

M/s. SRINIVASA MINERALS

(Pyrophyllite Mine - 60.705 Ha)

**Sy. No: 1095, Surabhi Village, Chakrayapet Mandal,
YSR District, Andhra Pradesh**

1. Form I

2. PRE-FEASIBILITY REPORT

Submitted by:

M/s Srinivasa Minerals

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Kadapa – 516001, Andhra Pradesh

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Studies & Documented By

M/s Team Labs and Consultants

(MoEF&CC – NABET –OM-S.No 156)

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Submitted To

**MINISTRY OF ENVIRONMENT FORESTS & CLIMATE CHANGE,
GOVERNMENT OF INDIA
INDIRA PARYAVARAN BHAWAN,
JOR BAGH ROAD, ALIGANJ, NEW DELHI**

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APPENDIX I
(See paragraph – 6)
FORM 1

(I) Basic Information

S. No	Item	Details
1	Name of the Project/s	Srinivasa Minerals
2	S. No in the Schedule	1(a) - A Category
3	Proposed capacity/area/length/tonnage to be handled/command area/lease area/number of wells to be drilled	Semi mechanized open cast method mine for Pyrophyllite average annual production of 47578.42 TPA.
4	New/Expansion/Modernization	
5	Existing Capacity/Area etc.	
6	Category of Project i.e 'A' or 'B'	A
7	Does it attract the general condition? If yes, please specify	No
8	Does it attract the Specific condition? If yes, please specify.	No
9	Location	
	Plot/Survey/Khasra No.	1095
	Village	Surabhu
	Tehsil	Chakrayapet
	District	YSR District
	State	Andhra Pradesh.
10	Nearest railway station/airport along with distance in kms.	Railway Station : YSR Kadapa – 40Kms
11	Nearest Town, City, District Headquarters along with distance in kms.	Vempalli-19km and district headquarter is YSR Kadapa -40 Km
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal address with telephone nos. to be given)	Surabhu
13	Name of the Applicant	Mr. S. Sankar Reddy, Managing partner
14	Registered Address	M/s Srinivasa Minerals D. No. 1/397-1, Court Road, Kadapa – 516 001, YSR District, A.P. Ph: 08562-272 499 Mobile: 9490449987 Fax: 040-23748666 E Mail: srinivasaminerals@gmail.com , reddy.sankar71@yahoo.com
15	Address for Correspondence:	

	Name	Mr. S. Sankar Reddy
	Designation(Owner/Partner/CEO)	Managing Partner
	Address	M/s Srinivasa Minerals D. No. 1/397-1, Court Road, Kadapa – 516 001, YSR District, A.P.
	Pin Code	516 001.
	E-mail	Email: srinivasaminerals@gmail.com , reddy.sankar71@yahoo.com
	Telephone Number	Phone :08562-272499
	Fax No.	Fax: 040-23748666
16	Details of alternative Sites examined, if any. Location of these sites should be shown on a topo sheet.	-NA – Site specific project i.e mining
17	Interlinked Projects	-NA-
18	Whether separate application of interlinked project has been submitted?	No
19	If yes, date of submission	
20	If no, reason	
21	Whether the proposal involves approval/clearance under: if yes, details of the same and their status to be given. (a) The Forest (Conservation) Act, 1980? (b) The Wildlife (Protection) Act, 1972? (c) The C.R.Z Notification, 1991?	No
22	Whether there is any Government Order/Policy relevant/relating to the site?	Yes - Mine lease from Government of Andhra Pradesh- Department of Mines and Geology (Annexure-1).
23	Forest land involved (hectares)	No
24	Whether there is any location pending against the project and /or land in which the project is propose to be set up? (a) Name of the Court (b) Case No (c) Orders/directions of the Court, if any and its relevance with the proposed project.	No

(II) Activity**1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)**

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	NO	The land area used for the mine is 60.705 ha (150.00 Acres). The active mine area is 6.375 ha. The proposed mining activity consists of Semi-mechanised opencast mining for Pyrophyllite.
1.2	Clearance of existing land, vegetation and buildings?	NO	Quarry lease area is located on a part of the hill.
1.3	Creation of new land uses?	NO	
1.4	Pre-construction investigations e.g. bore houses, soil testing?	YES	Survey completed, based on the soil quality mine office and rest shelter and stack yard is established.
1.5	Construction works?	NO	Temporary office and rest shelter is established.
1.6	Demolition works?	NO	
1.7	Temporary sites used for construction works or housing of construction workers?	NO	Local villagers shall be employed.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	NO	
1.9	Underground works including mining or tunneling?	NO	The project is for mining of Pyrophyllite and it is semi mechanized open cast mine.
1.10	Reclamation works?	NO	The topsoil can be utilized for post mining reclamation and environmental protection for development of large area of afforestation.
1.11	Dredging?	NO	
1.12	Offshore structures?	NO	
1.13	Production and manufacturing processes?	YES	Proposed mining operations will be carried out Semi-mechanised Opencast. (Annexure I) . There is no major activity carried out in previous years. Few trial pits and some trenches have been excavated on strike continuity to prove the mineral. No parallel veins. To know

