M/s. PARASAKTI CEMENT INDUSTRIES LTD.,

Jettipalem (Village & Post), Rentachintala (Mandal)
Guntur (Dist.) – A.P.

ENVIRONMENTAL STATEMENT (AUDIT)
FOR THE FINANCIAL YEAR 2020-2021

UNIVERSAL ENVIRO ASSOCIATES
#104 & 105, Libra Enclave, RTC 'X' Roads,
Musheerabad, Hyderabad – 500 020.
Ph: 27633361.

ACKNOWLEDGEMENT

M/s. Universal Enviro Associates express since debt of gratitude to **M/s. Parasakti Limestone Mines (M/s. Parasakti Cement Industries Limited)** for the opportunity given by assigning the preparation of Environmental Statement (Audit) for their Mines located near Jettipalem (V) Rentachintala (M), Guntur (Dist) of Andhra Pradesh. The Environmental Statement (Audit) is prepared for the financial year from April 2020 to March 2021. Special mention needs to be made of executives of M/s. Parasakti Lime Stone Mines (M/s. Parasakti Cement Industries Limited) for their cooperation and assistance during the preparation of Environmental Statement. We also wish to acknowledge our gratitude to all of them who helped during the data collection and report preparation.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

FORM - V
(See rule 14)

ENVIRONMENTAL STATEMENT REPORT FOR THE FINANCIAL YEAR ENDING THE 31ST MARCH 2021

PART – A

1	Name and address of the owner/ occupier of the industry operation or process.	**M/s. Parasakti Cement Industries Ltd.,** Plot No. 8-3-214/21, Srinivasa Nagar Colony (West), Hyderabad – 500 038. **Factory:** Jettipalem, Rentachintala Mandal, Guntur District, Andhra Pradesh. Phone: 9866700013/14
2	Industry Category Primary: (STC Code) Secondary: (STC Code)	Primary
3	Date of last environmental audit Report submitted	September, 2020
4	Production Capacity (units)	Clinker Production – 1.20 MTPA Cement Production – 1.26 MTPA
5	Year of establishment	June - 2005

PART – B

Water and Raw Material Consumption		
a) Water consumption	287.46	KLD
1. Process consumption & Dust suppression	137.49	KLD
2. Domestic	149.97	KLD

Name of Products	Water consumption per unit of product (KL/MT)	
	During the previous financial year (2019-2020)	During the current financial year (2020-2021)
Cement	0.110	0.122

Name of raw materials	Consumption of raw material per MT of output based on MT of Cement	
	During the previous financial year (2019-2020)	During the current financial year (2020-2021)
Lime Stone	1.167	1.391
Ironore	0.012	-
GCP Waste	0.0001	0.0004
Laterite	0.058	0.093
Dolomite	0.014	0.015
Gypsum-S	0.025	0.030
Limestone-PIs	-	0.023
Coal	0.132	0.158
Gypsum	0.042	0.043
Fly Ash	0.104	0.087

PART - C
POLLUTION GENERATED

(Parameter as specified in the consent issued)

Pollutants		Quantity of Pollutants Discharged (kg/day) 2020-2021	Concentrations Of Pollutants in Discharges (mg/L) 2020-2021	Percentage of variation from prescribed standards with reasons
a) Treated Waste Water				
1	Total Dissolved Solids	115.92	1100	47.61 % less
2	Total Suspended solids	3.61	34.25	82.87 % less
3	COD	5.08	48.26	80.69 % less
4	BOD	1.45	13.75	86.25 % less
5	Oil & Grease	0.14	1.31	86.90 % less
Average Effluent Quantity		**105.39 KLD**		

b) Air.				
Stack Attached to	Pollutants	Quantity of Pollutants Discharged (Kg/day) 2020-2021	Concentrations Of Pollutants in Discharges (mg/Nm^3) 2020-2021	Percentage of variation from prescribed standards with reasons
Kiln – I	PM	60.33	19.80	34.00% less
Cooler - I	PM	53.13	19.90	33.66% less
Coal Mill – I	PM	11.95	21.90	27.00% less
Cement Mill –I	PM	12.97	21.97	26.76% less
Cement Mill-Vent-I	PM	12.96	22.25	25.83% less
Kiln – II	PM	102.44	19.37	41.66% less
Cooler – II	PM	54.59	21.00	30.00% less
Coal Mill – II	PM	21.85	19.70	34.33% less
Cement Mill – II	PM	13.46	21.79	27.36% less
Cement Mill-Vent- II	PM	22.20	21.10	29.66% less
Crusher	PM	4.23	22.10	26.33% less
Raw Mill Vent-II	PM	16.43	19.20	36.00% less

PART - D
HAZARDOUS WASTE

(As specified under Hazardous wastes/Management and handling Rules, 2003)

Hazardous wastes	Total Quantity per year	
	During the previous financial year (2019-2020)	During the current financial year (2020-2021)
From Process		
Batteries scrap- used batteries	Nil	Nil
Used Grinding Media	19.56 MT	Nil
Waste Lube Oil	Nil	1.06 KL
Waste Grease	4.36 MT	0.72 MT
From Pollution Control facility		
Quantity recycled or Re-utilized		

Note: Waste Oil and Grease generated from plant.

