be taken for workers to prevent radioactive impact on health. All the safety regulation as applicable shall be strictly followed.	Implemented as per the directive of the Atomic Energy Regulatory Board (AERB), DAE
22	All prior statutory clearances from Department of Atomic Energy, Indian Bureau of Mines, Central and State agencies as applicable shall be obtained.	Complied. All the required statutory clearances from Dept. of Atomic Energy, Indian Bureau of Mines, Central and State agencies have been obtained prior to start of mining activity.
23	Sand dunes should not be flattened.	It is being complied.

General conditions:

S.No	Conditions	Compliance
(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 center and Collector's Office/Tehsildars's office for 30 days	Complied. A copy of EC & CRZ Clearance 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-13 .
(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.	Complied. Expenditure during the financial year 2016-17 given as Annexure – 14 .
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.	Will be complied.
9	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.	Will be complied
10	The Ministry reserves the right to add	Noted.

S.No	Conditions	Compliance
	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.	Complied. Enclosed Annexure -15 .
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	All applicable provisions of these Acts/ Notifications are complied
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, Forest & 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.	Complied. An advertisement in two local newspapers was given and copies of the same were submitted to RO, Chennai vide letter Dated 05.05.2015 Annexure -16 .
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. of 2004 as may be applicable to this project.	Noted.
15	Any appeal against this clearance shall lie	Noted.



S.No	Conditions	Compliance
	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, 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.	Complied. A copy of EC & CRZ Clearance was sent to local Panchayat vide our letter dated 30.04.2015 Annexure-17 . The clearance letter also was put on the website of the company.
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, SO ₂ , 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.	Being complied. We are uploading the status of compliance of the stipulated EC conditions, including results of monitored data on our company website periodically. It is simultaneously sent to the RO of MoEF & CC, the respective Zonal office of CPCB and the SPCB. The criteria pollutant levels or critical sectoral parameters, indicated for the project are monitored and displayed at the main gate of the company in the public domain Annexure-18 .
18	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 EC conditions and shall also be sent to the respective Regional Offices of MoEF & CC by e-mail.	Complied. The Form-V is submitted to SPCB and also uploaded on the company website. Copy of same for the period 2016-17 is enclosed as Annexure-19 .



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-1

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

- 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.
- 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.

- 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.
- 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.
- 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).

- The industry shall not manufacture any product / activity, other than those mentioned in this order.
- 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.
- 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.
 - 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 thickener 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//

10/15
* JOINT CHIEF ENVIRONMENTAL ENGINEER
UNIT HEAD - IV

Annexure-2

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

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//

Sri P. S. S. S.
Superintendent

Back filling



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-A
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-B)
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

	<p>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.</p>	<p>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 - 5 and monitoring reports as Annexure -6.</p>
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8	<p>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.</p>	<p>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 -C)</p>
9	<p>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.</p>	<p>Being complied.</p>
10	<p>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.</p>	<p>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 -2).</p>
11	<p>The afforestation with suitable species shall be implemented to act as shelter belt/wind break to stabilize the filled up areas.</p>	<p>Being complied.</p>
12	<p>Mining shall be carried out by permitted methods without the use of any forms of blasting. Use of explosives for blasting is prohibited.</p>	<p>Complied, No blasting is carried out.</p>
13	<p>Extraction of Monozite is a prohibited activity as the same is not permitted by the Atomic Minerals Directorate of Department of Atomic Energy.</p>	<p>Complied.</p>
14	<p>The project proponent shall strive to obtain the performance report on similar plants under operation using seawater in South Africa or elsewhere.</p>	<p>Will be complied.</p>
15	<p>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.</p>	<p>Noted.</p>

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



ENVIRONMENTAL

Department of Environmental Science
ANDHRA UNIVERSITY
Visakhapatnam - 530 003 - INDIA

Date: 18-10-12

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 TSPCL Mine lease areas of Vatsavalasa and Tonangi Villages, Srikakulam Dist, A.P." was carried out by the ENVID group of Andhra University for M/s Trimex Sands Pvt. Ltd., for the purpose of assessing Environmental Impacts.


(P. V. V. Prasada Rao)
Prof. P.V.V. PRASADA RAO
Dept. of Environmental Science
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 Tonangi 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*, *Launaeasarmetosa*, 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

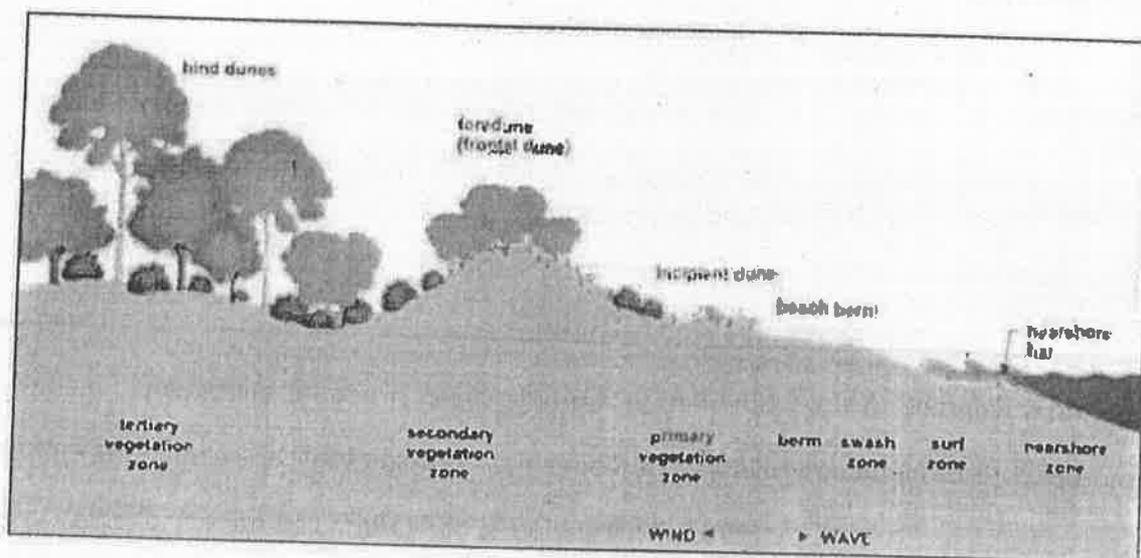
ages and successional stages are clearly seen running parallel to the coastline. Each of these set look like a crescent shaped, or horseshoe shaped, depending upon the wind pattern.

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.

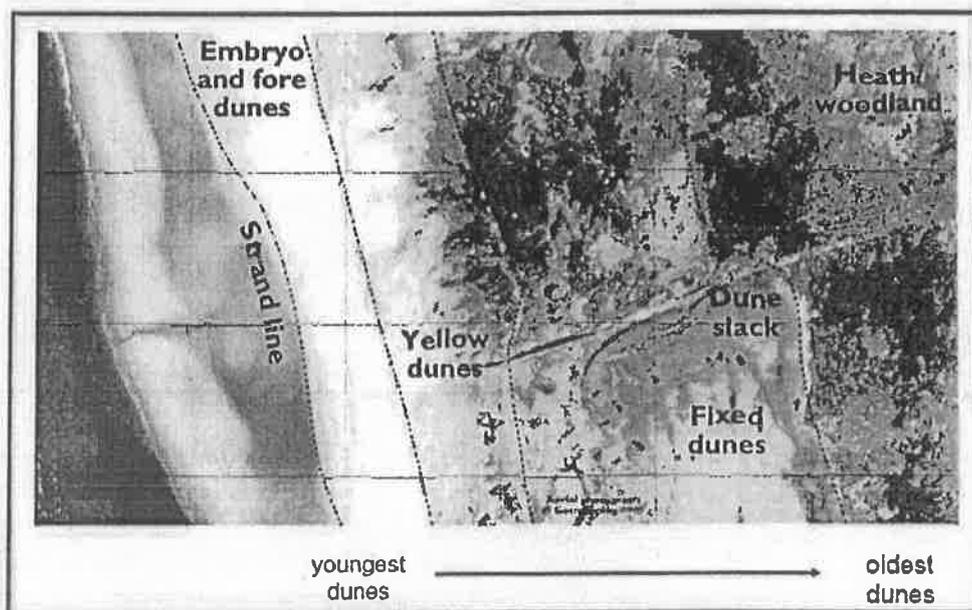
Several such dunes are further drifted backwards along the wind direction, and get deposited at the first Interruption (a plant/rock/any object) to the path and gradually forms a bigger dune, larger in height and base. These dunes are relatively more stable. Where the winds are very strong, such type 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.

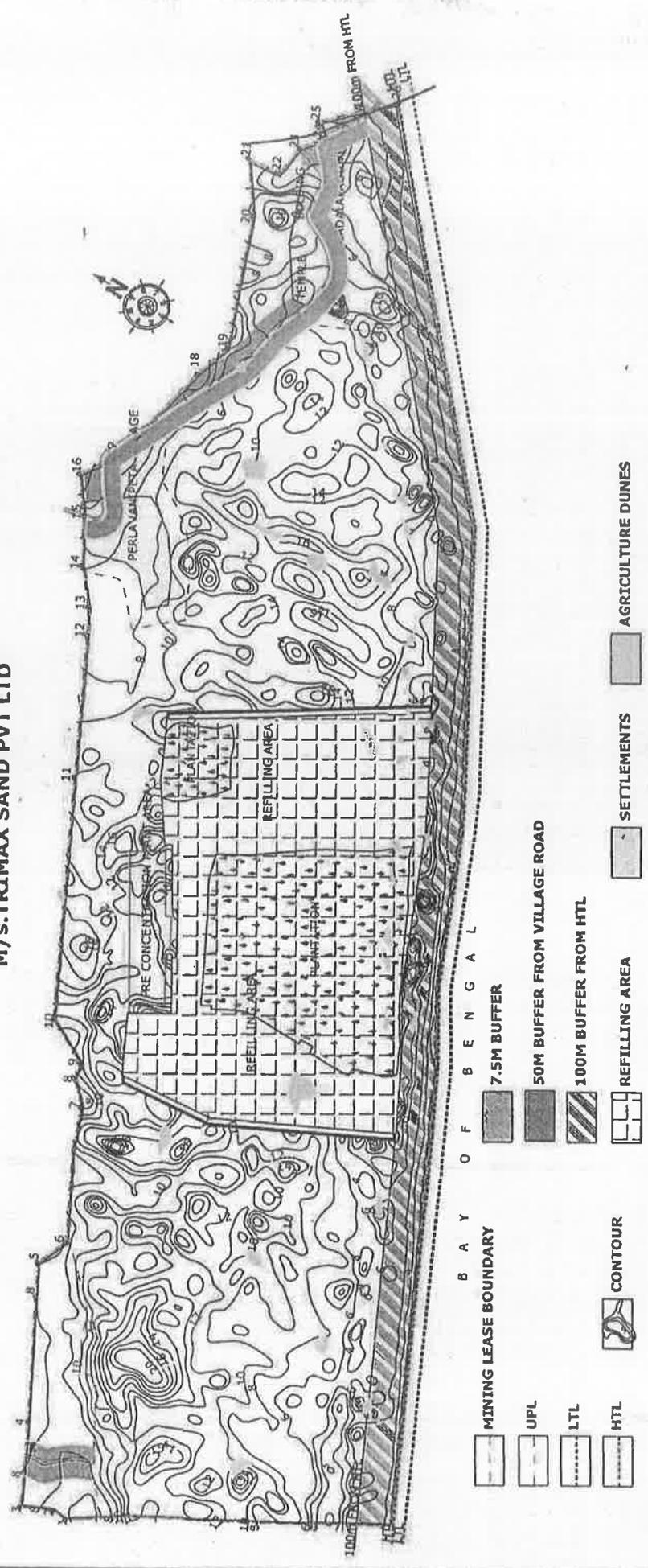
Dunes may be highly unstable and vulnerable to tidal action and wind actions or may be relatively more stable but prone for migration of sand to form the back dunes which over time have developing vegetation (herbaceous and shrub species). Dunes with high humus content are favourable for growth of trees 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.



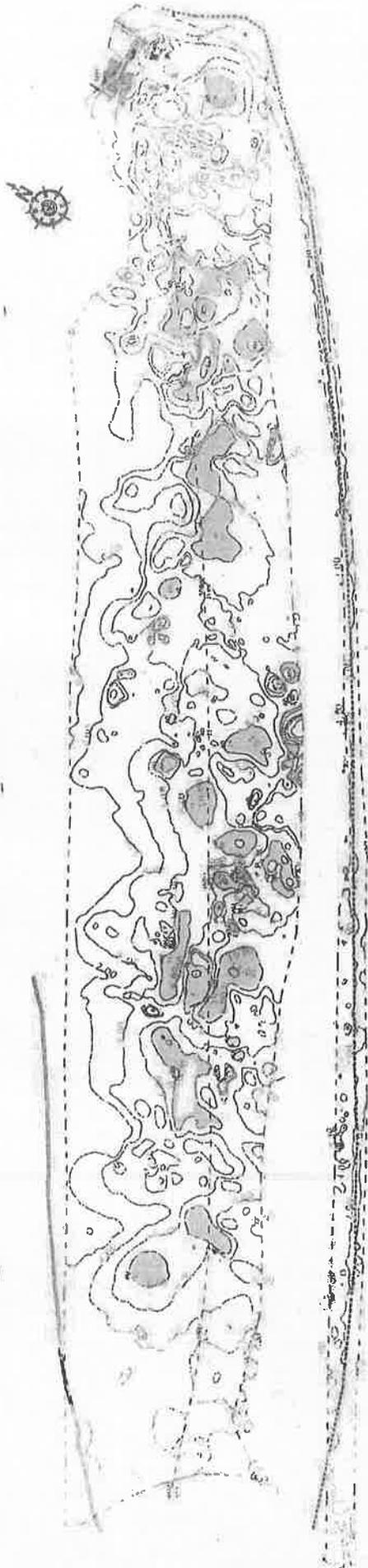
Beaches and dunes are part of natural coastal defenses; reduce erosion risk from storm bite and sand movement. Generally, dunes abutting the sea and within 50-100 m from the High Tide line act as sand reserve for coastal protection and stability and protect the coast from tidal surges, large waves, such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



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



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



- MINING LEASE BOUNDARY
- MTL
- 500m LJINE
- AGRICULTURE DUNES



A - 305(b)



o/c.

Annexure - e

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,

A handwritten signature in black ink, consisting of several overlapping, stylized strokes.

Sr. Vice President (Mines)

A handwritten signature in black ink, consisting of several overlapping, stylized strokes.

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
Mona zite (%)	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.

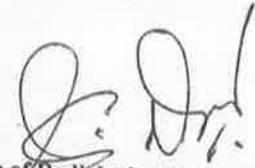
METHOD OF DISPOSAL OF MONAZITE ENRICHED TAILINGS (Tick whichever is applicable)

- 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 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 - 0.6
• Raw material Storage	IRZ con : 2 - 3 GA con : 0.10 - 0.25 Sil 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-

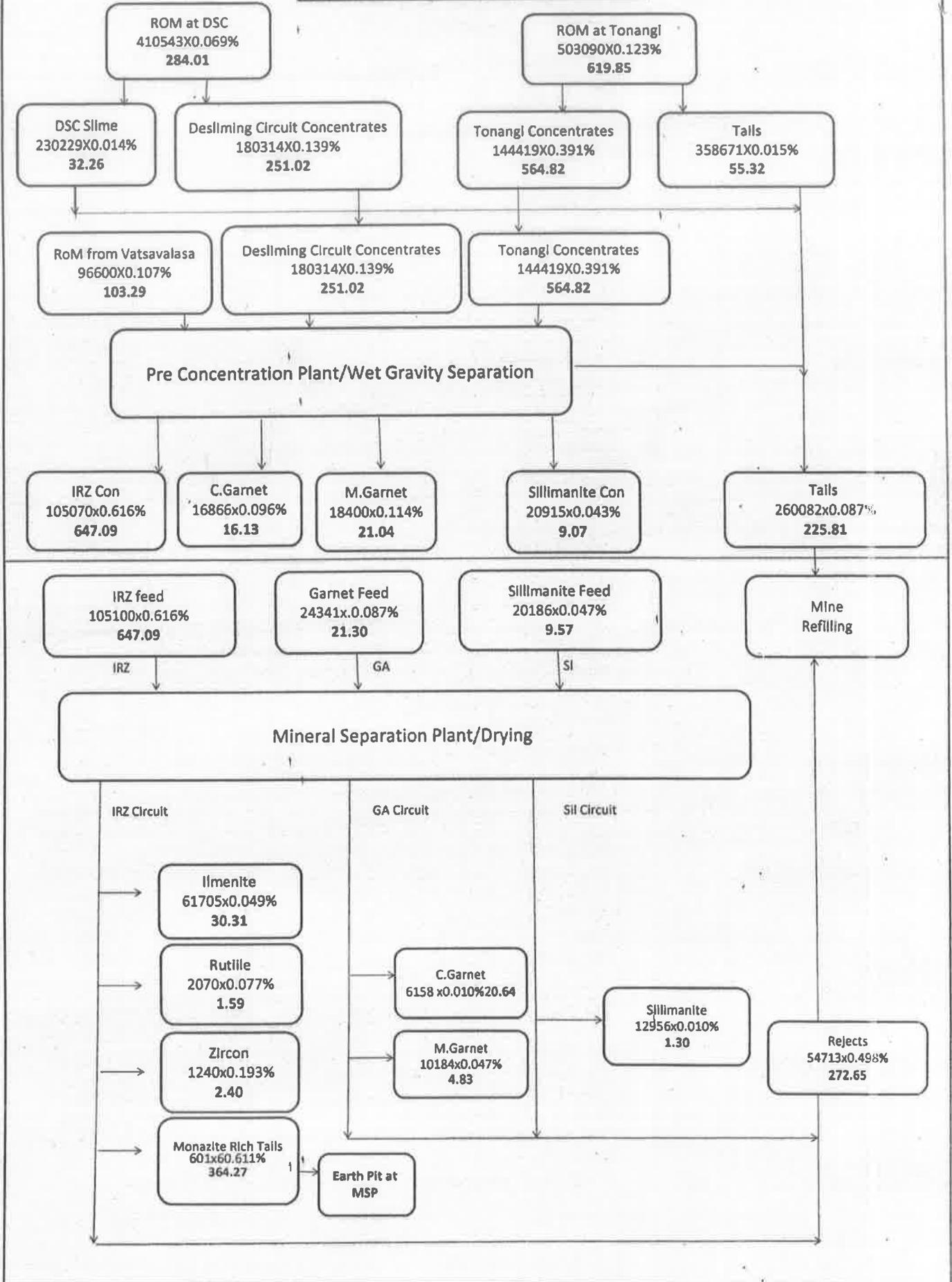
The table is indicative nature .If necessary; facility may be including other area also.



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

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

MONAZITE MATERIAL BALANCE



AVANTTEC LABORATORIES (P) LTD.,
No. 17, Arignar Anna Industrial Estate, Mettukuppam, Vengaloor, Chennai - 600 095.
Personnel Monitoring Service

Service Frequency: YEAR 2017
Report Date: 27/10/2017

Institution No.: 015026
Address: TRIMEX SANDS PVT LTD
 VATSAVALASA (V), GARA (M),
 SRIKAKULAM (DIST),
 SRIKAKULAM, ANDHRAPRADESH,
 INDIA - 532404

#	Pess. No.	Name	Wom At	Whole Body Dose (mSv)					Cumulative Year	Beta Dose (mSv)	Beta Total (mSv)	Wrist Dose (mSv) (XG)+B = Total	Wrist Total mSv
				Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Year					
1	0006	RAJUM	C	0.00	0.00	0.15	-	0.15	-	-	-	-	
2	0008	RAMAKRISHNA.P	C	0.05	0.00	0.40	-	0.40	-	-	-	-	
3	0011	SATYAM.T	C	0.05	0.45	0.60	-	0.60	-	-	-	-	
4	0013	KAMA RAJU.T	C	0.05	0.55	0.80	-	0.80	-	-	-	-	
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	-	0.75	-	-	-	-	
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	-	0.65	-	-	-	-	
9	0018	RADHA KRISHNA.K	C	0.05	0.00	0.50	-	0.50	-	-	-	-	
10	0019	SMHACHALAM.TELUKUTI	C	0.55	0.25	0.45	-	0.45	-	-	-	-	
11	0020	RAMA RAO.M	C	1.00	0.35	0.70	-	0.70	-	-	-	-	
12	0021	NARAYANA RAO.D	C	0.55	0.40	0.50	-	0.50	-	-	-	-	
13	0022	DANAYYA.T	C	0.45	0.55	0.70	-	0.70	-	-	-	-	
14	0023	RAMA RAJUS	C	0.00	0.00	0.00	-	0.00	-	-	-	-	
15	0024	SRIJAYASA RAO.B	C	0.45	0.50	0.90	-	0.90	-	-	-	-	
16	0025	BHAGAVAN.D	C	0.00	0.00	0.55	-	0.55	-	-	-	-	
17	0029	SHRIJAYAPILLI NAGA RAJU	C	0.05	0.65	0.35	-	0.35	-	-	-	-	
18	0032	SHRI.SAMPATHI RAO PRASANNA KL	C	0.00	-	-	-	-	-	-	-	-	
19	0034	Dr.VENKATESHA.B	C	0.00	0.45	0.60	-	0.60	-	-	-	-	
20	0035	SHRI.SHAUK NAZEER	C	0.00	0.00	0.00	-	0.00	-	-	-	-	
21	0036	SHRIANVESH MAMIDI	C	0.00	-	-	-	-	-	-	-	-	
22	0037	SHRI APPALA NAIDU.P	C	0.05	0.40	0.30	-	0.30	-	-	-	-	
23	0038	SHRI BHANOJI RAO.B	C	0.60	0.00	0.60	-	0.60	-	-	-	-	
24	0039	SHRI RAMA RAO.D	C	0.05	0.55	0.80	-	0.80	-	-	-	-	
25	0040	SHRI GOVINDA RAO.J	C	0.65	0.50	0.60	-	0.60	-	-	-	-	
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	-	0.55	-	-	-	-	
28	0043	SHRI NARAYANASWAMI.T	C	0.50	0.00	0.50	-	0.50	-	-	-	-	
29	0044	SHRI RAMA KRISHNA.K	C	0.45	0.00	0.25	-	0.25	-	-	-	-	

Para. Name No.

