PRE FEASIBILITY REPORT

Of

RAMCO BUDAWADA LIMESTONE MINE

(Area: 160 Ha. Budawada Reserved Forest)
Jaggayyapet Mandal,
Krishna District, Andhra Pradesh

For

INCREASE OF LIMESTONE PRODUCTION FROM 1.1 to 2.5 MTPA CAPTIVE LIMESTONE MINE

Of

THE RAMCO CEMENTS LIMITED

(Formerly Madras Cements Ltd.,)
Jaggayyapet Mandal,
Krishna District, Andhra Pradesh

Table of Contents

CHAPTER – 1 EXECUTIVE SUMMARY

1.0 Executive Summary

The Ramco Cements Limited (formerly known as Madras Cements Ltd) is operating a Cement plant of total installed capacity of 3.65 Million Tonnes Per Annum (MTPA) of cement at KSR Nagar, Jaggayyapet Mandal, Krishna District, Andhra Pradesh.

RCL is operating following Captive limestone mines to meet the limestone requirement of the cement plant.

Jayanthipuram North Band Mine
Jayanthipuram South Band Mine
Ravirala Mine (Forest)
Ramco Budawada Mine (Forest) – Subject Mine

Ramco Budawada Limestone Mine is one of the mines being operated by RCL for which EC has been obtained vide Letter: F. No. J-11015/150/2008-IA II (M) dated 10th December, 2009 for 1.1 MTPA of Limestone production in an area of 160 Ha (Budawada Reserved Forest Area), Jaggayyapet Mandal, Krishna District, Andhra Pradesh.

RCL propose to enhance Clinker production of the Cement plant by 0.3 MTPA for which limestone requirement is 0.5 MTPA. Due to presence of high silica zones, clay pockets and phyllites, mineral reserves have come down drastically in the operating captive limestone mines of Jayanthipuram cement plant. Keeping in view of limestone requirement of the expansion of cement plant and to have blending proportions of all the captive limestone mines to meet the quality of limestone feed at cement plant, **The Ramco Cements Limited** proposes to increase limestone production from 1.1 to 2.5 MTPA in Ramco Budawada Limestone mine.

Ramco Budawada Limestone mine is spread over an area of 160 Ha. with about proved mineral reserve of 101.46 Million Tonnes which will last for 41 years with proposed production capacity of 2.5 MTPA.

Fully Mechanized method of mining will be adopted. The limestone produced will be crushed in the mine for transport to cement plant through haul roads.

160 Ha is part of Budawada Reserve Forest. Forest Clearance was obtained vide letter No. 8-56/2005-FC, dated December 22, 2011.

No topsoil is present. The waste available is interstitial clay. The waste generated will be stacked in temporary dump yard and will be used for afforestation and laying roads. 1,54,652 m^3 waste is proposed to be generated during first five year plan as per 1st Scheme of Mining.

Water requirement for the mine at 2.5 MTPA limestone production is about 200 m^3/day for dust suppression, plantation and domestic purposes. This requirement is supplied by cement plant and after formation of the mine pit, rain water collected in the mine pit will be used.

The capital Investment Cost is estimated as Rs. 4 crores.

CHAPTER – 2 INTRODUCTION OF THE PROJECT/ BACKGROUND INFORMATION

i. Identification of project and project proponent. In case of mining project, a copy of mining lease / letter of intent should be given.

PROJECT: The Ramco Cements Limited proposes to increase the limestone production from 1.1 to 2.5 MTPA in Ramco Budawada Limestone mine located at Survey No.: 376(P), Compartment No. 6, Budawada Reserve Forest, Jaggayyapeta Mandal, Krishna District, Andhra Pradesh.

The Ramco Cements Limited has earlier obtained EC (vide Letter: F. No. J-11015/150/2008-IA II (M) Dated 10th December, 2009) for 1.1 MTPA of Limestone production.

Mine opened on 01.02.2014.

The present proposal is for obtaining Environmental Clearance for increase of limestone production from 1.1 to 2.5 MTPA from Ministry of Environment & Forests (MoEF) under 1(a) category of EIA notification SO1533 dated 14th Sep. 2006 and subsequent amendments dated 01.12.2009 & 04.04.2011.

A copy of the mining lease letter is enclosed as **Exhibit – 1**

PROJECT PROPONENT:

RAMCO group of companies have diversified industrial ventures, which include manufacture of cement, asbestos sheets, surgical dressing, textiles, windmill farms, ready mix concrete, as well as information technology. This 5000 Crore group has achieved international recognition for its quality products and services.

The Ramco Cements Limited having its corporate office in Chennai, Tamilnadu operates the following cement plants in the country.

S.No.	LOCATION	CEMENT CAPACITY
1	Ramaswamy Rajanagar, Virudhunagar Dist, Tamilnadu	1.5 MTPA
2	KSR Nagar, Krishna Dist, Andhra Pradesh	3.65 MTPA
3	Alathiyur Village, Ariyalur Dist, Tamilnadu	3.05 MTPA
4	Ariyalur, Ariyalur Dist, Tamilnadu	4.0 MTPA
5	Mathodu Village, Chitradurga Dist, Karnataka	0.3 MTPA

The Ramco Cements Limited have been in cement manufacture and allied fields for more than 5 decades and its products command a valuable brand image in cement market in south India as well as other parts of India.

ii. Brief description of nature of the project

The limestone mine is spread over 160 Ha with about proved mineral reserve of 101.46 Million Tonnes to produce 2.5 MTPA of Limestone from Ramco Budawada mine, Jaggayyapeta Mandal, Krishna District, Andhra Pradesh.

The mining of the deposit is worked by deep hole drilling & blasting with fully mechanized open cast mining method.

The benches are 8 m height. The limestone produced from the mine will be transported to the crusher by tipper dump trucks and after crushing to the desired size in the crusher will be transported to the plant through haul roads.

Area is devoid of any topsoil. The waste is accommodated in the Temporary dump yard located at South West Corner of the mining lease.