			the strike continuity of the pyrophyllite vein a total of 4 trial pits were proposed further west of the existing vein. It is proposed to put two benches of 3m height and 3m width.
1.14	Facilities for storage of goods or materials?	No	The waste and mineral will be stored in the ML area.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	YES	Waste generated will be about 54570 m ³ per five years plan period will be dumped in dumping yard. Domestic effluents shall be sent to septic tank followed by soak pit.
1.16	Facilities for long term housing of operational workers?	NO	Local villagers shall be employed.
1.17	New road, rail or sea traffic during construction or operation?	YES	The consigned goods will be transported by road on Lorries to YSR Kadapa/Pulivendula which are at 40 Km distance from the mine.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	NO	
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	NO	
1.20	New or diverted transmission lines or pipelines?	NO	There is no transmission line or pipeline passing though the lease area.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	NO	
1.22	Stream crossings?	NO	
1.23	Abstraction or transfers of water form ground or surface waters?	NO	Water shall be drawn from local villages for the purpose of domestic and water sprinkling purpose. Rainwater will be collected and reused for dust suppression purpose.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	NO	There is no discharge from the quarrying operations.
1.25	Transport of personnel or	YES	Mineral is sent away from the site, the

	materials for construction, operation or decommissioning?		consigned goods will be transported by road through Lorries.
1.26	Long-term dismantling or decommissioning or restoration works?	NO	Temporary structures will be constructed.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	NO	
1.28	Influx of people to an area in either temporarily or permanently?	NO	
1.29	Introduction of alien species?	NO	
1.30	Loss of native species or genetic diversity?	NO	
1.31	Any other actions?	NO	

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

S.No.	Information/checklist Confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	YES	The area proposed for mining is 60.705 ha (150 acres) at Sy. No: 1095 of Surabhu Village, Chakrayapet Mandal, YSR District, Andhra Pradesh.
2.2	Water (expected source & competing users) unit: KLD	YES	6.5 m ³ /day, Ground Water, by bore wells from nearby village. (Annexure II).
2.3	Minerals (MT)	NO	The product is a mineral.
2.4	Construction material– stone, aggregates, sand/soil(expected source- MT)	NA	
2.5	Forests and timber (source – MT)	NO	
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	NO	Mining operations would be semi mechanised is thus limited to drilling of shot holes for blasting by using jack hammer drills powered by portable air compressor. Power shall be drawn from local village supply.
2.7	Any other natural resources (use appropriate standard units)	NO	

3. Use, storage, transport handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

S.No.	Information/Checklist. confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	NO	There are no Hazardous substances or materials to human health or the environment. However blasting is required for the mine operation and the same is enclosed in Annexure I .
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	NO	
3.3	Affect the welfare of people e.g. by changing living conditions?	YES	The proposed project shall enhance the prospects of employment. Recruitment for the unskilled and semiskilled workers for the proposed project will be from the nearby villages
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	NO	The nearest village Muvvulapalle is located at a distance of 1.3 km, The project shall not have any significant impact on vulnerable groups of people.
3.5	Any other causes	NO	

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	The topsoil can be utilized for post mining reclamation and environmental protection for development of large area of afforestation.
4.2	Municipal waste (domestic and or commercial wastes)	NO	
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	NO	Waste oil from equipment shall be sent to authorized recyclers.
4.4	Other industrial process wastes	NO	
4.5	Surplus product	NO	
4.6	Sewage sludge or other sludge from effluent treatment	NO	
4.7	Construction or demolition wastes	NO	
4.8	Redundant machinery or equipment	NO	
4.9	Contaminated soils or other materials	NO	
4.10	Agricultural wastes	NO	
4.11	Other solid wastes	NO	

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S.No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	NO	
5.2	Emissions from production processes	YES	Dust Emissions are anticipated from mining, and transport activity. Water sprinkling and greenbelt development is proposed to reduce the dust.
5.3	Emissions from materials handling including storage or transport	YES	Dust may rise during mining, and transport.
5.4	Emissions from construction activities including plant and equipment	YES	Dust may rise during transport of material and mining activity. The dust emissions shall be mitigated by water spraying.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	NO	
5.6	Emissions from incineration of waste	NO	
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	NO	
5.8	Emissions from any other sources	NO	