PART – E
SOLID WASTES

Solid Wastes	Total Quantity	
	During the previous financial year (2019-2020)	During the current financial year (2020-2021)
From Process		
	NIL	NIL
From Pollution Control Facilities		
	NIL	NIL
Quantity recycled or reutilized within the unit		
	NIL	NIL

PART - F

Please specify the characteristics (in terms of concentration and quantum) of Hazardous as well as solid wastes and indicates disposal particles adopted for both these categories of wastes.

About 1.06 KLT Used lube oil and 0.72 MT Waste Grease of have been generated from the plant. 1.06 KL Used lube oil and 0.72MT is used internally for self consumption.

No Solid waste is generated from the Plant as it is a dry process. The intermediate products, raw material and finished product collected in various pollution control systems is being recycled in to the process.

PART – G

Impact of the pollution control measures on conservation of natural resources and consequently on the cost of production.

-Nil-

PART - H

Additional investment proposal for environmental protection including abatement of pollution.

1. An amount of Rs.3,32,996/- is spend on regular monitoring.
2. Total investment on the greenbelt development for the year 2020-21 is Rs.27,06,625/-
3. Total investment on the maintenance of the pollution control equipments for the year 2020-21 is Rs.62,53,343/-
4. Total investment on STP, Vacuum cleaner, Drinking welfare & Road sweeping maintenance for the year 2020-21 is Rs.14,12,011/-
5. APPCB Analysis charges & River Water Cess Rs.2,19,245/-

PART - I

Any other particulars in respect of environment protection and abatement of pollution.

- Parasakti Cement Industries Ltd., (PCIL) is conducting regular meeting for reviewing and taking up various improvements in the quality of the Safety and Environment.
- PCIL is conducting regular environmental monitoring to comply the conditions of APPCB/ MOEF.
- PCIL incurred an amount of Rs.2,90,30,237/- towards the power consumption on pollution control equipment.

1. INTRODUCTION

M/s. Parasakti Cement Industries Limited has setup Cement manufacturing unit at Jettipalem Village, Rentachintala Mandal, Guntur District of AP. The Plant is established in the year of 2005. M/s. Parasakti Cement Industries Limited is manufacturing Ordinary Portland Cement (OPC) 53 grade, OPC 43 grade and PPC with a production capacity is 1.20 MT/A (Clinker) & 1.26 MT/A (Cement).

2. OBJECTIVE OF THE STUDY:

The objective of the present study is to review the performance of pollution control systems installed by the industry so as to identify efficient pollution prevention and control systems, which could be beneficial to both environment and its components. And also **Inserted by rule 2 of the Environment (Protection) second Amendment & Rules, 1992 vide G.S.R. 329 (E), dated: 13-3-1992.** Every person carrying on an Industry, operation or process requiring consent under section 25 of the water (prevention and control of pollution) Act 1974 (6 of 1974) or under section 21 of the Air (Prevention and Control of Pollution), Act 1981 (14 of 1981) or both or authorization under the Hazardous wastes (Management and Handling) Rules, 1989 issued under the Environmental (Protection) Act 1986 (29 of 1986) shall submit an environmental audit report for the financial year ending 31st March in Form – V to the concerned state pollution control board on or before the 30th day of September every year beginning 1993.

3. BENEFITS OF ENVIRONMENTAL AUDIT

Environmental audit creates awareness in the conservation of natural resources and helps to improve production safety and health. The benefits of audits are:

1. It helps in reduction of raw material consumption by way of waste minimization and adoption of recovery of waste and recycles the same.
2. Determined the performance of process systems and helps to improve the systems.
3. Efficiency of pollution control systems can be calculated.
4. This gives the awareness of environmental organization in the industry.
5. Data available will help the management for use in the plant modification and adopting pollution control for different types of technology.
6. It helps to identify pollution creating systems and exposure to it by the employees for taking remedial measures.
7. The management will be assisted in complying with local, regional and national laws regulations by adopting standards.
8. It helps to identify hazardous wastes, handling measures taken and exposure to litigation can be reduced.
9. To determine the impact on the surrounding environment due the disposal of its pollutants and identify suitable preventive measures.
10. Energy saving systems can be adopted by considering fuel consumption data.

M/s. Parasakti Cement Industries Limited has entrusted the task of preparation of Environmental Statement (Audit) to M/s. Universal Enviro Associates (UEA), Hyderabad. An in-depth study was conducted by UEA, to review the process efficiency, waste water generated and the present treatment systems, emissions generated and air pollution control equipment provided mode of solid waste collection and disposal and the other associated problems leading to the pollution and impact on environment.

4. LOCATION

The M/s. Parasakti Cement Industries Limited is situated in Jettipalm Village, Rentachintala Mandal, Guntur district of Andhra Pradesh. The Plant is situated 30 km away from Macharla by the side of Macharla – Piduguralla road. **The project site falls under the Latitude $14^0$35′ - $14^0$45′ of North and Longitude of $78^0$30′ - $78^0$35′ East**. The project area is rocky in nature. The site comes under arid zone. **The Location map and Plant layout are show in Fig. 1.**