30 0005	SHRI JAGADESWARA RAMAN	Worn At	Whole Body Dose (mSv)					Beds Dose (mSv)	Beds Total (mSv)	Whole Dose (mSv) (X+Y+Z)	Whole Total mSv
			Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Outside Year				
		C		0.00	0.00			0.00			

Notes :

- All doses are reported in millirem (1mSv=100mRem).
- When more than one card is used dose is added.
- Annual effective dose in any calendar year shall not exceed 38 mSv.
- ... means in the service period dosimeter not used.
- ... TLD cards are split or contaminated.

Checked By

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

Authenticated B

PAYAPPAN
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,

A handwritten signature in black ink, consisting of several overlapping loops and lines.

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 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

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

Name of the facility

: TRIMEX SANDS PVT LTD.

Date: 04-08-2017.

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	
Cumulative in the year	Regular	30	13.80	0.46	NIL
	Temporary	NIL	NIL	NIL	1.35
				NIL	NIL

1.1 INDIVIDUAL DOSE STATICS

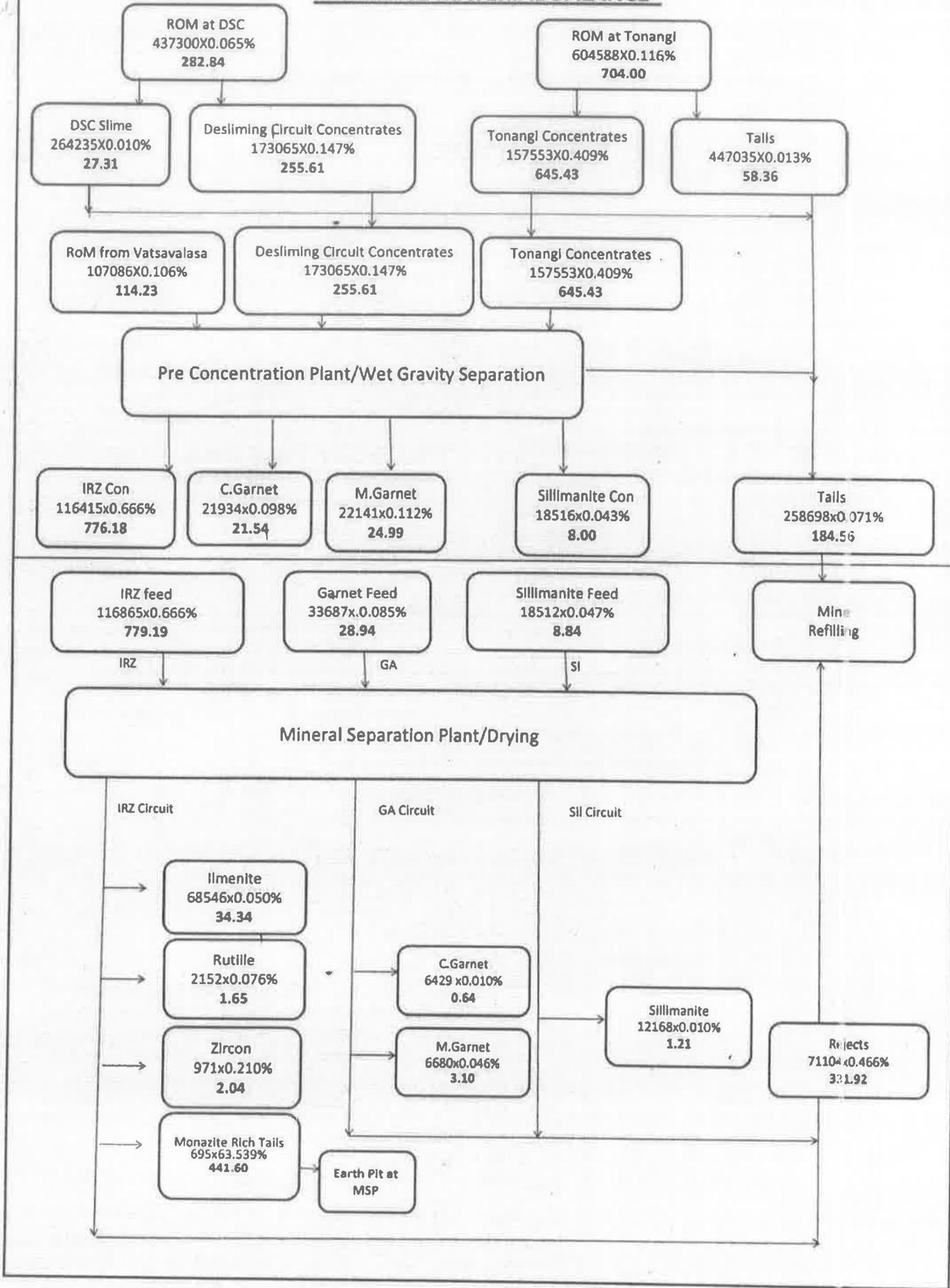
Dose range(mSv)	Number of person in year		
	Regular	Temporary	Total
Less than 2	30	NIL	30
2-6	NIL	NIL	NIL
>6-20	NIL	NIL	NIL
>20-30	NIL	NIL	NIL
>30	NIL	NIL	NIL
Total	30	NIL	30

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	63.53%

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

MONAZITE MATERIAL BALANCE



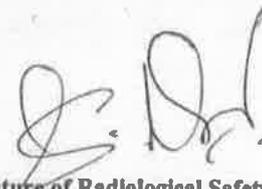
METHOD OF DISPOSAL OF MONAZITE ENRICHED TAILINGS (Tick whichever is applicable)

- 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 ($\mu\text{Gy/hr}$)
Minng 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 OFFICE R
TRIMEX SANDS PVT LTD.,
VATSAVAI, ASA (V), GARA (M)
SRIKAKULAM (DIST)-532 404, A.P

Institution No : 019226
 Address : TRINEX SANDS PVT LTD
 VATSALVASA (N), GARA (M),
 SRIRANGULAM (DIST),
 SRIRANGULAM, ANDHRA PRADESH,
 INDIA - 522024

AVANTTEC LABORATORIES (P) LTD.,
 No. 17, Agrifur Aruna Industrial Estate, Madukuppam, Vengal Rao, Chennai - 600 095.
 Personnel Monitoring Service
 DOSE REPORT

SERVICE FREQUENCY : QUARTERLY
 Report Date : 03/08/2017
 YEAR : 2017

#	Peta No.	Name	Work At	Whole Body Dose (mSv)					Current Year Total	Base Dose (mSv)	Base Total (mSv)	Whole Dose (mSv) (X/95) = Total	Whole Total mSv
				Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec						
1	0006	RAJUM	C	0.00	0.00	-	-	0.00	-	-	-	-	
2	0006	RAMAKRISHNA P	C	0.05	0.00	-	-	0.05	-	-	-	-	
3	0011	SATYALAT	C	0.05	0.45	-	-	0.50	-	-	-	-	
4	0013	KAMA RAJUT	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	SRIHARAJAM THAMADA	C	0.50	0.50	-	-	1.00	-	-	-	-	
9	0018	RAOHA KRISHNAK	C	0.05	0.00	-	-	0.05	-	-	-	-	
10	0019	SRIHARAJAM 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	DANAYALAT	C	0.45	0.55	-	-	1.00	-	-	-	-	
14	0023	RAMA RAO S	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	SREELAKSHMI NAGA RAJU	C	0.05	0.65	-	-	0.70	-	-	-	-	
18	0032	SRI SAMPATHI RAO PRASANNA KI	C	0.00	-	-	-	0.00	-	-	-	-	
19	0034	DR VENKATESHAB	C	0.00	0.45	-	-	0.45	-	-	-	-	
20	0035	SRI SHAIK NAZEER	C	0.00	0.00	-	-	0.00	-	-	-	-	
21	0036	SRI ANVESH MAABDI	C	0.00	0.00	-	-	0.00	-	-	-	-	
22	0037	SRI APPALA NANDU P	C	0.05	0.40	-	-	0.45	-	-	-	-	
23	0038	SRI BHANUJI RAO B	C	0.60	0.00	-	-	0.60	-	-	-	-	
24	0039	SRI RAMA RAO D	C	0.05	0.55	-	-	0.60	-	-	-	-	
25	0040	SRI GOVINDA RAO J	C	0.65	0.50	-	-	1.15	-	-	-	-	
26	0041	SRI RAMANNA MURTHY CH	C	0.00	0.00	-	-	0.00	-	-	-	-	
27	0042	SRI TAMADA APPANNA	C	0.55	0.35	-	-	0.90	-	-	-	-	
28	0043	SRI NARAYANASWAMI T	C	0.50	0.00	-	-	0.50	-	-	-	-	
29	0044	SRI RAMA KRISHNA K	C	0.45	0.00	-	-	0.45	-	-	-	-	

Insulation No : 815005

#	Spec. No.	Name	When As	Whole Body Dose (mSv)			Current Year Total	Dose (mSv)	Dose Total (mSv)	Whole Body Dose (mSv) (DQI-18 Total)	Whole Body Total mSv
				Jan-Mar	Apr-Jun	Jul-Sep						Oct-Dec
39	0845	SHRI JINGADESWARA RAOJA	C		0.100		0.000				

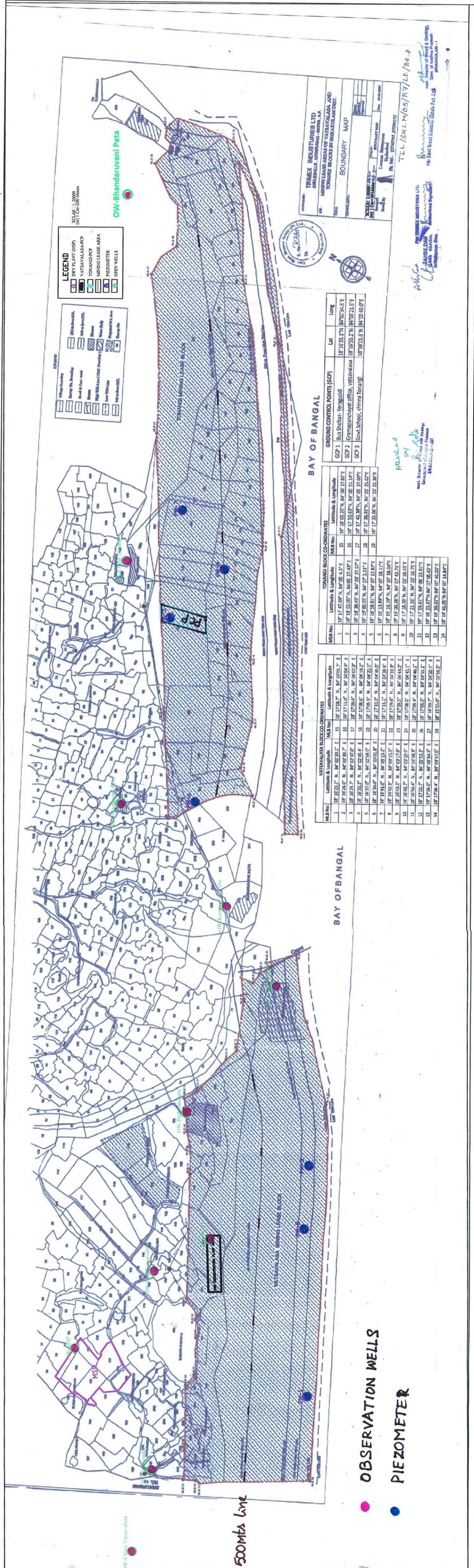
Notes :

- All doses are reported in millirem (mSv=100mrem).
- When more than one card is used dose is added.
- Annual effective dose in any calendar year shall not exceed 30 mSv.
- ... means in the service period dose meter not used.
- ... TLD cards are spoiled or contaminated.
- No Dose reported for new person unless POF received.
- Dose below measurable level for X-RAY<0.05 mSv, BETA<0.50 mSv and GAMMA<0.10 mSv is shown zero.
- Cumulative effective dose for a block of sliding 5 years (current year + previous 4 years) is 100 mSv
- ... means Total dose<20mSv. When details of the radiation work/practices to BARC/AEERB
- ... means letter sent regarding over exposure > 100 mSv.

Checked By

Authenticated By

PAYAPPAN
SR.Scientific Officer



LEGEND

- DRY PLANT (DSP)
- VATSAVALASA-PCP
- TONANGI-PCP
- MINING LEASE AREA
- PIEZOMETER
- OPEN WELLS

EXPLANATION

- Village Boundary
- Block Boundary
- Block of Cluster
- Block
- High Yield Area (COP - Boundary)
- Water Body
- Survey Line
- 100m Boundary
- 200m Boundary
- 300m Boundary
- 400m Boundary
- Proposed M.T. Area
- Survey No.

SCALE: 1:2000
(1" = 400 Meters)

OW-Bhandaruvani Peta

BAY OF BANGAL

GROUND CONTROL POINTS (GCP)

GCP No.	Description	Lat	Long
GCP 1	Bus Shelter - Yeragaddi	18°16'35.17" N	84°02'24.5" E
GCP 2	Gramapanchayat office, vatsavallasa	18°16'55.2" N	84°02'21.5" E
GCP 3	Govt. School, chinna Tonangi	18°18'21.5" N	84°05'45.0" E

TONANGI BLOCK CO-ORDINATES

MBL No.	Latitude & Longitude	MBL No.	Latitude & Longitude
1	18°17'47.69" N, 84°05'43.3" E	15	18°18'03.20" N, 84°06'17.82" E
2	18°18'02.05" N, 84°05'27.45" E	16	18°17'50.63" N, 84°05'51.14" E
3	18°18'36.43" N, 84°05'27.57" E	17	18°17'42.38" N, 84°05'37.00" E
4	18°19'00.55" N, 84°07'32.1" E	18	18°17'38.91" N, 84°05'25.62" E
5	18°18'58.81" N, 84°07'13.87" E	19	18°17'33.66" N, 84°05'22.36" E
6	18°19'13.89" N, 84°07'28.11" E		
7	18°19'16.19" N, 84°07'38.04" E		
8	18°19'00.28" N, 84°07'43.71" E		
9	18°17'18.39" N, 84°05'18.43" E		
10	18°17'21.16" N, 84°05'16.75" E		
11	18°17'59.61" N, 84°05'22.91" E		
12	18°18'25.67" N, 84°07'05.62" E		
13	18°18'55.62" N, 84°07'40.02" E		
14	18°18'41.05" N, 84°07'44.84" E		

VATSAVALASA BLOCK CO-ORDINATES

MBL No.	Latitude & Longitude	MBL No.	Latitude & Longitude
1	18°18'23.2" N, 84°02'31.1" E	15	18°17'03.7" N, 84°00'07.7" E
2	18°18'24.0" N, 84°02'38.7" E	16	18°17'11.0" N, 84°04'04.9" E
3	18°18'25.7" N, 84°02'37.0" E	17	18°17'09.0" N, 84°04'02.9" E
4	18°18'32.2" N, 84°02'45.4" E	18	18°17'06.6" N, 84°04'19.2" E
5	18°18'37.0" N, 84°02'59.0" E	19	18°17'05.5" N, 84°04'22.5" E
6	18°18'36.0" N, 84°03'01.8" E	20	18°17'03.0" N, 84°04'35.0" E
7	18°18'41.0" N, 84°03'13.2" E	21	18°17'15.1" N, 84°04'38.8" E
8	18°18'42.9" N, 84°03'15.5" E	22	18°17'09.8" N, 84°04'38.8" E
9	18°18'43.0" N, 84°03'17.0" E	23	18°17'08.5" N, 84°04'43.0" E
10	18°18'46.7" N, 84°03'19.0" E	24	18°17'08.0" N, 84°04'45.1" E
11	18°18'56.4" N, 84°03'38.8" E	25	18°17'06.4" N, 84°04'46.1" E
12	18°17'03.7" N, 84°03'52.2" E	26	18°17'05.0" N, 84°04'51.2" E
13	18°17'04.0" N, 84°03'54.5" E	27	18°16'59.7" N, 84°04'50.1" E
14	18°17'06.4" N, 84°03'57.0" E	28	18°16'55.0" N, 84°04'55.5" E

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MINING LEASE AREAS OF VATSAVALASA, AND
TONANGI BLOCKS IN SRIKALAHASTI.

BOUNDARY MAP

SCALE: 1:2000
(1" = 400 METERS)

PROJECT NO: 237/009/2720012
DATE: 23/07/2012

T.L.L / S.K.L.M/05/R7/LE/84-3

TRIMEX INDUSTRIES LTD.
JALABHALLI, HIRAHAND - BOOER, A.P.
MINING LEASE AREAS OF VATSAVALASA, AND
TONANGI BLOCKS IN SRIKALAHASTI.

MAA, Director of Mining & Geology,
Government of Andhra Pradesh,
Bhubaneswar, Odisha - 751005

Annexure - 6

TEAM

ORIGINAL

Form-No. TCLL/GF/RF-138

3370

Labs and Consultants

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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/8/0917** dt **05.10.2017**

Description of Test: **Phisico-chemical Analysis of Water**

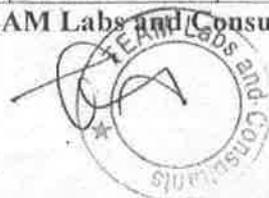
Name of the client: **Trimex Sands Pvt. Ltd.**

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

dt 05.10.2017

Description of Test: Phisico-chemical Analysis of Water

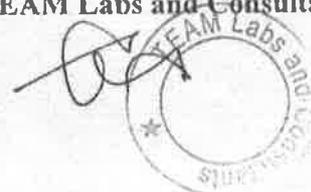
Name of the client: Trimex Sands Pvt. Ltd.

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 objectionable	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

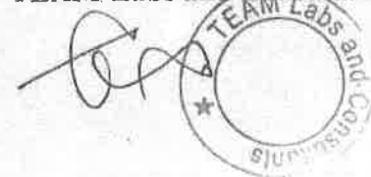
Name of the client: Trimex Sands Pvt. Ltd.

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 CaCo3	420mgpl	390mgpl	150mgpl	690mgpl
8	Calcium as CaCo3	290mgpl	270mgpl	100mgpl	410mgpl
9	Magnesium as CaCo3	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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Test Report No.TLC/V/Env/TSPL/8/0817

dt06.09.2017

Description of Test: Phisico-chemical Analysis of Water

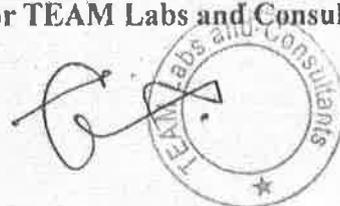
Name of the client: Trimex Sands Pvt. Ltd.

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

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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

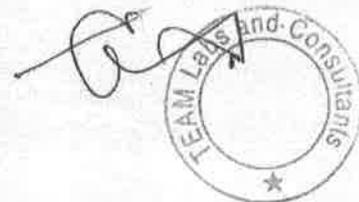
Name of the client: Trimex Sands Pvt. Ltd.