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	YES	Noise is anticipated during mining activity from blasting, drilling equipment, and transport vehicles. Personal protective equipments are provided to the workers to reduce the noise levels.
6.2	From industrial or similar processes	NO	
6.3	From construction or demolition	YES	Safety equipments shall be provided to the workers.
6.4	From blasting or piling	YES	Dust and noise may rise during blasting. PPE's are provided to the workers.
6.5	From construction or operational traffic	YES	The increased traffic shall not have any significant impact.
6.6	From lighting or cooling systems	NO	
6.7	From any other sources	NO	

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	NO	The material excavated is pyrophyllite and is Non-Hazardous.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	NO	Septic Tank followed by soak pit shall be provided for temporary toilets.
7.3	By deposition of pollutants emitted to air into the land or into water	NO	
7.4	From any other sources	NO	
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	NO	

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	NO	
8.2	From any other causes	NO	
8.3	Could the project be affected by natural disasters causing Environmental damage (e.g. floods, earthquakes, landslides, Cloudburst etc)?	NO	

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: <ul style="list-style-type: none"> •Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) •Housing development •Extractive industries • Supply industries • Other 	YES	The proposed project shall enhance the prospects of employment. Recruitment for the unskilled and semiskilled workers for the proposed project will be from the nearby villages.
9.2	Lead to after-use of the site, which could have an impact on the environment	NO	
9.3	Set a precedent for later developments	NO	
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	NO	The baseline environmental status of the surrounding areas is within the prescribed limits as observed from the secondary data.

(III) Environmental Sensitivity

S.No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	NO	
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	YES	Papagni river is flowing at a distance of 8.5km from the ML area. Payalopalle reserve forest is at a distance of 2.0km from the ML area in east direction. Surabhi reserve forest is at a distance of 2.0km in east direction. Idupulapaya and redla cheruvu reserve forest at a distance of 3.0km from the lease area in south direction.
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, overwintering, migration	NO	
4	Inland, coastal, marine or underground waters	NO	
5	State, National boundaries	NO	
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	NO	
7	Defence installations	NO	
8	Densely populated or built-up area	NO	The project impact area has no urban or semi-urban area. The PIA consists of rural area with low agricultural activity.
9	Areas occupied by sensitive man-made land uses (<i>hospitals, schools, places of worship, community facilities</i>)	NO	The PIA consists of community facilities in various villages, however no major impact is anticipated, as the mine is 1.3 km away from the residential area.
10	Areas containing important, high quality or scarce resources (<i>ground water</i>)	NO	

	<i>resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)</i>		
11	Areas already subjected to pollution or environmental damage. <i>(those where existing legal environmental standards are exceeded)</i>	NO	The area is undeveloped and consists of very few industries.
12	Areas susceptible to natural hazard which could cause the project to present environmental problems <i>(earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)</i>	NO	

(IV). Proposed Terms of Reference for EIA studies**Scope of Work of EIA**

“...The EIA shall cover the following:

Description of the proposed project:

The first task:” Description of the proposed project” forms a vital component of the Environmental Impact Assessment (EIA) as it provides the basis for evaluating the likely causes of Environmental Impacts. It is essential that the Pyrophyllite mining activity shall be clearly determined as far as possible at this stage.

Existing Environment and Baseline Conditions:

The baseline assessment will be carried out to identify potentially sensitive and critical areas that may be affected by the project in an area of 10 km surrounding the project location. The critical and sensitive targets shall be plotted on land use map of project impact area.

The existing environment and baseline conditions should be established from:

-Analysis of existing information published and secondary data.

-Consultation with relevant statutory authorities, and

Field visits for supplementation of missing gaps.

The key subject areas which the EIA shall address include Ecology and Nature conservation, Air quality, surface and water quality in project impact area, soil quality, cultural heritage, landscape, land use, noise quality, etc. Natural habitats like national parks, wildlife reserves, sanctuaries, sacred grove, protected areas, forests, wetlands, major rivers and waterways if any, shall also be identified and marked.

Assessment of Environmental Impacts:

Based upon the results from the review of existing information, field visits, site data collection and consultation, for each component of environment (physical, biological and socio economic) the positive, negative, direct and indirect, temporary and permanent impacts will be evaluated along with an indication of the degree of impact, i.e., whether the impact is significant, moderate, minor or negligible. The degree of impact shall also be quantified by using state of the art air quality impact prediction models based on ISCST3 algorithms.

Environment Management Plan and Mitigation Plan:

For each significant negative impact identified, specialist shall work closely with the engineering team/technical consultants to suggest practicable measures to avoid or mitigate the impact. The mitigation of environmental impacts will be by three mechanisms.

=>Introduction of mitigation features through the engineering practices.

=>Implementation of environmental controls during construction and operation.

=>Legislative control involving compliance with Indian environmental laws.

The Environmental management plan shall include an estimate of capital and recurring costs of mitigation measures and will identify the institutional framework for implementation.