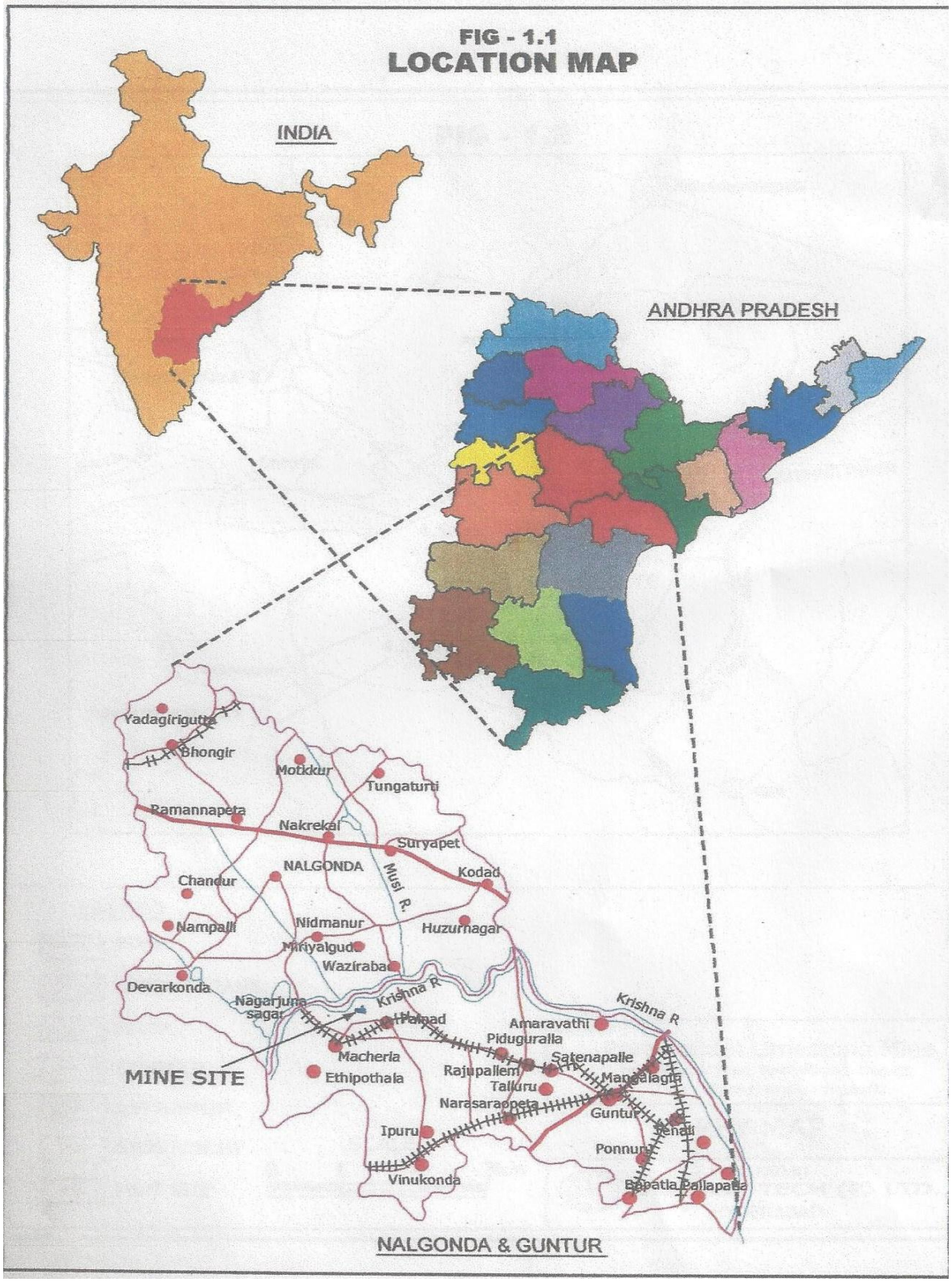


FIG - 1.1
LOCATION MAP
INDIA
ANDHRA PRADESH
Yadagirigutta
Bhongir
Motikkur
Tungaturti
Ramannapeta
Nakrekal
Suryapet
NALGONDA
Musi R.
Kodad
Chandur
Nampalli
Nidmanur
Huzurnagar
Miriyalguda
Wazíraba
Devarkonda
Krishna R
Nagarjuna sagar
Palnad
Amaravathi
Piduguralla
Macherla
Satenapalle
MINE SITE
Ethipothala
Rajupallem
Mangalagiri
Tallúru
Narasaraopeta
Guntur
Ipuru
Tenali
Ponnur
Vinukonda
Bapatla
Pallapatla
NALGONDA & GUNTUR

5. PROCESS DESCRIPTION:

The limestone is drilled, blasted and then loaded by hydraulic excavators into dumpers, which transports the limestone boulders to the crusher. After crushing it sent to stockpile.

The stages of cement manufacture at PCIL are as follows:

1.	Mining & Crushing of limestone	-	Stage 1
2.	Raw meal grinding	-	Stage 2
3.	Coal grinding	-	Stage 3
4.	Clinker Production (Pry process)	-	Stage 4
5.	Cement grinding	-	Stage 5
6.	Packing of Cement	-	Stage 6

1. Mining and Crushing of limestone

Lime for Parasakti Cement is mined at our captive limestone mine, Parasakti Limestone Mines and crushed in the compound impact crusher. The crushed limestone is stocked in the limestone stock pile. The stock pile bays are demarcated for high grade and low grade limestone. Depending on the analysis the crushed limestone is stocked in the respective bays.

2. Raw meal Grinding

Raw meal is prepared by grinding limestone and additives in suitable proportions in Raw Mill. Raw Mill feed system consists of 4 hoppers. For maintaining uniform particle size in the ground raw meal, the raw mill system is equipped with a High efficiency separator. In the 4 hoppers, one hopper is meant for High grade limestone, second hopper for Low grade limestone, the third hopper for Iron ore and the fourth for Laterite. All the four hoppers are equipped with weigh feeders. Proportioned and weighed quantities of raw materials are fed to the Raw mill to meet the quality requirement.