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 objectionable	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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TEST REPORT

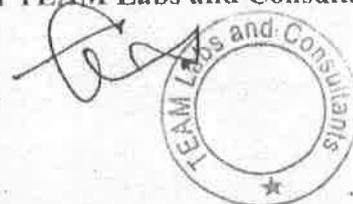
Test Report No. TLC/V/Env/TSPL/10/0817

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 : 18.08.2017

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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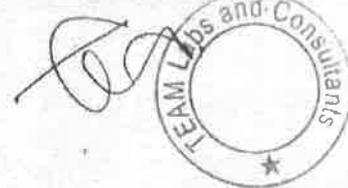
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TEST REPORT

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

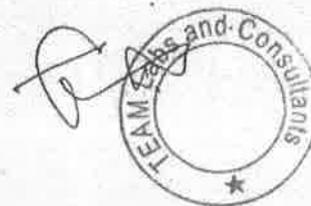
Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: Water samples as per Details given

Date of Sample Collected : 29.06.2017

o	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 CaCo3	510 mgpl	180mgpl	570mgpl	110mgpl	470mgpl
8	Calcium as CaCo3	360mgpl	110mgpl	410mgpl	70mgpl	290mgpl
9	Magnesium as CaCo3	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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Laboratory Recognised by Ministry Environment, Forests and Climate Change, GoI, New Delhi**TEST REPORT**

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

dt 05.07.2017

Description of Test:

Phisico-chemical Analysis of Water

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

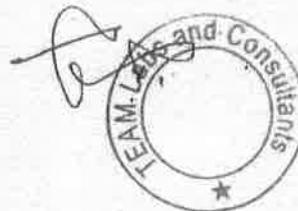
Water samples as per Details given

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

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, Gol, New Delhi**TEST REPORT**

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

dt05.07.2017

Description of Test: Phisico-chemical Analysis of Water

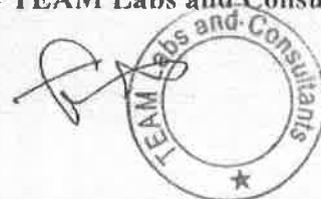
Name of the client: Trimex Sands Pvt. Ltd.

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

0	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

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/9/0517

dt05.06.2017

Description of Test: Phisico-chemical Analysis of Water

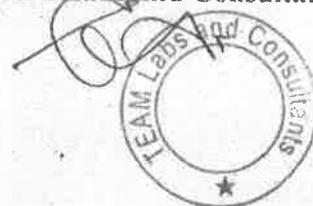
Name of the client: Trimex Sands Pvt. Ltd.

Location of sampling: Water samples as per Details given

Date of Sample Collected : 16.05.2017

No	parameter	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

For TEAM Labs and Consultants



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TEST REPORT

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

dt05.06.2017

Description of Test: Phisico-chemical Analysis of Water

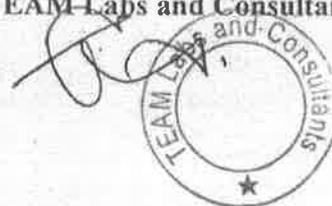
Name of the client: Trimex Sands Pvt. Ltd.

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

For TEAM Labs and Consultants



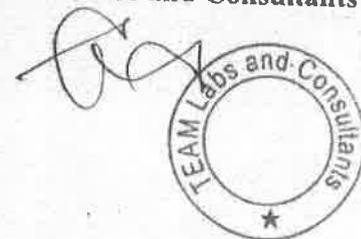
Registered Office :

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, Gol, New Delhi

TEST REPORTTest Report No. **TLC/V/Env/TSPL/8/0417**dt **06.05.2017**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

For **TEAM Labs and Consultants**

Labs and Consultants**Registered Office :****2385**

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

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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/9/0417

dt06.05.2017

Description of Test:

Phisico-chemical Analysis of Water

Name of the client:

Trimex Sands Pvt. Ltd.

Location of sampling:

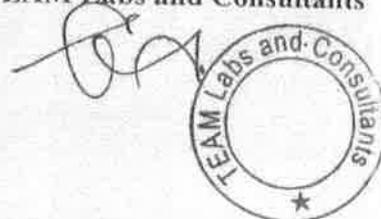
Water samples as per Details given

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

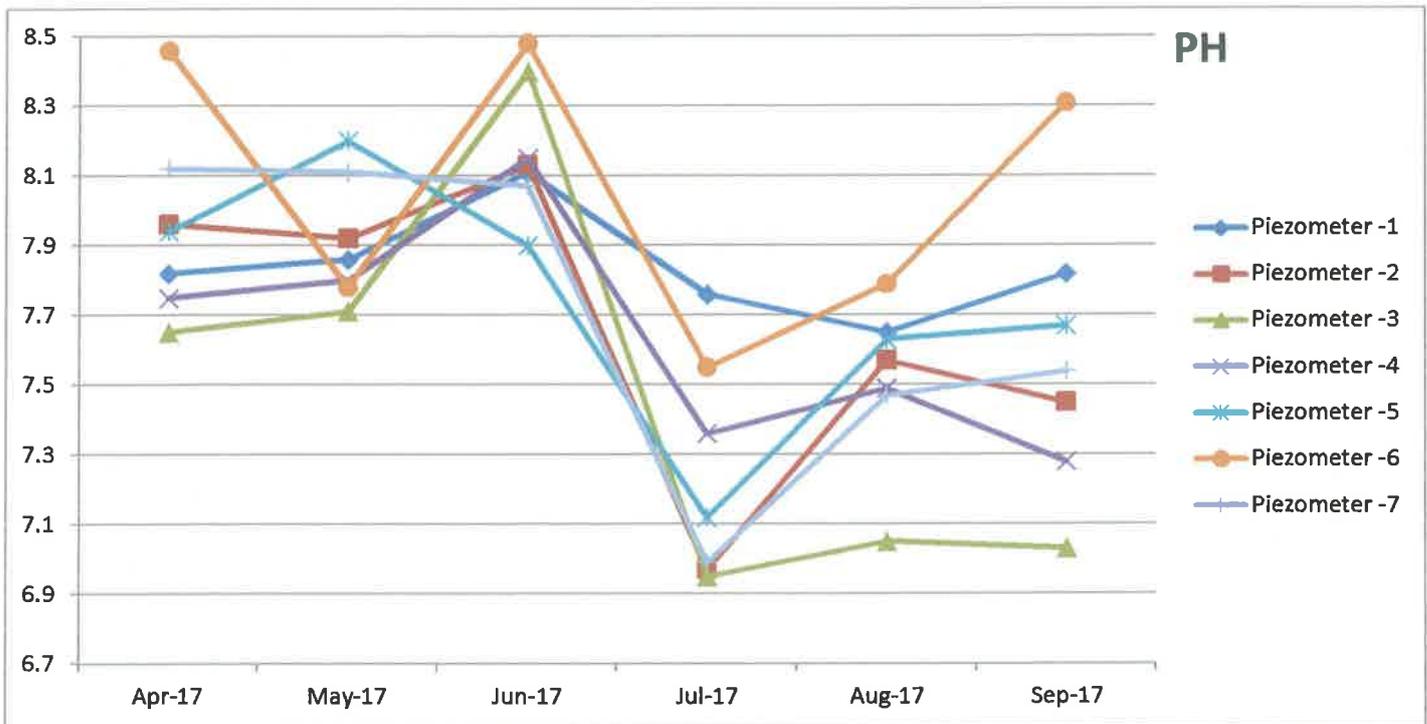
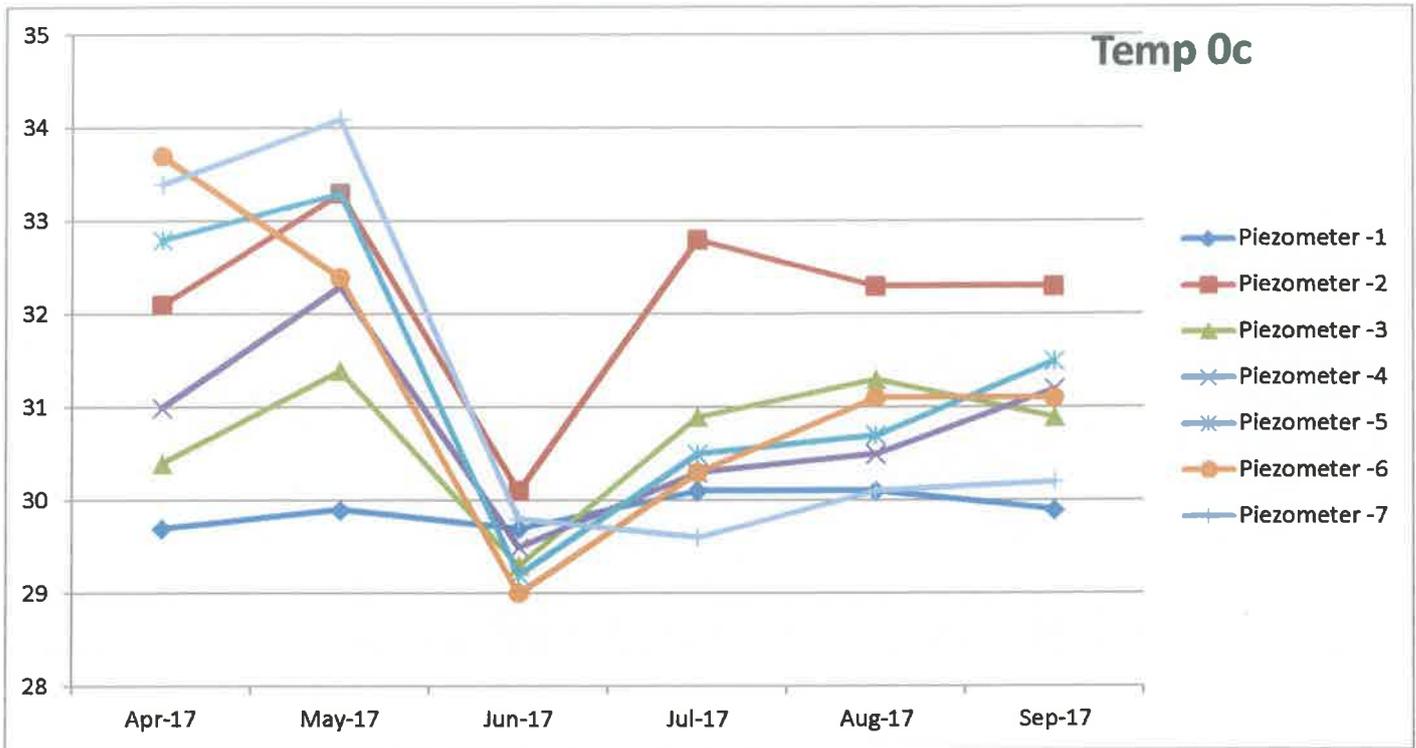
Location	Date	Time	Temp (C)	pH	EC (uS/cm @25C)	TDS (mg/L)	SAL (PSU)	Water Table +MSL
PM-1	30-Apr-17	8:41:21	29.7	7.82	582	378	0.24	0.428
PM-2	30-Apr-17	9:24:37	32.1	7.96	413	268	0.13	7.594
PM-3	30-Apr-17	9:13:41	30.4	7.65	235	152	0.07	2.866
PM-4	30-Apr-17	8:57:22	31	7.75	381	247	0.12	2.890
PM-5	30-Apr-17	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

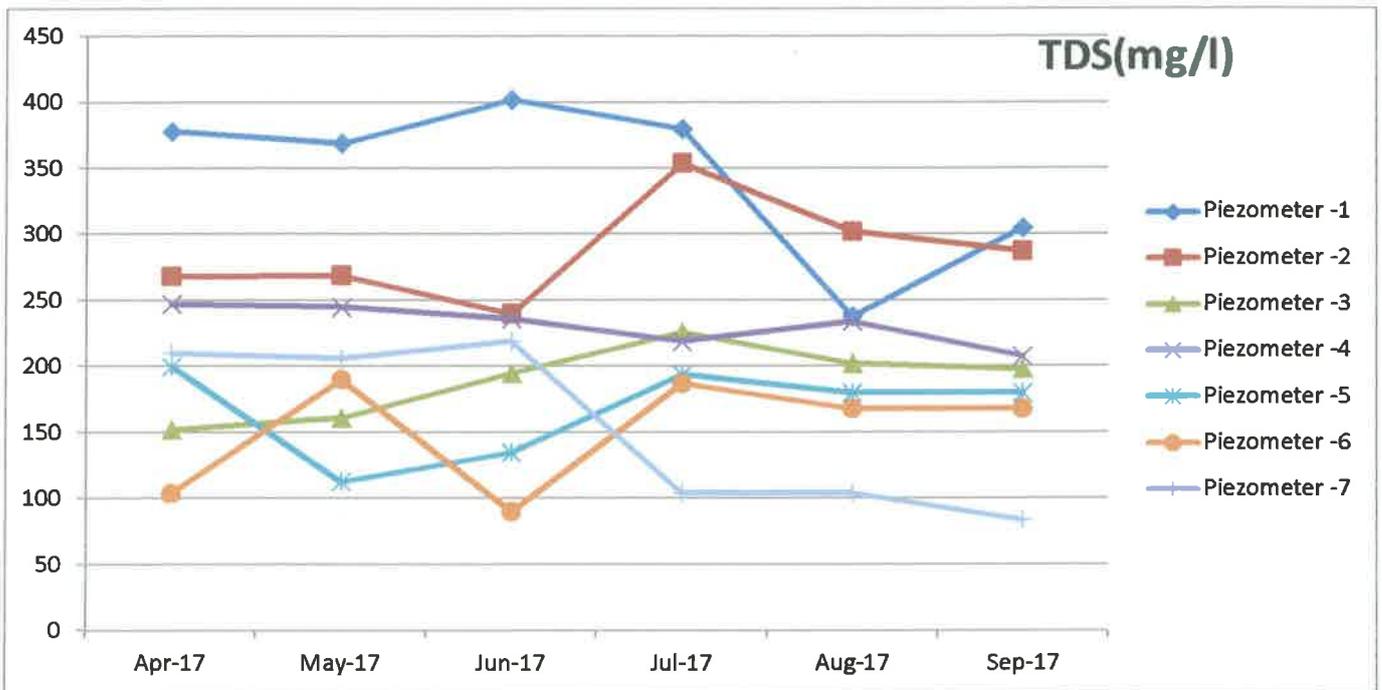
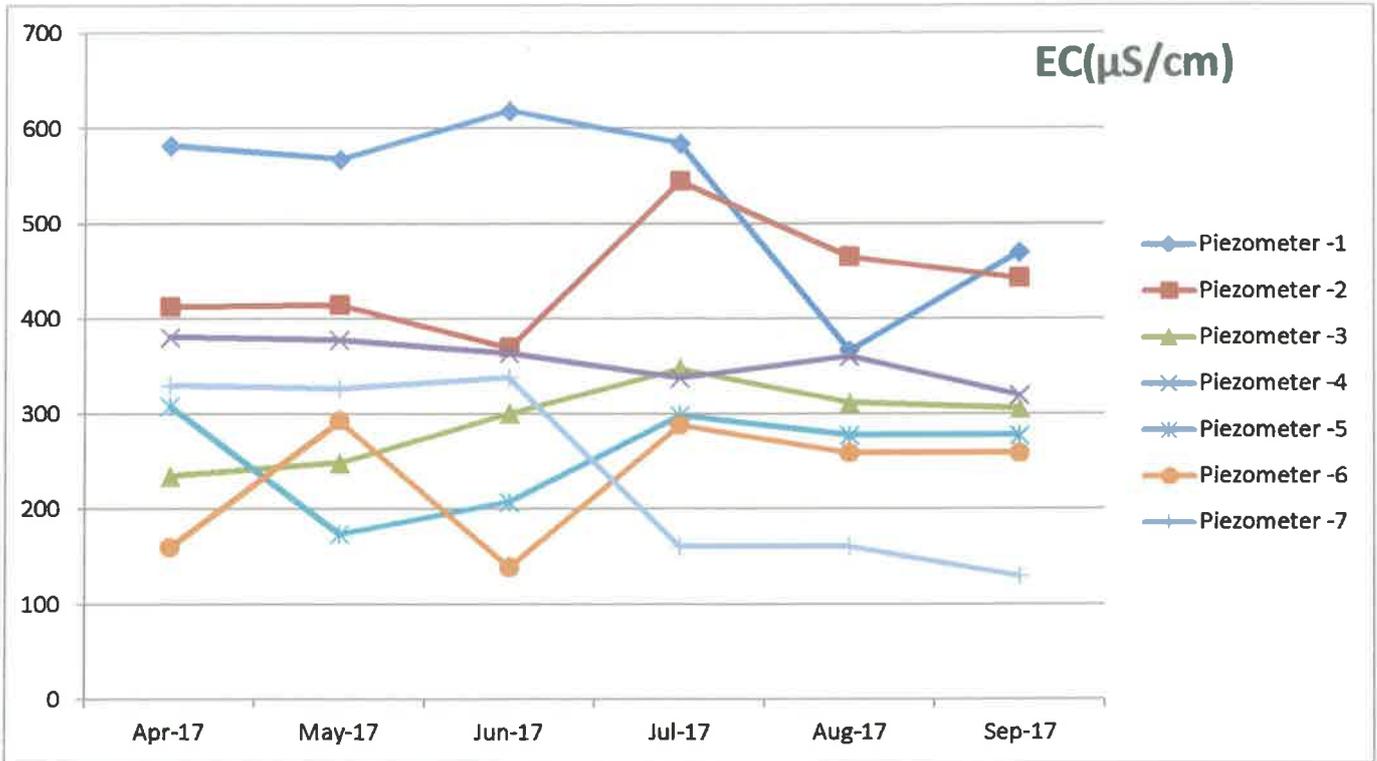
Piezometer Monitoring for the month of May-2017