The temporary waste dump will be removed at the conceptual stage and part of the generated waste will be utilized for afforestation all along the periphery of the Mining Lease boundary & for internal roads and on the floor of the first two benches up to a height of 1 m to 1.5 m all along the Mining Lease boundary.

At the end of mining operations, about 150 Ha of mined-out area will be developed into water reservoir and 2.72 Ha along the mine lease boundary and barrier zone for railway line will be afforested under Green Belt development. 5.26 Ha will be developed under road/Belt conveyor etc., 2.02 Ha will be developed as Sub-station, Mines office, auto garage etc.

iii. Need for the project and its importance to the country and or region.

In view of ever increasing demand for cement in southern region for various infrastructural purposes like construction of houses, national highway and other roads, irrigation dams, power plants, new airports, etc., The Ramco Cements Limited have total capacity to 3.65 MTPA of Cement.

Jayanthipuram cement plant commenced its operation in the year 1987. At the early stages of exploration, the geological survey indicated good deposits of limestone in the lease hold areas in Jayanthipuram held by The Ramco

Cements Limited. Subsequently during mining, the deposits were found to contain high silica zones, clay pockets and phyllites.

Further the company has enormous quantity of sub-grade limestone (15% to 18% SiO_2), which is not as such suitable for cement manufacturing. To consume the above said high silica limestone, a sizeable low silica limestone deposit is required for blending – sweetening purpose.

To optimize the use of these limestone deposits, it is proposed to increase the capacity of Ramco Budawada Limestone Mine from 1.10 million TPA to 2.50 million TPA.

With this, the life of the other deposits will get increased in either way:

- Optimum utilization of low grade limestone
- Increasing the life by reducing the production on pro-rata basis

The total requirement of limestone for the enhanced capacity of cement plant is 4.41 million tonnes per annum. Keeping in view of the quality of Jayanthipuram limestone mine which consists mainly high silica limestone and also to increase the life of other existing mines it is proposed to enhance the production from 1.1 to 2.5 MTPA in Ramco Budawada Limestone Mine , the subject area.

Demand– supply Gap

Since Limestone is the main raw material for cement production, the demand is always there with that of cement. Moreover, the subject mine produces good grade limestone leading to conservation of mineral resources**.**

The cement market has growth due to the central government liberalization policies and new schemes for housing, road projects. Cement demand growth is anticipated to be about 11% increase mainly through road projects & Housing Projects.

Continuous demand for exports to China and other South-East Asian countries along with the increased requirement of the domestic sector has been lead all the cement manufacturers in the country to plan for increased capacities.

iv. Imports Vs Indigenous production.

The limestone produced from The Ramco Cements Limited is meant for the captive consumption in the cement plant.

v. Export possibility.

No exports of limestone are proposed.

vi. Domestic / export markets

The limestone produced from The Ramco Cements Limited is meant for the captive consumption in the cement plant.

vii. Employment generation (direct and indirect) due to the project.

Mechanized method of mining is adopted.

No additional direct employment (total 55) for this expansion. The indirect employment will get increased from 150 to 200.

CHAPTER – 3 PROJECT DESCRIPTION

i. Type of project including interlinked and interdependent projects, if any.

The project is for increase of limestone production capacity from 1.1 to 2.5 MTPA from Ramco Budawada Limestone mine spread over an area of 160 Ha. with about proved mineral reserve of 101.46 Million will last for 41 years. The limestone produced from the mine is of good grade limestone and is directly utilized for the cement production

Status of the interlinked/interdependent projects:-

Project	Location	Capacity	Approvals
Cement Plant	KSR Nagar, Jaggayyapeta Mandal, Krishna District, AP.	3.65 MTPA	EC obtained vide Letter: F. No. J-11011/403/2006-IA II (I) Dated 9th June, 2009

It is categorized as Category 'A' Project under Schedule 1(a) as the mining lease area is more than 50 Ha hence it necessitates obtaining Environment Clearance from Ministry of Environment & Forest (MoEF).

ii. Location (map showing general location, specific location, and project boundary & project site layout) with coordinates.