Tertiary crusher is installed after weigh feeders, for further reduction of limestone size before entering the raw mill.

Raw mill is a tube mill filled with required quantity of grinding media charged inside. Raw mill consists of a drying chamber for drying of raw materials and two grinding chambers. The ground material from 1st and 2nd chambers is drawn out of the mill with air sucked through raw mill fan. The ground material is discharged into an air side and is carried to high efficiency separator through air slides and bucket elevator. In the separator, the ground material is separated to finer and coarse fraction. Finer fraction, called raw meal is transported to Raw meal silo, a continuous flow silo by Belt Bucket Elevator or Vertical Pneumatic Pump.

The fine dust in the air is collected in a Cyclone and the air is sent to Bag House. The collected dust is mixed with raw mill product when raw mill is running and to a separate dust silo when raw mill is stopped. The dust in silo will be added to the raw mill product when the mill is running.

3. Fine Coal Grinding

Incoming raw coal is unloaded into a hopper. Truck unloading system is installed in the plant for coal unloading. The coal from the hopper is conveyed to the raw coal crusher. The crushed coal is stocked in the coal stock pile in different bays as per the grade of coal. Fine coal is prepared by grinding crushed coal. The coal mill system consists of a two chambered air swept tube mill (one drying chamber and one grinding chamber), grit separator and a bag house. The coal from the raw coal hopper is fed to the mill through rotary table feeder. The dried coal from drying chamber then passes to grinding chamber filled with grinding media. Hot air from the Kiln cooler is utilized for the drying of coal.

The powdered coal is swept to grit separator, by air because of the induced draft created by coal mill bag filter fan, where fines and coarse are separated. Coarse material is returned back to mill for further grinding and fines are swept to bag house where fines are collected and stocked in fine coal bins.

4. Production of Clinker

Clinker preparation is subdivided into 4 stages.

- Raw meal extraction,
- Preheating & Precalcination
- Burning (Clinkerisation)
- Cooling
- Recycling of Dust

Raw meal Extraction:

The material stored in continuous flow silo, which is storage cum blending silo. The inverted central cone silo creates a good blending effect on the raw meal. The silo is equipped with multiple gates that are operated in auto/manual mode. The material is extracted in a cycle of multiple gates opening at a time for fixed period. This cycle feeds homogenized raw meal to the preheater system. This extracted raw meal is called Kiln Feed.

The extracted raw meal is discharged in to kiln feed storage bin using air slides. From the storage bin, weighed quantity of kiln feed using solid flow meter is transported to preheater system by Belt Bucket Elevator or V.P. Pump.

Preheating & Pre-Calcinations:

The kiln feed is preheated and partly calcined by hot kiln exit gases in a tower of heat exchange cyclones called Preheater. The heat exchange between gas and the material takes place in the cyclones, in suspension of material and gas.

The preheater at PCIL is a 5 stage preheater equipped with precalcinator, called RSP (Reinforced Suspension Preheater). The material from the 4^{th} stage of preheater is fed into the pre-calcinator called Swiri calciner. 60% of the fuel required for clinkerisation is fed into this calciner system along with hot recouped air from cooler called Tertiary air. The material from the precalciner goes to 1^{st} stage of the preheater before entering the kiln. By the time it enters the kiln, the kiln feed attains about 80-95% of degree of calcinations.

Burning (Clinkersation):

The final clinkerisation of the kiln feed takes place in the rotary kiln. 40% of fuel required for clinkerisation is fed into the kiln for burning. The precalcined kiln feed entered from preheater is further heated in the rotary kiln to about 1350 - 1450^0C at which clinker form is formed.

Cooling:

The clinker produced in the kiln is cooled from 1100 - 1400^0C to 120-150^0C in the grate cooler by air quenching. The cooler is fitted with slotted grate plates. As the clinker moves on the grates towards the discharge end of the cooler, air is blowed from the bottom of the plates and cools the clinker. The hot air generated, is recouped and utilized for clinker burning as secondary air for the kiln and tertiary air for precalcinator.

Recycling of Dust:

The dust laden exhaust gases from the preheater are passed Reverse Air Bag House (RABH), where the fine dust is collected and clean gases are released into the atmosphere. The dust collected is transported back to raw meal silo along with raw mill product. When the raw mill is not running this dust is collected in an intermediary dust silo and then mixed with the raw mill product, when raw mill is running.

