ONSITE EMERGENCY PLAN

J.K. CEMENT WORKS

KAILASH NAGAR
NIMBAHERA, DISTT-CHITTORGARH
RAJASTHAN

ONSITE EMERGENCY PLAN

(QUALITY, ENVIRONMENT AND OCCUPATIONAL HEALTH & SAFETY)
AS per ISO 9001:2008, ISO 14001 & ISO 18001:2007

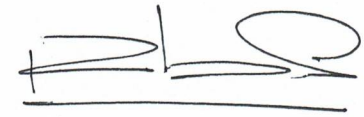
DOCUMENT NUMBER JK-OEP-01, Revision-04

SAFETY DEPARTMENT
JK CEMENT WORKS, NIMBAHERA

FOREWORD

In spite of various preventive and precautionary measures taken in the factory, the possibility of mishap cannot be totally ruled out. Hence the need to prepare a contingency plan for dealing with incidences which may still occur and are likely to affect LIFE and / or PROPERTY, both within the factory and in the immediate neighborhood. Such an Emergency could be result of malfunction of the plant and equipment of non-observance of operating instructions. It could at times, be the consequence of acts outside the control of plant management like serve storm, earthquake, flooding, or deliberate acts of arson or sabotage. A major emergency in the factory is one which may cause serious injury or loss of life and damage to the property. This On Site Emergency Plan (OEP) explains the code of conduct of all personnel in the factory along with the actions to be carried out in the event of an Emergency. This plan gives the guidelines for employees, contractors, transporters, etc. It not only defines responsibilities but also informs about prompt rescue operations, evacuations, rehabilitation, coordination's and communications. The plan has generally been prepared as per the section 41B (sub section – 4) of the Factories Act 1948 and Rajasthan Factory Rules, 1951.

Place: 20.06.2023
JK Cement Works,
Nimbahera



(R.B.M. Tripathi)
President (O) & UH

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Revision & Record

Sr. No.	Page No.	Rev. No.	Date	Nature of Change
1	06	01	12.10.2020	1. Change in Head Office Details 2. Change in Workers present in each shift 3. Change in Workers Present in a day
2	04 to 06	02	14.08.2021	Change of Unit Head & Safety Head
3	07, 19, 23	03	09.11.2022	1. Change in Safety Officer name. 2. Addition of Fire Co-ordinator and his responsibilities 3. Change in Incident Controller contact no.
4	7, 12, 19,20	04	20.06.2023	1. Corporate Office address 2. Updating Hazardous material list 3. Material Safety Data Sheet (MSDS), Addition of Sulphuric Acid , Sodium Hypochlorite MSDS 4. Environmental Risk due to Plant Operation

1.0 STATUTORY PROVISIONS.

Cement Manufacturing is declared a Hazardous Process under the provisions of Schedule 1 (8) attached to Section 2 (cb) of revised Factory Act, 1987.

As per Section 41 – B (4) of Factory Act, 1948 amended in 1987 with special provisions for Hazardous Processes, it is required that all Hazardous Industries should draw up an "ON – SITE EMERGENCY PLAN".

Every Occupier of the Hazardous Industries shall formulate an "ON – SITE EMERGENCY PLAN" with approval of Chief Inspector of Factories & Boilers, and ensure to take all suitable measures for the Safety of his Employees, as required to be taken in the event of any Emergency taking place.

1.1 OBJECTIVES

- To overcome any emergency in its initial stage and to handle Disaster in most effective manner.
- To eliminate any chance of loss to Human Life.
- To minimise loss of Property in the Plant and surrounding areas.
- To maintain essential supplies at the time of natural Calamities and / or Public disturbances.

1.2 SCOPE

- Assessment of the size and nature of events foreseen for causing Emergency and probability of their Occurrence.
- Hazards Identification and control Safety precautions.
- Service Utilities / Facilities and their Locations.
- Organisation for Emergency
- Assignment of duties and responsibilities to key Personnel for action on site

2.0 THE ORGANISATION

J.K. Cement Works, Nimbahera and Corporate Office located at the following Places.

Works :

Shri R.B.M. Tripathi
President (Operations) & Unit Head
J.K. Cement Works,
Kailash Nagar – 312617
Nimbahera, Distt. – Chittorgarh (Rajasthan)

Corporate Office :

Prism Tower, 5th Floor,
Ninaniya Estate , Gwal Pahari
Gurugram-122102 (Haryana)

2.1 THE PLANT:

J.K. Cement is engaged in Production of Portland Grey Cement and PPC with a capacity of about 3 .6 Million Tons per year with about 1365 People Employed at its Works in Nimbahera.

2.2 LAY OUT:

The Layout of Plant is shown as per drawing enclosed.

2.3 EXIT / ENTRY POINTS:

The entry route to the Plant and the Exit Point for coming out from the Plant have been Marked in the Drawing.

2.4 APPROACH ROAD:

The Approach to the Plant is through a puck Road, which is about ½ K.M from Chittor – Neemuch state Highway Road as shown in the Drawing.

2.5 MAX. WORKERS IN EACH SHIFT :

A Shift	B Shift	C Shift	G. Shift	Total Employee
218	218	218	711	1365

2.6 TOTAL WORKERS PRESENT IN A DAY : About 1240 workers

2.6.1 Number of Safety Officers:

Number of Safety Officers : One

Name, Designation & Contact : Vikas Tripathi (B.E., PDIS- RLI, Kanpur)
Asstt. Manager (Safety)
JK Cement Works
Nimbahera 312617
Chittorgarh (Raj.)
T.No. - 220087 Ext.12249 (O)

2.7 LOCATION:

The Plant is located at Nimbahera in District Chittorgarh and is well connected by road / Rail link. It is situated at a point equally Distanced between Chittorgarh and Neemuch on Jaipur – Indore route about 1.5 Km from Railway Station on the Western Railway. It is also connected by Air through Dabok Airport in Udaipur at a Distance of about 85-Km from Nimbahera.

The Plant has an ideal location surrounded with lush green Fields / gardens and Colony Complex equipped with all civil amenities and a Township with railway Station at about 1.5 Kms from Works.

3.0 BRIEF MANUFACTURING PROCESS:

The Manufacturing of Cement is based on Dry Process Technology with latest Machinery and Equipments supplied by M/s F.L.Smith, Denmark. It is using modern Technology with automatic control by sophisticated Instruments.

The Cement Grade Limestone is extracted from Mines adjacent to Plant through Open Cast Mining Process. It is crushed in Primary and Secondary Crusher. The crushed Limestone is mixed with Laterite and ground in Raw Mills.

The ground Raw Meal is then fed to Rotary Kiln, Where Calcination and Clinkerisation take place. The Clinker is further mixed with Gypsum and ground in Cement Mill to make Cement, Which is packed, in 50 Kg. Bags for onward dispatch, through Railway Wagons and Trucks. The process control system is fully automatic with FUZZY-LOGIC applications for centralized control and QCX for ON-LINE quality Control through X-Ray.

4.0 EMERGENCY – PREVENTION AND CONTROL

4.1 THE EMERGENCY

The Process and Material used in Cement Manufacturing are generally not hazardous in nature. However, an Emergency like situation may take place if any dangerous occurrence goes out of control in the Plant using heavy Equipments / Machinery and Structures with volumes of Raw & Finished Materials.

As such, an emergency like situation is deemed as one that may be caused by a dangerous occurrence or natural calamity affecting people and plant property at large and which calls for their safe evacuation through mobilization of resources and teamwork.

4.2 NATURE OF EMERGENCY:

An emergency may crop up on account of any of the following occurrences.

