



(I) Basic Information

S. No.	Item	Details
1	Name of the Project	Arasu Magnesite Mine of 96.34 ha located at Kurumbapatti RF, Thatayangarpatti Village, Omalur Taluk, Salem District.
2	S. No in the Schedule	1(a) - Mining of Minerals
3	Proposed capacity / area / length / tonnage to be handled / command area / lease area / number of wells to be drilled	Mining lease area: 96.34 Ha. Magnesite - 1,14,000 TPA & Dunite - 1,13,415 TPA.
4	New/Expansion/Modernization	Expansion
5	Existing Capacity/Area etc.	Mining of Magnesite – 1,14,000 TPA Mining lease area: 96.34 Ha
6	Category of Project i.e. 'A' or 'B'	Category '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.	Kurumbapatti R.F.
	Village	Thatayangarpatti
	Tehsil	Omalur
	District	Salem
	State	Tamil Nadu
10	Nearest railway station (RS) / airport along with distance in Kms.	Salem Railway Station – 9.5 km (SW) Salem Airport - 10.3 km (WNW)
11	Nearest Town, City, District Headquarters along with distance in Kms.	Town & District Head Quarters: Salem - 9.2 km (S)
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal address with telephone nos. to be given)	Thathiengarpatti post, Karuppur via, Omalur Taluk, Salem district – 636 012 Phone : 0427-2346342 Cell No. 94427 00715



13	Name of the Applicant	Tamil Nadu Magnesite Limited
14	Registered Address	5/53, Omalur Main Road, Jagir Ammapalayam Post, Salem, Tamil Nadu – 636 302.
15	Address for Correspondence:	
	Name	Tmt. R.Gajalakshmi., I.A.S.,
	Designation(Owner/Partner/CEO)	Chairman and Managing Director
	Address	5/53, Omalur Main Road, Jagir Ammapalayam Post, Salem
	Pin Code	636 302
	E-mail	tanmagmines.salem@gmail.com
	Telephone Number	0427 – 22346333 to 34
	Fax No.	0427 – 2346341
16	Details of alternative Sites examined, if any. Location of these sites should be shown on a topo sheet.	Does not arise, as mineral deposits are site specific in nature and so, no alternative sites were examined.
17	Interlinked Projects	Shaft Kiln Division (SKD) and Rotary Kiln Division (RKD) for manufacturing of DBM (Dead Burnt Magnesite) and LCM (Lightly Calcined Magnesite) from mined magnesite.
18	Whether separate application of interlinked project has been submitted?	No
19	If yes, date of submission	Not applicable
20	If no, reason	Interlinked project doesn't attract EIA under EIA Notification, 2006.



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?	Yes. Forest clearance obtained from MoEF, New Delhi vide letter No. 8-53/97-FC dated 23.06.1998 for 177.96 ha and renewed on 08.05.2008 for 96.34 ha for 20 years. No No
22	Whether there is any Government Order / Policy relevant / relating to the site?	Yes, G.O.Ms. N0. 234 Environment and Forest Dept. dated 06.08.1998 & G.O.Ms. N0. 79 Environment and Forest Dept. dated 12.08.2008 (Copy Enclosed).
23	Forest land involved (hectares)	Yes, 96.34 ha forest land area
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.	Nil

(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
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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)	Yes	There are no changes in the land use / land cover due to expansion since, there is no change in ROM (Run of Mine) quantity. From the same ROM quantity, co-existing mineral Dunite is recovered along with Magnesite.
1.2	Clearance of existing land, vegetation and buildings?	No	Mine lease is under operation and there is no clearance of existing land and vegetation is required.
1.3	Creation of new land uses?	No	No new land usage is envisioned.
1.4	Pre-construction investigations e.g. bore holes, soil testing?	Yes	The mine lease area is under operation. Prospecting exploration to prove continuity of Magnesite mineralization drilling has been carried out in mine lease area (11 Boreholes).
1.5	Construction works?	No	Not Applicable
1.6	Demolition works?	No	Not Applicable
1.7	Temporary sites used for construction works or housing of construction workers?	No	Not Applicable
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	Existing building structures such as Office, Work shed containing basic facilities, Weighing Bridge, Maintenance Workshop, First Aid Station, Canteen, Rest Shed, Fuel Station, Magazine and Toilets,
1.9	Underground works including mining or tunneling?	No	Not applicable
1.10	Reclamation works?	Yes	After completion of mining activities, the pit will be reclaimed and surrendered to Forest Department as per Progressive Mine Closure Plan (PMCP) approved by IBM.
1.11	Dredging?	No	Not applicable
1.12	Offshore structures?	No	Not applicable
1.13	Production and manufacturing processes?	Yes	The mine is semi mechanized open cast - drilling and blasting method, the