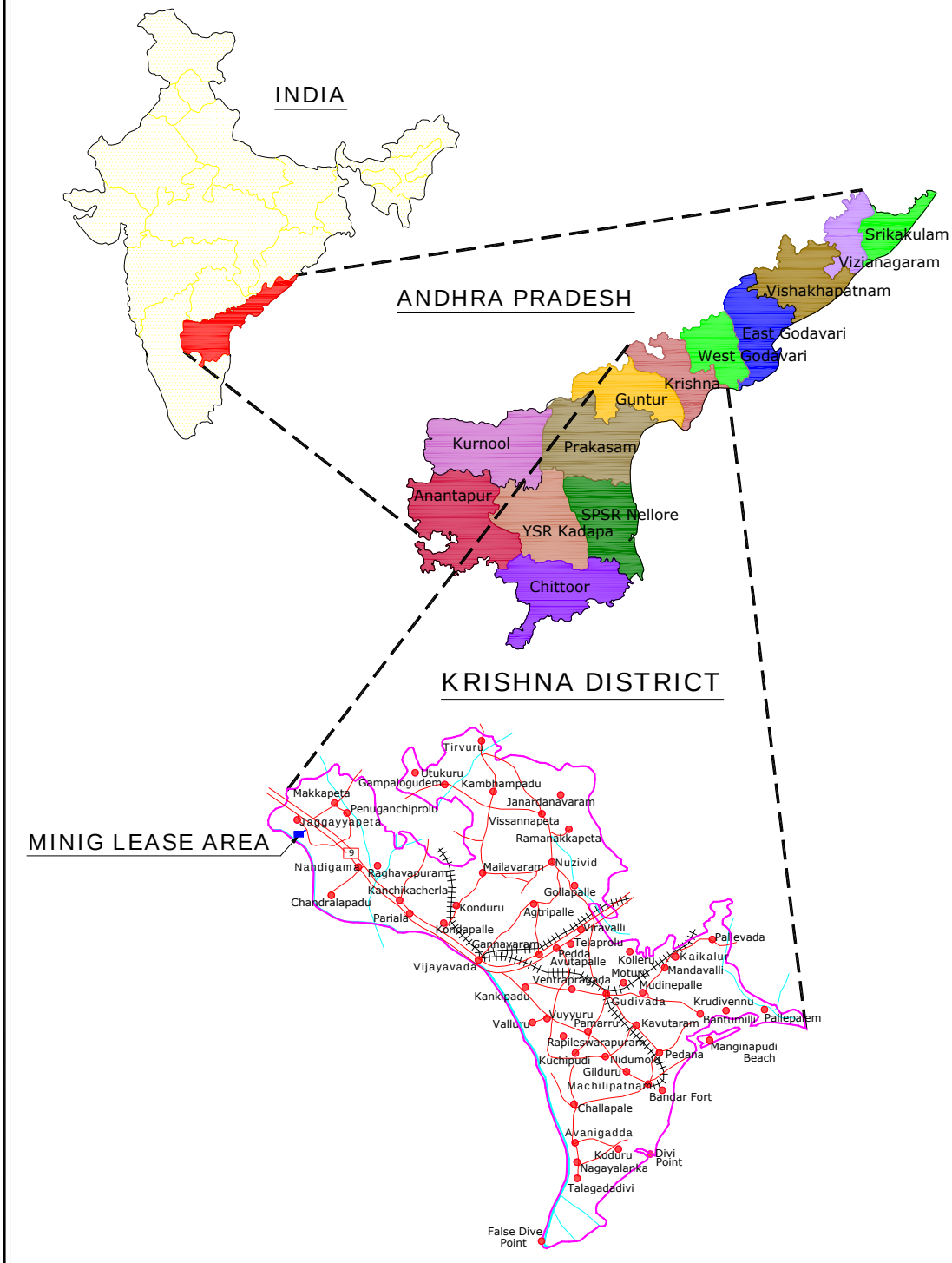
The mining lease area comprising 160 Ha is situated at Jaggayyapet Mandal, Krishna District, Andhra Pradesh.

The mine area is a part of the Survey of India Topo sheet $16^0$51'17.0''N - $16^0$52'10.3''N & $80^0$03'46.9''E - $80^0$05'32.0''E (datum-WGS 84) North latitude and East Longitude with general ground level is 65-m above MSL.

The location map of the mine site is shown in **Fig – 1.**

FIG - 1

LOCATION MAP



Nearest railway line connecting Madhira - Mellacheruvu of South Central Railway line is passing through in North direction. Key map showing the location of various features around the Mining Lease Area is shown in **Fig – 2**. Vijayawada is major town at a distance of 72.0 km - SE.

The National Highway (NH-9) connecting Vijayawada – Hyderabad, at a distance of about 4.0 km - NE. The nearest railway station is Bonakallu at 23 km NW. Major Railway station is Vijayawada – 72.0 km SE.

There are no wild life sanctuaries, national parks, elephant/tiger reserves within 10-km radius of the study area.

Nearest Settlements from the Mine site

- Budawada – 3.5 km – WNW
- Mukteshwarapuram & K Agraharam – 2.5 km
- Jaggayyapeta – 3.2 - NE

Nearest Reserved Forests from the Mining Lease Area

- Budawada RF – Adjacent
- Jaggayyapeta Extension RF – 2.9 2.7 km – SE
- Balusupadu – 2.8 km - NW

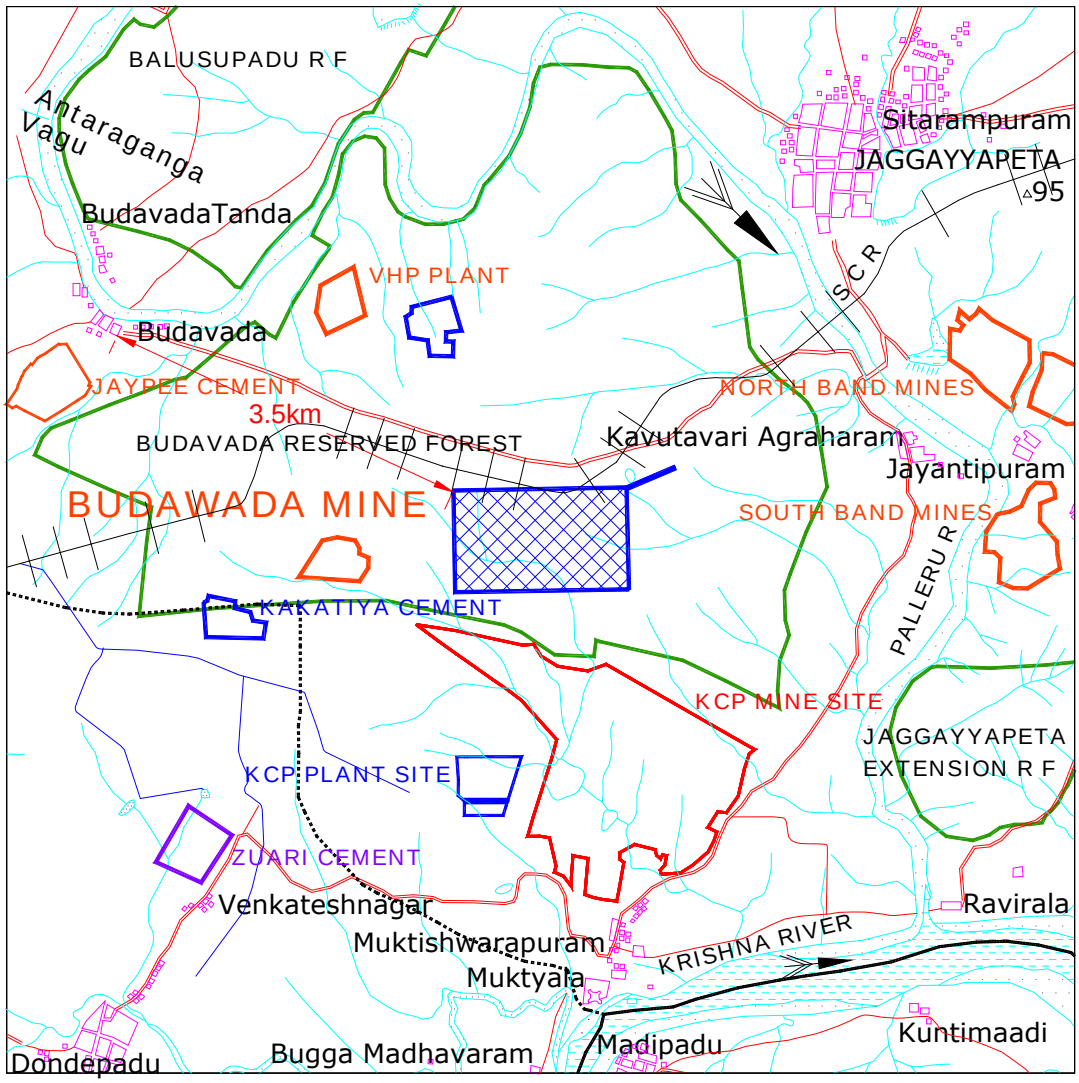
Salient features of Mine site are given in **Table – 1** and **Fig - 3** shows the study area of 10 km radius around the Mine site.