5. Cement Grinding:

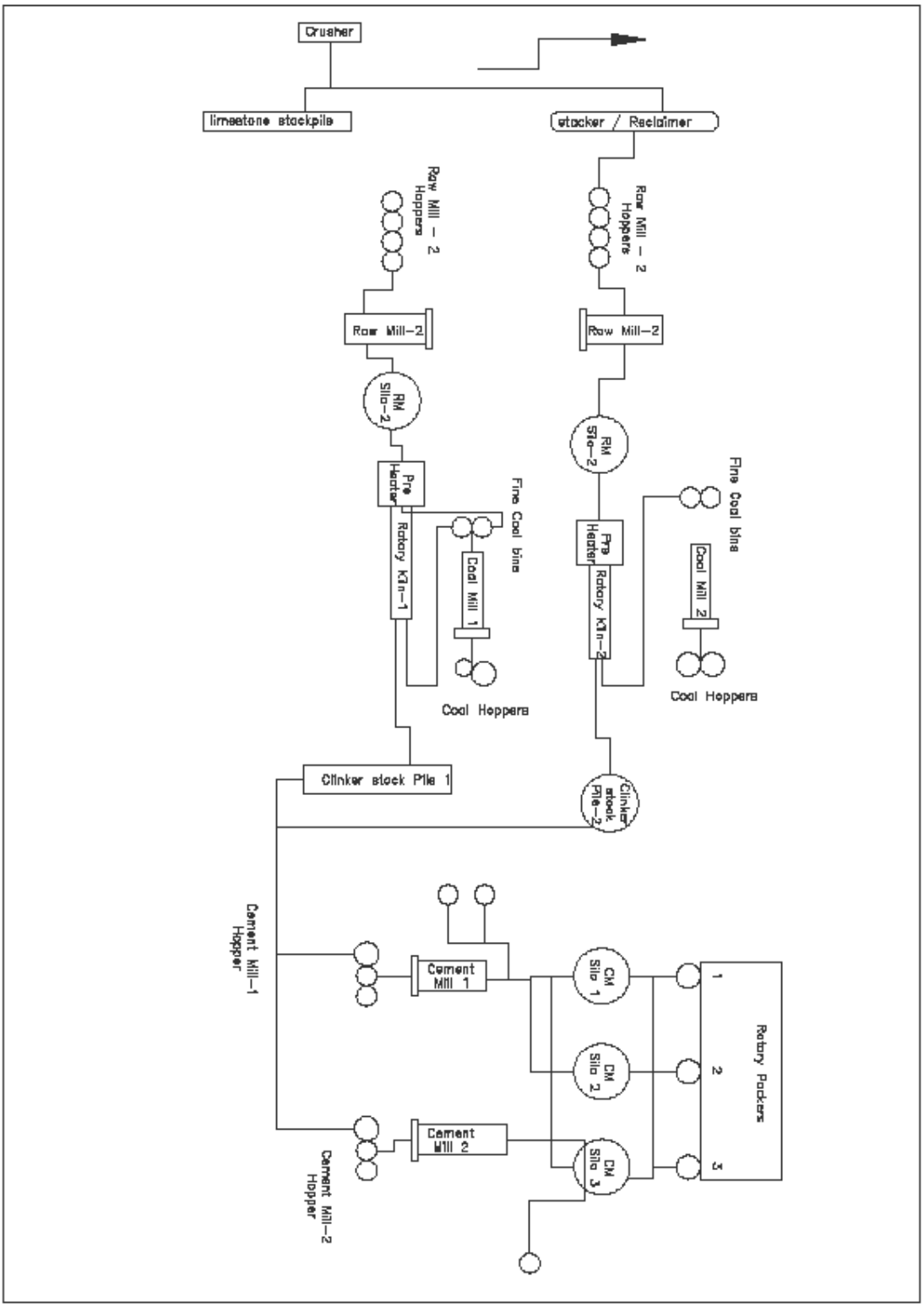
Cement is ground by grinding clinker, fly ash and gypsum in suitable proportions. Cement mill at PCIL are closed circuit ball mills. Each Cement mill is having of 3 hoppers (one for clinker, second for Gypsum and one for spare). For fly ash separate metallic storage silos are installed. Weighed quantity of Fly ash is extracted through solid flow meter from the bottom of the silo and pumped to high efficiency separator.

Weigh feeders are installed to every hopper, and Mills are equipped with high efficiency classifiers for better particle size distribution. Weighed & proportioned quantities of clinker, gypsum are fed into the cement mill from hoppers. The cement mill are two chambered mills. The ground cement and fly ash is fed to the separator by air slide and bucket elevator. In the separator, the ground material and fly ash is separated to finer and coarse fraction. Finer fraction is transported to four compartment silo by Bucket Elevator or Vertical Pneumatic Pump.

6. Dispatch of Cement

PCIL has electronic packers with eight spouts for packing the cement into bags and loading into the trucks.

Cement from the silos is extracted through gates and transported to the Hopper in Packer System. Bags are attached to the nozzle of the rotating electronic packer. Filled in bags are automatically discharged from the packer on to the belt conveyers and loaded in to the trucks.


Crusher
limestone stockpile
stacker / Reclaimer
Raw Mill – 2 Hoppers
Raw Mill – 2 Hoppers
Raw Mill–2
Raw Mill–2
RM Silo–2
RM Silo–2
Pre Heater
Pre Heater
Rotary Kiln–1
Rotary Kiln–2
Coal Mill 1
Coal Mill 2
Fine Coal bins
Fine Coal bins
Coal Hoppers
Coal Hoppers
Clinker stock Pile 1
Clinker stock Pile–2
Cement Mill–1 Hopper
Cement Mill 1
Cement Mill 2
Cement Mill–2 Hopper
CM Silo 1
CM Silo 2
CM Silo 3
Rotary Packers
1
2
3

6. WATER REQUIREMENT:

The total consumption is 287.46 m^3 /day and the breakup details are given below:

1. Process consumption & Dust suppression - 137.49 m^3/day
2. Domestic & Gardening - 149.97 m^3/day

Most of the process and cooling water will be evaporated / consumed. The domestic requirement includes requirements of colony, drinking as well as sanitation. The water requirement is being met from the bore wells.