			Magnesite production is 1,14,000 MT and Dunite production is 1,13,415 MT. The detailed manufacturing process is given as ANNEXURE – I .
1.14	Facilities for storage of goods or materials?	No	Nil
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	Solid waste of 1,01,73,871 Tonnes for a period of 5 years is generated, which will be dumped at the earmarked waste dump area as per approved Scheme of Mining.
1.16	Facilities for long term housing of operational workers?	No	There is no proposal for providing any additional long term housing facilities.
1.17	New road, rail or sea traffic during construction or operation?	No	Not Applicable
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	Existing approach roads will be utilized.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Not Applicable
1.20	New or diverted transmission lines or pipelines?	No	Not Applicable
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not Applicable
1.22	Stream crossings?	No	No stream is crossing in the mine lease area.
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	Rain water collected inside the pit will be reused for water sprinkling, developing green belt and recharging nearby wells.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	There are no water bodies in the ML area.



1.25	Transport of personnel or materials for construction, operation or decommissioning?	No	Necessary facilities are in existence for the transportation of personnel during operation.
1.26	Long-term dismantling or decommissioning or restoration works?	No	Not Applicable
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not Applicable
1.28	Influx of people to an area in either temporarily or permanently?	Yes	Security arrangements are provided to prevent influx of people in to ML area.
1.29	Introduction of alien species?	No	Not Applicable.
1.30	Loss of native species or genetic diversity?	No	There will be no loss of native species
1.31	Any other actions?	No	Not Applicable

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
1	Land especially undeveloped or agricultural land (ha)	No	Land is hilly terrain and diverted Forest Land. Mining is being undertaken in the mining lease area of 96.34 ha.
2	Water (expected source & competing users) unit: KLD	Yes	Total Water requirement for the ML operations will be 60 KLD inclusive of domestic, dust suppression & green belt development and maintenance which will be met from well & tube well near the proposed site.
3	Minerals (MT)	No	Not Applicable



4	Construction material – Stone, aggregates, sand / soil (expected source- MT)	No	Not Applicable
5	Forests and timber (source – MT)	No	Not required
6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	High Speed Diesel (HSD) will be used for mining machinery only and electricity is used for general lighting at office buildings and workshop activities.
7	Any other natural resources (use appropriate standard units)	No	Not Applicable.

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)	Yes	HSD will be used in machinery and in transport of vehicles. The spent oil generated will be disposed off through authorized recyclers. Explosives (Class II Explosives - Nitrate Mixtures & Class VI - Electric Detonators) are used for blasting during mining.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	Not applicable
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	The project has created positive socio-economic impacts such as direct / indirect employment to people in nearby villages and creating revenues for State and



			Central Government by means of lease rent, royalty, cess, taxes, etc.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.	No	Not Applicable.
3.5	Any other causes	No	Not Applicable

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	Yes	Solid waste of 1,01,73,871 Tonnes for a period of 5 years is generated, which will be dumped at the earmarked waste dump area as per approved Scheme of Mining.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	The domestic waste generated is collected in bins and disposed scientifically.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	Spent Oil from Vehicles or other machineries is collected, stored and disposed through authorized vendors.
4.4	Other industrial process wastes	No	Other than mining solid wastes, industrial process wastes will be negligible.
4.5	Surplus product	No	No envisaged surplus product from this project.
4.6	Sewage sludge or other sludge from effluent treatment	No	Not applicable
4.7	Construction or demolition wastes	No	This project does not involve any construction or demolition activities.
4.8	Redundant machinery or equipment	No	The mining machineries are engaged on outsourcing and hence disposal of



			mining machineries does not arise.
4.9	Contaminated soils or other materials	No	Machineries will be maintained in good working condition and measures are taken to prevent oil spillage. Thus the project will not cause any soil contamination.
4.10	Agricultural wastes	No	Not applicable
4.11	Other solid wastes	No	No other solid waste generation is envisaged.