iii. Details of alternate sites considered and the basis of selecting the proposed site, particularly the environmental considerations gone into should be highlighted.

No alternate sites were considered as the project is site specific.

iv. Size or magnitude of operation.

Mine area is 160 Ha. The production of limestone is proposed to increase from 1.1 to 2.5 MTPA.



LEGEND

- ROADS
- STREAMS / TANKS
- RIVER
- FOREST BOUNDARY
- CANAL
- SETTLEMENTS
- RAILWAY LINE
- SPOT HEIGHT
- NORTH BAND MINES
- SOUTH BAND MINES
- VHP PLANT
- JAYPEE CEMENT
- KAKATIYA CEMENT
- ZUARI CEMENT
- KCP PLANT SITE
- KCP MINE SITE
- BUDAWADA MINE

SCALE

0 1 2km

FIG - 2

CLIENT: M/s. RAMCO CEMENTS LIMITED
(FORMERLY MADRAS CEMENTS LIMITED)
Budawada Village, Jaggayapeta Mandal, Krishna District, Andhra Pradesh. India

PROJECT: BUDAWADA LIMESTONE MINE

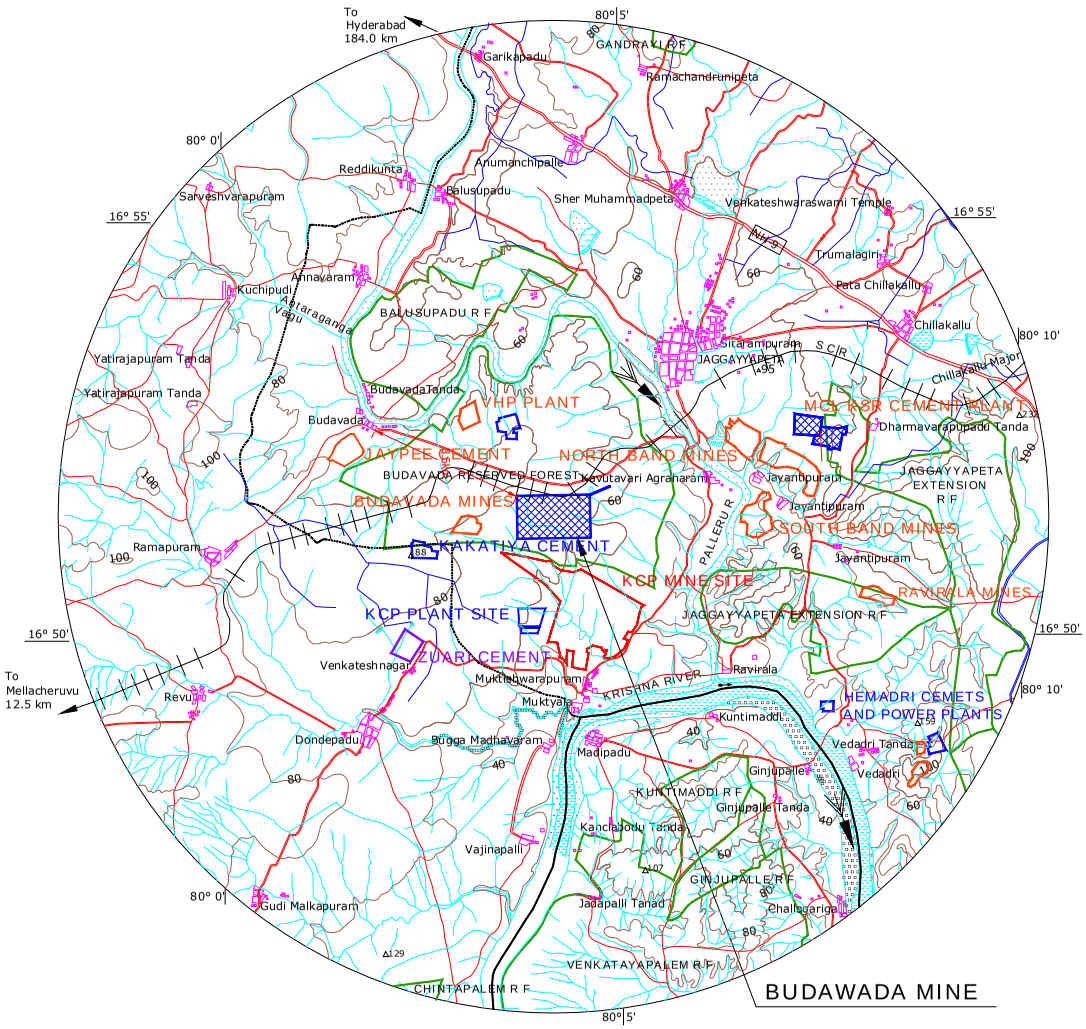
TITLE: KEY MAP

PREPARED BY:
B.S.ENVI-TECH (P) LTD.,
HYDERABAD

TABLE - 1
SALIENT FEATURES OF THE MINE SITE

Feature	**Details**
Altitude	60 m above MSL
latitude and Longitude	$16^0$51'17.0''N -$16^0$52'10.3''N & $80^0$03'46.9''E - $80^0$05'32.0''E (Datum-WGS 84)
Village, Tehsil, District, State	Jaggayapet Mandal, Krishna District of Andhra Pradesh.
IMD Station	Kammam – 43.0 km - N
Max. Temp., ^oC	47.2
Min. Temp., ^oC	9.4
Relative Humidity,%	35-83
Annual rainfall,	680 mm
Topography	Plain
Soil Type	Red soil
Nearest Water Bodies	Paleru – 2.5 km – SE Krishna River – 3.7 km – SSE
Nearest Highway	National Highway (NH-9) Connecting Vijayawada – Hyderabad – 4.0 km NE direction
Nearest Railway station	Bonakalu-23 km NW Vijayawada – 72.0 km – SE
Nearest Industries	JP Balaji Cements.
Nearest Village	Mukteshwarapuram & K Agraharam – 2.5 km Budawada – 3.5 km – WNW
Nearest Town	Vijayawada – 72.0 km - SE
Inter State Boundary	Andhra Pradesh – Telangana – 18.0 km - NNW
Nearest Air port	Gannavaram (Vijayawada) – 100 km ESE
Nearest Forest	Budawada RF – Adjacent Jaggayapeta RF – 2.7 km – SE Balusupadu – 2.8 km - NW
Historical places	None within 10 km radius

*all distances mentioned in the above table are aerial distances



LEGEND

- ROADS
- CONTOURS
- STREAMS / TANKS
- RIVER
- FOREST BOUNDARY
- CANAL
- SETTLEMENTS
- RAILWAY LINE
- DISTRICT BOUNDARY
- SPOT HEIGHT
- NORTH BAND MINES
- SOUTH BAND MINES
- RAVIRALA MINES
- BUDAWADA MINE
- HEMADRI CEMETS AND POWER PLANTS
- VHP PLANT
- ZUARI CEMENT
- KAKATIYA CEMENT
- JAYPEE CEMENT
- KCP PLANT SITE
- KCP MINE SITE
- MCL KSR CEMENT PLANT

N

Index to Survey of India Toposheets

56 O/16	65 C/4	65 C/8
56 P/13	65 D/1	65 D/5
56 P/14	65 D/2	64 D/6

SCALE

0 3 6 km

FIG - 3

CLIENT: THE RAMCO CEMENTS LIMITED
(FORMERLY MADRAS CEMENTS LIMITED)
Budawada Village, Jaggayapeta Mandal, Krishna District, Andhra Pradesh. India

PROJECT: BUDAWADA LIMESTONE MINE