- Major fire in the plant engulfing large area and People
- Collapse of any heavy Structural installation or Plant Building.
- Natural calamity like Flood, Earthquake or Thunderous Windstorm.
- AFR and Aqua Ammonia Handling.

4.3 HAZARDS IDENTIFICATION:

Following Areas, Materials and Structures are identified as possible Hazards, which may lead to any Emergency like situation.

(A) SENSITIVE AREAS

- HDP Bag Godown
- Coal Yard
- Electrical Sub Station
- AFR Storage Tank (Liquid)
- AFR Storage area (Solid)
- Aqueous Ammonia Storage area (SNCR)
- Gas cylinder Storage area

(B) FLAMMABLE MATERIALS

- Diesel
- Petrol
- LPG
- Industrial Fuel Oil (For Kiln light up)

(C) COMBUSTIBLE MATERIAL

- HDP Bags
- Rubber belt
- Coal
- AFR Liquid & Solid

(D) TOXIC MATERIAL

- Aqua Ammonia (NH_4OH)

4.4 SITE PLAN – HAZARDS IDENTIFICATION:

The Hazard prone Areas as detailed above are distinctly marked in the Site Plan for proper identification.

4.5 HAZARD ASSESSMENT TECHNIQUE:

All potential risks in the plant areas as borne out of hazardous process activities and materials are regularly assessed for elimination of unsafe situations thereby preventing chances of an Emergency. Following Techniques are adopted for assessment of Hazards.

- Regular Safety Inspections of Plant Areas.
- Regular Job Safety Analyses.
- Safety Audit / Survey of Oil Tank Installations conforming to Petroleum Act / Rules.
- Test / Examination of Lifting Machines / Pressure Vessels under Factories Act / Rules.
- Dust Monitoring of Working Zones under Factories Act / Rules.
- Dust Monitoring of Stack emission & Ambient Air under Environment Act / Rules.

5.0 STORAGE QUANTITY OF HAZARDOUS MATERIALS. :

Details of maximum quantity of Hazardous Material Stored at a time are as under.

Name of the substance	Max Qty at a time licensed	Property	Location	Mode of storage
Petrol	125 Ltrs	Flammable	General store	Drum
AFR Liquid & Solid	50 K.Ltr. & 1000 Ton	Flammable	Raw Mill Area and Near secondary crusher	Tank and Shed
Coal	40,000 MT	Combustible	Coal yard	Open Piles.
HDP Bag	30 lacks	Combustible	Godown	Bales / Loose
Aqua Ammonia (NH3- 20 to 27%)	88 KL	Toxic	Aqua Ammonia Shed (Near WHR)	Tank

JK-1904	70 MT	Combustible	Packing Plant & Yard behind Time office	Drum
JK-1923	3.8 MT	Toxic	Mines office storage	Drum
JK-1920		Toxic	Mines office storage	Drum

6.0 MATERIAL SAFETY DATA SHEET.

Material	Characteristic / Properties	Effect on Exposure / Control	Prevention	Control Measures
1	2	3	4	5
Petrol	F.P. : -38 to -42 deg. C A.I.T. : 220*C SP.Gr : 0.75-0.85 LEL : 1.4 % UEL : 7.6 %	Fire & Explosion Headache, Skin Irritation Nausea	No. opens flame. No smoking. Welding / Hot Job without permission. Explosive proof fittings. Earthing Grounding Bounding use of Hand gloves and Safety Goggles. Tight fitting use Non-sparking tools.	Use DCP, CO2, and Halen Fire Eqpt. Cool the container by water jetting fresh air breathing. Rinse affected parts with sufficient water, check plug leakages spillage.
Diesel (H.S.D.)	B.P.: 215 – 376 C. F.P.: 32 deg C. LEL : 0.6 % UEL : 6.0 % AIT: 225 deg C. Sp. Gr. : 0.86 Flammable Skin Irritation.	Fire accumulate static Charge Toxic to some extent	Welding / hot job under permission and supervision and grounding and bounding earthing Tight Fittings. Use hand gloves and safety goggles. Good House Keeping	Use DCP, Foam Co2, and Halen Fire Extinguishers. Cool the container with sufficient water jetting and dust filters
Coal	Highly Carbonaceous Volatile : 6 % C.V.: 7800 – 8600 K. Cal / Kg. Mixture of Coal dust and air is explosive combustible highly toxic on formation of carbon monoxide	Fire Spontaneous ignition. Coal dust Explosion Asphyxia (0 2, Deficient caused by coal dust explosion Irritation to respiratory tract.	Proper firing for complete combustion. Check CO gas occurrence Avoid open flame. Dust Good ventilation. Use hand gloves and dust filters. Increase heat exchange area. Avoid formulation of heaps and high piles. Proper water spraying.	
H.D.P. Bags	Cap: 50 Kg. M.S.: 85 Kg. S.S.: 40 Kg. M.P.: 100 – 120 C. Organic compound combustible	Fire	No smoking. No hot job. Proper techniques of stacking. Proper ventilation. No loose piling stacks of controlled height. Space for movement. Covered storage.	Sufficient water jetting for extinguishing fire. Sufficient water jetting. Dozing and shifting material / piles. Use hand gloves
NH4OH	B.P. :27 C M.P : No data available F.P : Not applicable Sp. Gr.: 0.89 Solubility: Water Complete	Toxic	Store in a closed vessel. Fitted ammonia detector at various places. Storage area to be locked. Shower to be provided. Before unloading the ammonia all fittings to be checked with soap solution for leakage. No. opens flame. No smoking.	Water sprinkling system provided. Use full body chemical suit.

AFR	F.P. : 92 deg C C.V. : 3612 Kcal SP.Gr : 1.06	Flammable	Welding / Hot Job without permission.	Adequate firefighting system provided.
Sulphuric Acid	• Flammability of the Product: Non-flammable. • Auto-Ignition Temperature: Not applicable. • Flash Points: Not applicable. • Flammable Limits: Not applicable.	Potential Acute Health Effects: Very hazardous in case of skin contact (corrosive, irritant, permeator), of eye contact (irritant, corrosive), of ingestion, of inhalation. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns.	**Small Spill:** Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate. **Large Spill:** Corrosive liquid. Poisonous liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate.	**Products of Combustion:** Products of combustion are not available since material is non-flammable. However, products of decompostion include fumes of oxides of sulfur. Will react with water or steam to produce toxic and corrosive fumes. Reacts with carbonates to generate carbon dioxide gas.
Sodium Hypochlorite Solution	**Boiler point :** 40C(104F) Decomposer slightly **Meeting point :** -6C (21F) **Solubility :** 100% in water **Density :** 1.07 – 1.14	**Potential Health effects:** **Inhalation:** May cause irritation to the respiratory that (Nose and throat; symptoms may include coughing and sore throat) **Ingestion:** May cause nausea and vomiting. **Skin contact:** May irritate skin. **Eye contact:** Contact may cause severe irritation and damage especially at higher concentration. **Chronic Exposure:** A constant irritant to the eyes and throat. Low potential for sensitization after exaggerated exposure to damage skin. **Aggravation of pre-existing conditions:** Persons with impaired respiratory function,	**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen, get medical attention immediately. **Ingestion:** If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately. **Skin contact:** Immediately flush skin with plenty of water for atleast 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before re-use. Thoroughly clean shoes before re-use. **Eye contact:** Immediately flush eyes with plenty of water for atleast 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.	Made bund wall to control spillage on earth.

		or heart disorders (or disease) may be more susceptible to the effects of substance		

F.P. = Flash Point
AIT = Auto Ignition Temp.
Sp. Gr. = Specific Gravity
C.V. = Calorific Value

LEL = Lower Explosive Limit
UEL = Upper Explosive Limit
B.P. = Boiling Point
M.P. = Melting Point.

