

**SUMMARY ON ENVIRONMENTAL IMPACT ASSESSMENT REPORT**

*OF*

**K.SESHAGIRI RAO & COMPANY**

**MINE LEASE AREA – 50.60 Ha. (125 Acres)**

**SY. NO. 628/A,**

**KOTHAPATNAM VILLAGE,**

**KOTA MANDAL,**

**SPS NELLORE DISTRICT,**

**ANDHRA PRADESH.**

**Submitted To**

**ANDHRA PRADESH POLLUTION CONTROL BOARD**

**VIJAYAWADA.**

## EXECUTIVE SUMMARY

### 1.0 PROJECT SUMMARY

S. No.	Parameters	Description
1	Mine Lease Area	50.60 Ha. (125 Acres)
2	Mineral and Excavation Capacity	Silica sand – 4,03,560 Tons/annum
3	Sy. Nos.	628/A
4	Project cost	Rs: 20 Lakhs
5	Water Requirement	28.2 KL/Day
6	Source of water	Bore well
7	Effluent generation	1.4 KL/Day
8	Effluent treatment	No wastewater generation from the mine operations. Sanitary wastewater to be treated in septic tank followed by soak pit.
9	Air emissions	<p>The major emissions from mining activity will be particulate (dust) and major sources of particulate is due to vehicular movement. The following measures will be taken to control the dust emissions.</p> <ul style="list-style-type: none"><li>➤ Provision of Water sprinklers at the mine, approach roads to prevent the generation of dust.</li><li>➤ Regular Compaction &amp; grading of haul roads and service roads.</li><li>➤ Avoid overloading of dumpers.</li><li>➤ Good &amp; timely maintenance of vehicles.</li><li>➤ Good housekeeping procedures to be adopted</li></ul>
10	Noise levels	The source of noise generation will be due vehicular movement.
11	Solid waste generation	There will be no solid waste generation from the mine operations.
12	Greenbelt	Greenbelt to be developed in the buffer zone of Mine lease area and on either side of the approach road to the mine

## 1.1 MINE DESCRIPTION

The mine lease area was granted in favour of K.Seshagiri Rao & Company over an extent of 50.60 Ha. (125 Acres) in Sy.No.628/A of Kothapatnam Village, Kota Mandal, SPS Nellore District, Andhra Pradesh vide G.O.Ms.No.176 of Industries & Commerce (Mines-I) Dept, Govt. of Andhra Pradesh dated 03/07/2007. The ML was executed on 08/08/2007 for a period of 20 years vide Procs. No.2424/M/2002 dated: 08.08.2007 of the Assistant Director Mines and Geology, Nellore and is valid up to 07/08/2027. Production commenced from August, 2007 production stopped from September, 2015. As per the directions of Ministry of Environment, Forest & Climate Change Credible action taken report obtained from state Government. Based on this MOEF&CC has accorded Terms of Reference (TOR) for the proposal vide letter No J-11015/183/ 2016- IA.II (M) dated 16<sup>th</sup> December 2016. The present proposal envisages production of 4,03,560 T/Annum of Silica sand. Total project cost is Rs. 20 Lakhs.

**Pioneer Enviro Laboratories & Consultants Private Limited, Hyderabad**, which is accredited by NABET, Quality Council of India for conducting EIA studies for Mining of Minerals, have prepared this Draft Environmental Impact Assessment (DEIA) Report for the Mine operations by incorporating the TOR approved by Ministry of Environment, Forest & Climate Change , New Delhi vide letter NO. J-11015/183/ 2016- IA.II (M) dated 16<sup>th</sup> December 2016. The report contains detailed description of the following

- Detailed characterization of status of environment in the area of 10 km. radius from the ML area for major environmental components including air, water, noise, soil, flora, fauna and socio-economic environment.
- Assessment of air emissions, liquid waste and solid waste from the mining activity along with the noise level assessment.
- Pollution control measures to be adopted and Environmental Management Plan.

## 1.2 ENVIRONMENTAL FEATURES

The following are environmental setting of the ML area within 10 Km. radius.

Parameter	Details
Habitation	Siddhavaram - 0.53 Kms.
Details of water bodies / lakes / rivers / nallahs	Buckingham Canal – 1.1 Kms. Challa Kalva – 1.7 Kms.