Monitoring Plan:

Having identified the significant environmental impact that is likely to arise as a result of the project, the project team shall specify what monitoring is required during the various phases of the project cycle.

The monitoring plan will identify parameters and frequency of monitoring and responsible organization.

I hereby give the undertaking that data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance give, if any to the project will be revoked at our risk and cost.

Date:

Place:

Signature of the applicant
With Name and Full Address
(Project Proponent/Authorised Signatory)

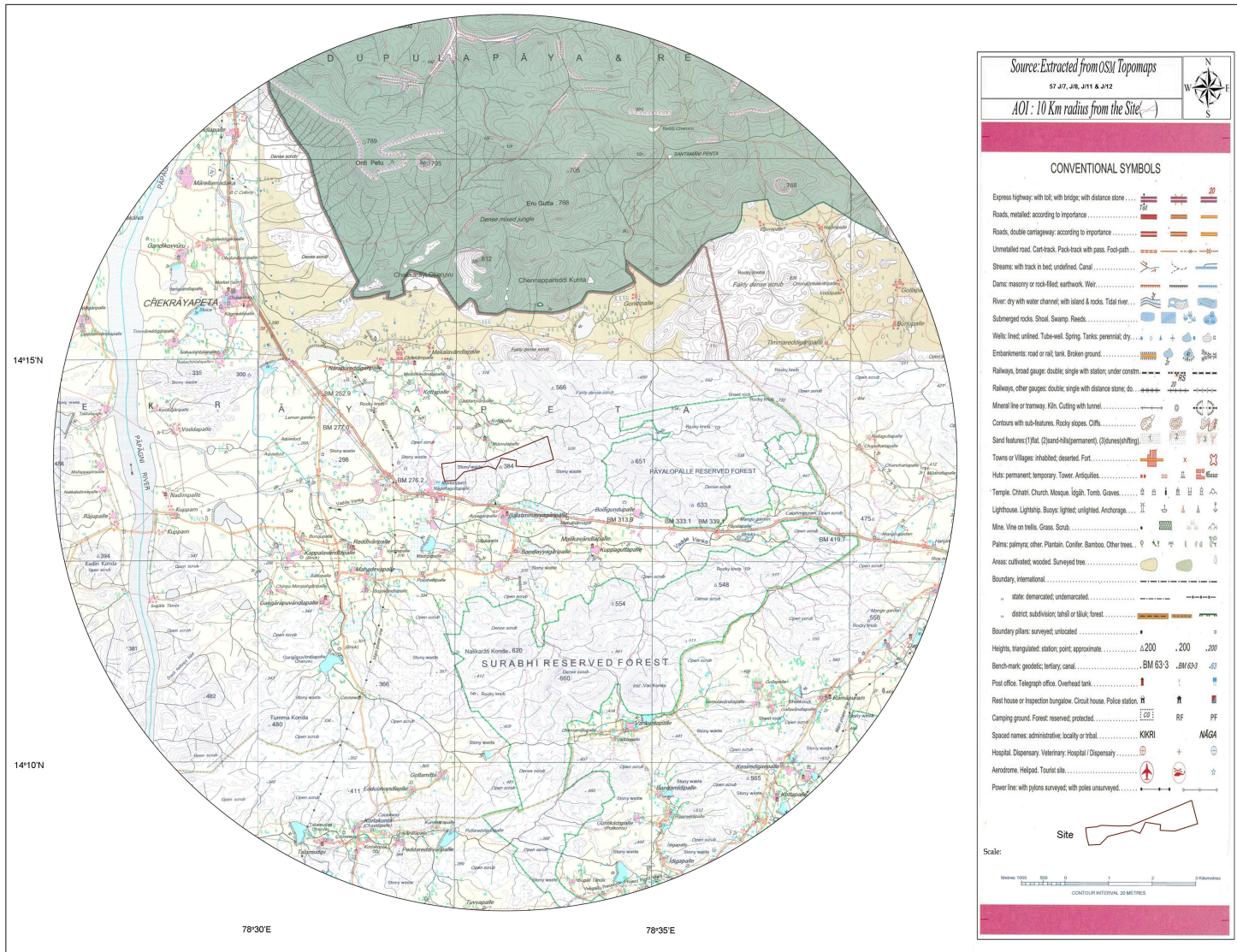


S. Sankar Reddy
Managing Partner

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M/s Srinivasa Minerals
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ANNEXURE