TITLE: TOPOGRAPHICAL MAP SHOWING 10 km RADIUS

PREPARED BY:
B.S.ENVI-TECH (P) LTD., HYDERABAD

v. Project description with process details (a schematic diagram/ flow chart showing the project layout, components of the project etc. should be given)

The mining is by opencast mechanized mining, employing DTH drilling for blast holes, after blasting the mineral is loaded into the tippers using hydraulic excavator. The limestone is hauled to the factory.

i) Drilling

Latest hydraulic drills are used in combination with the diesel- operated compressors. The diameter of drill hole will be of 115 mm diameter.

Primary Drilling

Bench Height

As per the deposit characteristics the bench height is kept at 8.0 m.

Burden

40% to 60% of the bench height i.e. 3.0 m depending on the height of the bench and also depends upon the thickness of individual litho unit.

Spacing

A spacing of 4.0 m is maintained based on nature and stratigraphic sequence of the rock.

Angular Holes

The blast hole is vertical only.

Depth of Holes

The depth of the hole is kept at 8.5 m equal to bench height with sub grade drilling.

Secondary drilling

No secondary drilling will be carried out. The boulders are broken by deploying Rock – Breaker or by using secondary blasting if required.

ii) Blasting

Blasting is one of the most important operations in the production cycle of a mine. Open cast mining adopting deep hole blasting technique & deploying HEMM.

Type of explosives used / to be used

Two licensed magazines are located at Jayanthipuram Limestone mine situated at a distance of about 8 km with a capacity of 10 tonnes each bearing license no. E/HQ/AP/22/135(E1737) and E/HQ/AP/22/112(E1692). The explosives are transported by an approved explosive van.

iii) Loading

Loading of limestone will be carried out with the help of hydraulic excavators of 2.0 m^3 bucket capacity.

iv) Hauling

Tippers of 20 tonne capacity will be used for transport of limestone from pit to crusher.

v) Raw material required along with estimated quantity, likely source, marketing area of final product/s, mode of transport of raw material and finished product.

No raw material is required.

vi) Resource optimization / recycling and reuse envisaged in the project, if any, should be briefly outlined.

The area is devoid of top soil.

vii) Availability of water its source, energy /power requirement

Water requirement for enhanced production is 50 m^3/day for dust suppression, plantation and domestic purposes. The water requirement is presently supplied by cement plant and after formation of the mine pit, rain water collected in the mine pit will be used.

The power required for illumination will be met from grid.

viii) Quantity of wastes to be generated (liquid and solid) and scheme for their management / disposal.