CAP = Capacity
M.S. = Mech Strength
S.S. = Seam Strength

ASSESSMENT FOR PROBABILITY OF OCCURRENCE;

Normally there is no potential for any Emergent situation to occur in the Plant other than natural Disasters like Earth Quake, Flood etc. Cement Manufacturing Process does not involve any treatment, Storage, Handling, Releasing or Transporting any Toxic / Hazardous Chemicals or Gases. However, effective measures are planned to control any emergency in time.

7.0 EMERGENCY SHUTDOWN & CONTROL PROCEDURE

7.1 SHUT DOWN OF KILN OPERATION

In case of an Emergency, The conditions are such which may force a Shut Down of the Plant. If the situation so warrants then the Shut Down should be effected in a systematic manner without causing any loss to Plant, People and the Auxiliaries / Equipment.

In the Cement Unit the kiln is the Heart of the Plant which produces Clinker in the granular form, which is powered by grinding to produce Cement and packed in Bags. Other Plant being supplement to the Kiln, its Shut Down results in shutting off other Plants.

Following Procedure should be adopted to shut down the Kiln.

- Section Incharge to ask the incident controller for Shutting off the Plant.
- Stop the Coal Firing to the Kiln
- Stop the Raw Meal feed to the Kiln.
- Stop the S.G. Fan meant for sucking of the hot Gases from the Kiln.
- Switch off the drives to stop rotation of Kiln.
- Switch off the Kiln Cooler, Clinker transport and Coal Mill simultaneously.

- Switch off other Auxiliaries related to Kiln.
- Inform the Incharge Power Supply for cutting off Power supply to the Plant.
- Continue alternate Power Supply to general / Road lights and important utilities.

7.2 RECOMMISSIONING

Start-Up the Kiln may resume after long shut down. As such every care should be taken to avoid any untoward happening at the time of restarting of the Plant.

Following Procedure should be adopted during relighting the Kiln.

The Section / Area Incharge to ensure for restoring normalcy after Emergency.
Ensure for removal of left out Materials and safe movement in working area.
Ensure that all Manholes Ducting are closed and moving M/c parts are guarded.
Arrange for switching on Power supply to the Plant through In-charge Power supply.
Switch on Power supply to the Control Panels.
Switch on Power supply for trail run of Auxiliaries relating to the Kiln.
Switch on Power supply to the Drives for rotation of Kiln.
Check for smooth functioning of control System during trial run of Auxiliaries.
Check for proper feed of Raw Meal & Coal.
Start lighting of the Kiln with a small flame.
Start Kiln rotation continuously with Smoke Gas Fan start.
Observe the flame condition in Burning Zone, if found stable, take out Kiln lighting.
Gradually control other kiln functions to maintain Process Parameters.

Power Plant (22MW CPP) Shutdown Procedure: -

- Reduce coal feeding and first stop the Coal feeder one by one from fourth compartment
- According to pressure reduce the load.
- Keep one compartment in service.
- If generator load is <2.5 mw open the grid barker and run the TG with home load for some time.
- Ensure startup feeder is closed or not.
- Open the Generator breaker and run the TG rated speed.
- Stop the first compartment coal feeder and wait for bed temperature down up to 600 deg.c for safety operation.
- If boiler to be shutdown means depressurize the boiler naturally other vice hot box up the boiler.

- Generator desynchronizes and trips the turbine manually.
- After stopped coal feeder immediately close the boiler MSSV.
- Until stop the first coal feeder frequently give air mixing for remaining Compartments like 2, 3, and 4.
- After tripping the turbine immediately open the warm up vent, turbine casing drains, ESV drains.

7.3 Boiler Shutdown Procedure (WHR):-

- Inform to CCR related boiler regarding stoppage of WHRB Boiler.
- Open the bypass damper to 100% by inching operation as per standard operating procedure.
- Close the out let damper and subsequently close the gas inlet damper.
- Stop rapping system mechanism after 20 minutes.
- STOP drag chain and RAV after half an hour.
- Maintain drum level and continue RC Pump in service for one hour.
- Stop HP dosing pump.

7.4 PREVENTION AND CONTROL

Any dangerous occurrence can be checked with adequate precautionary measures before it may lead to Emergency. Following precautionary measures shall be taken to effectively control the Hazardous Situation.

7.5 FIRE PREVENTION MEASURES

No hot work or any other Job involving naked flame shall be done in sensitive areas as earlier identified without any valid permission / clearance or authorisation from Area / Section Incharge.

- Naked flame if any will not be left unattended.

- Smoking is prohibited in side the Plant especially in the areas where no smoking Board is displayed like Packing, Godown, Diesel Oil / Petrol Tanks.

- Flammable scrapes like Packing Material, Waste Rubber and Jute, Oil soaked rags etc should be dumped away from the working Place and disposed off regularly.

- Areas under Welding should be cleared off flammable Materials to prevent chance of Fires from Welding splatters.

- Fire extinguishers and water availability should be ensured on site where Welding Jobs are carried out near or around flammable Materials area.

- Loose Electrical fittings and exposed joints should be properly insulated to check short-circuiting / sparking.

- All Fire Extinguishers shall be kept ready for operation duly checked / tagged through regular inspection.

- Access to Fire Fighting Equipments should not be blocked.

- Ensure proper lubrication and cooling of Machine Parts to avoid friction.

- Does not over load the Electrical circuit by using too much Equipment at one point.

- All Welding Machines and other Electrical Motors should be earthed.

7.6 FIRE CONTROL MEASURES.

Any person who detects the Fire will shout Fire-Fire to gather the attention of other fellow persons and rush to the scene to help extinguishing the Fire.

Simultaneously, the concerned Shift / Area Incharge and Fire Section / Security Department should be informed.

The shift area Incharge should inform his senior officers about the nature and location of the Fire.

In case the Fire aggravates and is likely to cause damage to Plant and property, the Shift area Incharge should consult his senior Officers for approval to isolate the affected area by cutting off inlet / outlet flow of Material.

Similarly any decision to cut off the Power supply or shutting down the Plant, should make every effort to put off the Fire with whatever resources those are available with him.

On receipt of Fire call the fireman on duty will rush to the site of Fire with trained persons and Fire Tender & Fire Equipments. Fight out Fire so as to bring it under control as early as possible.

He will inform the Pump House to arrange and ensure sufficient Water supply for Hydrant Line.

The affected area should be cordoned off.

Chimneys / Structural, towers, Tanks, Silos etc. should be electrically earthed.

All other combustible material should be removed from the place of Fire.

7.7 FIRE ON GAS CYLINDER

Warp/ cover the Cylinder body with wetted cloth or Gunny Bag. Use hand gloves.

The cylinder regulator / valve should be immediately closed. Use hand gloves.

Try to roll down the cylinder and take it away to some safer place.

7.8 ELECTRICAL FIRE.

Switch / Cut off the Power supply immediately.

Water should not be used on Electric Fires.

Use only Dry Chemical Powder / Co2 / ABC type Fire Extinguishers.

7.9 FIRE ON OIL, DIESEL STORAGE & LIQUID AFR.

Isolate the affected part by cutting off inlet / outlet Control valve.

Cool down the outer surface by sprinkling water in case of Fire in the Oil Drum & Tanker.

Do not pour water on the burning Oil.

For Controlling /Extinguishing the Fire on Oil, We use the Chemical foam / Mech. Foam.