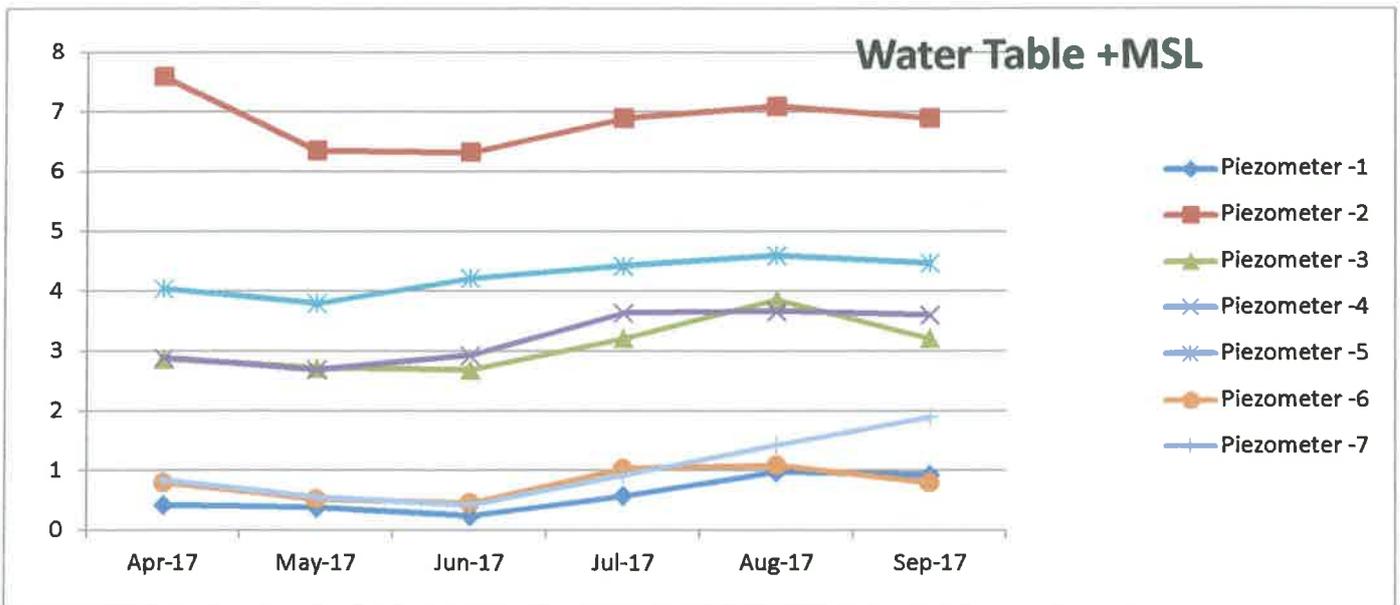
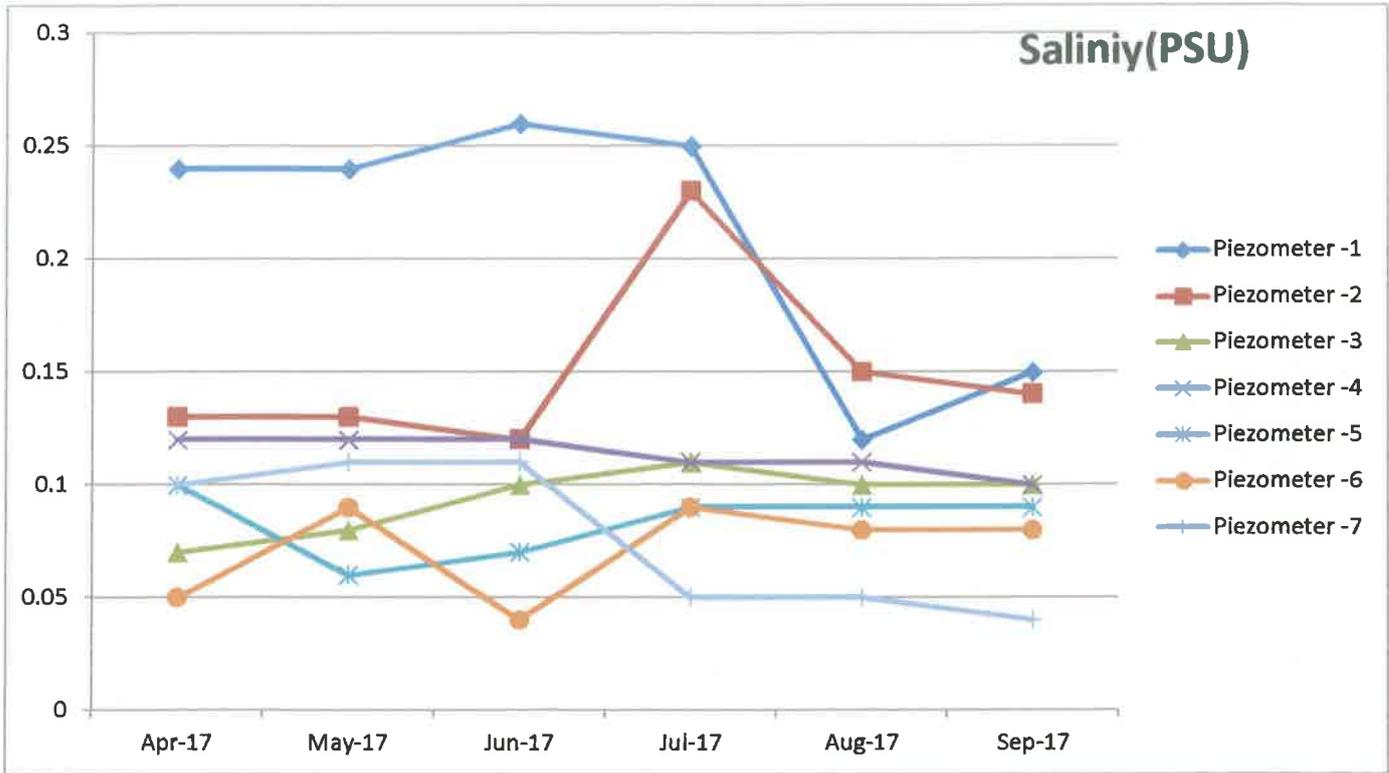
Location	Date	Time	Temp (C)	pH	EC (uS/cm @25C)	TDS (mg/L)	SAL (PSU)	Water Table +MSL
PM-1	31-May-17	10:48:07	29.9	7.86	568	369	0.24	0.378
PM-2	31-May-17	11:33:19	33.3	7.92	415	269	0.13	6.354
PM-3	31-May-17	11:22:55	31.4	7.71	249	161	0.08	2.716
PM-4	31-May-17	11:01:57	32.3	7.8	378	245	0.12	2.690
PM-5	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









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





O/c

Annexure - 2(i)

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 - 537404, 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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Hyderabad Office: 2nd Floor, Sri Durga Towers, Plot No. 201, Road No. 10, Banjara Hills, Hyderabad - 500 034, Andhra Pradesh, India.
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Tel: +91 44 2498 8822 / 8813 Fax: +91 44 2498 6047 web: www.trimexsands.com

CIN : U14299TN2004PTC071437



Ok Anireware - 8(1)

TSPL/ENV/MOEF/2017-18/116

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 - 600034.

Dear Sir,

Sub: Soil analysis report - Submission - Reg.

Ref: CRZ Clearance vide F.No.11-67/2013-IA-III dated 28-04-2015.

As per the reference cited above, please find herewith enclosed Soil analysis report for the period of Jul to Sep, 2017.

Thanking You,

Yours Faithfully,

Sr. Vice President (Mines)

CC:

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.
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.
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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

Trimex Sands Pvt.Ltd

Soil analysis consolidated data

Village: Tonangi

S.No	Parameter	Before mining						Back filled area					
		144	158	157	148	148	144	158	157	148	148		
1	Survey No.	144	158	157	148	148	144	158	157	148	148		
2	Soil type	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	
3	PH	6.65	6.73	6.00	6.04	6.59	6.55	6.69	6.00	6.78	6.45		
4	E.C	0.07	0.05	0.04	0.12	0.09	0.05	0.05	0.07	0.07	0.04		
5	Organic carbon	0.23	0.37	0.38	0.62	0.47	0.44	0.40	0.35	0.36	0.42		
6	Available Nitrogen	125	63	88	63	63	63	75	63	63	38		
7	Available phosphorous	4	3	3	3	3	3	3	3	3	4		
8	Available potassium	54	86	92	129	80	111	80	98	111	98		

Before Mining Sy. 16-144
భూసార పరీక్షా ఫలితాలు

భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

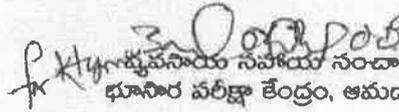
సమూహ నెం. 335
 రైతు పేరు శ్రీ Trinex గ్రామం Bm,
 నల్ల నెం. మండలం GARA జిల్లా : శ్రీకాకుళం
 నేల స్వభావం (SL) తేలిక నేలు/మధ్యరకం నేలు/బరువు నేలు
 ఉదజని సూచిక (6.65) ఆమ్లం/కలుస్తం/క్షారం (అల్ప/మధ్యస్థం/అధిక)
 అవని సాంద్రత మి.గ్రా.సెం.మీ (0.07) నిమ్మామ్లం/మొలకెత్తుట కష్టం/సంకటకు పని
 సంద్రీయ కర్ణసంక (0.23) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య సత్తజని క్రి.గ్రా. (125) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య భాస్వరం క్రి.గ్రా. (4) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య పొటాష్ క్రి.గ్రా. (54) తక్కువ / మధ్యస్థం / ఎక్కువ
 నీటి వివరం : నీటి పనరుల క్రింద వర్షాధారం గూతుల క్రింద
 భూమి వివరం : పల్లం మెట్టు ఆరుదక్క
 పైరు :

ఖరీఫ్ / రబీలో నివారణు చేయబడిన ఎరువుల మోతాదు క్రి.గ్రా./ఎకరాకు.

సత్తజని	(		)	యూరియా	()
భాస్వరం	(		)	యన్.యస్.పి. / డి.ఎ.పి. -	()
పొటాష్	(		)	మ్యూరేట్ ఆఫ్ పొటాష్	()
గెత్తం	(		)	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 200 కేజీల జిప్సం పొడిని రెండవసారి కలుపు తీయు సమయంలో మొక్కకు 5 సెం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
 2. వచ్చేసాల్సిన ఎరువులైన పిల్లపెసర, గ్లెనసిడియా, జీలుగ, కట్టిజనుము మొ. వాటిని భూమిలో వేసి పూక సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సేద్యపు నీటిని పెట్టి దబ్బుచేసి, తేరుకున్న మురుగునీటినిగ ఈట కాలువల ద్వారా యింకని నీటిని బయటికి పంపాలి.
 5. నేల స్వభావం క్షారం అయినందున చాడు తగ్గించేందుకు ఎకరాకు టన్నుల జిప్సంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సేద్యపు నీటిని పెట్టి యింకనున్న చేయాలి. 24 గం.ల తరువాత ఇంకని నీటిని ఈట కాలువల ద్వారా బయటికి పంపాలి.
 6. జంతులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జంతు సర్వేటును దుక్కిలో వేసి కలియదున్నాలి.
 7. నేల స్వభావం ఆమ్లత్వం అయినందున దాని నివారణకు ఎకరాకు కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియదున్నాలి.
 8. ఇతర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారి వారిని సంప్రదించండి.
- సూచన : తదుపరి భూసార పరీక్షలు చేయించుకోవలసిన సమయము
 (ముూడు పంట కాలుములకు ఒకసారి)


 కృష్ణవసాయి సహాయ సంచాలకులు
 భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

భూసార పరీక్షా ఫలితాలు

భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

నమూనా నెం. 336
 రైతు పేరు & క్రి Tranex గ్రామం Am2
 సర్కే నెం. మండలం గిర్రా జిల్లా : శ్రీకాకుళం
 నేల స్వభావం (SL) తేలిక నేలలు/మధ్యరకం నేలలు/బరువు నేలలు
 ఉదజని సూచిక (6.55) ఆమ్లం/తటస్థం/క్షారం (అల్ల/మధ్యస్థం/అధిక)
 లవణ సాంద్రత మి.మో/సి.మీ (0.05) సోమార్దం/ములకెత్తుట కష్ట/పంటకు హాని
 సంద్రీయ కర్మణం (0.44) తక్కువ/మధ్యస్థం/ఎక్కువ
 లభ్య నత్రజని 311/హా (63) తక్కువ/మధ్యస్థం/ఎక్కువ
 లభ్య భాస్వరం కి.గ్రా/హా (3) తక్కువ/మధ్యస్థం/ఎక్కువ
 లభ్య పొటాష్ కి.గ్రా/హా (111) తక్కువ/మధ్యస్థం/ఎక్కువ
 నీటి వివరం : నీటి పగులుల క్రింద వర్షాధారం గూకుల క్రింద
 భూమి వివరం : పల్లం మెట్టు ఆరుదక్క
 పైరు :

ఖరీఫ్ / రబీలో సిఫారసు చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు.

నత్రజని	()	యూరియా..	()
భాస్వరం	()	యూ.ఎస్.పి. / డి.ఎ.పి. -	()
పొటాష్	()	మ్యూరేట్ ఆఫ్ పొటాష్	()
గెడ్డం	()	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 200 కేజీల ఆమ్లం పొడిని రెండవసారి కలుపు తీయూ సమయంలో మొక్కకు 5 సెం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
2. పొద్దున్నా ఎరువులైన పిల్లపసర, గ్లెనిసిడియా, జీలుగ, కట్టజనుము మొి వాటిని భూమిలో వేసి పూక సమయంలో కలియదున్నాలి.
3. జీవన ఎరువులను వాడాలి.
4. సేద్యపు నీటిని పెట్టి దబ్బుచేసి, తేరుకున్న మురుగునీటినిగ ఉంట కాలువల ద్వారా యింకని నీటిని బయటికి పంపాలి.
5. నేల స్వభావం క్షారం అయినందున చాడు తగ్గించేందుకు ఎకరాకు టన్నుల ఆమ్లంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సేద్యపు నీటిని పెట్టి యింకనట్లు చేయాలి. 24 గం.ల తరువాత ఇంకని నీటిని ఉంట కాలువల ద్వారా బయటికి పంపాలి.
6. ఇంకులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు ఇంకు సభేటును దుక్కిలో వేసి కలియదున్నాలి.
7. నేల స్వభావం ఆమ్లత్వం అయినందున దాని నివారణకు ఎకరాకు కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియదున్నాలి.
8. ఇతర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారి వారిని సంప్రదించండి.

సూచన : కడువల భూసార పరీక్షలు చేయించుకోవలసిన సమయము (మూడు వంట కాలుములకు ఒకసారి)

[Signature]
 భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

భూసార పరీక్షా ఫలితాలు *Before Mining Sy 16-158*

భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

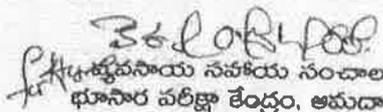
సమూహా నెం. 337
 రైతు పేరు త్రి Tramex గ్రామం Bm.3
 సర్వే నెం. మండలం Sriyala జిల్లా : శ్రీకాకుళం
 నేల స్వభావం (SL) తేలిక నేలలు/మధ్యరకం నేలలు/బరుపు నేలలు
 ఉదజని సూచక (6.93) ఆమ్లం/తటస్థం/క్షారం (అల్ప/మధ్యస్థం/అధిక)
 లవణ సాంద్రత మి.మో/సె.మీ (0.05) సామాన్యం/ములతెత్తుకు కష్టపంతుకు హాని
 సంద్రీయ కర్షణం (0.37) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య నత్రజని కి.గ్రా/మీ (63) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య ఛాస్యరం కి.గ్రా/మీ (3) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య పొటాష్ కి.గ్రా/మీ (86) తక్కువ / మధ్యస్థం / ఎక్కువ
 నీటి వివరం : నీటి పనరుల క్రింద వర్షాధారం గూఢుల క్రింద
 భూమి వివరం : పల్లం మెట్టు ఆరుదక్క
 పైరు :

ఖరీఫ్ / రబీలో సిఫారసు చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు.

నత్రజని	()	యూరియా	()
ఛాస్యరం	()	యస్.యస్.పి. / డి.ఎ.పి.	()
పొటాష్	()	ముర్రేట్ ఆఫ్ పొటాష్	()
గెడ్డం	()	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 200 కేజీల జిప్సం పొడిని రెండవసారి కలుపు తీయు సమయంలో మొక్కకు 5 సెం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
 2. పచ్చిరొట్టె ఎరువులైన పిల్లపెనర, గైలసిడియా, జీలుగ, కల్షిజనుము మొ॥ వాటిని భూమిలో వేసి పూత సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సేద్యపు నీటిని పెట్టి దమ్ముచేసి, తేరుకున్న మురుగునీటినిగ ఉంట కాలువల ద్వారా యింకని నీటిని బయటికి పంపాలి.
 5. నేల స్వభావం క్షారం అయినందున చాడు తగ్గించేందుకు ఎకరాకు _____టన్నుల జిప్సంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సేద్యపు నీటిని పెట్టి యింకునట్లు చేయాలి. 24 గం॥ల తరువాత ఇంకని నీటిని ఉంట కాలువల ద్వారా బయటికి పంపాలి.
 6. జంకులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జింకు సల్ఫేటును దుక్కిలో వేసి కలియదున్నాలి.
 7. నేల స్వభావం ఆమ్లకృష్ణం అయినందున దాని నివారణకు ఎకరాకు _____ కిలోల సున్నంను పొడిచేసి నేలపై జిల్లి బాగా కలియదున్నాలి.
 8. ఇతర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారి వారిని సంప్రదించండి.
- సూచన : తదుపరి భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
 (మూడు పంట కాలములకు ఒకసారి)


 కృష్ణవసాయి సహాయ సంచాలకులు
 భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

After Mining Sy. No-158

భూసార పరీక్షా ఫలితాలు

భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

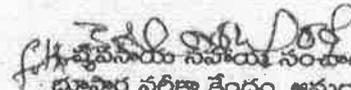
సమూహా నెం. 338
 రైతు పేరు శ్రీ Trilax గ్రామం Amly
 సర్కే నెం. _____ మండలం Giddalur జిల్లా : శ్రీకాకుళం
 నేల స్వభావం (SL) తేలిక నేలలు/మధ్యరకం నేలలు/బరువు నేలలు
 ఉదజని సూచిక (6.69) ఆమ్లం/తటస్థం/క్షారం (అల్ల/మధ్యస్థం/అధిక)
 లవణ సాంద్రత మి.మో/సి.సి (0.05) సామూహ్యం/ములతెక్కుట కష్ట/వంటకు హాని
 సంద్రీయ కర్ణనం (0.40) తక్కువ/ మధ్యస్థం / ఎక్కువ
 లభ్య నక్షత్రం 87 (75) తక్కువ/ మధ్యస్థం / ఎక్కువ
 లభ్య భాస్వరం కి.గ్రా/హె (3) తక్కువ/ మధ్యస్థం / ఎక్కువ
 లభ్య పొటాష్ కి.గ్రా/హె (80) తక్కువ/ మధ్యస్థం / ఎక్కువ
 నీటి వివరం : నీటి వనరుల క్రింద వర్షాధారం గూకుల క్రింద
 భూమి వివరం : పల్లం మెట్టు ఆరుదక్క
 పైరు :

ఖరీఫ్ / రబీలో సిఫారసు చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు.

నక్షత్రం	()	యూరియా	()
భాస్వరం	()	యస్.యస్.పి. / డి.ఎ.పి. -	()
పొటాష్	()	ముల్లెట్ ఆఫ్ పొటాష్	()
గెడ్డం	()	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 200 కేజీల జిప్సం పొడిని రెండవసారి కలుపు తీయని సమయంలో మొక్కకు 5 సెం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
 2. వర్షాల్ప ఎరువులైన పిల్లపెసర, గ్లొసెడియా, జీలుగ, కల్లిజనుము మొ. వాటిని భూమిలో వేసి పూత సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సేద్యపు నీటిని పెట్టి దమ్ము చేసి, తేరుకున్న మురుగునీటినిగన ఈట కాలువల ద్వారా యింకని నీటిని బయటికి వంపాలి.
 5. నేల స్వభావం క్షారం అయినందున చౌడు తగ్గించేందుకు ఎకరాకు _____టన్నుల జిప్సంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సేద్యపు నీటిని పెట్టి యింకనుట్లు చేయాలి. 24 గం.ల తరువాత ఇంకని నీటిని ఈట కాలువల ద్వారా బయటికి వంపాలి.
 6. జంతులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జింకు సల్ఫేటును దుక్కిలో వేసి కల్లియదున్నాలి.
 7. నేల స్వభావం ఆమ్లత్వం అయినందున దాని నివారణకు ఎకరాకు _____ కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియదున్నాలి.
 8. ఇకర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారి వారిని సంప్రదించండి.
- నూచన : కరువుల భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
 (మూడు వంట కాలుములకు ఒకసారి)


 ఖైదీ పనియ సహాయ సం.దాలకులు
 భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

భూసార పరీక్షా ఫలితాలు

భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

సమూహ నెం 340
 రైతు పేరు క్రి Trimex గ్రామం Am6
 నర్సే నెం _____ మండలం Gara జిల్లా: కృతాకుళం
 నేల స్వభావం (SL) కేరిక నేలు/మధ్యదకం నేలు/బరువు నేలు
 ఉదజని నూరుక (6.00) అస్పం/కటస్పం/జ్వారం (అల్ల/మధ్యస్పం/అధక)
 లవణ సాంద్రక మిమోసం.మీ (0.07) సామాన్యం/ములకెక్కుట కష్టం/పంటకు హాని
 సెంట్రీయూ కర్జనం (0.35) కక్కువ /మధ్యస్పం / ఎక్కువ స్వల్పము - 63
 లభ్య భాస్వరం కి.గ్రా/హె (3) కక్కువ /మధ్యస్పం / ఎక్కువ కాని
 లభ్య పొటాష్ కి.గ్రా/హె (98) కక్కువ /మధ్యస్పం / ఎక్కువ అధికము
 గిట్టి వివరం : గిట్టి పనరుల క్రింద వర్షాధారం గూతులక్రింద
 భూమి వివరం : వల్లం మెట్టు ఆరుదళ్ళు
 పైరు : _____

ఖరీద్/రబల్లో నివారను చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు

నక్రజని (	) యూరియా - - -	()
భాస్వరం (	) యన్.యన్.పి. / డి.పి.పి -	()
పొటాష్ (	) మ్యూరేట్ ఆఫ్ పొటాష్	()
గక్రం (	) టాస్టలు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 200 కేజీల అస్పం పొడిని రెండవసారి కలుపుకీయు సమయంలో మొక్కకు 5 సెం.మీ.కుర్చి దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
 2. పొద్దురాళ్ళు ఎరువులైన విల్లవసర, గ్లూనడియా, జీలెగ, కల్లిజనుము మొ.వాటిని భూమిలో వేసి పూక సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వూడాలి.
 4. సెద్దపు గిట్టిని పెట్టి దమ్ముచేసి, తేరుకున్న మురుగుగిట్టిని ఈట కాలువల ద్వారా యింకని గిట్టిని బయటికి పంపాలి.
 5. నేల స్వభావం జ్వారం అయినందున చాడు కగ్గించేందుకు ఎకరాకు _____ టాస్టల అస్పంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. కరువాక మడులు కట్టి సెద్దపు గిట్టినిపెట్టి యింకనుట్లు చేయాలి. 24 గం.ల కరువాక ఇంకని గిట్టిని ఈట కాలువల ద్వారా బయటికి పంపాలి.
 6. జంతులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు అంతు సల్ఫేటును దుక్కిలోవేసి కలియదున్నాలి.
 7. నేల స్వభావం అస్పం అయినందున దాని నివారణకు ఎకరాకు 150 కిలోల / అస్పం సున్నంను పొడిచేసి నేలపై అల్లి బాగా కలియదున్నాలి.
 8. ఇకర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారివారిని సంప్రదించండి.
- సూచన : కరువల భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
 (మూడు పంట కాలుములకు ఒకసారి)

(Handwritten Signature)
 భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

భూసార పరీక్షా ఫలితాలు

భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

నమూనా నెం. 341
 రైతు పేరు శ్రీ T. Suresh గ్రామం Bm 7
 సర్వే నెం. మండలం 5700 జిల్లా : శ్రీకాకుళం
 నేల స్వభావం (SL) తేలిక నేలలు/మధ్యరకం నేలలు/బరువు నేలలు
 ఉదాని సూచక (6.04) అమ్మం/తటస్థం/జ్వారం (అల్ల/మధ్యస్థం/అధిక)
 లవణ సాంద్రత మి.మో/సం.మి (0.12) సామాన్యం/మొలకెత్తుట కష్టం/పంటకు హాని
 సెంట్రీయం కర్దనం (0.82) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య నక్షత్రం కి.గ్రా/హె (63) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య ధాన్యం కి.గ్రా/హె (3) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య పొటాష్ కి.గ్రా/హె (129) తక్కువ / మధ్యస్థం / ఎక్కువ
 నీటి దివరం : నీటి వనరుల క్రింద వర్షాధారం గూతుల క్రింద
 భూమి దివరం : పల్లం మెట్టు ఆరుదళ్ళు
 పైరు :

ఖరీఫ్ / రబీలో సిఫారసు చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు.