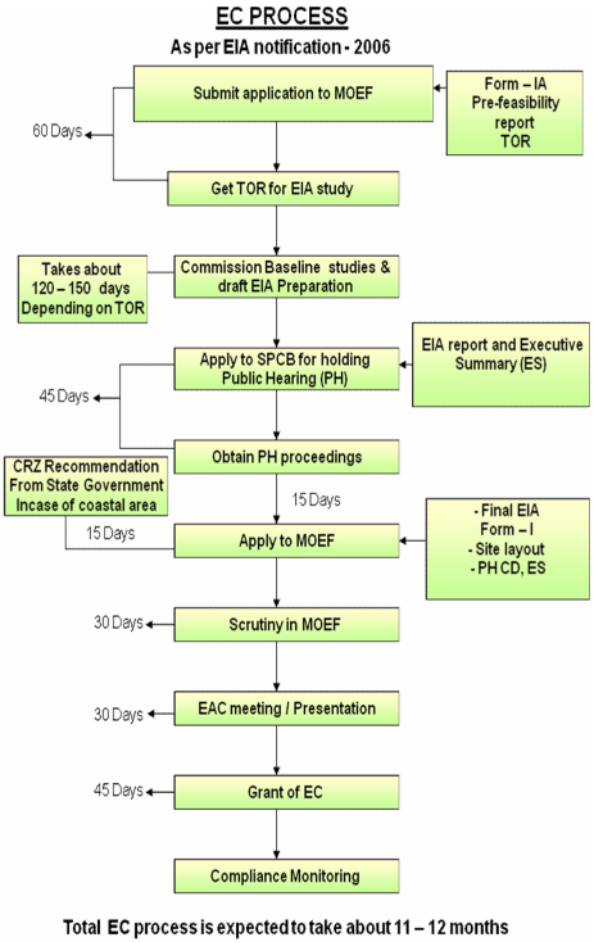
Area is devoid of topsoil.

The waste generated, if any, will be temporarily accommodated in the Temporary dump yard located at South West Corner of the mining lease.

The temporary waste dump will be removed at the conceptual stage and part of the generated waste will be utilized for afforestation all along the periphery of the Mining Lease boundary & for internal roads and on the floor of the first two benches up to a height of 1 m to 1.5 m all along the Mining Lease boundary.

Waste water generated from domestic uses will be treated in septic tank followed by soak pit.

ix) Schematic representations of the feasibility drawing which give information of EIA purpose.



CHAPTER – 4 SITE ANALYSIS

i. Connectivity.

The mine area under reference extends over an area of 160 Ha in Jaggayyapet Mandal, Krishna District, Andhra Pradesh.

Nearest railway line connecting Madhira - Mellacheruvu of South Central Railway line is adjacent to North direction. Vijayawada is major town at a distance of 72.0 km - SE.

The National Highway (NH-9) connecting Vijayawada – Hyderabad, at a distance of about 4.0 km - NE. The nearest railway station is Bonakalu at 23 km NW. Major Railway station is Vijayawada – 72.0 km - SE.

Infrastructural facilities like Post, Telephone, Police Station and Primary Health Center etc., are available in the nearby villages. The nearest airport is Vijayawada 100 km – E.

ii. Land form, land use and land ownership.

Land use:

Total area of 160 Ha is part of Budawada Reserve Forest.

The Mining will be continued up to 2054-2055 @ 2.5 million tonnes of limestone per year. The land use pattern is furnished in the following table.

S.No.	Nature of Activity	Extent in Ha.
1.	Mining	150.00
2.	Plantation	2.72
3.	Sub-station, Mines office, auto garage etc.,	2.02
4.	Road/Belt conveyor etc.,	5.26
Total		**160.00**

Topography (along with map)

The topography is undulating. The area is devoid of trees and the entire area is covered with scanty vegetation and rock exposures.

The surface elevation range from 74 m above MSL to 61m above MSL.

Fig – 4 shows the survey map/surface layout of the mining lease area.

iii. Existing land use pattern (agriculture, non-agriculture, forest, water bodies (including area under CRZ), shortest distances from the periphery of the project to periphery of the forests, national park, wild life sanctuary, eco sensitive areas, water bodies (distance from the HFL of the river), CRZ, in case of notified industrial area, a copy of the Gazette notification should be given.

Total area of 160 Ha is part of Budawada Reserve Forest.

No sensitive areas or National parks are located within 10 km of the mine area.