Mixed Oil & Foam (Waste Mixture after Fire Extinguishing) Collected in Drums and Send the same to Store.

7.9 FIRE IN COAL BINS/STORAGES.

Nitrogen Purging System Installation for Liquid AFR Storage to control spontaneous Ignition in fine Coal bins.

7.9.1 FIRE ON SOLID AFR.

Isolate the affected area by barricading.

Try to segregate the fire from unburned material.

Use water to extinguish the fire.

7.9.10 ENVIRONMENTAL RISK DUE TO PLANT OPERATION

Aims of environmental Risk Assessment: Overall conservation of environment condition at site, judicious use of natural resources and water, good health of the work force. Ensure human health and pollution free plant operation with addressing the control of Air Pollution Control, Noise Mitigation, Wastewater Management, Solid Waste Management, Greenbelt Development etc.

Identification of Environmental Risk and Control Measure: Identification of major hazardous based on above factor and leakages which cause environmental risk. Storage Hazardous Chemical and waste material under the various rule & regulations. Spillage and leachate control of waste storage yard. The risk identification are being carried out based on plant round by respective area owner, employee and workforce, reporting through offline and online mode.

If there is any leakage and eventuality of source of ignition, highly inflammable nature of the chemical may cause fire hazard in the storage facility. Implement waste management plan that identifies and characterizes every waste arising associated with proposed

activities and which identifies the procedures for collection, handling & disposal of each waste arising. Records of solid waste generation, treatment and disposal.

To control the NOx emission , SNCR system installed and alarm system provided in CCR to control if emission goes beyond the limit.

Crushing and finish product section are most susceptible to spillage of dust (hazard). Failure of dust extraction and suppression systems may lead to abnormal conditions and increasing the concentration of dust. Preventative maintenance of Bag filter and dry fog water system to ensure.

Water sprinkling system installed on stocks of coal in required scales to prevent spontaneous combustion and consequent fire hazards.

Noise generated from various plant operations, vehicular to be optimized and monitored, Noise measurement is being done at the source & ambient conditions.

No untreated discharge made to surface water, groundwater or soil. Discharge norms for effluents is being maintained. Design to incorporate existing drainage pattern and avoid disturbing the same. Visual inspection of drainages,

Area is water stress zone hence monitoring of water quality & levels are ensure through offline & online mode.

Cement Plant/ WHRB/CPP

In order to regulate the particulate matter emission unit has provided high efficient bag house for kiln, coal mill and cement mill exhaust and ESP for clinker cooler and boiler exhaust.

Concreting roads and vacuum sweeping.

Fly ash transportation by closed tankers.

Covered unloading hoppers with atomized water spray system.

Silo for clinker storage, fly ash, cement and covered storage for gypsum and Laterite

Water sprinkling facility is provided at coal/ pet coke storage area.

Water sprinkling system is provided at the limestone crushing system.

Bag filter is provided for all the material transfer points.

- Green belt development along with plant periphery and within the plant premises.
- Proper maintenance of vehicles is being done regularly.
- Periodic air quality survey is being/ will be carried out to monitor the changes as per the norms of State Pollution Control Board.

Transportation

- Haul road including the main ramp from crusher to mine pit will be kept wide, leveled and properly maintained.
- The limestone is crushed in the crusher. The mineral is transported from crusher to the plant through conveyor belts.
- Limiting of vehicular speed will be adopted.
- Water tankers for sprinkling of water will be used regularly on haul roads, dump roads and other roads leading outside on which transportation vehicles ply.
- Morrum/ coarser material will be used on haul road, which reduces the generation of dust.
- Plantation is done along the road sides to mitigate the vehicular fugitive emissions.

Crushing

- De- dusting system will be provided at screening & crushing plant with bag filter to collect the dust generated during crushing.
- Atomized water sprinkling system or de-dusting system will be provided at crusher hopper & conveyor belt transfer points to suppress the dust emissions.

DON'TS

Never fiddle with Safety pin valve regulator of the Fire Extinguisher.

Do not hammer the Nozzle / Plunger with a hard object.

The Fire Equipments should not be hit against wall or hand object.

Don't be panicky during the Fire.

Don't switch On the Power Supply till the normal conditions are restored.

8.0 SAFETY OF HEAVY STRUCTURES/BUILDING.

Following measures should be taken to ensure Safety of Structures / Buildings.

Vibration Monitoring of Plant/Unit should be done where there are operations – causing vibrations.

Trusses and Purlins and Beams of Sheet Roofing Structures should be thoroughly checked and rectified for aging.

Supporting Columns should be thoroughly reinforced whenever any crack is detected.

Any major crack developed in the walls should be informed.

Chipping, major Dismantling / Modification work of R.C.C. Structure should only be done under Supervision.

The roof sheeting should be regularly cleaned off dust, especially before Rains.

Any masonry erosion or civil defects in the Structure should be promptly attended.

Steel Structures and Fabrication should be ensured for properly wedded joints and strength for uniformly distribution of bearing load.
Proper alignment of Crane, Rails should be done to avoid jerking, vibrations and derailment.
Stability certificate of fitness in respect of heavy structures / building should be taken from approved competent person.

8.1 SAFETY AGAINST NATURAL CALAMITIES.

- Daring System inside the Plant should be perfect.
- Water logging should be checked through effective disposal.
- Lightning arrestors should be mounted on tall Buildings.
- Chimneys / Structural Towers, Tanks, Silos etc. should be electrically earthed.

9.0 FIRE FIGHTING / COMBATING PROCESS

- The first observer is the person who first observes the fire. He try to extinguish the fire. If unable to control over the fire, he should speak loudly saying AAG....AAG... to draw the attention of nearby persons on the fire.
- Simultaneously First observer will inform to control room and shift in-charge for immediate action to handle the situation.
- Control room personnel should immediately inform to Fire Squad leader about the emergency with its location.
- Fire Squad leader should immediately reach at site with team & facility to control over the fire.

9.1 EVACUATION / RESCUE PROCEDURE

The work of evacuating the Personnel will be done under the Supervision of Rescue Co-ordinator as per following procedure.

- The Section Incharge of the Emergency affected area will call for Rescue Co-ordinator to arrange for evacuation of Personnel required if any.
- The Rescue Co-ordinator will immediately summon his Team with necessary Materials / Gadgets and reach to the evacuation site to assess the situation.
- All Employees other than affected Persons shall gather at the Assembly Point.
- The Rescue Co-ordinator will seek help from Transport / Medical / Welfare Co-coordinators for necessary arrangements as may be required for evacuation.
- In case of rescue required while caused any mishap during working in confined space, working at height work and other hazardous place, the concerned work team

  member/ supervisor will try to handle the emergency situation. If not able to handle it safely, immediate call to Emergency Control Centre to get a help. The Rescue team will rush at site & rescue to the personnel with the help of rescue kit/mechanism.

10 ORGANISATION FOR EMERGENCY

10.1 EMERGENCY ROLE.

Following Executives / Officers of the Plant shall be responsible for providing "ORGANISATIONAL SUPPORT" and services to help controlling the Emergency in any Section of the Plant.

They will form an "Emergency Commanding Structure" and give the desired "LEAD" in Areas of their Operational Control.
The EMERGENCY ROLE" as assigned to each Designated Persons of the task group is defined as under.