నక్షత్రం	()	యూరియా	()
ధాన్యం	()	యన్.యన్.పి. / డి.ఎ.పి. -	()
పొటాష్	()	మ్యూరేట్ ఆఫ్ పొటాష్	()
గెడ్డం	()	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 200 కేజీల జప్తం పొడిని రెండవసారి కలుపు తీయు సమయంలో మొక్కకు 5 సం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగవోయాలి.
 2. వర్షాల్ప ఎరువులైన పిల్లపెసర, గైలసిడియా, జీలుగ, కట్టిజగుము మొ॥ వాటిని భూమిలో వేసి పూక సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సేద్యపు నీటిని పెళ్ళి దమ్ముచేసి, తేరుకున్న మురుగునీటినిగన ఉంట కాలువల ద్వారా యింకని నీటిని బయటికి వంపాలి.
 5. నేల స్వభావం జ్వారం అయినందున చౌడు తగ్గించేందుకు ఎకరాకు టన్నుల జప్తంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సేద్యపు నీటిని పెళ్ళి యింకనుట్లు చేయాలి. 24 గం॥ల తరువాత ఇంకని నీటిని ఉంట కాలువల ద్వారా బయటికి వంపాలి.
 6. జంకులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జంకు సళ్ళేటును దుక్కిలో వేసి కలియదున్నాలి.
 7. నేల స్వభావం అమ్మత్వం అయినందున దాని నివారణకు ఎకరాకు 50 కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియదున్నాలి.
 8. ఇకర దివరాలకు దగ్గరలో ఉన్న వృవసాయాధికారి వారిని సంప్రదించండి.
- నూచన : తదుపరి భూసార పరీక్షలు చేయించుకోవలసిన సమయము
 (మూడు పంట కాలములకు ఒకసారి)

(Signature)
 ప్లవనాయ సహాయ సంహాలకులు
 భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

భూసార పరీక్షా ఫలితాలు

భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

నమూనా నెం. 342
 రైతు పేరు & త్రి Trimex గ్రామం Am8
 నర్సే నెం. 68 మండలం Gara జిల్లా : కృతాకుకం
 నేల స్వభావం (SL) తేలిక నేలలు/మధ్యరకం నేలలు/బరువు నేలలు
 ఉదజని సూచక (6.78) అమ్మం/కట్టనం/క్షారం (అల్క/మధ్యనం/అధిక)
 లవణ సాంద్రత మి.మో/సం.మీ (0.07) సాక్షాత్తుం/ములకెత్తుట కష్ట/పంటకు వఱం
 సంద్రీయ కర్షణం (0-36) తక్కువ / మధ్యనం / ఎక్కువ
 లభ్య నత్రజని 87 (63) తక్కువ / మధ్యనం / ఎక్కువ
 లభ్య ధాన్యరం కి.గ్రా/హా (3) తక్కువ / మధ్యనం / ఎక్కువ
 లభ్య పొటాష్ కి.గ్రా/హా (111) తక్కువ / మధ్యనం / ఎక్కువ
 గిట్టి వివరం : గిట్టి వనరుల క్రింద పర్యాధారం గూతుల క్రింద
 భూమి వివరం : పల్లం మెట్టు అరుదట్టు
 పైరు :

ఖరీఫ్ / రబీలో సిఫారసు చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు.

నత్రజని	()	యూరియా	()
ధాన్యరం	()	యస్.యస్.పి. / డి.ఎ.పి. -	()
పొటాష్	()	ముర్రేట్ ఆఫ్ పొటాష్	()
గెడ్డం	()	టర్ములు/బండ్రు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 200 కేజీల జవ్వం పొడిని రెండవసారి కలుపు తీయు సమయంలో మొక్కకు 5 సెం.మీ.దర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
 2. వచ్చాల్సిన ఎరువులైన పిల్లపెసర, గ్లొసిడియా, జీలుగ, కట్టిజనుము మొ. వాటిని భూమిలో వేసి పూక సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సేద్యపు గిట్టిని పెట్టి దమ్ముచేసి, తేరుకున్న మురుగుగిట్టినిగ ఉంట కాలువల ద్వారా యింకని గిట్టిని బయటికి పంపాలి.
 5. నేల స్వభావం క్షారం అయినందున చాడు తగ్గించేందుకు ఎకరాకు టర్ముల జవ్వంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సేద్యపు గిట్టిని పెట్టి యింకనుట్టు చేయాలి. 24 గం.ల తరువాత ఇంకని గిట్టిని ఉంట కాలువల ద్వారా బయటికి పంపాలి.
 6. జంకులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జంకు సర్వేటును దుక్కిలో వేసి కలియదున్నాలి.
 7. నేల స్వభావం అమ్మకత్తం అయినందున దాని నివారణకు ఎకరాకు కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియదున్నాలి.
 8. ఇతర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారి వారిని సంప్రదించండి.
- సూచన : కదుపలి భూసార పరీక్షలు చేయించుకోవలసిన సమయము
 (మూడు పంట కాలుములకు ఒకసారి)

[Signature]
 వ్యవసాయ సహాయ సంచాలకులు
 భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

భూసార పరీక్షా ఫలితాలు

భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

నమూనా నెం. 363
 రైతు పేరు శ్రీ Tramex గ్రామం Bmg
 నల్గే నెం. _____ మండలం GuARA జిల్లా : శ్రీకాకుళం
 నేల స్వభావం (SL) తేలిక నేలలు/మధ్యరకం నేలలు/బరువు నేలలు
 ఉదజని సూచిక (6.59) ఆమ్లం/కటన్/జ్వారం (లల్ల/మధ్యస్థం/అధిక)
 లవణ సాంద్రత మి.మో/సెం.మీ (0.09) సామాన్యం/మొలకెత్తుట కష్ట/పంటకు హాని
 సంద్రీయ కర్ణగం (0.47) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య నత్రజని 87 (63) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య భాస్వరం కి.గ్రా/హె (3) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య పొటాష్ కి.గ్రా/హె (80) తక్కువ / మధ్యస్థం / ఎక్కువ
 నీటి వివరం : నీటి పనరుల క్రింద వర్షాధారం గూకుల క్రింద
 భూమి వివరం : పల్లం మెట్టు ఆరుదక్క
 పైరు : _____

ఖరీఫ్ / రబీలో సిఫారసు చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు.

నత్రజని	(	)	యూరియా...	()
భాస్వరం	(	)	యనీయస్.పి. / డి.ఎ.పి. -	()
పొటాష్	(	)	మ్యూరేట్ ఆఫ్ పొటాష్	()
గెత్తం	(	)	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 200 కేజీల జప్తం పొడిని రెండవసారి కలుపు తీయు సమయంలో మొక్కకు .5 సెం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
2. వర్షారోట్ల ఎరువులైన ఫిల్లిపెనర, గ్లెనిడియా, జీలుగ, కల్టజనుము మొం బాదని భూమిలో వేసి పూత సమయంలో కలియదున్నాలి.
3. జీవన ఎరువులను వాడాలి.
4. సెద్యపు నీటిని పెట్టి దమ్ముచేసి, తేరుకున్న మురుగునీటినిగ ఉంట కాలువల ద్వారా యింకని నీటిని బయటికి పంపాలి.
5. నేల స్వభావం జ్వారం అయినందున చాడు కగ్గించేందుకు ఎకరాకు _____టన్నుల జప్తంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సెద్యపు నీటిని పెట్టి యింకనుట్లు చేయాలి. 24 గం.ల తరువాత ఇంకని నీటిని ఉంట కాలువల ద్వారా బయటికి పంపాలి.
6. జంకులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జంకు సల్ఫేటును దుక్కిలో వేసి కలియదున్నాలి.
7. నేల స్వభావం ఆమ్లత్వం అయినందున దాని నివారణకు ఎకరాకు _____ కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియదున్నాలి.
8. ఇతర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారి వారిని సంప్రదించండి.

నూచన : తదుపరి భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
 (ముూడు పంట కాలములకు ఒకసారి)

(Signature)
 వ్యవసాయ సహాయ సంచాలకులు
 భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

భూసార పరీక్షా ఫలితాలు

భూసార పరీక్షా కేంద్రం, ఆమదాలవలస

నమూనా నెం. 344
 రైతు పేరు శ్రీ TRIMPX గ్రామం Amid
 నర్సే నెం. మండలం GARA జిల్లా : శ్రీకాకుళం
 నేల స్వభావం (SL) తేలిక నేలలు/మధ్యరకం నేలలు/బరువు నేలలు
 ఉదజని సూచక (6.45) ఆమ్లం/కటన్/జ్వారం (అల్ప/మధ్యస్థం/అధిక)
 లవణ సాంద్రత మి.మో/సిం.మీ (0.04) సామాన్యం/మొలకెక్కుట కష్ట/పంటకు హాని
 సెంట్రీయ కర్బనం (0.47) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య గ్రామం కి.గ్రా/హా (38) తక్కువ / మధ్యస్థం / ఎక్కువ
 లభ్య పొటాష్ కి.గ్రా/హా (48) తక్కువ / మధ్యస్థం / ఎక్కువ
 గీటి వివరం : - గీటి పగులు క్రింద వర్షాధారం నూతుల క్రింద
 భూమి వివరం : పల్లం మెట్టు ఆరుదళ్ళు
 ఫైరు :

ఇరిఫ్ / రబ్లో సిఫిరసు చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు.

గ్రామం	()	యూరియా..	()
భూస్వరం	()	యన్.యన్.పి. / డి.ఎ.పి. -	()
పొటాష్	()	క్యూరేట్ ఆఫ్ పొటాష్	()
గ్రేట్లం	()	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 200 కేజీల జిప్సం పొడిని రెండవసారి కలుపు తీయు సమయంలో మొక్కకు 5 సెం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగిడోయాలి.
2. వర్షారోట్ల ఎరువులైన పిల్లపెనర, గ్లొసిడియా, జీలుగ, కట్టిజనుము మొ. వాటిని భూమిలో వేసి పూక సమయంలో కలియదున్నాలి.
3. జీవన ఎరువులను వాడాలి.
4. సేద్యపు గీటిని పెట్టి దమ్ముచేసి, తేరుకున్న మురుగుగీటినిగ ఉంట కాలువల ద్వారా యింకని గీటిని బయటికి వంపాలి.
5. నేల స్వభావం జ్వారం అయినందున చాడు కర్గించేందుకు ఎకరాకు టన్నుల జిప్సంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. కరువాక మడులు కట్టి సేద్యపు గీటిని పెట్టి యింకనుట్లు చేయాలి. 24 గం||ల తరువాత ఇంకని గీటిని ఉంట కాలువల ద్వారా బయటికి వంపాలి.
6. జంకులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జంకు సల్ఫేటును దుక్కిలో వేసి కలియదున్నాలి.
7. నేల స్వభావం ఆమ్లకృం అయినందున దాని నివారణకు ఎకరాకు 60 కిలోల / సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియదున్నాలి.
8. ఇకర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారి వారిని సంప్రదించండి.

నూచన : కరువల భూసార పరీక్షలు చేయించుకోవలసిన సమయము
 (మూడు పంట కాలుములకు ఒకసారి)

(Signature)
 వ్యవసాయ సహాయ సంచాలకులు
 భూసార పరీక్షా కేంద్రం, ఆమదాలవలస



o/c

TSPL/ENV/MOEF/2017-18/1093

Srikakulam,
24-07-2017.

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: Soil analysis report - Submission - Reg.

Ref: CRZ Clearance vide F.No.11-67/2013-LA-III dated 28-04-2015.

As per the reference cited above, please find herewith enclosed Soil analysis report for the period of Apr to Jun, 2017.

Thanking You,

Yours Faithfully,

Vice President (Mines)

CC:

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.
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

Trimex Sands Pvt. Ltd

Soil analysis consolidated data

Village: Tonangi

S.No	Parameter	Before mining						Back filled area					
		177	177	157	148	148	177	177	157	148	148		
1	Survey No.	177	177	157	148	148	177	177	157	148	148		
2	Soil type	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	
3	PH	6.30	6.07	6.02	6.38	5.16	6.29	7.32	6.40	7.00	6.07		
4	E.C	0.04	0.02	0.03	0.03	0.03	0.01	0.02	0.03	0.01	0.01		
5	Organic carbon	0.21	0.24	0.10	0.14	0.25	0.14	0.15	0.42	0.23	0.22		
6	Available Nitrogen	188	150	125	100	163	75	226	113	113	63		
7	Available phosphorous	3	5	3	3	10	3	3	4	3	6		
8	Available potassium	129	105	111	105	111	62	74	92	68	74		

భూసార పరీక్షా ఫలితాలు
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

నమూనా నెం. 0294

రైతు పేరు శ్రీ Timrex గ్రామం _____

సర్కే నెం. _____ మండలం గుం జిల్లా: శ్రీకాకుళం

నేల స్వభావం (9) తరల నేలలు/మధ్యరతం నేలలు/బరువు నేలలు

ఉదజని సూచిక (6-30) ఆమ్లం/కటన్/జ్వారం (అల్ల/మధ్యస్థం/అధిక)

లవణ సాంద్రత మి.మో/సం.మీ (0.04) సామాన్యం/మొలకెక్కుట కష్టం/వంటకు హాని

సెంట్రీయ కర్బనం (0.21) తక్కువ /మధ్యస్థం / ఎక్కువ

లభ్య నక్షణం (188) తక్కువ /మధ్యస్థం / ఎక్కువ

లభ్య ధాన్యం కి.గ్రా/ఎ (3) తక్కువ /మధ్యస్థం / ఎక్కువ

లభ్య పొటాష్ కి.గ్రా/ఎ (129) తక్కువ /మధ్యస్థం / ఎక్కువ

నీటి వివరం : నీటి పరారుల క్రింద వర్షాధారం నూకులక్రింద

భూమి వివరం : పల్లం మెట్టు ఆరుదళ్ళు

పైరు :

ఖరీఫ్/రతలో నివారణు చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు

నక్షణం () యూరియా - - - ()

ధాన్యం () యస్.యస్.పి. / డి.పి.పి - (/)

పొటాష్ (/) మ్యూరేట్ ఆఫ్ పొటాష్ ()

గెజ్జం () టన్నులు/బండ్లు/ఎకరాకు ()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 2 కేజీల జిప్సం పొడిని రెండవసారి కలుపుతీయు సమయం మొక్కకు 5 సెం.మీ.కు దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
 2. వచ్చాల్సిన ఎరువులైన పిల్లిపెసర, గైంగిడియా, జీలుగ, కట్టిజనుము మొ.వాటిని భూమిలో వేసి, పూత సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సేద్యపు నీటిని పెట్టి దమ్ముచేసి, తేరుకున్న మురుగునీటిని ఉంట కాలువల ద్వారా యింకని నీటిని బయటికి వంపాలి.
 5. నేల స్వభావం జ్వారం అయినందున చాడు తగ్గించేందుకు ఎకరాకు _____ టన్నుల జిప్సంను పొడిచేసి పొలంలో వేసి దాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సేద్యపు నీటినిపెట్టి యింకనుగట్టు చేయాలి. 24 గం.ల తరువాత ఇంకని నీటిని ఉంట కాలువల ద్వారా బయటికి వంపాలి.
 6. జంకులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జంకు సల్ఫేటును దుక్కిలోవేసి కలియదున్నాలి.
 7. నేల స్వభావం ఆమ్లం అయినందున దాని నివారణకు ఎకరాకు 60 కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియదున్నాలి.
 8. ఇతర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారివారిని సంప్రదించండి.
- సూచన : తరువతి భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
(మూడు పంట కాలములకు ఒకసారి)

[Signature]
వ్యవసాయ సహాయ సంఘాలకులు,
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

భూసార పరీక్షా ఫలితాలు

భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

సమూహ నెం 0295
 రైతు పేరు Trimex గ్రామం _____
 సర్వే నెం _____ మండలం గిరి జిల్లా: త్రీశాకుళం
 నేల స్వభావం (6-5L) తేలిక నేలు/ముద్దరకం నేలు/బరువు నేలలు
 ఉదజని సూచక (6-29) అమ్మం/కటన్/జ్వారం (అల్ప/ముద్దస్వం/అధిక)
 లవణ సాంద్రత మి.మో.సిం.మీ (0.01) స్వల్ప/మి.మి.లెక్చుట కష్టం/పంటకు హాని
 సెంట్రీయ కర్బనం (0.14) కక్కువ / ముద్దస్వం / ఎక్కువ
 లఘు నక్షజని (6-75) కక్కువ / ముద్దస్వం / ఎక్కువ
 లఘు భాస్వరం కి.గ్రా/ఎ (3) కక్కువ / ముద్దస్వం / ఎక్కువ
 లఘు పొటాష్ కి.గ్రా/ఎ (62) కక్కువ / ముద్దస్వం / ఎక్కువ
 గిట్టి వివరం : గిట్టి పనరుల క్రింద వర్షాధారం గూకులక్రింద
 భూమి వివరం : పల్లం మెట్టు ఆరుదట్టు
 సైరు :

భారత్/రబల్ నిఫారసు చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు

నక్షజని ()	యూరియా - - -	()
భాస్వరం ()	యస్.ఎస్.పి. / డి.పి.పి -	()
పొటాష్ ()	మున్సేట్ ఆఫ్ పొటాష్	()
నెక్టం ()	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 1 కేజీల జప్తం పొడిని రెండవసారి కలుపుతీయు సమయం మొక్కకు 5 సెం.మీ.టర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగడోయాలి.
 2. వర్షారోళ్ళు ఎరువులైన పిల్లపెనర, గైలసిడియా, జీలుగ, కట్టిజనుము మొ.వాటిని భూమిలో వేసి, పూక సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సేద్యపు గిట్టిని పెట్టి దమ్ముచేసి, తేరుకున్న మురుగునీటిని ఈట కాలువల ద్వారా యింకని గిట్టిని బయటికి పంపాలి.
 5. నేల స్వభావం జ్వారం అయినందున చొడు కగ్గించేందుకు ఎకరాకు _____ టన్నుల జప్తంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. కరువాక మడులు కట్టి సేద్యపు గిట్టిని పెట్టి యింకనుగట్టు చేయాలి. 24 గం.ల కరువాక ఇంకని గిట్టిని ఈట కాలువల ద్వారా బయటికి పంపాలి.
 6. ఇంకులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు ఇంకు సల్ఫేటును దుక్కిలోవేసి కలియదున్నాలి.
 7. నేల స్వభావం అమ్మకత్తం అయినందున దాని నివారణకు ఎకరాకు 100 కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియదున్నాలి.
 8. ఇతర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారిని సంప్రదించండి.
- సూచన : కరువల భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
 (మూడు పంట కాలుములకు ఒకసారి)

[Signature]
 వ్యవసాయ సహాయ సంచాలకులు,
 భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