The following are theNearest Reserved Forests from the Mining Lease Area

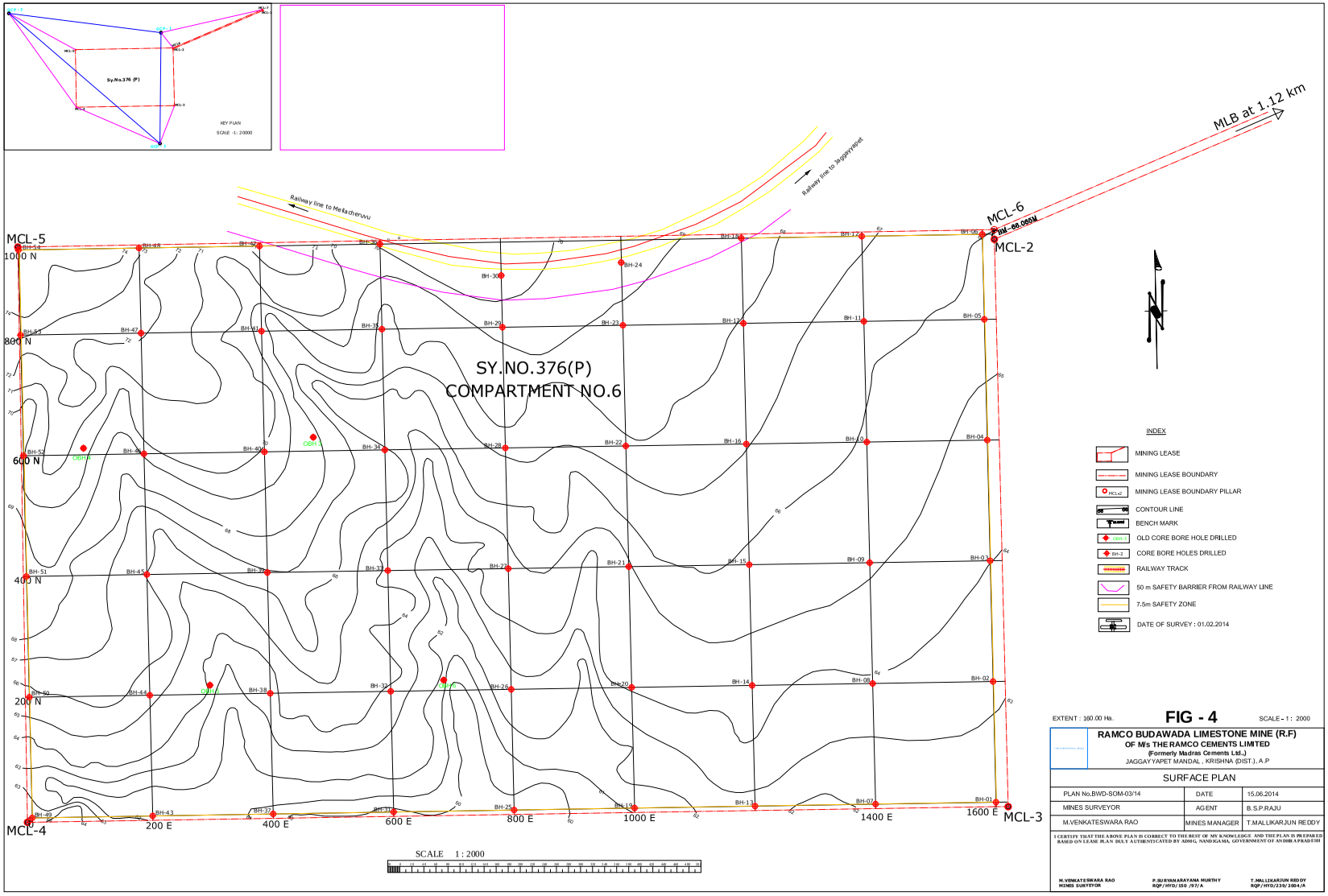
- Budawada RF – Adjacent
- Jaggayapeta RF – 2.7 km – SE
- Balusupadu – 2.8 km - NW

iv. Existing infrastructure.

None

v. Soil classification

Area is devoid of any top soil.


KEY PLAN
SCALE -1: 20000
Sy.No.376 (P)
MLB at 1.12 km
Railway line to Mekaheruvu
Railway line to Jaggayyapet
MCL-5
MCL-6
MCL-2
MCL-3
MCL-4
1000 N
800 N
600 N
400 N
200 N
0
200 E
400 E
600 E
800 E
1000 E
1400 E
1600 E
SY.NO.376(P)
COMPARTMENT NO.6
SCALE 1 : 2000
INDEX
MINING LEASE
MINING LEASE BOUNDARY
MINING LEASE BOUNDARY PILLAR
CONTOUR LINE
BENCH MARK
OLD CORE BORE HOLE DRILLED
CORE BORE HOLES DRILLED
RAILWAY TRACK
50 m SAFETY BARRIER FROM RAILWAY LINE
7.5m SAFETY ZONE
DATE OF SURVEY : 01.02.2014
EXTENT : 160.00 Ha.
FIG - 4
SCALE - 1 : 2000
RAMCO BUDAWADA LIMESTONE MINE (R.F)
OF M/s THE RAMCO CEMENTS LIMITED
(Formerly Madras Cements Ltd.)
JAGGAYYAPET MANDAL , KRISHNA (DIST.), A.P
SURFACE PLAN
PLAN No.BWD-SOM-03/14
DATE
15.06.2014
MINES SURVEYOR
AGENT
B.S.P.RAJU
M.VENKATESWARA RAO
MINES MANAGER
T.MALLIKARJUN REDDY
I CERTIFY THAT THE ABOVE PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND THE PLAN IS PREPARED BASED ON LEASE PLAN DULY AUTHENTICATED BY ADMG, NANDIGAMA, GOVERNMENT OF ANDHRA PRADESH
M.VENKATESWARA RAO
MINES SURVEYOR
P.SUBYANARAYANA MURTHY
RQP/HYD/ 150 /97/A
T.MALLIKARJUN REDDY
RQP/HYD/239/ 2004/A

vi. Climatic data from secondary sources

In general the climate of this area is dry. Summer starts from mid of February and continues up to first week of June, when the monsoon breaks. The monsoon continues till the end of October. Winter is between November and middle of February. The peak of summer is in May. The maximum temperature is about 47.2 ^{0}C. During the cold months of December the temperature falls to 9.4^{0}C. The average rainfall of the district is 680 mm.

vii. Social infrastructure available.

A well-equipped Occupational Health Center is provided at colony, which has full time qualified Occupational Health Specialist assisted, by compounders and nurse. Necessary medical aid is available for the company employees.

A good canteen is provided for the benefit of the employees. The canteen serves tea & snacks at subsidized rates to the employees.

Adequate number of shelters with fans, drinking water etc. for taking food and rest are provided for the benefit of the employees.

Safe hygienic drinking water is provided at the mines. Drinking water facility is available near rest shelters.

A full-fledged Training hall is available in the RCL cement plant complex. The training to workmen is provided on basics as well as for refreshers.

The employees are provided with well-designed houses having electricity and water connections.

For the education facility of employee's Children School is provided at colony.

RCL has spent an amount of Rs 4.0 crores for providing various social infrastructure/measures towards Health Care, Education, Drinking Water / Sanitation / Infrastructure Religious Sports / Cultural / Social / Plantation Water Supply For Agriculture Fields And Flood Relief Activities for the past 11 years.