ANNEXURE-I LOCATION OF SRINIVASA MINERALS



Source: Extracted from OSM Topomaps
57, 817, 818, 811 & 812

AOI : 10 Km radius from the Site

CONVENTIONAL SYMBOLS

- Express highway; with toll; with bridge; with distance stone
- Roads, metalled; according to importance
- Roads, double carriageway; according to importance
- Unmetalled road. Cart-track. Puck-track with pass. Foot-path
- Streams: with track in bed; undefined. Canal
- Dams: masonry or rock-filled; earthwork. Weir
- River: dry with water channel; with island & rocks. Tidal river
- Submerged rocks. Shoal. Swamp. Reeds
- Wells: lined; unlined. Tube-well. Spring. Tanks: perennial; dry
- Embankments: road or rail; bank. Broken ground
- Railways, broad gauge; double; single with station; under constn
- Railways, other gauge; double; single with distance stone; do
- Mineral line or tramway. Kin. Cutting with tunnel
- Contours with sub-features. Rocky slopes. Cliffs
- Sand features (Flat. Sand-ridge/penament). (Cliff/escarpment)
- Towns or Villages: inhabited; deserted. Fort
- Hills: permanent; temporary. Tower. Antiquities
- Temple. Chattri. Church. Mosque. Uigh. Tomb. Graves
- Lighthouse. Lightship. Buoy; lighted; unlighted. Anchorage
- Mine. Vine on trellis. Grass. Scrub
- Palms; palms; other. Plantain. Conifer. Bamboo. Other trees
- Areas: cultivated; wooded. Surveyed tree
- Boundary, international
 - state; demarcated; undemarcated
 - district; subdivision; tahsil or taluk; forest
- Boundary pillars: surveyed; unlocated
- Heights, triangulated; station; point; approximate
- Bench-mark: geodetic; tertiary; canal
- Post office. Telegraph office. Overhead tank
- Rest house or inspection bungalow. Circular house. Police station
- Camping ground: Forest: reserved; protected
- Spaced names: administrative; locality or tribal
- Hospital. Dispensary. Veterinary Hospital / Dispensary
- Aerodrome. Helipad. Tourist site
- Power line: with pylons surveyed; with poles unsurveyed

Scale:

1:50,000
0 1 2 Kilometres
CONTOUR INTERVAL: 20 METRES

Site

ANNEXURE I**Introduction**

M/s. Srinivasa Minerals proposes to conduct semi-mechanised open cast method mining for Pyrophyllite with average production of 47578.42 TPA. The production achieved in previous years is 2723 Tons/annum. The mining lease for Pyrophyllite was granted over an extent of 150.00 acres (or) 60.705 hectares in survey no. 1095 of Surabhi Village, Chakrayapet Mandal, YSR District, Andhra Pradesh for a period of 20 years in favour of M/s Srinivasa Minerals vide G.O. Ms No. 22 from Industries and Commerce (I&C) (M.III) department dated 18-01-2002. The mining lease deed was executed and work orders issued vide Asst. Director of Mines and Geology, Kadapa proceedings No. 473/M3/2002 dated 16-09-2002 in favour of Srinivasa Minerals Proprietor Sri P. Nageswara Rao. M/s Srinivasa minerals originally it is proprietor ship firm and subsequently it becomes partnership firm. Accordingly Sri S. Sankar Reddy is the managing partner and GPA holder of the firm. Subsequently Sri. P. Nageswara Rao, Proprietor of M/s Srinivasa minerals made a requisition to the secretary (I&C) Department vide 32AA 569568 for transfer of the mining lease in favour of Sri. Sanivarapu Sankar Reddy Managing partner of M/s Srinivasa minerals.

Location

The mine lease area is located at survey no. 1095, Surabhi Village, Chakrayapet Mandal, YSR District, Andhra Pradesh. The mine lease area falls in survey of India Topo sheet no. 57 J/12 at the intersection $78^{\circ} 32' 21.9''$ - $78^{\circ} 33' 45.2''$ E longitude and $14^{\circ} 13' 27.1''$ - $14^{\circ} 13' 53.5''$ N latitude. The mine lease area includes a part of hillock with highest MSL of 465 m. The mine lease area is surrounded by open land in all directions. The nearest habitation from the proposed active mine area is Muvvulapalle located at a distance of 1.3 km in NW direction. The main road access for ML area shall be Vempalli – Rayachoti (Via B.Timmayagaripalle) road which is at a distance of 1.5 km from the ML area in south direction. Papagni River is passing from southwest to northwest direction at 8.5 km in W direction. The mine lease area consists of one first order drain on the northern boundary draining northwest, southwestern and northern part of mine lease. There are three Reserve Forests in the study area. Payalopalle RF is at a distance of 2.0 km from the ML boundary in east direction. Surabhi RF is at a distance of 2.0 km from the ML boundary in east direction. Idupulapaya RF is at a distance of 3.0 km from the ML boundary in South direction. There are no sanctuaries, national parks, critically polluted areas and inter-state boundaries within 10 km radius from the mine lease area.