భూసార పరీక్షా ఫలితాలు
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

నమూనా నెం. 996	గ్రామం	Tranank	జిల్లా : కృతాకుళం
రైతు పేరు శ్రీ	మండలం	TR	
నెల స్వభావం	(SL)	కేలిక నేలలు/మధ్యరకం నేలలు/బరువు నేలలు	
ఉదజని సూచక	(6.07)	ఉష్ణం/కటన్/జ్వరం (అల్ప/మధ్యస్థం/అధిక)	
అవణ సాంద్రత మి.మో/సం.మీ	(0.02)	సామ్యం/మొలకెక్కుట కష్టం/వంటకు వణి	
సెంట్రీయ కర్బనం	(0.94)	తక్కువ /మధ్యస్థం / ఎక్కువ	
లభ్య నత్రజని	(158)	తక్కువ /మధ్యస్థం / ఎక్కువ	
లభ్య భాస్వరం కి.గ్రా/ఎ	(5)	తక్కువ /మధ్యస్థం / ఎక్కువ	
లభ్య పొటాష్ కి.గ్రా/ఎ	(10)	తక్కువ /మధ్యస్థం / ఎక్కువ	
నీటి వివరం :	నీటి వనరుల క్రింద	పర్యాధారం	సూకులక్రింద
భూమి వివరం :	వల్లం	మెట్టు	ఆరుదళ్ళు
పైరు :			

ఖరీఫ్/రబీలో నిఫారను చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు

నత్రజని ()	యూరియా - - -	()
భాస్వరం ()	యస్.యస్.పి. / డి.పి.పి -	()
పొటాష్ ()	మ్యూరేట్ ఆఫ్ పొటాష్	()
గెక్కుం ()	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 2 కేజీల ఇష్టం పొడిని రెండవసారి కలుపుతీయు సమయ మొక్కకు 5 సెం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
 2. వచ్చులోట్ల ఎరువులైన పిల్లిపెనెన, గైలినీడియా, జీలంగ, కట్టెజనుము మొ.వాటిని భూమిలో వేసి పూక సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సెద్యపు నీటిని పెట్టి దమ్ముచేసి, తేరుకున్న మురుగునీటిని ఈట కాలువల ద్వారా యింకని నీటిని బయటికి పంపాలి.
 5. నేల స్వభావం జ్వరం అయినందున చాటు కర్షించేందుకు ఎకరాకు 2 టన్నుల ఇష్టంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సెద్యపు నీటినిపెట్టి యింకనుట్లు చేయాలి. 24 గం.ల తరువాత ఇంకని నీటిని ఈట కాలువల ద్వారా బయటికి పంపాలి.
 6. జంతులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జంతు సల్ఫేటును దుక్కిలోవేసి కలియదున్నాలి.
 7. నేల స్వభావం అప్పుక్కుం అయినందున దాని నివారణకు ఎకరాకు 120 కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియదున్నాలి.
 8. ఇకర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారివారిని సంప్రదించండి.
- నూచన : కరువధి భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
(మూడు పంట కాలములకు ఒకసారి)

Signature
ప్రధానాధికారి సహాయ సంచాలకులు,
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

After Mining

28 No - 1 + +

భూసార పరీక్షా ఫలితాలు
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

సమూహం నెం	271	గ్రామం	Trimmex
రైతు పేరు	శ్రీ	మండలం	TRG
సర్కే నెం		జిల్లా	శ్రీకాకుళం
నీల స్వభావం	(SL)	ప్రతీక నేలలు/మద్దనకం	నేలలు/బరువు నేలలు
ఉదజని సూచక	(7.32)	అమ్మ/అమ్మం/జ్వారం	(అల్లి/మద్దనం/అధిక)
లవణ సాంద్రత మి.మో/సం.మీ	(0.02)	సామాన్యం/మొలకెక్కుట	కష్టం/పంటకు హాని
సంక్రియ కర్మణం	(0.15)	అమ్మ / మద్దనం / ఎక్కువ	
లవణ సక్రమణ	(226)	అమ్మ / మద్దనం / ఎక్కువ	
లవణ భాస్వరం కి.గ్రా/ఎ	(3)	అమ్మ / మద్దనం / ఎక్కువ	
లవణ పొటాష్ కి.గ్రా/ఎ	(74)	అమ్మ / మద్దనం / ఎక్కువ	
నీటి వివరం :	నీటి పగురుల క్రింద	వర్షాధారం	గూకులక్రింద
భూమి వివరం :	పల్లం	మొట్టు	ఆరుదళ్ళు
పైరు :			

ఫలితం/రకలో నివారణ చర్యలను చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు

సక్రమణ ()	యూరియా - - -	()
భాస్వరం ()	యస్.యస్.పి. / డి.పి.పి -	()
పొటాష్ ()	ముక్కరేట్ అఫ్ పొటాష్	()
గడ్డం ()	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి 1 కేజీల అమ్మం పొడిని రెండవసారి కలుపుతీయు సమయం మొక్కకు 5 సం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
 2. వర్షాల్ప ఎరువులైన పిల్లిపెనర, గైలినీడియా, జీలుగ, కట్టిజనుము మొ.వాటిని భూమిలో వేసి, పూత సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సేద్యపు నీటిని పెట్టి దమ్ముచేసి, తరుకున్న మురుగునీటిని ఈట కాలువల ద్వారా యింకని నీటిని బయటికి పంపాలి.
 5. నీల స్వభావం జ్వారం అయినందున చాడు కర్గించేందుకు ఎకరాకు _____ టన్నుల అమ్మంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సేద్యపు నీటినిపెట్టి యింకనున్ను చేయాలి. 24 గం||ల తరువాత ఇంకని నీటిని ఈట కాలువల ద్వారా బయటికి పంపాలి.
 6. ఇంకులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు ఇంకు సర్టిటును దుక్కిలోవేసి కలియదున్నాలి.
 7. నీల స్వభావం అమ్మకం అయినందున దాని నివారణకు ఎకరాకు _____ కిలోల సున్నంను పొడిచేసి నేలపై అల్లి బాగా కలియదున్నాలి.
 8. ఇతర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారివారిని సంప్రదించండి.
- సూచన : తదుపరి భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
(ముూడు పంట కాలములకు ఒకసారి)

R. H. S. S. S. S. S.
వ్యవసాయ సహాయ సంఘాలకులు,
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

భూసార పరీక్షా ఫలితాలు
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

గమనా నెం 298
రైతు పేరు Tramex గ్రామం _____
నర్సే నెం _____ మండలం TDP జిల్లా: శ్రీశాకుంతలం
నెల స్వభావం (9) తేలిక నెలలు/మధ్యరకం నెలలు/బరువు నెలలు
ఉదజని సూచక (6.02) ఆమ్లం/తటస్థం/క్షారం (ఆల్క/మధ్యస్థం/అధిక)
లవణ సాంద్రత మి.మో/సం.మి (0.03) సామాన్యం/ములకెక్కువ కష్టం/పంటకు హాని
సంక్రియ కర్మణం (0-10) అక్కవ /మధ్యస్థం / ఎక్కవ
లభ్య నక్షత్రం (125) అక్కవ /మధ్యస్థం / ఎక్కవ
లభ్య భాస్వరం కి.గ్రా/ఎ (3) అక్కవ /మధ్యస్థం / ఎక్కవ
లభ్య పొటాష్ కి.గ్రా/ఎ (111) అక్కవ /మధ్యస్థం / ఎక్కవ
నీటి వివరం : నీటి పగురుల క్రింద పర్యాధారం గూతులక్రింద
భూమి వివరం : పల్లం మెట్టు ఆరుదట్టు
పైరు : _____

ఖరీఫ్/రబీలో సిఫారసు చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు

నక్షత్రం ()	యూరియా - - -	()
భాస్వరం ()	యస్.యస్.పి. / డి.పి.పి -	()
పొటాష్ ()	మ్యూరేట్ ఆఫ్ పొటాష్	()
గోళం ()	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

- ఎకరానికి : తేలిక జన్మం పొడిగి రెండవసారి కలుపుతీయని సమయం మొక్కకు 5 సం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
 - పచ్చాల్పాట ఎరువులైన పిల్లిపనర, స్ట్రెన్డియా, జీలుగ, కట్టెగుము మొ.వాటిని భూమిలో వేసి, పూత సమయంలో కలియబెట్టాలి.
 - జీవన ఎరువులను వాడాలి.
 - సెద్యపు నీటిని పెట్టి దబ్బువేసి, తేరుకున్న మురుగునీటిని ఈట తాలువల ద్వారా యింకని నీటిని బయటికి పంపాలి.
 - నెల స్వభావం క్షారం అయినందున చూడు కర్గించేందుకు ఎకరాకు _____ టన్నుల జన్మంను పొడిచేసి పాలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సెద్యపు నీటినిపెట్టి యింకనుగట్టు చేయాలి. 24 గం.ల తరువాత ఇంకని నీటిని ఈట తాలువల ద్వారా బయటికి పంపాలి.
 - జంతులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు ఇంకు సల్ఫేటును దుక్కిలోవేసి కలియబెట్టాలి.
 - నెల స్వభావం ఆమ్లజన్మం అయినందున దాని నివారణకు ఎకరాకు _____ కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియబెట్టాలి.
 - ఇకర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారివారిని సంప్రదించండి.
- నూచన : తదుపరి భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
(మూడు పంట తాలములకు ఒకసారి)

[Signature]
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

భూసార పరీక్షా ఫలితాలు
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

సమూహ నెం. <u>299</u>	రైతు పేరు త్రి <u>Trimex</u>	గ్రామం _____
సర్వే నెం. _____	మండలం <u>గుంటూరు</u>	జిల్లా : త్రికాకుళం
నెల స్వభావం (<u>SL</u>)	✓ తేలిక నెలలు/మధ్యరకం నెలలు/బరువు నెలలు	
ఉదాహరణ సూచక (<u>6.40</u> )	) ఆవృం/కటస్థం/జ్వారం (లబ్ధి/మధ్యస్థం/అధిక)	
లవణ సాంద్రత మి.మో/సం.మీ (<u>0.03</u>)	✓ సామాన్యం/ములతెక్కుట కష్టం/పంటకు హాని	
సెంట్రీయ కర్బనం (<u>0.62</u> )	) కక్కువ /మధ్యస్థం / ఎక్కువ	
లబ్ధ సక్రమణ (<u>11.3</u> )	) కక్కువ /మధ్యస్థం / ఎక్కువ	
లబ్ధ భాస్వరం కి.గ్రా/ఎ (<u>4</u> )	) కక్కువ /మధ్యస్థం / ఎక్కువ	
లబ్ధ పొటాష్ కి.గ్రా/ఎ (<u>92</u> )	) కక్కువ /మధ్యస్థం / ఎక్కువ	
నీటి వివరం :	నీటి పనరుల క్రింద	వర్షాధారం
భూమి వివరం :	పల్లం	మొట్టు
పైరు :		నూకులక్రింద
		ఆరుదర్బు

ఫిల్టర్/రెజిస్టర్ సిఫారసు చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు

సక్రమణ ()	యూరియా - - -	()
భాస్వరం ()	యన్.యన్.సి. / డి.పి.సి -	()
పొటాష్ ()	ముయిరేట్ ఆఫ్ పొటాష్	()
గెడ్డం ()	టార్పూలు/బండ్ర/ఎకరాకు	()

- ప్రత్యేక సలహాలు :**
- ఎకరానికి 2 కేజీల ఆవృం పొడిని రెండవసారి కలుపుతీయు సమయం మొక్కకు 5 సం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
 - సర్వేలోని ఎరువులైన పిల్లపెనర, గైంసిడియా, జీలుగ, కట్టిజనుము మొ.వాటిని భూమిలో వేసి, పూక సమయంలో కలియచున్నారు.
 - జీవన ఎరువులను వాడాలి.
 - సర్వేపు నీటిని పట్టి దమ్ముచేసి, తేరుకున్న మురుగునీటిని ఈట కాలువల ద్వారా యింకని నీటిని బయటికి పంపాలి.
 - నెల స్వభావం జ్వారం అయినందున చాడు కర్గించేందుకు ఎకరాకు _____ టార్పూల ఆవృంను పొడిచేసి హిలంలో వేసి దాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సర్వేపు నీటినిపట్టి యింకనిట్లు చేయాలి. 24 గం.ల తరువాత ఇంకని నీటిని ఈట కాలువల ద్వారా బయటికి పంపాలి.
 - జంతులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జంతు సర్వేటును దుక్కిలోవేసి కలియచున్నారు.
 - నెల స్వభావం ఆవృం అయినందున దాని నివారణకు ఎకరాకు 60 కిలోల నున్నంను పొడిచేసి నెలపై జల్లి దాగా కలియచున్నారు.
 - ఇతర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారిని సంప్రదించండి.
- నూచన : తదుపరి భూసార పరీక్షలు చేయించులోపలనైన సమయము _____
(మూడు పంట కాలములకు ఒకసారి)

P. S. S. S. S. S.
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

భూసార పరీక్షా ఫలితాలు
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

సమూహ నం. 300
రైతు పేరు త్రి Trimex గ్రామం _____
సర్వే నం. _____ మండలం గు జిల్లా: త్రికాకుళం
నేల స్వభావం (SL) తేలిక నేలలు/మధ్యరకం నేలలు/బయ్య నేలలు
ఉదజని సూచక (6.38) ఆమ్లం/కఠినం/జ్వరం (అల్క/మధ్యస్థం/అధిక)
లహరి సాంద్రత మి.మో/సం.మి. (0.03) సామాన్యం/మొలతెక్కువ కష్టం/పంటకు హాని
సంక్రియ కఠనం (0.14) తక్కువ /మధ్యస్థం / ఎక్కువ
లభ్య సక్రమణ (100) తక్కువ /మధ్యస్థం / ఎక్కువ
లభ్య భాస్వరం కిగ్రా/ఎ (3) తక్కువ /మధ్యస్థం / ఎక్కువ
లభ్య పొటాష్ కిగ్రా/ఎ (105) తక్కువ /మధ్యస్థం / ఎక్కువ
నీటి వివరం : నీటి వనరుల క్రింద పర్షాధారం సూకులక్రింద
భూము వివరం : వల్లం మెట్టు ఆరుదళ్ళు
పైరు :

భరిష్/రబలో నిఫారసు చేయబడిన ఎరువుల మోతాదు కిగ్రా/ఎకరాకు

సక్రమణ ()	యూరియా - - - -	()
భాస్వరం ()	యస్.యస్.పి. / డి.పి.పి -	()
పొటాష్ ()	ముర్దేట్ అఫ్ పొటాష్	()
గక్రం ()	టన్నులు/బండ్లు/ఎకరాకు	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి :) తేలిక జన్మం వూడిని రెండవసారి కలుపుతీయు సమయం మొక్కకు 5 సం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగడోయాలి.
 2. పచ్చిపొత్తు ఎరువులైన పిల్లిపెనర, గైలినీడియా, తీలుగ, కట్టిజనుము మొ.వంటివి భూములో వేసి పూజ సమయంలో కలియబుద్దాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సుదృఢ నీటిని పెట్టి దమ్ముచేసి, తేరుకున్న మురుగునీటిని ఈట కాలువల ద్వారా యింకని నీటిని బయటికి పంపాలి.
 5. నేల స్వభావం జ్వరం అయినందున చాడు కగ్గించేందుకు ఎకరాకు _____ టన్నుల జన్మంను పొడిచేసి వీలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సుదృఢ నీటినిపెట్టి యింకనున్న చేయాలి. 24 గం||ల తరువాత ఇంకని నీటిని ఈట కాలువల ద్వారా బయటికి పంపాలి.
 6. జంకులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జంకు సన్నటును దుక్కిలోవేసి కలియబుద్దాలి.
 7. నేల స్వభావం ఆమ్లకృష్ణం అయినందున దాని నివారణకు ఎకరాకు 60 కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియబుద్దాలి.
 8. ఇకర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారివారిని సంప్రదించండి.
- సూచన : తదుపరి భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
(మూడు పంట కాలములకు ఒకసారి)

[Signature]
వ్యవసాయ సహాయ నిరవాలకులు,
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

భూసార పరీక్షా ఫలితాలు
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

గమనా నెం	302	గ్రామం	
రైతు పేరు	Trimesh	జిల్లా	శ్రీకాకుళం
నల్ల నెం	మండలం	720	
నీల స్వభావం	(9)	తేలిక నీలలు/మధ్యరకం నీలలు/బరువు నీలలు	
ఉదజని సూచక	(5.16)	ఆమ్లం/కఠినం/జ్వరం (అల్క/మధ్యస్థం/అధిక)	
లవణ సాంద్రత మి.మో/సం.మీ	(0.03)	సామాన్యం/మొలకెక్కువ కష్టం/పంటకు హాని	
సెంట్రీయ కర్బనం	(0.25)	కక్కువ /మధ్యస్థం / ఎక్కువ	
లఘు నత్రజని	(163)	కక్కువ /మధ్యస్థం / ఎక్కువ	
లఘు ధాన్యరం కి.గ్రా/ఎ	(10)	కక్కువ /మధ్యస్థం / ఎక్కువ	
లఘు పొటాష్ కి.గ్రా/ఎ	(111)	కక్కువ /మధ్యస్థం / ఎక్కువ	
నీటి వివరం :	నీటి పనరుల క్రింద	పర్యావారం	నూకులక్రింద
ధూమి వివరం :	పల్లం	మెట్టు	ఆరుదళ్ళు
పైరు :	భారత్/రజల్ నీవారను చేయబడిన ఎరువుల మోతాదు కి.గ్రా/ఎకరాకు		
నత్రజని ()	యూరియా - - -	()	()
ధాన్యరం ()	యన్.యస్.పి. / డి.పి.పి -	()	()
పొటాష్ ()	మ్యూరేట్ ఆఫ్ పొటాష్	()	()
కర్బం ()	టన్నులు/బండ్లు/ఎకరాకు	()	()

ప్రత్యేక సలహాలు :

1. ఎకరానికి :) తేలిక జ్వరం పొడిగి రెండవసారి కలుపుతీయి నమయి.) మొక్కకు 5 సం.మీటర్ల దూరంలో వేసి మట్టిని మొదలకు ఎగదోయాలి.
 2. వర్షాల్ప ఎరువులైన పిల్లిపెనర, గైలినీడియా, జీలుగ, కల్లిజనుము మొ.వాటిని భూమిలో వేసి, పూక సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సేద్యపు నీటిని పెట్టి దమ్ముచేసి, తేరుకున్న మురుగునీటిని ఈట తాలువల ద్వారా యింకని నీటిని బయటికి పంపాలి.
 5. నీల స్వభావం జ్వరం అయినందున చాడు తగ్గించేందుకు ఎకరాకు _____ టన్నుల జ్వరంను పొడిచేసి పొలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సేద్యపు నీటిని పెట్టి యింకనుట్లు చేయాలి. 24 గం.ల తరువాత ఇంకని నీటిని ఈట తాలువల ద్వారా బయటికి పంపాలి.
 6. జంకులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జంకు సల్ఫేటును దుక్కిలో వేసి కలియదున్నాలి.
 7. నీల స్వభావం ఆమ్లత్వం అయినందున దాని నివారణకు ఎకరాకు 200 కిలోల సున్నంను పొడిచేసి నేలపై జల్లి బాగా కలియదున్నాలి.
 8. ఇతర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారివారిని సంప్రదించండి.
- సూచన : తదుపరి భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
(మూడు పంట తాలములకు ఒకసారి)

[Signature]
వ్యవసాయ సహాయ సరచాలకులు,
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

భూసార పరీక్షా ఫలితాలు
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

సమూహా నెం. 303

రైతు పేరు త్రి Trimex గ్రామం _____

సర్వే నెం. _____ మండలం TRP జిల్లా : త్రికాకుళం

నీల స్వభావం	(	<u>SL</u>	)	కఠిన నీలలు/మధ్యరకం నీలలు/బయ్య నీలలు
ఉదజని సూచక	(	<u>6.07</u>	)	అప్పుం/కఠినం/జ్వరం (అల్ప/మధ్యస్థం/అధిక)
లవణ సాంద్రత మి.మో/సం.మి	(	<u>0.01</u>	)	సామాన్యం/మొలకెక్కుట కష్టం/వంటకు వాని
సంక్రియ కర్మణం	(	<u>0-22</u>	)	కక్కువ / మధ్యస్థం / ఎక్కువ
లభ్య నక్షణం	(	<u>63</u>	)	కక్కువ / మధ్యస్థం / ఎక్కువ
లభ్య భాస్వరం కిగ్రా/ఎ	(	<u>6</u>	)	కక్కువ / మధ్యస్థం / ఎక్కువ
లభ్య వాటాప్ కిగ్రా/ఎ	(	<u>74</u>	)	కక్కువ / మధ్యస్థం / ఎక్కువ

నీటి వివరం : నీటి వశయల క్రింద వర్షాధారం నూతులక్రింద

భూమి వివరం : పల్లం మొట్టు ఆరుదళ్ళు

పైరు : _____

ఖరీఫ్/రబీలో నిఫారను చేయబడిన ఎరువుల మోతాదు కిగ్రా/ఎకరాకు

నక్షణం	(	_____	)	యూరియా - - -	(_____)
భాస్వరం	(	_____	)	యస్.యస్.పి. / డి.పి.పి -	(_____)
వాటాప్	(	_____	)	మ్యూరేట్ అఫ్ వాటాప్	(_____)
గిక్రం	(	_____	)	టాక్సులు/బండ్రా/ఎకరాకు	(_____)

ప్రత్యేక సలహా :

1. ఎకరానికి 200 కేజీల జిప్సం పొడిని రెండవసారి కలుపుతీయి సమయంలో మొక్కకు 5 సెం.మీ.కుర్ల దూరంలో వేసి చుట్టిన మొదలకు ఎగడోయాలి.
 2. పచ్చిరాట్ల ఎరువులైన పిల్లిపెనర, గైలసిడియా, జీలుగ, కట్టిజారుము మొ.వాటిని భూమిలో వేసి, పూక సమయంలో కలియదున్నాలి.
 3. జీవన ఎరువులను వాడాలి.
 4. సెద్యపు నీటిని పెట్టి దమ్ముచేసి, తేరుకున్న మురుగునీటిని ఉంట కాలువల ద్వారా యింకని నీటిని బయటికి పంపాలి.
 5. నీల స్వభావం జ్వరం అయినందున చాడు కర్గించేందుకు ఎకరాకు _____ టాక్సుల జిప్సంను పొడిచేసి వాలంలో వేసి బాగా దుక్కి చేయాలి. తరువాత మడులు కట్టి సెద్యపు నీటినిపెట్టి యింకనుట్లు చేయాలి. 24 గం||ల తరువాత ఇంకని నీటిని ఉంట కాలువల ద్వారా బయటికి పంపాలి.
 6. జంతులోపం ఉన్నచోట ఎకరాకు 20 కిలోలు జంతు సల్ఫేటును దుక్కిలోవేసి కలియదున్నాలి.
 7. నీల స్వభావం అప్పుక్కం అయినందున దాని నివారణకు ఎకరాకు 200 కిలోల సున్నంను పొడిచేసి నీలపై జల్లి బాగా కలియదున్నాలి.
 8. ఇతర వివరాలకు దగ్గరలో ఉన్న వ్యవసాయాధికారివారిని సంప్రదించండి.
- సూచన : కడపవల భూసార పరీక్షలు చేయించుకోవలసిన సమయము _____
(మూడు వంట కాంములకు ఒకసారి)

[Signature]
వ్యవసాయ సహాయ సంచాలకులు,
భూసార పరీక్షా కేంద్రం, ఆమదాలవలస.