	DESINGATED PERSON	EMERGENCY ROLE
01	Head of the Organisation	Will act as Site controller
02	Head (Technical)	Will act as Incident Controller
03	Head / Duty In charge (Security)	Will act as communication , Rescue and Transport Coordinator
04	Deptt./ Section Heads	Will act as "Area / Section Incharge"
05	Chief Medical Officer	Will act as Medical Coordinator
06	Head (Safety)	Will act as Observer
07	Head (Stores)	Will act as Material coordinator
08	Head (HR & IR)	Will act as Welfare , Training, liaising & public relation coordinator
09	Head (Electrical)	Will act as Incharge Power supply
10	Head (Mechanical).	Will act as Co-ordinator of Mechanical Utility

10.2 ORGANISATION STRUCTURE:

The Organization Structure for "ON SITE EMERGENCY ACTION PLAN" is drawn as per Chart enclosed as Annexure.

In the absence of any Member of the Task Group, the 2nd Person in Chain of Command will automatically take charge of the responsibilities for the respective Function and Duties of his senior.

All Personnel as notified above for Emergency work shall report to Emergency Control Officer immediately after an Emergency is declared.

Duties & Responsibilities of all Key Members of the Emergency Task Group are detailed separately.

10.3 EMERGENCY DUTIES / RESPONSIBILITIES OF KEY PERSONNEL:

10.3.1 SITE CONTROLLER:

The Site Controller will be the overall Incharge of Emergency Control activities and his duties during Emergency shall be:

- To make himself available in the Emergency Control Room immediately after receiving the information regarding serious Occurrence.
- To declare the affected Area as Emergency Zones in consultation with Incident Controller and Site Incharge take control of Situation for overall Co-ordination of the Emergency handling operation between different Agencies at Work.
- To Contact if needed the Local / District Administration, Police, Hospital, Fire Brigade etc for any help required and give instructions to Liaison Officer to this effect.
- To assess the Magnitude of the situation in consultation with Incident Controller and decide if Employees need to be evacuated from the affected Area to the Assembly Point.
- To maintain continuos review of developments in consultation with Incident Controller as to whether shutting down of the Plant or any Unit / Equipment is required.
- To issue authorised statement to News Media if required and ensure that material evidence is preserved for any Enquiry to be conducted by Statutory Authorities.

10.3.2 INCIDENT CONTROLLER

Incident Controller will function as Site Controller in his absence with duties as under:

- To control Plant Operations and take Emergency shutdown in consultation with Area Section Incharge.

- To ensure evacuation of Employees to the Assembly Point.
- To direct Fire Fighting Operations till the Fire Fighting Squad reaches the site.
- To identify urgent Material requirement and advise the "Material Co-ordinator"
- To direct all Emergency handling operation on priority for Safety of Personnel & Minimum losses to Machine and Material.
- To keep in touch with Site Controller and inform all developments to the Communication Officer with specific information.

10.3.3 COMMUNICATION CO-ORDINATOR :

- He will ensure that all Communication System under him are maintained to work with.
- To operate from Emergency Control center and inform the Site Controller / Incident Controller about the Emergency situation immediately after he receives the information from Area / Section Incharge.
- He will arrange to blow the Siren / Hooter for declaring or clearing emergency under instruction from Site Controller.
- He will inform all the Members of Emergency Task Force on receiving the information in this regard.
- Telephone lines, STD, Hot lines etc, shall be kept clear on priority during Emergency to ensure speedy transmission of urgent message.
- In case of Power / Telephone failure he will arrange to use Runners / Messengers.
- He will use Public address system / Mike to convey any specific information to the Persons gathered at Assembly point as

10.3.4 AREA / SECTION INCHARGE

- The Area / Section Incharge in whose jurisdiction the Emergency has occurred will reach the Site and take stock of its Magnitude and implication.
- He will lead the Rescue Team and direct all Control Operations.
- He will inform the Communication Officer about the Emergency Occurrence.
- He will inform the Incident Controller / Site Controller and ask for Shutting down the Plant Operation or any additional help as may be required.
- He will ask the Incharge Power Supply to Cut Off in the affected area as required in consultation with Incident Controller.
- He will arrange to cordon off the Area around Emergency Zone to prevent entry of unauthorised Personnel.

- He will also arrange for the Evacuation of affected personnel to the Safe Zone.

10.3.5 RESCUE CO-ORDINATOR:

- Shall take charge of all Rescue & Relief Operations at the Emergency Site: like Firefighting and evacuation of affected Personnel etc and work under the direction of Incident Controller.
- To immediately arrange to call all Members of Rescue / Relief Operations, and rush them to the Site for fighting out the Emergency.
- To arrange / co-ordinate for calling Fire Brigade from outside as may be required.
- To cordon off the affected Area in consultation with Area / Section Incharge.

10.3.5 MEDICAL CO-ORDINATOR :

- To immediately call all the Members of First Aid Team and establish First Aid care.
- To ensure availability of Ambulance Equipped with essential Items ready for use.
- Assign specific Job / Instructions to First Aid Team and to Paramedical &Ambulance Staff.
- To arrange & ensure supply of Medicines to First Aid Emergency Center from Plant Dispensary, stores or from outside in consultation with Material Co-ordinator.
- To direct the removal of Injured Personnel to the Dispensary or to outside Hospital for Treatment as the case may be.
- To summon outside Medical Aid if required.

10.3.6 SAFETY CO-ORDINATOR :

- He will rush to the site of Emergency and identify all Safety requirements keeping Safety of Persons on priority.
- Coordinate with Site Controller and Incident Controller.
- To conduct investigations into causes of Emergency occurrences and suggest remedial measures for prevention of its reoccurrence.
- To evaluate the adequacy of Emergency Control Plans for Disaster Prevention and preparedness and suggest measures for rectification of Shortcoming.

- To arrange suitable Safety Appliances for Personnel Protection like Safety Helmet, Hand Gloves, Safety Belt, face Shield, dust Filters etc from Stores, Plant / Department and Emergency stock etc in consultation with Material Co-ordinator.
- To take all possible Safety Measures and Safeguards to arrest further spread of hazards, in co-ordination with Area / Section Incharge and Incident Controller.

10.3.7 FIRE CO-ORDINATOR:

- Ensure / Secure isolation of Plant Process and operation of Machine / Equipment to keep away danger from Persons.
- To mobilize sufficient quantities of Fire Equipment, Fire Brigade and fittings at Emergency Site and arrange for Fire Fighting operations.

10.3.8 MATERIAL CO-ORDINATOR:

- To maintain reasonable stocks of Materials like Safety, Fire, First Aid Items, Mechanical, Material Handling fightings etc and earmark " Emergency Stock " of above Items.
- To maintain Emergency Stocks separately at Emergency Control Center and review / replenish them.
- To arrange prompt supply of essential goods from local market as and when required during Emergency.
- To remain in constant touch with Incident Controller and Area / Section Incharge for identification and supply of Material and Equipments / Accessories.

10.3.9 TRANSPORT CO-ORDINATOR.

- To mobilize sufficient Vehicles and Transport Equipment's for shifting Man / Material and Evacuation of Employees.
- To arrange strict Security at the Gate to prevent entry of unauthorised Personnel and Vehicles.

- To control Traffic movement and ensure that no crowding of Vehicle is there Around emergency zone.
- To ensure that alternate Transport is also available as and when required.

10.3.10 LIAISONING AND PUBAIC RELATION CO-ORDINATOR:

- To assist Site Controller in seeking help from outside agencies like Police, Administration, Hospital, Fire Brigade for Emergency Work.
- To keep himself informed on the status of casualties or other Emergency losses and arrange to provide any additional help for prompt Treatment of the Injured.
- To handle all inquiries from relatives and provide appropriate Information.