Land use in Mine Lease area

Description	Present Use (Ha)	During plan Period (Ha)	Total (Ha)
	A	B	C = (A+B)
Area of excavation	0.04	2.5	2.54
Overburden/ waste dump	--	0.32	0.32
Mineral stockyard	--	0.05	0.05
Infrastructure (administrative building, site services etc)	--	0.005	0.005
Road	0.4	0.06	0.46
Green belt	--	2.0	2.0
Total	0.44	4.935	5.375

Exploration

To know the strike continuity of the Pyrophyllite vein a total of 4 trial pits were proposed further west of the existing vein. The size of the trial pits will be 5m x 5m x 5m.

MINING

The mining operations will be carried out by semi-mechanised open-cast method by forming benches at 3m x 3m. The pyrophyllite mineral occurring on hilly terrain without over burden. The mining operations have been started north-eastern end of the lease boundary on hill top where pyrophyllite mineral has been exposed laterally and vertically. The ramp has been made upto the mine face where mineral as well as side burden loaded into the trucks by proclain and transported to the level ground and stacked the mineral and side burden separately. As experienced in the present mining there is no regular blasting is required, whenever blasting is required by drilling of 33mm dia holes by using jack hammer operated by compressed air these holes are blasting by using slurry explosive with special ordinary detonators.

It is proposed to carry out the mining operations in the semi-mechanised open-cast method by forming the benches at 3m x 3m size.

1.2 Year Wise Development and Production

The pyrophyllite vein has been exposed to surface without any overburden. As experienced in the present mining the weathered country rock such as schist occurring as a side burden which has been removed during the course of mining and stacked separately.

It is planned to achieve an average production of 47578.42. A buffer zone of 7.5m will be left all along the lease boundary two benches of 3m height and 3m width and will be advanced ease to west. During the first 5 years period the Pyrophyllite mineral will be extracted between the 476m RL and 358m RL.

Year	Production Tons
1 st year	47578.42
2 nd year	47578.42
3 rd year	47578.42

Mining machinery

S. No	Type of machine	No's	Size/Capacity	Make	Motive power
1	Jack hammer	1	33 mm	Atlos Copco	Pneumatic
2	Tractor mounted compressor	1	7 Cum/min	Atlos Copco	Diesel
3	Excavator	1	0.4 cum	L & T	Diesel
4	Tippers	2	10 Tons	TATA	Diesel

Waste Management

The generation of waste for the scheme period will be 54570 Cu. m. The waste will be stacked separately and stabilized.

Dumping

The waste dump will be covered over an area of 54570 Cu. m. with a height of 20 m in the 5 years period. Around the dump yard retaining wall will be constructed with big boulders.

ANNEXURE II**Water Requirement:**

Water requirement for the project is mainly for maintaining the green belt and also for sprinkling on the haulage roads to mitigate dust emissions. The water requirement of the project is presented below.

Water Balance

S. No	Water Usage	Quantity KL/day
1	For wet drilling operation	1
2	For water sprinkling on mine haulage roads	2
3	Domestic	1.5
4	Green Belt	2
Total		6.5

By Speed Post

No. J-11015/434/2012-IA.II (M)

Government of India
Ministry of Environment and Forests
Impact Assessment Division

Paryavaran Bhavan,
C.G.O. Complex, Lodi Road,
New Delhi-110 003
Telefax: 011-24364067

Dated: 22th April, 2013

To

M/s Srinivasa Minerals

D.No. 1/397-1, Court Road,
Kadappa- 516 001,
YSR District, A.P
Pin-516 001

Tel: 08562-272499, Fax: 040-23748666
Email- pathinagarraju@gmail.com

Sub.:Mining of Pyrophyllite with proposed production capacity of 50,000 tons/annum of M/s Srinivasa Minerals at Village Surabhu, Chakrayapet Mandal, District-YSR, Andhra Pradesh (60.705 ha) (Consultants: Team Labs & Consultants- Prescribing TOR regarding.

This has reference to your letter no. SM-PM/YSRD/MoEF/EC/1, dated 19-10-2012, received in the Ministry on 31-10-2012. The Proposal is to determine the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the Proponent had submitted information in the prescribed format (Form-1) along with a Pre-feasibility Report. The proposal was considered by the Reconstituted Expert Appraisal Committee in its 5th meeting held during March 13th -15th, 2013.