7. POLLUTION CONTROL IN THE PLANT

The industry has given top priority for pollution prevention and control. Therefore all the sources that release particulate matter are provided with ESP & Bag filters for the control of particulate emissions into atmosphere. Tall stacks are provided as an effective measure for good atmospheric dispersion of the pollutants and air pollution control.

7.1 Waste water Sources and Monitoring

Most of the water consumed for process as well as cooling is consumed/ evaporated. The only source of wastewater is from sanitary facilities of the plant and colony is presently being sent to Sewage treatment plant to treat this wastewater. Discharges from the sewage treatment plant water characteristic meets the discharge standards of APPCB for on-land irrigation.

7.2 Air Pollution Control

7.2.1 Stack Emissions

The sources of air emissions are from Raw mills & Kiln, Raw mills and kiln, Cooler Stack, Cement Mill –I & II, Coal Mill. Stack emissions monitoring is carried out regularly for the parameters PM. The average values of stack emission data is given in table 7.1. It is

noticed from the collected emissions data that the parameters monitored are within the limits prescribed by AP pollution control Board.

Table 7.1

AIR POLLUTION CONTROL EQUIPMENTS		
UNIT – I		
S No.	**LOCATION**	**TYPE OF EQUIPMENT**
U1-1	RAW MILL & ROTARY KILN	REVERSE AIR BAG HOUSE
U1-2	COAL MILL	BAG HOUSE
U1-3	COOLER	ESP
U1-4	CEMENT MILL	ESP
U1-5	CEMENT MILL VENT	ESP
U1-6	LIMESTONE CRUSHER	BAG HOUSE
U1-7	LIMESTONE HOPPERS TOP	BAG HOUSE
U1-8	TERTIARY CRUSHER	BAG FILTER
U1-9	RAW MEAL SILO	BAG FILTER
U1-10	RAW MEAL SILO EXTRACTION	BAG FILTER
U1-11	COAL CRUSHER	BAG FILTER
U1-12	COAL TRANSFER POINT	BAG FILTER
U1-13	COAL FEED CIRCUIT	BAG FILTER
U1-14	CLINKER DISCHARGE ABOVE DBC	BAG FILTER
U1-15	CLINKER STOCK PILE SHAFT – I	BAG FILTER
U1-16	CLINKER STOCK PILE SHAFT – II	BAG FILTER
U1-17	CSP TO TRANSFER POINT	BAG FILTER
U1-18	CLINKER HOPPER TOP	BAG FILTER
U1-19	CEMENT SILO	BAG FILTER
U1-20	PACKING PLANT	BAG FILTER
U1-21	COAL MILL HOPPERS TOP	BAG FILTER
U1-22	PRE-HEATER TOP	BAG FILTER
U1-23	FLY ASH SILO TOP	BAG FILTER

AIR POLLUTION CONTROL EQUIPMENTS		
UNIT – II		
S No.	**LOCATION**	**TYPE OF EQUIPMENT**
U2-1	RAW MILL VENT	BAG FILTER
U2-2	KILN & RAW MILL	REVERSE AIR BAG HOUSE
U2-3	COOLER STACK	ESP
U2-4	COAL MILL VENT	BAG FILTER
U2-5	CEMENT MILL VENT	BAG HOUSE
U2-6	CEMENT MILL STACK	ESP
U2-7	TP-8 (@RMH-II FEEDING)	BAG FILTER
U2-8	RM HOPPERS TOP	BAG FILTER
U2-9	TERTIARY CRUSHER (RMH BOTTEM)	BAG FILTER
U2-10	RMH BOTTEM FOR WEIGH FEEDERS-3 NOS.)	BAG FILTER
U2-11	BLENDING SILO TOP – SILO VENT	BAG FILTER
U2-12	BLENDING SILO TOP – (DB+BE/VP/PUMP)	BAG FILTER
U2-13	SILO DISCH. BIN (KILN FEED BIN)	BAG FILTER
U2-14	PREHEATER TOP (BE/VP/PUMP VENT)	BAG FILTER
U2-15	COOLER DISCHARGE ABOVE DBC	BAG FILTER
U2-16	CSP TOP	BAG FILTER
U2-17	CSP EXTRACTION – 2 NOS.	BAG FILTER
U2-18	TP-9 (@CSP OUTLET)	BAG FILTER
U2-19	TP-10 (@CMH. FEEDING CONV.)	BAG FILTER
U2-20	CEMENT MILL HOPPERS TOP	BAG FILTER
U2-21	CEMENT MILL HOPPERS BOTTEM (WEIGH FEEDERS)	BAG FILTER
U2-22	CEMENT SILO TOP (SILO VENT)	BAG FILTER
U2-23	CEMENT SILO TOP (BE/VP PUMP+DB)	BAG FILTER
U2-24	PACKING PLANT (PACKER #2)	BAG FILTER
U2-25	TP-II(@COAL TRANSFER POINT)	BAG FILTER
U2-26	RAW COAL HOPPERS TOP	BAG FILTER
U2-27	COAL MILL BUILDING – 3 NOS.	BAG FILTER
U2-28	@TP -4 (BC-1 SPLITTING)	BAG FILTER
U2-29	@TP-5 (LSP-II EXTRACTION)	BAG FILTER
U2-30	@TP-6 (STACKER FEEDING TP)	BAG FILTER
U2-31	@TP-7 (RECLAIMER DISCHARGE. TP)	BAG FILTER
U2-32	ADDITIVE DUMP HOPPER	BAG FILTER
U2-33	ADDITIVE DUMP CRUSHER	BAG FILTER
U2-34	@CMB-I (SEPERATOR CHIMNEY – TAPPING)	BAG FILTER
U2-35	FLY-ASH SILO TOP	BAG FILTER
U2-36	CEMENT SILO #3 TOP (SILO VENT)	BAG FILTER
U2-37	CEMENT SILO #3 TOP (BE/VP/PUMP VENT)	BAG FILTER
U2-38	PACKING PLANT (PACKER #3)	BAG FILTER
U2-39	EXTENDED TUNNEL CLINKER FEED POINT	BAG FILTER