10.3.11 INCHARGE POWER SUPPLY:

- To cut off the source of Power Supply to the affected Emergency Zone and related operational Units as and when required authentically by Area Section Incharge.
- Restore Power Supply after Emergency clearance is obtained from authorised Person.
- To provide alternate source of Power Supply to Electrical Equipment / Auxiliary from J.K.Thermal or D.G.House in case of Power failure from R.S,E.B

10.3.12 INCHARGE WATER SUPPLY:

- To ensure sufficient Reserves of Water Storage.
- To maintain Pump operation and Valve control for proper supply of water.
- To give top priority for Water supply to affected Zone as may be required for Emergency use.

10.3.13 CO-ORDINATOR MECHANICAL EQUIPMENT / UTILITIES:

To arrange supply and installation of all Mechanical / Material Handling Equipments and their fittings like Mobil Crane, Chain Pulley Block, Slings, Ropes, Ladders, Winch Crab, Trolley etc as may be required for use during Emergency.

10.3.14 WELFARE CO-ORDINATOR:

- To ensure that Casualties receive adequate attention.

- In-Case Emergency is prolonged, he will arrange for the relief of Personnel and organise Refreshment / Catering facilities.
- To arrange Admission / Hospitalisation and proper care of the Injured during Treatment outside in co-ordination with Doctors.
- To keep in touch with the Family Members of the Injured.

10.3.15 TRAINING CO-ORDINATOR:

- To prepare and earmark a Rescue Team of trained Personnel capable of handling Emergency control / relief Operation.
- To arrange Training of Rescue Team Personnel in all Rescue Operations like Evacuation, Fire Fighting etc through demonstration / drills of Fire Equipments.
- To form a First Aid Team and provide Training in First Aid so as to make them capable of rendering all First Aid Services and care.
- To provide the list of all trained Members of the Rescue Team and First Aid Team in the Emergency Control Center intimating them to operate under Rescue Co-ordinator respectively during Emergency.

10.3.16 FOR EMERGENCY DURING NIGHT DUTY HOURS:

- During Night duty Working hours, the Security Officer on duty will be the Emergency night duty Incharge for Emergency Control Works. He will be responsible for Co-ordinating all necessary action to help control the Emergency Situations.
- To assess the scale and magnitude of the Emergency implications and accordingly inform the Incident controller of Area Section Incharge as the case may be.
- If required inform all members of Emergency task Group & Rescue First Aid Teams.
- To use Runners / Messengers in –case of Telephone failure.
- To blow the Siren / hooter for declaring state of Emergency under instructions of incident controller.
- To arrange the Transport / Vehicle for Emergency and Rescue Operations.
- To act under instructions of incident Controller and carry out other jobs as are attributed to communication Co-Ordinator.

10.4 EMERGENCY SERVICES & UTILITIES

10.4.1 EMERGENCY CONTROL CENTRE.

Security office at main Gate will be the Emergency Centre during emergency and all emergency operations would be directed from there.

The emergency control Centre shall have the following facilities.:-

- Internal and external telephone facilities.
- List of key persons notified for Emergency work with their contact Telephone numbers and addresses.
- List of all employees as engaged in different shifts in the plant.
- List of control locations / contact Telephone numbers for service and liaising.
- List of outside Agencies for help like local / Distt. Administration, Hospital, Police, and Fire brigade etc., along with their addresses and phone numbers.
- Emergency Siren / hooter control a public address system.
- Emergency stock of essential items for Fire fighting, safety, First Aid, Rescue / valuation, Transport etc

10.4.2 CONTROL ROOM / COMMUNICATIONS CENTRE :

- Location & Access: The Security office at the main Gate is the control Room and communication Centre during emergency as identified in the lay out plan. The control Room has a clear access.
- Vehicles / Transport: the control room has ready availability of sufficient Vehicles to meet any emergency as detailed under.
- Plan: A lay out plant of the factory is displayed in the control room.
- The plant has following vehicles, which can exclusively be put in service for evacuating and shifting of personnel and Material during Emergency.

1. Jeeps: 02 Nos.
2. Cars: 02 Nos.
3. Fire Jeep: 01 No.
4. Trucks : 02 No's (on hire)

- These vehicles shall be available near the Emergency control centre under the charge of security office.

- Besides, ambulance facilities are also available round the clock in the plant dispensary. There are 02 Ambulances, which can be put to Emergency use.

- Important Telephones: A list of all important Telephones is also displayed in the emergency control Room.
- Communication Facilities. : The control Room is provided with Internal & External phone to make use of the same during Emergency.
- Also the runner's persons designated as Runner is available in each shift.
- The details are also exhaustively covered under communication System Mechanism with all concerned Persons / Agencies for arranging necessary help to effectively handle emergency control operations.

10.4.3 ASSEMBLY POINT :-

- In case of emergency all the persons who are not required with any emergency activities like firefighting, Rescue, first Aid, and emergency plant shut down will assemble at following locations for roll call.
  1. In front of Time office (Main Gate)
  2. In front of packing plant 1,2 &3 (Near Mech. Work shop)
  3. Back side of Mines office.
- Display of Board: A Board has been displayed to identify the location as assembly point.
- Roll Call System: HR Personnel will take roll call of company employees, contractors' employees, visitors, etc at all the all three assembly points.
- All the assembled personnel should be ready for support in emergency management.

10.5 COMMUNICATION FACILITIES & PROCEDURES

The plant has following systems of communication widely spread over to every Department Colony complex and outside contacts.

- Internal Telephone
- External telephones with STD facilities
- Telephone / Mobile phone will be used his liaising at Udaipur & H.O. Kanpur.
- Computerized PBX junction through computerized Electronic Telephone Exchange.
- Direct lines to Sr. Executives at night hours.
- FAX System Telex System.
- Electrical Siren Hooter
- Public Address Mike / Horn

- Runner System
- Jeeps.

The alarms/ Sirens are provided at strategic points whereas telephone systems are provided in each and every section.

- The communication officer will use the alarm siren for emergency as and when required.
- In addition, the communication officer shall also inform all concerned persons telephonically as notified for Emergency work.
- In case of telephone failure the communication officer shall arrange to rush the runner with a conveyance to convey the massage to all concerned.
- If needed he should also use public address / Mike system at the assembly point for conveying any information as may be required to the persons who have assembled there after being evacuated from the affected area.
- Telephone / Mobile Phones: facilities shall be used for conveying messages to Head Office or area Marketing / Liaisoning office.
- STD, E-mail & FAX facilities shall be used for onward communication to statutory authorities informing them about the occurrence / declaration of an Emergency.
- The communication officer in consultation with incident & site controllers shall municipal / District Administration etc on Telephones to summon any urgent help as may be required to bring the situation under control without loss of time.

10.6 ON DETECTION OF FIRE:

- In case a fire is detected by any person, he will.
- Raise the alarm by shouting Fire-Fire to draw attention of his other colleagues.
- Immediately inform the section Incharge, Departmental Head, Fire Section, Security officer on duty etc. and also inform his colleagues to make possible arrangements for fire fighting by using portable fire extinguishers as are placed nearby.
- On receiving the information the section in charge will immediately rush to the site of fire occurrence and make all possible arrangements to control the situation.
- He will also assess the magnitude and gravity of the situation and if required shall inform the occurrence to incident controller and communication officer.
- If required, the section in charge will inform Electrical Department to arrange "shutting off" the power supply.

10.7 ALARAM MECHANISM FOR EMERGENCY:

Following system will be adopted for blowing the alarm /Siren for Emergency.

- In case of Emergency the Communication Officer will arrange to blow the Siren
- First at high pitch for one minute and then gradually at low pitch for 20 seconds.