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.	Yes	Negligible
5.2	Emissions from production processes	Yes	Fugitive dust during drilling, blasting, and transportation activities.
5.3	Emissions from materials handling including storage or transport	Yes	Respirable Dust Emissions arise during drilling, blasting, and transportation activities.
5.4	Emissions from construction activities including plant and equipment	No	Not Applicable
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Due to vehicular movement, dust emission is anticipated. No odour is envisioned.
5.6	Emissions from incineration of waste	No	Not Applicable
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Not Applicable
5.8	Emissions from any other sources	No	Not applicable



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 & Vibration is present during mining activity from drilling, blasting and transportation.
6.2	From industrial or similar processes	No	Not Applicable
6.3	From construction or demolition	No	No construction or demolition involved.
6.4	From blasting or piling	Yes	Temporary noise generation during blasting and drilling activities.
6.5	From construction or operational traffic	Yes	Noise and emission will be generated by operational traffic which would be controlled by effective environment management plan.
6.6	From lighting or cooling systems	No	Not Applicable
6.7	From any other sources	No	Not applicable

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	No hazardous materials are being used in the lease area. However as a precautionary measure, the provisions of Hazardous Waste (Management and Handling) Rules 2008 and subsequent amendments of same will be strictly followed. Hence no risk is involved in this regard.



7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Not Applicable
7.3	By deposition of pollutants emitted to air into the land or into water	No	Not Applicable
7.4	From any other sources	No	Not Applicable
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	Not Applicable

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	Yes	The risk of accidents is envisaged during blasting and handling of explosives only. Since all statutory safety measures are followed in transporting and using the explosives by engaging well trained and qualified persons for the blasting operations, risk of accidents would be almost nil.
8.2	From any other causes	No	Not Applicable
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, Cloudburst, etc)?	No	Not Applicable

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 supporting infrastructures such as roads, lighting, etc. have been improved. Social infrastructure has improved due to direct and indirect employment of local persons from nearby villages mostly in the project.
9.2	Lead to after-use of the site, which could have an impact on the environment	Yes	The mined out area will be reclaimed and surrendered to forest department as per approved PMCP.
9.3	Set a precedent for later developments	Yes	This project will set a precedence in the area of environmental safe guards and socio-economic aspects
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	There are 2 magnesite mining leases in the nearby areas (<i>SAIL Refractory Company Limited and Dalmia Magnesite Corporation Limited</i>).

(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	No	Nil



	their ecological, landscape, cultural or other related value		
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Yes	<ul style="list-style-type: none"> ➤ Kannankurichi Puthu Eri - 5.1 km (ESE) ➤ Yercaud Lake - 5.8 km (NE) ➤ Kannankurichi Lake - 6.3 km (SSE) ➤ East Sarabanga River - 7.9 km (WNW)
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	Nil
4	Inland, coastal, marine or underground waters	Yes	Nil
5	State, National boundaries	No	Nil
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	➤ Yercaud Road - 7 km (NE)
7	Defense installations	No	Nil
8	Densely populated or built-up area	Yes	<ul style="list-style-type: none"> ➤ Chettichavadi - 2.0 Km (South) ➤ Thekkampatti - 2.0 Km (South West)
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	<ul style="list-style-type: none"> ➤ Perumal Temple - 1.14 Km ➤ Manipal Hospital - 7.4 km (SW) ➤ Indian Public School - 1.62 Km (SE)



TAMILNADU MAGNESITE LIMITED
PROJECT SUMMARY


10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	YES	Kurumbapatti Reserve Forest & Kurumbapatti Zoological Park
11	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	No	The area is under reserved forest and no other industrial activities exist.
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	No	Area falls in Zone-III (Moderate) and is not prone to earth quakes, floods, etc.

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 given, if any to the project will be revoked at our risk and cost.

Date : 10.04.2018

Place : Salem

For TAMILNADU MAGNESITE LIMITED
(A Govt. of Tamilnadu Undertaking)


(B. RAJAKUMAR)
Manager (Mines)