2. M/s Srinivasa Minerals obtained mine lease deed and work orders from Asst. Director of Mines and Geology, Kadapa proceedings No. 473/M3/2002 dated 16-09-2002 for a period of 20 years in survey no. 1095 of Surabhu Village, Chakrayapet Mandal, YSR District, Andhra Pradesh. The mining operations are carried out by semi-mechanised open cast method from the year 2004-05 to 2008-09 and achieved Pyrophyllite production of 2,723 Tons. There is no development and production from the year 2009-10 to till date. The average production proposed for Pyrophyllite is 50,000 Tons/annum. The mine lease area falls in the Survey of India topo sheet no. 57J/12 with the coordinates of Latitude 14°13' 45"N and Longitude 78°33' 37" E. The nearest village is Muvvulapalle located at a distance of 1.2km from the ML area in North direction. Lakkireddipalli to Vempalli road is passing at a distance of 1.5 km from the ML area in south direction. The major town is Vempalli which is at a distance of

19.0 km and railway station is YSR Kadapa located at a distance of 40.0 km from the ML area. Papagni River is flowing at a distance of 8.5 km from the ML area. Payalopalle Reserve Forest is located at a distance of 2.0 km from the ML area in east direction. Surabhi reserve forest is located at a distance of 3.0km in south direction. No National Park/ Sanctuary is located within 10 km radius from the mine lease area. The mining operations are carried out by semi-mechanized open cast mining. Waste generated from mining shall be dumped in the dump yard in an area to a height of 20-mtrs. A protective retention wall shall be constructed around the foot of the dump. Water requirement (6.5 KLD) is mainly for drinking purpose, domestic purpose, green belt maintaining and for sprinkling on Mine haulage roads. The water shall be drawn from nearby village. The domestic waste water shall be sent to septic tank followed by soak pit. The estimated cost of the project is approximately Rs. 50.0 Lakhs.

3. Based on the information furnished, presentation made and discussions held, the Committee prescribed the Terms of Reference for undertaking detailed EIA study which are as follows:

- 1) Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification, 1994 came into force w.r.t. the highest production achieved prior to 1994.
- 2) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 3) All documents including approved mine plan, EIA and public hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management and mining technology and should be in the name of the lessee.
- 4) All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
- 5) Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large may also be detailed in the EIA report.
- 6) Issues relating to Mine Safety, including subsidence study, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
- 7) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc should be for the life of the mine / lease period.
- 8) Land use of the study area delineating forest area, agricultural land,

- grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted.
- 9) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
 - 10) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
 - 11) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
 - 12) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
 - 13) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
 - 14) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly detailed mitigative measures required, should be worked out with cost implications and submitted.
 - 15) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger/Elephant Reserves/Critically Polluted Areas/Aravalli (existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the State Wildlife Department/Chief Wildlife Warden under the Wildlife (Protection) Act, 1972 and copy furnished.
 - 16) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

- 17) Impact, if any, of change of land use should be given.
- 18) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village located in the mine lease area will be shifted or not. The issues relating to shifting of Village including their R&R and socio-economic aspects should be discussed in the report.
- 19) One season (non-monsoon) primary baseline data on ambient air quality (PM₁₀, SO₂ and NO_x), water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM₁₀, particularly for free silica, should be given.
- 20) Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 21) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 22) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 23) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- 24) Impact of the project on the water quality, both surface and groundwater should be assessed and necessary safeguard measures, if any required, should be provided.
- 25) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.
- 26) Details of any stream, seasonal or otherwise, passing through the lease

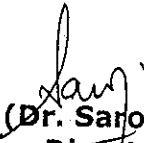
- area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
- 27) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.
 - 28) Quantity of solid waste generation should be estimated and details for its disposal and management provided. The quantity, volumes and methodology planned for removal and utilisation (preferably concurrently) of top soil should be indicated. Details of backfilling proposed, if any, should also be given. It may be clearly indicated that out of the total waste generated during the mine life, how much quantity would be backfilled and how much quantity would be disposed off in the form of external dumps (number of dumps, their height, slopes and terraces to be brought out).
 - 29) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the project.
 - 30) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered.
 - 31) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA report.
 - 32) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
 - 33) Phase-wise plan of greenbelt development, plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given.
 - 34) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP.
 - 35) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
 - 36) Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
 - 37) Detailed environmental management plan to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.

- 38) Public hearing points raised and commitment of the project proponent on the same along with time bound action plan to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 39) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the project should be given.
- 40) The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should clearly be spelt out.
- 41) A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any.
- 42) Details of rainwater harvesting proposed, if any, in the project to be provided.
- 43) The reclamation plan, post mine land use and progressive greenbelt development plan shall be prepared in tabular form and submitted.

4. The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

5. The prescribed TORs would be valid for a period of two years for submission of the EIA/EMP reports, as per the O.M. No. J-11013/41/2006-IA.II(I) dated 22.3.2010.