- He should repeat the blowing of Siren 03 times at a stretch intermittently.
- The alarm will signify that an Emergency has occurred and Emergency services should accordingly be put in operation.

10.8 ALL CLEAR SIGNAL:

The Communication Officer shall arrange to blow a long pitched siren continuously for two minutes without break to indicate that Emergency is over and normally is being restored after the emergency has been controlled.

11.0 MEDICAL AID:

The Plant has 02 Dispensary one each in Works & Colony Complex operating round the Clock under qualified Medical Doctor. It has facilities for Dressing, Minor Operations.

Oxygen cylinders, Beds, Stretchers etc. to meet First Aid requirements of the Employees and Colony Resident for Medical Treatment.

12.0 DISPENSARY STAFF:

Following Medical / Para-Medical Staff are available on regular roll in the Dispensary who can always be put for Emergency use.

Medical Doctor	01
Compounder	06
Female Nurse	01
Helpers	04

In addition we have scheduled visits of guest Doctors on regular basis also.

Further 03 Government Hospitals / Dispensaries are located in Nimbahera close to the Plant namely: Referral Hospital, ESI Dispensary and a Family Planning unit. Besides 01 District Hospital is also operating at Chittorgarh where the Injured Person can be sent.

13.0 EMERGENCY EQUIPMENT

13.1 EMERGENCY MEDICINES / FACILITIES

A stock of following emergency medicines is maintained in the dispensary.

Inj Adrenaline	21 amp.	Tab Aten	20
Inj Dexona	12 vial	Inj. Hacmecial	05 Bottle
Tab Indral	20	Inj Avil	20 ampules
I.V. Set	50 Nos.	Inj. Atropine	10 ampules
Inj Vit. K	05 amp.	Inj. Lasix	10 ampules
Inj Primacort	10 vial	Inj. Batropose	05 ampules
Inj Calmposet	10 amp.	Inj. Dopamine	05 ampules
Tab Sorbitrate	50.	TabEcosprin	50

Besides, many other general Medicines & Facilities are available in sufficient quantities.

Following Equipment are readily available in the dispensary.

Ambulance	02	Portable Trolley	02
Other Transport	03	Eye Wash Bottle	06
Splints	Sufficient		
Oxygen Cylinder	06	Beds	06
Stretcher	03	Resuscitator	02

13.2 FIRE EQUIPMENTS

Various types of Fire Fighting Equipments are available in the Plant in sufficient numbers to meet any Emergency. These are fixed at prominent locations in the Plant and reserve stock is also maintained in Fire Station and Stores. These are available in various sizes as detailed below.

ITEM	QUANTITY
Co2 Type (all size)	249 Nos
DCP Type (All Sizes)	75 Nos
Foam Type (All Sizes)	148 Nos
ABC Type (Multi Purposes)	254 Nos.
Hydrant Points	25 Nos.
Water Pump	02 Nos.
Fire Brigade	01No.s
Hose Winding Machine	01 No.
Sand Buckets	25 Nos.
Hose Pipes	20 Nos.
Branch Nozzle	03 Nos.
Spare Fittings / Parts & accessories	Sufficient

13.3 MUTUAL AID:

The Scheme is existing and Factories included under the mutual aid scheme are JKCW Mangrol, Wonder Cement and Nagar Palika, Nimbahera as and when required during Emergency.

13.4 ADEQUACY OF FIRE EQPT. :

Fire Equipment's are sufficiently available as per TAC norms.

13.5 WATER SUPPLY

The plant has a system of storing water in number of ways like overhead water tank, surface water tanks & Return water Tanks. Also sufficient number of under ground Tube wells are there to supply water on regular basis for use in plant and machinery. Separate Pumps and water hydrants are there for fire Emergency. The total storage of water reserves are as under.

13.6 TOTAL WATER STORING CAPACITY

• Surface water Tanks	=	6,00,00 Gallons
• Elevated water tanks (Inside plant)	=	35,000 Gallons
• Return water Tanks (2 nos.)	=	50,000 Gallons
• Elevated water Tank	=	30,000 Gallons
• Elevated water Tanks (Colony No.-1)	=	35,000 Gallons
• Surface water Tank (Colony No. – 1)	=	11,000 Gallons
• Surface water tank (Colony No. –1)	=	20,000 Gallons
Total Water	=	7, 81,000 Gallons

13.7 SAFETY EQUIPMENT (PERSONNAL PROTECTIVE APPLIANCES)

Sufficient quantities of personnel protective appliances like safety helmets face shield, Safety Goggles, Filter Masks, safety Belts, Hand Gloves, Apron, Gum Boots and Safety Shoes etc. are available in stores and plant department.

• Safety helmet	200	hand Gloves	782
• Ear Plug	37	Goggles	73
• Dust Filter Mast	3000	Hand Screen	13
• Safety Belt	23	Head Screen	12
• Apron / Overall	9	Shoe Asbestos	30

13.8 POWER SUPPLY

Total requirement of Power supply for Plant and Colony is about 38 M.W. and the total load of Power consumption is about 13500 H.P. which is met through following Power supply sources.

From R.S.E.B.	30.5 M.W.
Through J.K Thermal Power	22 M.W.
WHR	13 MW

In case of RESEB Failure, alternate supply from thermal / D.G. Grid is a valuable to ensure that Power to critical Equipments and Auxiliaries is always maintained and compensated for Emergency use.

13.9 MECHANICAL EQUIPMENT / ACCESSORIES

Ropes, ladders, chain Pulley Blocks etc. are available in stores and Mechanical Departments for use during Emergency.

13.10 LIAISONING & CO-ORDINATION

All liaisoning & Co-ordination work with concerned Authorities like Police, Hospital, Local/ District Administration, Fire Brigade etc. shall be done from the Emergency Control Centre. Various other enquiries shall also be entertained from there.

14.0 TRAINING OF PERSONNEL:

- All Employees of the Plant shall be regularly Trained and retained to meet effectively the Emergency requirements.
- Special emphasis will be given on Fire Fighting Demonstration and First Aid as being a regular part of such Training.
- It shall be always ensured that sufficient numbers of Trained Personnel are available at all times to meet any Emergency.

14.01 TRAINING OFFERED FOR:

• First Aiders:	Training is arranged Periodically
• Fire Fighter:	Regular Training is done on Fire Prevention & Control.
• Essential / Key Personnel:	Training regularly done.
• General Public:	Knowledge is imparted through Health Camps, Educational Functions and

Community Welfare Activities.

14.02 TYPE OF TRAINING:

Details of Training for desired Emergency personnel

(a) Training of First Aiders :

Type of Training:

- In-house Training / Demonstration by Training Deptt. with faculty support from medical Deptt.
- External Training of First Aiders through Red Cross Society or any other related agency.

Contents of Training:

- first aid procedures & Treatment of Fractured Limbs.
- Knowledge of type and use of splints.
- First aid treatment against Electric Shock.
- Use of Resuscitator /Artificial Respiration
- First aid treatment against Burn Injuries

(b) Training of fire Fighter :

Type of Training:

- In-house Training / Demonstration
- External Training on Effective Fire Fighting system

Contents of Training:

- Fire Chemistry & Classification of Fire
- Types of Fire Extinguishers and their use.
- Checking / Maint of Fire Eqpt. & Hydrants.

(c) Training of Essential Persons :

Type of Training:

- In-house Training for handling Emergency and Management of Utilities / Auxiliaries.
- External Training of Disaster Management
- Contents of Training : Team Building & Leadership Qualities to lead their people during Emergency
- Assessment of Emergency and managing ready stock of Emergency utilities like water, Air, Emergency power & Mech. Fittings at site.
- Inter departmental liasoning and Co-ordination.