CHAPTER – 5 PLANINIG BRIEF

i. Planning concept (type of industries, facilities, transportation etc.) town and country planning / development authority classification.

The subjected mine is the captive limestone mine of **The Ramco Cements Limited** at near Budawada Village of Jaggayyapeta Mandal of Krishna District, Andhra Pradesh with mine extent of 160 Ha. The proposal is for increase of limestone production from 1.1 to 2.5 MTPA.

ii. Population projection

About 55 workers will be deployed.

iii. Land use planning (breakup along with greenbelt etc.,)

At the end of mining operations, about 150 Ha of mined-out area will be developed into water reservoir and 2.72 Ha along the mine lease boundary and barrier zone for railway line will be afforested under Green Belt development. 5.26 Ha will be developed under road/Belt conveyor etc., 2.02 Ha will be developed as Sub-station, Mines office, auto garage etc.

iv. Assessment of infrastructure demand (physical & social)

After this expansion, the mine will provide direct employment to about 55 people, in addition there will be indirect employment to many more people, in the form of contractual jobs, business opportunities, service facilities etc. This will enhance the economic status of the area.

Apart from the jobs, the company will provide medical and educational facilities to the employees which can also be availed by the people in nearby villages.

v. Amenities / Facilities.

Infrastructural facilities like Post Office, Telephone and Primary Health Centre etc., will be provided at cement plant of The Ramco Cements Limited. The mine office with first aid rooms, rest shelters, toilets, tool/store room, etc., are proposed in cement plant.

CHAPTER – 6 PROPOSED INFRASTRUCTURE

i. Industrial area (processing area)

No processing is involved

The mine will be operated by means of opencast fully mechanised method of mining which includes deep drilling and blasting, loading the broken material by heavy machinery like hydraulic excavators and tippers for transporting the limestone to crusher at cement plant.

ii. Residential area (non-processing area)

No residential area is proposed at mine.

iii. Greenbelt.

2.72 Ha along the mine lease boundary and barrier zone for railway line will be afforested under Greenbelt development.

iv. Social infrastructure.

The mining activity carried out in the area rather has a positive socio-economic impact upon the nearby human settlement as indirect employment potential is created due to mining and allied activities in the area. Apart from these, the company promotes health and education awareness in the area time to time by organizing health camps and educational infrastructure.

In addition The Ramco Cements Limited will take various social welfare programmes in the surrounding villages. The focus areas include:

- Economic development (Self Help Groups)
- Drinking Water
- Sanitation
- Health & Hygiene
- Relief & Rehabilitation
- Temples & Religion Related Assistance
- Education

v. Connectivity (traffic and transportation road/ rail/ metro/ water ways etc.,)

Nearest railway line connecting Madhira - Mellacheruvu of South Central Railway line is adjacent to North direction. Vijayawada is major town at a distance of 72.0 km - SE.

The National Highway (NH-9) connecting Vijayawada – Hyderabad, at a distance of about 4.0 km - NE. The nearest railway station is Bonakalu 23 km NW. Major Railway station is Vijayawada – 72.0 km - SE.

The nearest international airport is at Gannavaram (Vijayawada) – 100.0 km - ESE

vi. Drinking water management (source & supply of water)

Water requirement for the mine expansion is about 50 m^3/day. For dust suppression the water is supplied to the mine site by cement plant initially. Later after development of mine pit, water will be sourced from mine pit.

vii. Sewerage system

Domestic waste water from mines office is treated in septic tank followed by soak pit.

viii. Industrial waste management

Not Applicable

ix. Solid waste management.

Area is devoid of any topsoil.

The waste will be accommodated in the Temporary dump yard located at South West Corner of the mining lease.

The temporary waste dump will be removed at the conceptual stage and part of the generated waste will be utilized for afforestation all along the periphery of the Mining Lease boundary & for internal roads and on the floor of the first two benches up to a height of 1m to 1.5m all along the Mining Lease boundary.

x. Power requirement & supply / source.

The power required for illumination will be supplied from grid.

CHAPTER – 7 REHABILITATION AND RESETTLEMENT (R & R) PLAN

i. Policy to be adopted (central / state) in respect of the project affected persons including home oustees, land oustees and landless labourers (a brief outline to be given).

An extent of Ac. 454.36 gt. (184.10 Ha.) of revenue land was handed over to Forest department in Ragunadhapaleam village, Matttampally Mandal, Nalgonda District, Telangana State (located at Combined Andhra Pradesh at the time of this transfer) towards compensatory afforestation for diversion 160.00 Ha of Budawada Forest for Mining purpose.

An amount of Rs. 283 lakh paid to the Forest department towards cost of the compensatory afforestation scheme for development of afforestation by the Forest Department, in the above Compensatory afforestation area.

Net Present Valve paid for the same is Rs. 900.80 lakh.

CHAPTER – 8 PROJECT SCHEDULE & COST ESTIMATES

i. Likely date of start of construction and likely date of completion (time schedule for the project to be given).

Enhanced production will be commenced after getting EC, CFE, CFO and all other regulatory clearances. Life of the mine @ 2.5 million tonnes per annum for the proved mineral reserve of 101.46 million tonnes would be 41 years.

ii. Estimated project cost along with analysis in terms of economic viability of the project.

The estimated project cost for the limestone production will be about Rs. 4 Crores.

CHAPTER–9 ANALYSIS OF PROPOSAL (FINAL RECOMMENDATIONS)

i. Financial and social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area.

Economic development of the region depends largely upon the nature of activities undertaken in the surrounding region. Corporate development invariably contributes towards acceleration of the process of socio-economic upliftment of the rural society by means of employment, health & study programme, medical camps etc.

Employment: Preference will be given for locals for employment based on qualifications & requirement

Medical facilities: Medical facilities will be provided for employee as well as people of nearby villages.

Educational facilities: Basic educational and vocational facilities will be provided to the children of employees as well as nearby villages.

Infrastructure facilities: Approach roads will be developed at par with plants.