6. After preparing the draft EIA (as per the generic structure prescribed in Appendix- III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

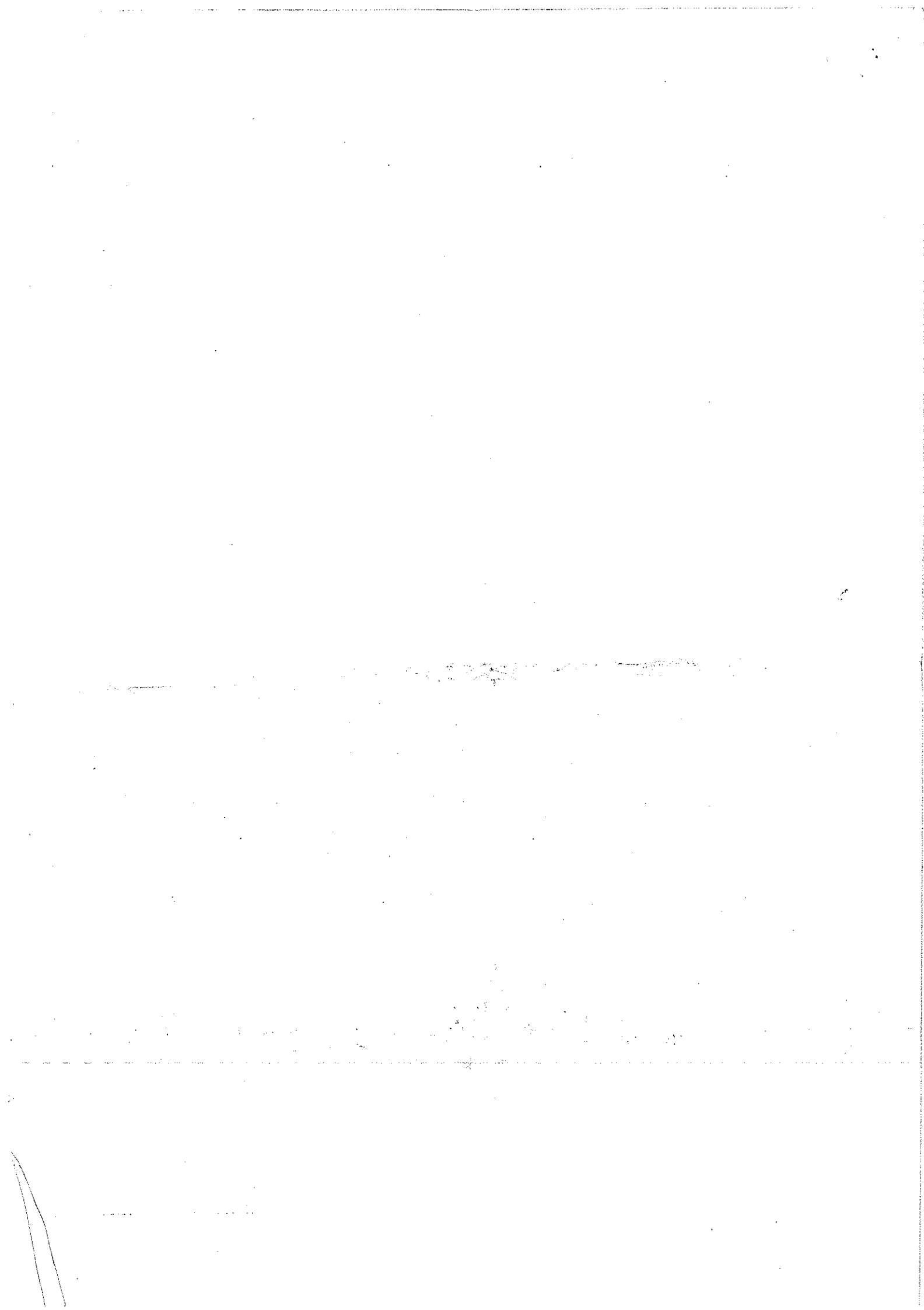

(Dr. Saroj)
Director

Copy to:

- 1). The Secretary, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
- 2). Secretary, Department of Environment, Government of Andhra Pradesh, Hyderabad.
- 3). Secretary, Department of Forests, Government of Andhra Pradesh, Hyderabad.
- 4). Secretary, Department of Mines and Geology, Government of Andhra Pradesh, Hyderabad.
- 5). Secretary, Department of Industries and Commerce (M-III), Govt of Andhra Pradesh, Hyderabad.
- 6). Chief Conservator of Forests, Regional Office (SZ), Kendriya Sadan, 4th Floor E&F, Wings 17th Main Road, 1 Block, Koramangala, Bangalore-560 034.
- 7). Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.

- 8). Chairman, Andhra Pradesh State Pollution Control Board, Paryavaran Bhawan, A-3 Industrial Estate, Sanath Nagar, Hyderabad - 500 018
- 9). Member Secretary, Central Ground Water Authority, A2, W- 3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- 10). Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- 11). District Collector, YSR District, Andhra Pradesh.
- 12). Guard File


(Dr. Saroj)
Director



M/s. SRINIVASA MINERALS

(Pyrophyllite Mine - 60.705 Ha)

**Sy. No: 1095, Surabhi Village, Chakrayapet Mandal,
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