Water Sprinkling on Haul Roads



Annexure-10

TEAM

ORIGINAL

Form-No. TCLL/GF/RF-138

3374

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, Gol, New Delhi

TEST REPORT

Test Report No. TLC/V/Env/TSPL/12/0917

dt05.10.2017

Description of Test:

Analysis of Heavy metal in TCLP (Toxicity Characteristic Leaching Procedure) extract

Name of the client:

Trimex Sands Pvt. Ltd. Vatchavalasa, Srikakulam Dt.

Date of Collection:

20.09.2017

Sample Description:

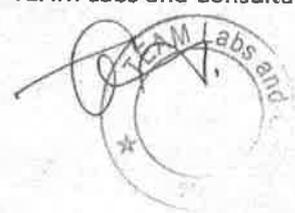
Raw materials & Tailings samples

Test Method:

USEPA Test Method-1311

SNö.	PARAMETER	UNIT	RESULT Extraction with Fluid-II At pH 4.9	
			Raw material(ROM)	Tailings
1	Total Chromium	Mg/l	0.09	0.08
2	Cr ⁶⁺	Mg/l	NIL	NIL
3	Zinc	Mg/l	0.07	0.05
4	Cadmium	Mg/l	NIL	NIL
5	Lead	Mg/l	0.14	0.11
6	Copper	Mg/l	NIL	NIL
7	Iron	Mg/l	0.18	0.15
8	Cobalt	Mg/l	NIL	NIL
9	Nickel	Mg/l	NIL	NIL
10	Manganese	Mg/l	0.35	0.22
11	Arsenic	Mg/l	NIL	NIL
12	Mercury	Mg/l	NIL	NIL

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, Gol, New Delhi

TEST REPORT

Test Report No. TLC/V/Env/TSPL/12/0617

dt 05.07.2017

Description of Test:

Analysis of Heavy metal in TCLP (Toxicity Characteristic Leaching Procedure) extract

Name of the client:

Trimex Sands Pvt. Ltd. Vatchavalasa, Srikakulam Dt.

Date of Collection:

28.06.2017

Sample Description:

Raw materials & Taili8ng samples

Test Method:

USEPA Test Method-1311

SNo.	PARAMETER	UNIT	RESULT Extraction with Fluid-II At pH 4.9	
			Raw material (ROM)	Tailings
1	Total Chromium	Mg/l	0.11	0.09
2	Cr ⁶⁺	Mg/l	NIL	NIL
3	Zinc	Mg/l	0.05	0.04
4	Cadmium	Mg/l	NIL	NIL
5	Lead	Mg/l	0.12	0.10
6	Copper	Mg/l	NIL	NIL
7	Iron	Mg/l	0.19	0.14
8	Cobalt	Mg/l	NIL	NIL
9	Nickel	Mg/l	NIL	NIL
10	Manganese	Mg/l	0.32	0.26
11	Arsenic	Mg/l	NIL	NIL
12	Mercury	Mg/l	NIL	NIL

For TEAM Labs and Consultants



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 -12)</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</p>

	industry providing livelihood to labor and fisherman community	commitment in future also.		Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -12)
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.</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 -12)</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</p> <p>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</p> <p>The management has assured that the impact on the environment will be</p>	<p>Complied.</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: MinimumRs.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 -12)</p>
6	<p>Sri TaniVenkataApparao, PedaTulugu (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</p> <p>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: MinimumRs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Complied.</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 -12)</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: MinimumRs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Complied.</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 -12)</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.</p> <p>Complied. 0.88 Crores spent towards CSR activities & 1.95</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: MinimumRs.2.0 Crores every year towards CSR activities. Timeframe: Every year	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 -12)
9	Sri KurumanaAppaRao, 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: MinimumRs.2.0 Crores every year towards CSR activities. Timeframe: Every year	Complied. 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 -12)
10	Sri KomaraKorlayya, 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	<p>Sri KoyyanaJagadeesh, Koyyanapeta (v)</p> <p>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.</p>	<p>The management after understanding 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.</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: MinimumRs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Complied.</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 -12)</p>
12	<p>Sri D. Simhadri, Tulugu (v)</p> <p>He requested the management to provide further employment in the expansion of the proposed project.</p>	<p>The management has already provided employment for 1200 people and promised to provide more employment for the proposed 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: MinimumRs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Complied.</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 -12)</p>
13	<p>Sri Koyyana, Satyanarayana, Tulug (v)</p> <p>He requested the management to develop</p>	<p>The suggestions provided by the local panchayat has been accepted and it is committed to provide</p>		<p>Complied.</p>

	local panchayat and provide employment to women also in the industry.	local employment to woman folk of the area,		
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: MinimumRs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>Complied.</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 -12)</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</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.</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.</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-14).</p>

	<p>of water per day from Vamsadhara River may cause water scarcity in the surrounding areas for 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>Water is drawn from a point at Vamsadhara river, where no water drawal for irrigation 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.</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-14).</p>
17	<p>Sri BandiRam, Mugadalpadu (v)</p> <p>He opined that the</p>	<p>The management informed that all the precautionary</p>	<p>The management has assured that need based CSR activities</p>	<p>Complied.</p> <p>Complied. 0.88 Crores spent towards CSR</p>

	<p>industry is implementing the CSR activities in the nearby villages due to pollution problems from 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>measures for pollution problems will be taken and will develop their area as 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>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>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 -12) The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-14).</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</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</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. 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</p>

	expansion project also.	area as a part of CSR activity.		under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -12)
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.</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 -12)</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-14).</p>
20	<p>Smt. RangarajuVani, Srikurmam (v)</p>	<p>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd</p>	<p>The management has assured that need based CSR activities</p>	<p>Complied.</p> <p>Complied. 0.88 Crores spent towards CSR</p>

	<p>She stated that the management has taken up developmental activities in the area and the expansion of the project also would develop further in this area.</p>	<p>expressed his thankfulness and stated that the management will take all means to develop their area as a part of CSR activity.</p>	<p>will be continued by spending about Rs.2.0 Crores/year.</p>	<p>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 -12)</p>
12	<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.</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 -12)</p> <p>The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September,</p>

				2017) is 697.96 Lakhs (Annexure-14).
22	<p>Sri. K. Raju, MPTC, Srikurmam (v)</p> <p>He stated that industrialization is necessary for development of this area. He opined that the people in this area are benefited due to establishment 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>Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd expressed his thankfulness and stated that the management will continue to 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. 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 -12) The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-14).</p>
23	<p>Sri GaneswaraRao, Umaravalli (v)</p> <p>He stated that due to lack of industrialization there are no developmental activities in this area and</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. Total capital cost and</p>	<p>Complied. Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking Social upliftment</p>

	<p>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 management to remove the silt in the irrigation canals to facilitate the irrigation water for 70 acres of agricultural land of their village.</p>	<p>all the precautionary measures for pollution problems and will develop their area as a part of CSR 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>works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -12) The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs. (Annexure-14).</p>
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. 	<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. 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</p>	<p>Complied.</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 -12) The recurring expenditure incurred</p>

	<p>3) He praised the District Collector for involving in taking up of CSR activities with the industries for developing the Government hostels.</p> <p>4) The Management should provide computer training programmes to the local students and to educate them in all aspects.</p>		lakhs respectively.	against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs (Annexure-14).
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</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</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.</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 -12)</p> <p>The recurring expenditure incurred against the environmental</p>

	<p>by semi-mechanized method. The management should explore possibility of manual operations 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</p>	<p>2011 and primary need based assessment study carried out is utilized in developing the CSR activities in the area.</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>		<p>protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs (Annexure-14).</p>
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	land every year, so that the total mining area of 720 ha would be covered with greenbelt in 12 years.			
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>	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>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.</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 -12)</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-14).</p>
14	Sri Tanmai, Engineering Student, Srikakulam	Dr. N. L. Rao, Head (Liaison), M/s Trimex	Action Plan Vocational training	<p>Complied.</p> <p>Complied. 0.88 Crores</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 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.</p>	<p>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>will be provided to youth. Employees will be provided with higher education facilities which will enhance their skills.</p> <p>Budget: Minimum Rs.2.0 Crores every year towards CSR activities.</p> <p>Timeframe: Every year</p>	<p>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 -12)</p>
28	<p>Sri Nagabhusanam</p> <p>He welcomed the project and stated that there is no problem with M/s Trimex industries and this will further develop the area.</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>Complied.</p>

29	<p>Sri P. PentaRao, President of Malamahanadu, Visakhapatnam</p> <p>He welcomed the project and stated that the people 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>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.
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</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</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,</p>	<p>Complied. Complied. 0.88 Crores spent towards CSR activities & contributed 1.95 Crores to the State Govt. for undertaking Social upliftment works in the mining affected villages</p>

	the district.	a part of CSR activity.	occupational health & safety, reclamation, green belt development etc would be Rs1064 lakhs and Rs1616 lakhs respectively.	under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -12) The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs (Annexure-14).
31	SmtLaxmiNarasimha Devi, Ex-MPTC, Tonangi (v) 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.	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.		Complied.
32	Sri Guntu Laxmayya He expressed his grievance and stated that there would be pollution problems with the industry even though	Dr. N. L. Rao, Head (Liaison), M/s Trimex Sands Pvt. Ltd stated that the management will take all possible precautionary measures for	The management has assured that need based CSR activities will be continued by spending about Rs.2.0 Crores/year. Total capital cost and	Complied. Complied. 0.88 Crores spent towards CSR activities & 1.95 Crores to the State Govt. for undertaking

	<p>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 village. He requested to provide employment to the coast line village people.</p>	<p>pollution problems and will develop their area as a part of CSR 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>Social upliftment works in the mining affected villages under District Mineral Foundation for the FY 2017-18 (up to September, 2017) (Annexure -12) The recurring expenditure incurred against the environmental protection measure/monitoring for the year 2017-18 (up to September, 2017) is 697.96 Lakhs (Annexure-14).</p>
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. 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 -12)</p>



Ammex - 12

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

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 Musalayaa Layout, Adithya Nagar, Arasavilli Road, Srikakulam-532001, Andhra Pradesh, India Telefax: +91 8942 229328, e-mail: trimexsklm@eth.net
Hyderabad Office:	#8-2-624, 2nd Floor, Sri Durga 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

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	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.	



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



भारत सरकार
Government of India

राष्ट्रीय उद्योग विभाग

Ministry of Commerce & Industry

पेट्रोलियम एवं विस्फोटक सुरक्षा संगठन (PEESO)
पेट्रोलियम एवं विस्फोटक सुरक्षा संगठन (PEESO)
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पेट्रोलियम एवं विस्फोटक सुरक्षा संगठन (PEESO)



Annexure - 15

Email: explosives@govt.pes.gov.in
Phone/Fax No: 0712-251024 Fax: 2510377

आदेश संख्या: PE/IA/15/4051 (P-332428)

दिनांक: 03/07/2015

श्री/श्री/से. / To
M/s. Trimex Sands Pvt. Limited,
Plot No. 59, Telugu Musdalayaya Layout, Arsavilli Road,
Srikakulam,
District: SRIKAKULAM,
State: Andhra Pradesh,
PIN: 532001

विषय / Sub: Survey No. 144 P (Old 618), Gara, Tonangi, Gara, District: SRIKAKULAM, State: Andhra Pradesh, PIN: 532404 में पेट्रोलियम वर्ग B का अतिरिक्त - अनुमति जारी करने के बारे में।
Petroleum Class B installation of Survey No. 144 P (Old 618), Gara, Tonangi, Gara, District: SRIKAKULAM, State: Andhra Pradesh, PIN: 532404 Grant of license regarding

संदर्भ संख्या / (Ref)

कृपया अपने पत्र संख्या TRIME/TONGUCCE दिनांक 25/08/2015 का उत्तर लिखें करें।
Please refer to your letter No TRIME/TONGUCCE dated 25/08/2015

विस्तारित अनुमति के अंतर्गत पेट्रोलियम वर्ग B के तहत तब तक का अतिरिक्त के लिए पेट्रोलियम नियम, 2002 के अधीन प्रारूप - XV में स्वीकृत दिनांक 31/12/2024 तक वैध अनुमति संख्या PE/IA/15/4051 (P-332428) दिनांक 03/07/2015 जारी की गई है।
Licence No PE/IA/15/4051 (P-332428) dated 03/07/2015 granted in Form XV under the Petroleum Rules, 2002 and valid till 31/12/2024 for the storage of the following kinds and quantities of Petroleum of the subject installation is forwarded herewith.

पेट्रोलियम का विवरण /Description of Petroleum

शिलोमीटर में अनुमानित मात्रा /Quantity (rounded in KL)

वर्ग A के तहत पेट्रोलियम /Petroleum Class A in bulk	NIL
वर्ग A से अतिरिक्त पेट्रोलियम /Petroleum Class A otherwise than in bulk	NIL
वर्ग B के तहत पेट्रोलियम /Petroleum Class B in bulk	40.00 KL
वर्ग B से अतिरिक्त पेट्रोलियम /Petroleum Class B otherwise than in bulk	NIL
वर्ग C के तहत पेट्रोलियम /Petroleum Class C in bulk	NIL
वर्ग C से अतिरिक्त पेट्रोलियम /Petroleum Class C otherwise than in bulk	NIL
कुल क्षमता /Total Capacity	40.00 KL

कृपया पेट्रोलियम नियम 2002 के अधीन वर्ग B के तहत नियम 148 में दी गई प्रक्रिया का पालन करें और अनुमति के नवीकरण हेतु आवश्यक दस्तावेजों को अनुमति की शर्तों के तहत प्रेषित की जाएगी जो नियम 148 के तहत प्रमुख नियंत्रक, विस्फोटक, विशाखापट्टनम से प्राप्त करें।
Please follow the procedure strictly as laid down in rule 148 of the Petroleum Rules, 2002 and submit complete documents for the Renewal of the licence to Dy. Chief Controller of Explosives, Visakhapatnam to reach his office on or before the date on which licence expires.

यह अनुमति/अनुमति अन्य प्राधिकारियों से आवश्यक अनुमति/अनुमति प्राप्त करने से या या अन्य अन्य विधियों से छूट नहीं देती है।

This approval/permission, however, does not absolve from obtaining necessary permission/clearance from other authorities or under other statutes as applicable

मुख्य नियंत्रक, विस्फोटक
[Signature]
[Name]
मुख्य नियंत्रक, विस्फोटक
Controller of Explosives
दक्षिण चक्राफिस, चेन्नई
For Chief Controller of Explosives
NAGPUR
Nagpur

Copy forwarded to:-
1. The District Magistrate, SRIKAKULAM (Andhra Pradesh) with reference to his NOC No D/CA No 368/2013 Dated 09/12/2014
2. Chief Controller of Explosives, South Circle Office, CHENNAI. A Copy of the licence along with approved plan is enclosed
3. Dy. Chief Controller of Explosives, Visakhapatnam, VISAKHAPATNAM. A Copy of the licence along with approved plan is enclosed

For Chief Controller of Explosives
Nagpur

[अधिक जानकारी के लिए सर्विस की स्थिति, शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट http://peso.gov.in देखें] -
(For more information regarding status, fees and other details please visit our website http://peso.gov.in)

प्ररूप XV
(प्रथम अनुसूची का अनुच्छेद 6 देखिए)
FORM XV
(see Article 6 of the First Schedule)



अधिष्ठापनों में पेट्रोलियम के आयात और भण्डारण के लिए अनुज्ञप्ति
LICENCE TO IMPORT AND STORE PETROLEUM IN AN INSTALLATION

अनुज्ञप्ति सं. (Licence No.): P/HQ/AP/15/4061(P332428)

फीस रूपरेखा (Fee Rs.) 100/- per year

M/s. Trimex Sands Pvt. Limited, Plot No. 66, Telugu Musdalayya Layout, Arasavilli Road, Srikakulam, District: SRIKAKULAM, State: Andhra Pradesh, PIN: 532001 को केवल इसमें यथा विनिर्दिष्ट वर्ग और मात्राओं में पेट्रोलियम 40.00 KL आयात करने के लिए और उसका, नीचे वर्णित और अनुमोदित वास्तु संख्या P/HQ/AP/15/4061(P332428) तारीख 03/07/2015 जो कि इससे उपाबंध है, में दिखाए गए स्थान पर भण्डारण के लिए पेट्रोलियम अधिनियम, 1934 के उपबंधों या उसके अधीन बनाए गए नियमों तथा इस अनुज्ञप्ति की अतिरिक्त शर्तों के अधीन रहते हुए, यह अनुज्ञप्ति अनुदत्त की जाती है।

Licence is hereby granted to M/s. Trimex Sands Pvt. Limited, Plot No. 66, Telugu Musdalayya Layout, Arasavilli Road, Srikakulam District: SRIKAKULAM, State: Andhra Pradesh, PIN: 532001 valid only for the importation and storage of 40.00 KL Petroleum of the class and quantities as herein specified and storage thereof in the place described below and shown on the approved plan No P/HQ/AP/15/4061(P332428) dated 03/07/2015 attached hereto subject to the provisions of the Petroleum Act, 1934 and the rule made thereunder and to the further conditions of this Licence.