	Swarnamuki River – 2.2 Kms. Pennaki Cheruvu – 7.7 Kms. Yereru Cheruvu – 7.4 Kms. Bay of Bengal – 3.0 Kms Sona kavaluvas are present with 10 Km radius. No streams/water bodies are passing through the ML area
Wildlife Sanctuaries / Bird Sanctuaries / National Parks / Elephant corridor / Tiger reserves	As per MOEF&CC Notification S.O. 1736 dated 26/06/2015, Pulicate Lake Bird Sanctuary is present within 10 Km radius From ML area.
Reserve Forests	Kottapatnam R.F - 0.25 Kms. Momidi R.F – 6.8 Kms.
Interstate boundary	There is no interstate boundary with in 10 Km radius.
Industrial areas / cluster, which are listed in MoEF office memorandum dated 13th January 2010	No such area within 10 Km. radius.
Defence Installations	Nil within 10 Km. Radius
Historical places / Places of Tourist importance / Archeological sites	Nil within 10 Km. Radius
Other mine the study area	There are several silica sand mines present within study area.

### 1.3 MINING

The method of mining is by Opencast manual Mining Method. Manual open cast method of digging, scooping and excavating with the help of simple tools like spade / pawdas. Loading to be done manually.

### 1.4 WATER & WASTEWATER

The Water required in mine mainly for dust suppression, plantation and Domestic purpose. The water required will be sourced from the bore well. The following will be the breakup of it.

#### WATER REQUIREMENT

S. NO.	ITEM	REQUIREMENT IN KLD
1.	For Dust Suppression within the ML roads	12.0
2.	For Dust Suppression along the approach Road	12.0
3.	For Domestic Use	1.8
4.	For plantation	2.4
	<b>Total</b>	<b>28.2</b>

There will be no wastewater generation from the mining operations, only wastewater generation will be sanitary wastewater of 1.4 KLD, which will be treated in septic tank followed by subsurface dispersion trench.

#### WASTE WATER GENERATION

S.NO	UNIT	GENERATION (KLD)
1	Sanitary wastewater	1.4
<b>Total</b>		<b>1.4</b>

The following are sanitary wastewater characteristics

PARAMETER	CONCENTRATION
	SANITARY WASTE WATER (UNTREATED)
pH	7.0 – 8.5
BOD (mg/l)	200 – 250
COD (mg/l)	300 – 400
TDS (mg/l)	<1000

## 2.0 BASELINE DATA

Baseline data has been collected on ambient air quality, water quality, noise levels, Soil, flora & fauna and socio-economic details of the people within 10 km. radius of the ML area.

### 2.1 AMBIENT AIR QUALITY

Ambient air quality was monitored for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO & Free silica in PM<sub>10</sub> at 8 stations for one season. The following are the concentrations of various parameters at all the monitoring stations.

PM <sub>2.5</sub>	-	23.6 to 36.8 µg/m <sup>3</sup>
PM <sub>10</sub>	-	39.0 to 58.7 µg/m <sup>3</sup>
SO <sub>2</sub>	-	9.0 to 16.7 µg/m <sup>3</sup>
NO <sub>x</sub>	-	10.6 to 23.5 µg/m <sup>3</sup>
CO	-	385 to 715 µg/m <sup>3</sup>
Free silica in PM <sub>10</sub>	-	0.8 to 1.8 µg/m <sup>3</sup>

## **2.2 WATER QUALITY**

Ground water samples were collected at 8 locations and analysed for various physico – chemical, Biological parameters. The ground water samples shows that they are suitable for potable purpose.

## **2.3 NOISE LEVELS**

Noise levels were measured at 8 stations during day time & night time. The noise levels at the monitoring stations are ranging from 42.00 dBA to 56.89 dBA.