The emission from Cooler, Kiln, cement mill is passed though ESP which reduces the particulate matter to the minimum levels. The emission from Coal Mill, Kiln and Cement Mill are passed through Bag filters.

7.2.2 Ambient Air Quality

Ambient air quality monitoring is carried out regularly at mines to know the status of the ambient air quality.

Ambient air quality is monitored for 24 hours at each station for the estimation of PM_{10}, $PM_{2.5}$, SO_2, NOx. Estimated average values for the parameters monitored are represented in the Table 7.2 the analyzed values for PM_{10}, $PM_{2.5}$, SO_2 and NOx are within limits prescribed by APPCB.

Table 7.2
AVERAGE VALUES OF AMBIENT AIR QUALITY DATA

Location	Parameters			
	PM_{10}	**$PM_{2.5}$**	**SO_2**	**NO_X**
Near Security gate	58.55	22.59	13.25	18.23
Near Cement mill area	61.64	23.74	12.83	18.28
Near Crushing area	60.43	22.95	13.05	18.58
Colony	55.31	21.03	12.50	18.60

Note: All the values are expressed as ($\mu g/m^3$)

7.2.3 Noise Pollution

Noise Levels are measured at various places in the factory premises by using a sound level meter. The noise levels were found to be within the limits prescribed by APPCB. The management provided ear muffs for workers who are exposing to high noise levels. The industry has provided industrial type silencers for Diesel Generator sets for controlling noise pollution.

Table
Ambient Noise Levels

S No.	Location	Noise Levels in dB(A)	Noise Levels in dB(A)
		Day Time	Night Time
1	Near Raw Mill	64.69	61.93
2	Near QC Lab	53.23	47.96
3	Near Time Office	43.71	41.74
4	Near Colony	61.93	38.52

8. GREENBELT DEVELOPMENT

DETAILS OF SPECIES FOR GREEN BELT DEVELOPMENT FOR THE YEAR 2020-2021	
PLANT AREA	
AREA IN ACRES	1.00Acre
NO. OF PLANTS	445 Plants
NAME OF THE SPECIES	Dubai
Survival rate (%)	85%
WATER SUPPLY	Drip system and Water Tanker

9. HOUSEKEEPING:

Proper cleaning of the different sections is required to maintain healthy environment, to avoid unnecessary loss of product in the form of dust emission and polluting surrounding environment. Water spraying is done inside the factory premises to control fugitive emissions from coal yard and raw material storage yards. Stores to be maintain properly. Factory premises are to be clean and green to have good housekeeping. **M/s. Parasakti Cement Industries Ltd**, is keeping their plant and premises neat tidy. Housekeeping has been found to be well.

NNEXURE-1			
MONTH WISE WATER CONSUMPTION FOR THE YEAR 2020-21			
MONTH	**INDUSTRIAL(KL)**	**DOMESTIC(KL)**	**TOTAL(KL)**
April, 2020	4097	4590	8687
May, 2020	8112	4800	12912
June, 2020	4417	4570	8987
July, 2020	967	4590	5557
August, 2020	1403	4710	6113
September, 2020	2257	4530	6787
October, 2020	2027	4640	6667
November, 2020	3188	4530	7718
December, 2020	2914	4550	7464
January, 2021	4593	4530	9123
February, 2021	4778	4140	8918
March, 2021	7993	4560	12553
TOTAL	**46746**	**54740**	**101486**

	RAW MATERIAL CON-2020-21										
MONTH	Limestone	GCP Waste	Laterite	Dolomite	Gypsum-S	Gypsum	Fly Ash	Limestone-PIS	Coal Imp	Pvt. Coal	Pet Coke
APR'20	0	0	0	0	436	621	683	0	0	0	0
MAY'20	110970	0	7319	1194	599.36	2877	4243	0	12134.56	839.44	0
JUN'20	117802	0	7600	1260	1375	2877	6795	0	12810.85	1304.15	0
JUL'20	34437	337.38	2036.62	372	2754	3320	6081	0	3906	354	0
AUG'20	112535	0	9943	1237	2477	2333	6952	0	6692.54	260	4912.46
SEP'20	58621	0	3690	628	2214	2463	6595	1540	6561.99	248.01	0
OCT'20	104077	0	6760	1120	2267	2660	6169	2170	11846	0	0
NOV'20	116927	0	7545	1255	3198	3341	6448	2829	13201	0	0
DEC'20	120295	0	7761	1295	3802	3614	7038.64	3113	13833	0	0
JAN'21	119805	0	8004	1291	3627	3268	6089.72	2675	13608	125	0
FEB'21	107243	0	7164	1153	2051.82	3995	6505.78	3243	10005.51	2281	61.03
MAR'21	157622	0	10050	1669	386.93	4538.32	8897.35	3864	16341	195	0
TOTAL	**1160334**	**337.38**	**77872.62**	**12474**	**25188.11**	**35907.32**	**72497.49**	**19434**	**120940.5**	**5606.60**	**4973.49**