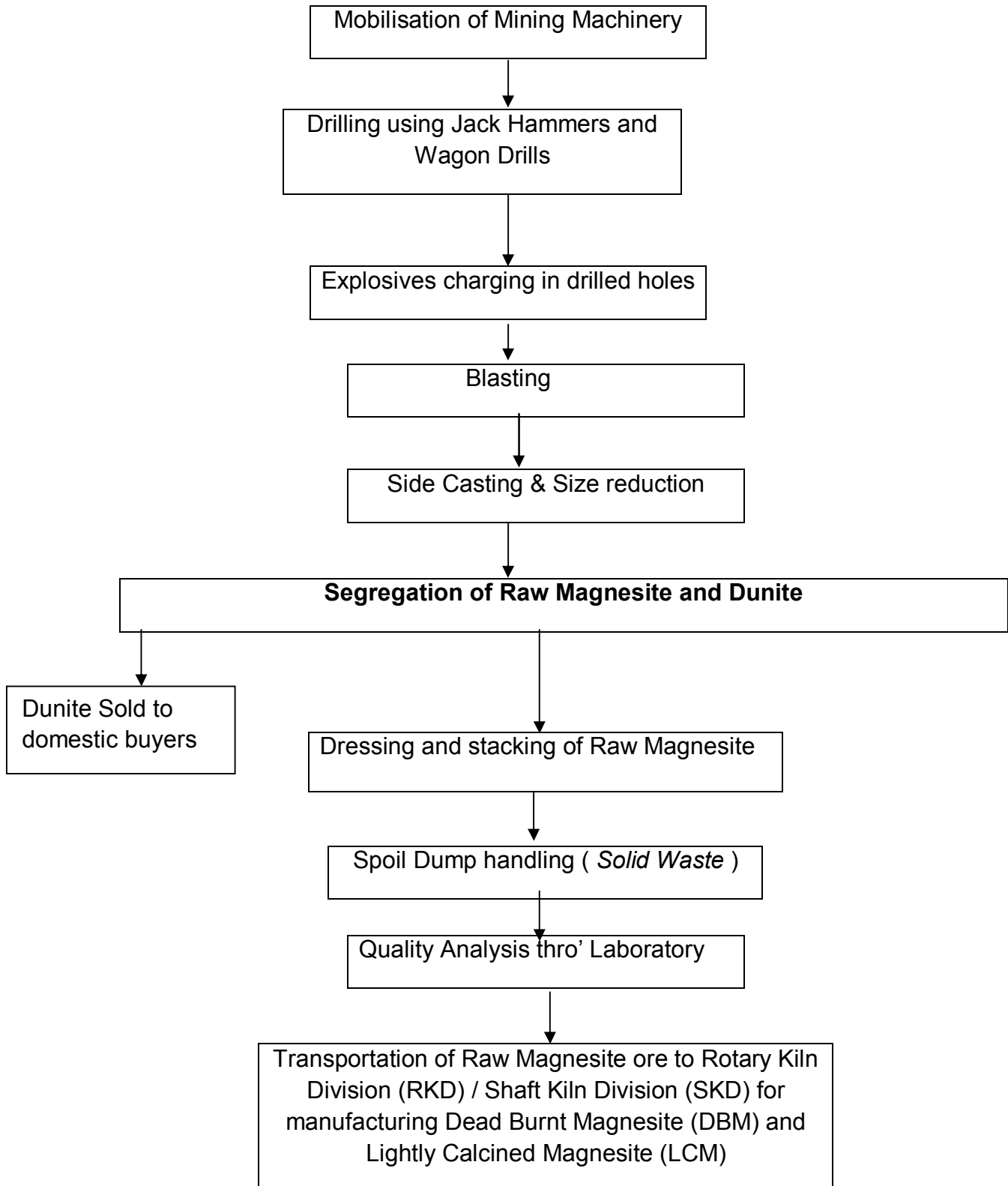
Signature of the applicant

With Name and Full Address

(Project Proponent / Authorized Signatory)

ANNEXURE - I

1. MINING PROCESS FLOW CHART



2. MINING PROCESS DESCRIPTION

Mobilisation of Mining Machinery:

Mining Machinery such as Wagon Drills & Jack Hammer Drills are mobilized to planned district towards drilling.

Drilling:

Deep hole drilling of 110 mm dia with 4.5 M depth by engaging Wagon Drill along with Air compressor and 34 mm dia with 0.6 M by engaging Jack Hammer Drills.

Drilling Parameters:

Spacing x burden x depth: 3.6m x 3.0m x 4.5m



Primary Blasting :

Explosive used: Slurry explosive / 83mm dia / 2.78 kgs per cartridge.

Detonating Fuse and Electric Detonator are used for blasting.



Secondary Blasting:

Short holes with 34 mm dia of 0.6 M depth mainly used to break hard boulders arrived from primary blasting. Explosive used for short hole: 25 mm dia slurry explosive with Electrical Detonators are used for blasting.



Side Casting & Size reduction:

After secondary blasting, the workmen are engaged at the face to segregate and collect the Raw Magnesite and Dunite from blasted heaps.



The manually collected Raw Magnesite ore after chipping and cleaning is stacked away for transport to SKD and RKD. Manually collected dunite is segregated and sold to domestic buyers.



Balance waste material (*Solid Waste*) are heaped by engaging dozer and removed to spoil waste dump by using hydraulic excavator for loading with tippers/dumpers for transport