## **3.0 ANTICIPATED ENVIRONMENTAL IMPACTS**

### **3.1 PREDICTION OF IMPACTS ON AIR QUALITY**

The emissions of concern from the Mining activity will be mainly Particulate Matter, NO<sub>x</sub> & CO. For the purpose of prediction of Ground Level Concentrations the emissions from vehicles used for Transportation are considered. ISC3 software is used for prediction of Ground Level Concentrations. It is observed that the maximum predicted incremental rise in PM concentration transportation of Vehicles will be 0.27 µg/m<sup>3</sup>. It is observed that the maximum predicted incremental rise in NO<sub>x</sub> concentration during mining will be 2.8 µg/m<sup>3</sup>. It is observed that the maximum predicted incremental rise in CO concentration during mining will be 1.93 µg/m<sup>3</sup>. The predicted results show that the incremental rise over the existing baseline status of ambient air quality will be within the National Ambient Air Quality Standards during the operation of mine.

### **3.2 PREDICTION OF IMPACTS ON NOISE QUALITY**

Main source of noise generation will be due to movement of vehicles. All the precaution will be taken to control the noise levels. The Ambient Noise levels will be maintained within the standards prescribed by MoEF, GOI vide Notification dated 11-01-2010 under the Noise pollution (regulation & control) (amended) Rules, 2010.

### **3.3 PREDICTION IMPACTS ON WATER QUALITY**

There will be no waste water generation from the mining operations. The waste water generation from the mine will be 1.4 KLD of sanitary waste water. This will be treated in septic tank followed by subsurface dispersion. The depth of mining will be 2.5 m and ground water table is at 5m. Hence the proposed mining activity will not intersect the ground water table. Hence there will not be any adverse impact on water quality due to the mining activity.

### **3.4 PREDICTION OF IMPACTS ON BIOLOGICAL ENVIRONMENT**

There are no Biosphere reserves/ National Parks/ Elephant corridor / Tiger reserves within 10 Km radius of the ML area. However Pulicat Lake Bird Sanctuary is within 10 Km radius from the Mine. All the required measures will be taken up to comply with the norms. Once all the norms are complied with then there will not be any adverse impact on flora, fauna due to the mine.

### **3.5 PREDICTION OF IMPACTS ON SOCIO ECONOMIC ENVIRONMENT**

In the mining activity unskilled and semi skilled workers will be employed from the local areas only. Socio and economic status standard of living of people in the surrounding villages will improve.

### **4.0. ENVIRONMENTAL MONITORING PROGRAMME**

Ambient Air Quality, water analysis will be carried out regularly as per CPCB norms and the analysis reports will be submitted to the regional office of Ministry of Environment, Forest & Climate Change & State Pollution Control Board.

### **5.0. ADDITIONAL STUDIES**

There will be no habitations in the ML area. Hence no Rehabilitation and Resettlement is required.

### **6.0. PROJECT BENEFITS**

The local areas will be benefited by way of generation of direct/indirect employment opportunities, increased demand for local products and services due the mining activities. The mine creates employment to 37 persons.

### **7.0 ENVIRONMENTAL MANAGEMENT PLAN**

#### **7.1 AIR ENVIRONMENT**

The major emissions from mining activity will be dust and major sources of dust will be due to vehicular movement. The following measures will be taken to control the dust emissions.

- Water sprinklers to be provided at the mine, approach roads to prevent the generation of dust.
- Regular Compaction & grading of haul roads and service roads.
- Avoid overloading of dumpers.
- Good & timely maintenance of vehicles.
- Good housekeeping procedures to be followed.

## **7.2 WATER ENVIRONMENT**

There will be no waste water generation from mining operations. The only waste water generation will be sanitary waste water, which will be sent to septic tank followed by subsurface dispersion trench. The depth of mining will be 2.5 m and ground water table is at 5m. Hence the proposed mining activity will not intersect the ground water table. Hence there will not be any adverse impact on water quality due to the mining activity.

## **7.3 NOISE ENVIRONMENT**

The source of noise generation to be vehicular movement. The following control measures will be taken to control the noise.

- All roads will be maintained in good condition to reduce vehicle noise.
- Speed of trucks will be limited to moderate speed of 25 KMPH to prevent undue noise from empty trucks.
- Good maintenance of Vehicles.
- Planting of trees along the mining lease boundary.

## **7.4 SOLID WASTE**

There will be no solid waste generation from the mining operations.

## **7.5 LAND ENVIRONMENT**

Due to the Mining activity, there will be change in the topography of the land.

## **7.6 GREENBELT DEVELOPMENT**

Greenbelt to be developed in the buffer zone of Mine lease area and on either side of the approach road to mine.