CLINKER PRODUCTION, CONSUMPTION & SALES FOR THE YEAR 2020-21			
MONTH	Production	Consumption	Sales
APR'20	0	12807	0
MAY'20	78985	60711.64	0
JUN'20	84068	56189	3970.98
JUL'20	25404	62279	4028.97
AUG'20	81872	50231	3999.65
SEP'20	41609	49313	13823.42
OCT'20	74430	48623	6893.15
NOV'20	82716	61876	23545.93
DEC'20	85552	66514.36	4106.22
JAN'21	85605	56933.28	31540.68
FEB'21	77306	69224.4	26939.67
MAR'21	109494	86519.4	23843.79
Total	**827041**	**681221.08**	**142692.46**

CEMENT PRODUCTION DETAILS 2020-21					
GRADE	OPC 43	OPC 53	PPC	SRPC	TOTAL
MONTH	PROD	PROD	PROD	PROD	PROD
APR'20	0	9995	4552	0	**14547**
MAY'20	3615	40232	24141	443	**68431**
JUN'20	4872	38842	22778	744	**67236**
JUL'20	4611	43917	25249	657	**74434**
AUG'20	3243	38068	19919	763	**61993**
SEP'20	3726	37810	20061	528	**62125**
OCT'20	4708	38683	17679	819	**61889**
NOV'20	6963	49529	20174	1026	**77692**
DEC'20	9017	53179	20675	1211	**84082**
JAN'21	8647	44802	17504	1640	**72593**
FEB'21	8255	56617	19347	801	**85020**
MAR'21	13023	64197	25421	1565	**104206**
TOTAL	**70680**	**515871**	**237500**	**10197**	**834248**

CEMENT DESPATCH DETAILS 2020-21					
GRADE	OPC 43	OPC 53	PPC	SRPC	TOTAL
MONTH	DESPATCH	DESPATCH	DESPATCH	DESPATCH	DESPATCH
APR'20	163.00	8580.00	4459.20	35.00	13237.20
MAY'20	3150.92	41347.95	24610.44	470.59	69579.90
JUN'20	5274.41	38306.71	22745.50	641.57	66968.19
JUL'20	4691.15	46794.43	24930.54	666.00	77082.12
AUG'20	3212.31	36339.09	20199.50	637.03	60387.93
SEP'20	4065.63	40397.04	19413.09	803.19	64678.95
OCT'20	4358.67	39999.11	19155.10	599.34	64112.22
NOV'20	6488.38	47931.75	19552.75	790.93	74763.81
DEC'20	9795.16	51497.40	20756.00	1506.72	83555.28
JAN'21	8070.45	43731.81	16926.00	1577.76	70306.02
FEB'21	8197.45	56951.29	19522.00	1045.26	85716.00
MAR'21	13688.11	71773.48	25596.64	1269.60	112327.83
TOTAL	**71155.64**	**523650.06**	**237866.76**	**10042.99**	**842715.45**

EXPENDITURE ON POLLUTION CONTROL EQUIPMENT & MONITORING 2020-2021

	CRUSHER	RAW MILL	KILN PREHEATER, COOLER ESP BAG FILTERS	COALMILL	CEMENT MILL	PACKING PLANT	TOTAL
LINE-1	0	22420	651025.59	197147.58	77097.63	94770	1042460.80
LINE-2	97500	2300252.87	897630.48	95701.73	1819797.13	0	5210882.21
LINE 1&2	**97500**	**2322673**	**1548656**	**292849**	**1896895**	**94770**	**6253343**
STP MAINTENANCE							566400.00
P&A WELFARE-STP							49179.32
P&A WELFARE-DRINKING WATER TREATMENT PLANT							64268.84
ROAD SWEEPING MACHINE							714114.41
VACCUME CLEANER							18048.42
YEARLY MONITORING CHARGES							332996.00
GENERAL POLLUTION MONITORING EQUIPMENTS							155173.90
APPCB RIVER WATER CESS & WATER ANALYSIS CHARGES							219245.00
HORTICULTURE							183903.41
PLANITATION							169155.22
MIYAWAKI PLANITATION							2353566
POWER CONSUMPTION ON POLLUTION EQUIP							29030237
GRAND TOTAL							**4,22,76,355.21**

MONTHLY WISE CONSUMPTION OF ELECTRICAL ENERGY FROM APSPDCL / GENERATION OF ELECTRICAL ENERGY FROM D.G.SETS/DIESEL CONSUMPTION FOR THE YEAR OF 2020-2021.			
MONTH	**ELECTRICAL ENERGY FROM APSPDCL**	**WHR UNITS**	**ELECTRICAL ENERGY FROM D.G. SET**
APR'20	784100	-	-
MAY'20	3068200	3971856	-
JUN'20	3039600	4357489	-
JUL'20	3257400	823728	-
AUG'20	3423500	4024614	-
SEP'20	2719400	2061803	-
OCT'20	3167000	3769779	-
NOV'20	3837100	4065335	-
DEC'20	4019800	4640105	-
JAN'21	3057200	4431059	-
FEB'21	4780200	2727196	-
MAR'21	5870500	4103271	-
TOTAL	**41024000**	**38976235**	**-**