यह अनुज्ञप्ति 31st day of December 2024 तक प्रवृत्त रहेगी।
The Licence shall remain in force till the 31st day of December 2024

पेट्रोलियम का विवरण /Description of Petroleum	अनुज्ञप्त मात्रा (किलोलीटरों में) /Quantity licenced in KL
वर्ग क प्रपुंज पेट्रोलियम /Petroleum Class A in bulk	NIL
वर्ग क प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class A, otherwise than in bulk	NIL
वर्ग ख प्रपुंज पेट्रोलियम /Petroleum Class B in bulk	40.00 KL
वर्ग ख प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class B, otherwise than in bulk	NIL
वर्ग ग प्रपुंज पेट्रोलियम /Petroleum Class C in bulk	NIL
वर्ग ग प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class C, otherwise than in bulk	NIL
कुल क्षमता /Total Capacity	40.00 KL

July 3, 2015


For Chief Controller of Explosives
H. A. Nagpur

अनुज्ञप्त परिसरों का विवरण और अवस्थान
DESCRIPTION AND LOCATION OF THE LICENSED PREMISES

अनुज्ञप्त परिसर जिसकी विन्यास सीमाएं अन्य विशिष्टताएं संलग्न अनुमोदित नक्शों में दिखाई गई हैं Survey No: 144 P (Old 618), Gara, Tonangi, Gara, District: SRIKAKULAM, State: Andhra Pradesh, PIN: 532404 स्थान पर अवस्थित है तथा उसमें निम्नलिखित Two nos. of above ground tank(s) for petroleum Class-B and other connected facilities. सम्मिलित हैं।

The licensed premises, the layout, boundaries and other particulars of which are shown in the attached approved plan are situated at Survey No: 144 P (Old 618), Gara, Tonangi, Gara, District: SRIKAKULAM, State: Andhra Pradesh, PIN: 532404 and consists of Two nos. of above ground tank(s) for petroleum Class-B and other connected facilities. together with connected facilities.

अनुमति संख्या-(Licence No.) P/HQ/AP/15/4081 (P332428)

नवीनीकरण के पत्रांकन के लिए स्थान
SPACE FOR ENDORSEMENT OF RENEWALS

पेट्रोलियम अधिनियम, 1934 के उपबन्धों या उनके अधीन बनाए गए नियमों या इस अनुमति की शर्तों का उल्लंघन न होने की दशा में यह अनुमति फिर भी बिना किसी एंट के दस वर्ष तक नवीनीकृत की जा सकेगी।
This licence shall be renewable without any concession in fee for ten years in the absence of contravention of any provisions of the Petroleum Act, 1934 or of the rules framed thereunder or of any of the conditions of this licence.

नवीनीकरण की तारीख
Date of
Renewal

समाप्ति की तारीख
Date of
Expiry of license

अनुज्ञापन प्राधिकारी के हस्ताक्षर और स्टाम्प
Signature and office stamp of the licensing authority

यदि अनुमति परिसर इसमें उपायद्वय विवरण और शर्तों के अनुरूप नहीं पाए जाते हैं और जिन नियमों और शर्तों के अधीन यह अनुमति मंजूर की गई है उनमें से किसी का उल्लंघन होने की दशा में यह अनुमति रद्द की जा सकती है और अनुमतिधारी प्रथम अपराध के लिए साधारण कारावास से, जो एक महीना तक हो सकता है, या जुर्माने से, जो एक हजार रुपये तक हो सकता है, या दोनों से, और प्रत्येक पश्चातवर्ती अपराध के लिए साधारण कारावास से जो तीन महीने तक हो सकता है, या जुर्माने से, जो पांच हजार रुपये तक हो सकता है, या दोनों से, दण्डनीय होगा।

This licence is liable to be cancelled if the licensed premises are not found conforming to the description given on the approved plan attached hereto and contravention of any of the rules and conditions under which this licence is granted and the holder of this licence is also punishable for the first offence with simple imprisonment which may extend to one month, or with fine which may extend to one thousand rupees, or with both and for every subsequent offence with simple imprisonment which may extend to three months, or with fine which may extend to five thousand rupees or with both.



PETROLEUM AND EXPLOSIVES SAFETY ORGANISATION

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन

Ministry of Commerce & Industry

Department of Industrial Policy & Promotion



भारत सरकार
Government of India

वाणिज्य और उद्योग मंत्रालय
Ministry of Commerce & Industry

पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पैसो)
Petroleum & Explosives Safety Organisation (PESO)

पूर्व नाम विस्फोटक विभाग
Formerly Department of Explosives

140, रुक्मिणी लक्ष्मीपति रोड, मार्शलस रोड, एगमोर
No.140, Rukmini Laxmipati Road, Marshalls Road, Egmore,
चेन्नई (Chennai) - 600008

ई मेल (E-mail): jtccechennai@explosives.gov.in
फोन / फेक्स (Phone / Fax): 28514848 / 28514848

संख्या (No.): P/HQ/AP/15/3653(P220969)

तारीख (Date): 3/7/2012

सेवा में (To),

M/s. Trimech Sands Pvt. Ltd.

Mineral Separation Plant, Vatchavalasa Village & Post,
(Via) Srikurmam, Gara Mandal, District - SRIKAKULAM, PIN - 532404
State : Andhra Pradesh.

विषय :- Sy. No. 182, Vatchavalasa Village, Gara Mandal जिल्हा SRIKAKULAM राज्य Andhra Pradesh में
विद्यमान पेट्रोलियम वर्ग "B" संस्थापन के नवीनीकरण संदर्भ में अनुज्ञप्ति
सं. P/HQ/AP/15/3653(P220969).

Subject Existing Petroleum Class "B" installation at Sy. No. 182, Vatchavalasa Village, Gara Mandal
District : SRIKAKULAM, State : Andhra Pradesh - Licence No.
P/HQ/AP/15/3653(P220969) - Reg Renewal of.

महोदय (Sir),

कृपया अपने पत्र क्रमांक X दिनांक 12/6/2012 का अवलोकन करें।
Please refer to your letter No.: x, dated 12/6/2012.

अनुज्ञप्ति संख्या P/HQ/AP/15/3653(P220969) दिनांक 25/3/2009 दिनांक 31/12/2021 तक नवीनीकृत कर इस पत्र के साथ भेजी जा रही है।
Licence No. P/HQ/AP/15/3653(P220969) dated 25/3/2009 is returned herewith duly renewed upto 31/12/2021.

आपके रूप 2100/- कार्यालय में जमा है जो भविष्य में इसी अनुज्ञप्ति के लिए इस्तेमाल किए जाएंगे।
Your Balance Amount with the Department is Rs.2100/-, which will be used for processing of the same Licence in future.

कृपया पावती दें. (Please acknowledge the receipt.)

भवदीय (Your's faithfully),

आर.वेणुगोपाल (R.Venugopal)
विस्फोटक नियंत्रक (Controller of Explosives)

कृते संयुक्त मुख्य विस्फोटक नियंत्रक
Copy together with a copy of Licence in Form XV is forwarded to -
मुख्य विस्फोटक नियंत्रक, नागपुर
The Chief Controller of Explosives, Nagpur.

1.

2.

उप मुख्य विस्फोटक नियंत्रक, उप अंचल, हैदराबाद
The Dy. Chief Controller of Explosives Hyderabad Sub Circle Office, Hyderabad
कृते संयुक्त मुख्य विस्फोटक नियंत्रक
for Jt. Chief Controller of Explosives
(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क आदि के लिए हमारी वेबसाइट <http://peso.gov.in> देखें।)
(For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

Disclaimer : This page gives the latest action taken by this organization on your application. This page is made available for the information of concerned applicant/licensee only. For documentry purposes, only the original documents issued under the seal and signature of the respective offices of Petroleum & Explosives Safety Organization, shall be valid. All efforts have been made to secure this information. However, PESO will not be responsible for any misuse of the information by unauthorised persons including the hackers.



Government of India
Ministry of Commerce & Industry
Petroleum & Explosives Safety Organisation (PESO)
Kendriya sadan, 1st floor, Sultan Bazar, Koti,
Hyderabad - 500195

पंजीयुक्त
REGISTER 3D

E-mail
dyccehyderabad@explosives.gov.in
Phone/Fax No : 040 - 2480035

No.: P/HQ/AP/15/3734 (P234341)

Dated : 13/12/2012

To,

M/s. Trimex Sands Pvt. Ltd.,
Sy. No. 182, Vatchavalasa Village & Post,
Gara Mandal-532 404,
Srikakulam,
District: SRIKAKULAM,
State: Andhra Pradesh
PIN: 532404

14 DEC 2012

Sub: Existing Petroleum Class B,C Installation at Plot No, Sy. No. 182, NA, Vatchavalasa Village, Gara Mandal, District: SRIKAKULAM, State: Andhra Pradesh, PIN: 999999 - Licence No. P/HQ/AP/15/3734 (P234341) - granted for XV of Petroleum Rule 2002 Renewal regarding.

Sir(s),

Please refer to your letter No.: nil, dated 30/10/2012

Licence No. P/HQ/AP/15/3734 (P234341) dated 22/03/2010 is forwarded herewith duly renewed upto 31/12/2022.

Please follow the procedure strictly as laid down in rule 148 of the Petroleum Rules, 2002 and submit complete documents for the Renewal of the licence so as to reach this office on or before the date on which Licence expires.

Please acknowledge the receipt.

Note : Your Balance Amount with the Organisation is Rs.550, which will be used for processing of the same Licence in future.

Yours faithfully,

(K Srinivasa Rao)
Dy. Controller of Explosives
For Dy. Chief Controller of Explosives
Hyderabad

(For more information regarding status, fees and other details please visit our website <http://peso.gov.in>)

<http://10.0.1.28/peso/licence/CustomizeLetterPrint.aspx>

12/13/2012



7/16

संस्थापनों में पेट्रोलियम के आयात और भंडारण के लिए अनुमति
LICENCE TO IMPORT AND STORE PETROLEUM PRODUCTS

अनुमति सं. (Licence No.) :- P/HQ/AP/15/3734(P234341)

फीस रुपए (Fees Rs.) 8650 प्रति वर्ष

श्री M/s. Trimex Sands Pvt. Ltd., Sy. No. 182, Vatchavalasa Village & Post, Gara Mandal-532 404, Srikakulam, SRIKAKULAM, Andhra Pradesh, PIN - को केवल इसमें यथा विनिर्दिष्ट वर्ग के और मात्राओं में पेट्रोलियम 180 किलोलीटर आयात करने के लिए और उक्त वर्ग वर्णित नकश संख्या P/HQ/AP/15/3734(P234341) तारीख 22/3/2010 जो कि इससे उपाबद्ध है, में दिखाए गए स्थान पर भंडारण के लिए पेट्रोलियम 1934 के उपबंधों या उसके अधीन बनाए गए नियमों तथा इस अनुमति की अतिरिक्त शर्तों के अधीन रहते हुए यह अनुमति अनुव्यक्त की जाती है।

Licence is hereby granted to M/s. Trimex Sands Pvt. Ltd., Sy. No. 182, Vatchavalasa Village & Post, Gara Mandal, Srikakulam, SRIKAKULAM, Andhra Pradesh, PIN - valid only for the importation of 180 K.L. Petroleum of the classes and quantities herein specified and storage thereof in the place described below and shown in the approved plan No P/HQ/AP/15/3734(P234341) dated 22/3/2010 attached hereto subject to the provisions of the Petroleum Act, 1934 and the rules made thereunder and to the further conditions.

यह अनुमति 31 दिसम्बर 2012 तक प्रवृत्त रहेगी।
The licence shall remain valid upto 31st day of December 2012

पेट्रोलियम का विवरण (Description of Petroleum)	किलोलीटर में अनुमत क्षमता (Quantity licensed in K.L.)
वर्ग A प्रयुज पेट्रोलियम (Petroleum Class A in bulk)	निरंक (Nil)
वर्ग A प्रयुज पेट्रोलियम से भिन्न (Petroleum Class A, otherwise than in bulk)	निरंक (Nil)
वर्ग B प्रयुज पेट्रोलियम (Petroleum Class B in bulk)	20 किलोलीटर (KL)
वर्ग B प्रयुज पेट्रोलियम से भिन्न (Petroleum Class B, otherwise than in bulk)	निरंक (Nil)
वर्ग C प्रयुज पेट्रोलियम (Petroleum Class C in bulk)	160 किलोलीटर (KL)
वर्ग C प्रयुज पेट्रोलियम से भिन्न (Petroleum Class C, otherwise than in bulk)	निरंक (Nil)
कुल क्षमता (Total Capacity)	180 किलोलीटर (KL)

Monday, March 22, 2010

मुख्य नियंत्रक, निर्यात
for Chief Controller, Exports

अनुमति परिसरों का विवरण और अवस्थान
DESCRIPTION AND LOCATION OF THE LICENSED PREMISES

अनुमति परिसर जिसकी विन्यास सीमाएं अन्य विशिष्टता सलग्न अनुमोदित नक्शों में दिखाई गई हैं Sy. No. 182, Vatchavalasa Village, Gara Mandal, SRIKAKULAM, Andhra Pradesh, स्थान पर अवस्थित है तथा उसमें निम्नलिखित सम्मिलित है :- one aboveground Petroleum Class 'B' and two aboveground Petroleum Class 'C' storage tanks together with connected facilities

The licensed premises, the layout, boundaries and other particulars of which are shown in the attached approved plan are situated at Sy. No. 182, Vatchavalasa Village, Gara Mandal, SRIKAKULAM, Andhra Pradesh, and consists of one aboveground Petroleum Class 'B' and two aboveground Petroleum Class 'C' storage tanks together with connected facilities

Renewed upto 31/12/2012

अनुमति संख्या- (Licence No.) P/HQ/AP/15/3734(P234341)

नवीनीकरण के पत्रांकन के लिए स्थान
SPACE FOR ENDORSEMENT OF RENEWALS

पेट्रोलियम अधिनियम, 1934 के उपबन्धों या उनके अधीन बनाए गए नियमों या इस अनुमति की शर्तों का उल्लंघन न होने की दशा में यह अनुमति फिर से बिना किसी छूट के तीन वर्ष तक नवीकृत की जा सकती है।

The licence shall be renewable without any concession in fee for three years in the absence of contravention of any provision of the Petroleum Act, 1934 or of the rules framed thereunder or of any of the conditions of this licence.

नवीकरण की तारीख

Date of Renewal

समाप्ति की तारीख

Date of Expiry

अनुज्ञापन प्राधिकारी के हस्ताक्षर और मुद्रा

Signature and office stamp of the licensor authority

यदि अनुमति परिसर इसमें उपाबन्ध विवरण और शर्तों के अनुरूप नहीं पाए जाते हैं और जिन नियमों और शर्तों के अधीन यह अनुमति प्रदान की है उनमें से किसी का उल्लंघन होने की दशा में यह अनुमति रद्द की जा सकती है और अनुमतिधारी धरम अपराध के लिए सजावरण कायदा में एक मास तक हो सकता है, या जुर्माने से, जो एक हजार रुपये तक हो सकता है, या दोनों से, और प्रत्येक त्रिमासिक अपराध के लिए सजावरण कास से जो तीन मास तक हो सकता है, या जुर्माने से, जो पांच हजार रुपये तक हो सकता है, या दोनों से दण्डनीय होगा।

This licence is liable to be cancelled if the licensed premises when inspected are not found conforming to the description and conditions set hereon and contravention of any of the rules and conditions under which this licence is granted and the holder of this licence is also punishable. For first offence with simple imprisonment which may extend to one month, or with fine which may extend to one thousand rupees, or with both and every subsequent offence with simple imprisonment which may extend to three months, or with fine which may extend to five thousand rupees, or both.

05 May 2015



The Additional Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office (SEZ),
1st and 11nd Floor, Handloom Export Promotion Council,
34, Cathedral Garden Road, Nungambakkam,
Chennai - 34

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 (A.III Section), Govt. of India, vide letter F. No: 11-67/2013-IA.III Dt: 28-04-2015.

We wish to inform you that for the expansion of Srikurmam Mineral Sands Project from 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).

As stipulated under sub point (xiii), (xiv) & (xvi) of sl. no.11 in General Conditions of the clearance letters under reference, we have handed over the Environmental & CRZ Clearances to all the concerned Panchayats (enclosed as Annexure 3), State Pollution Control Board, District Industries Center & The District Collector (enclosed as Annexure 4) and also given advertisement in two local newspapers (enclosed as Annexure 5).

Thanking You,

Yours Truly,

For M/s. Trimex Sands Pvt. Limited



Authorized Signatory

Encl: Annexure 1 to 5.

Trimex Sands Pvt Ltd:

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

Hyderabad Office:

#8-2-624, 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

3784



ప్రకటన

ఇందు మూలముగా తెలియజేయబడినవి క్రింది విషయాలకు సంబంధించినవి. అవినీతి నివారణ చట్టం, 1988 (CRZ) అనుబంధ ప్రతిపత్తి ప్రకారం నియమించబడిన అంశం J-11015/125/2011-IA II (M) తేదీ 17-04-2015 మరియు తేదీ J-11-07/2013-IA-III తేదీ 28-04-2015 క్రింద జరిగిన విచారణలకు సంబంధించిన అనుబంధ ప్రతిపత్తిని అనుబంధించి మూలముగా తెలియజేయబడినవి. అవినీతి నివారణ చట్టం, 1988 (CRZ) అనుబంధ ప్రతిపత్తి ప్రకారం నియమించబడిన అంశం J-11015/125/2011-IA II (M) తేదీ 17-04-2015 మరియు తేదీ J-11-07/2013-IA-III తేదీ 28-04-2015 క్రింద జరిగిన విచారణలకు సంబంధించిన అనుబంధ ప్రతిపత్తిని అనుబంధించి మూలముగా తెలియజేయబడినవి. అవినీతి నివారణ చట్టం, 1988 (CRZ) అనుబంధ ప్రతిపత్తి ప్రకారం నియమించబడిన అంశం J-11015/125/2011-IA II (M) తేదీ 17-04-2015 మరియు తేదీ J-11-07/2013-IA-III తేదీ 28-04-2015 క్రింద జరిగిన విచారణలకు సంబంధించిన అనుబంధ ప్రతిపత్తిని అనుబంధించి మూలముగా తెలియజేయబడినవి.

ప్రకటన

ఇందు మూలముగా తెలియజేయబడినవి క్రింది విషయాలకు సంబంధించినవి. అవినీతి నివారణ చట్టం, 1988 (CRZ) అనుబంధ ప్రతిపత్తి ప్రకారం నియమించబడిన అంశం J-11015/125/2011-IA II (M) తేదీ 17-04-2015 మరియు తేదీ J-11-07/2013-IA-III తేదీ 28-04-2015 క్రింద జరిగిన విచారణలకు సంబంధించిన అనుబంధ ప్రతిపత్తిని అనుబంధించి మూలముగా తెలియజేయబడినవి. అవినీతి నివారణ చట్టం, 1988 (CRZ) అనుబంధ ప్రతిపత్తి ప్రకారం నియమించబడిన అంశం J-11015/125/2011-IA II (M) తేదీ 17-04-2015 మరియు తేదీ J-11-07/2013-IA-III తేదీ 28-04-2015 క్రింద జరిగిన విచారణలకు సంబంధించిన అనుబంధ ప్రతిపత్తిని అనుబంధించి మూలముగా తెలియజేయబడినవి.

THE HANS INDIA MONDAY 4 MAY 2015

NOTICE

This is to inform that the Expansion of Beach Sand Mining Project at Gara Mandal in Srikakulam District of Mr. Trimesh Sands Pvt. Ltd. has been accorded Environmental Clearance by the Ministry of Environment, Forest and Climate Change, Impact Assessment Division, Govt. of India, New Delhi vide Dtd letter No. J-11015/175/2011-1A-II (M) Dated 17-04-2015 and CRZ Clearance by the Ministry of Environment, Forest and Climate Change (A-III Section), Govt. of India, New Delhi vide their letter No. J-11-672013-1A-III, Dated 25-04-2015. The copy of the clearance letter is available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forests and Climate Change at <http://envfor.nic.in>

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: trimexskm@ethi.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.	
2	The Secretary, Tonangi Gram Panchayat Office, Gara Mandal, Srikakulam District.	<p style="text-align: center;">RN901003576 IN.</p> <p style="text-align: center;">बोमा नती NOT INSURED</p> <p>प्राप्त किये गये डाक टिकटों का मूल्य रु. _____</p> <p>Amount of stamps affixed Rs. _____</p> <p>रजिस्ट्री नं. _____ प्राप्त किया _____</p> <p>Received a receipt of _____</p> <p>आनेवाला रूप में _____</p> <p>Addressed to _____</p> <p style="text-align: right;">2584</p> <p style="text-align: right;">तारीख मीत Date Stamp</p> <p style="text-align: center;">Signature of Receiving Office</p>

*Trimex
vatsavalasa*

Environment Monitoring Data Displaying Board





Annexure-19

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/CFO/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 **1360, 1533 & 1595**
(SIC Code), Secondary -
(SIC Code)
- (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 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	1,30,000
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.

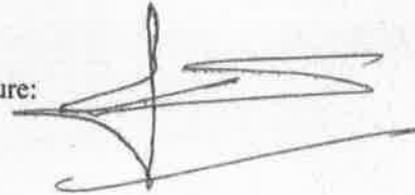
PART - I

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)