(d) Training of Key persons :

Type of Training:

- In-house Training / Demonstration

- Review Meetings
- External Training on Disaster Control management

Contents of Training:

- About their Role / Duties during Emergency
- Assessment of Emergency situation for deciding possible shutdown / startup of plant & its utilities.
- Liaoning and Co-ordination with out side agencies.

(e) Training of General Public :
Type of Training:

- through Company organized Exhibitions and Health and welfare comps.

Contents of Training:

- Environment Protection.

Cement Manufacturing does not involve release / leakage of any Toxic gas or vapor during production and transportation as such public Safety at large is not at all endangered.

(f) Training Manual for Emergency personnel.

Objectives:

To provide procedural guidelines for assessment of Training needs imparting of Training for Emergency personnel and authorise them to effectively handle emergency situation in area of their control.

Responsibilities:

The Unit head of works shall be responsible for identifying suitable personnel who are directly or indirectly engaged for controlling emergency.

All such personnel will be apprised with their emergency roles and functions clearly as defined in "ON-SITE EMERGENCY PLAN"

All such emergency personnel / Co-coordinator's shall be members of Emergency Taskforce.

Identification of Emergency personnel

Concerned Deptt. Head shall be responsible to identify and spare Emergency personnel's and coordinators from their department like First Aiders Fire.

Fighters, Utility Co-ordinates whom they deemed to be as essential persons to help controlling the Emergencies emergency.

Roles & Responsibilities of such personnel's during Emergency shall be well identified and apprised to them.

Assessment of Training Needs.

Head of Training Deptt. shall identify Training needs of all emergency personnel with a view to impart Training for enhancing their functional skills so that emergency situations could be handled effectively.

The assessment of training Needs shall be done in consultation with concerned dept Heads and Head of safety dept

Scope of Training

The Training of Emergency personnel should preferably cover following areas

1. Nature of emergency and disasters
2. On site Emergency plan
3. Disaster control Management
4. Emergency preparedness
5. Management of emergency utilities
6. Team Building amongst cross functional Groups

7. Leadership Development

8. First aid Measures

9. Fire control Measures

10. Rehearsal drills & Demonstration.

Training of Emergency Personnel

Head of Training Deptt. In consultation with Head of Safety shall be responsible to arrange suitable Training of Emergency Personnel as per their Training Needs identified under Role and functions as laid down in "ON-SITE EMERGENCY PLAN"

Training Head as per advice of head of Safety shall design suitable Training Programme aiming to develop necessary functional skills required for controlling emergency effectively.

The training will be need based focusing mainly in the emergency control areas as required for safe handling of emergencies.

Head of training shall conduct in-house training Programme with faculty support from experts for all categories of emergency personnel.

Head of training Deptt in constitution with head of safety shall also arrange external / Advanced Training in areas of disaster control Management and Emergency Preparedness for such persons as deemed fit.

Head of Safety will review their skills and take timely action for necessary upgradation.

Fire fighting demonstrations & rehearsal Drills shall be done periodically to take stock of emergency preparedness and efficiency of emergency of control systems by safety Deptt.

14.03 DEMONSTRATION / DRILLS :

Fire Demonstration / Drill shall be regularly done for Fire Fighters / Security Staff and Plant personnel to check the Efficiency and reliability of Fire Control System.

14.04 REHEARSAL of EMERGENCY:

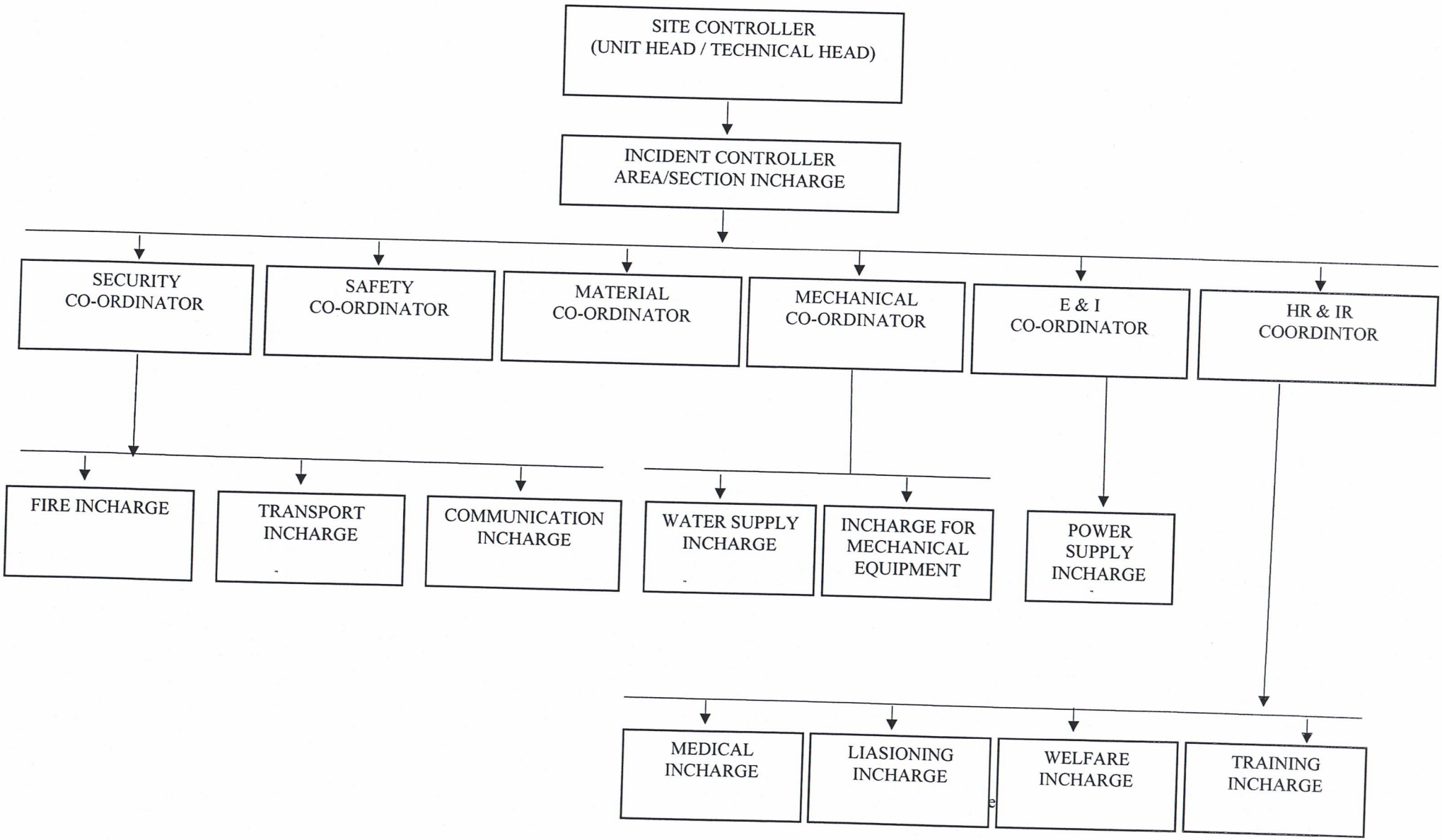
Rehearsal of Emergency shall be conducted twice in Year.

14.05 EXPLOSION and TOXIC GAS RELEASE:

Are not applicable as Cement Processing and Transporting do not involve any Explosion / Toxic Gases etc.

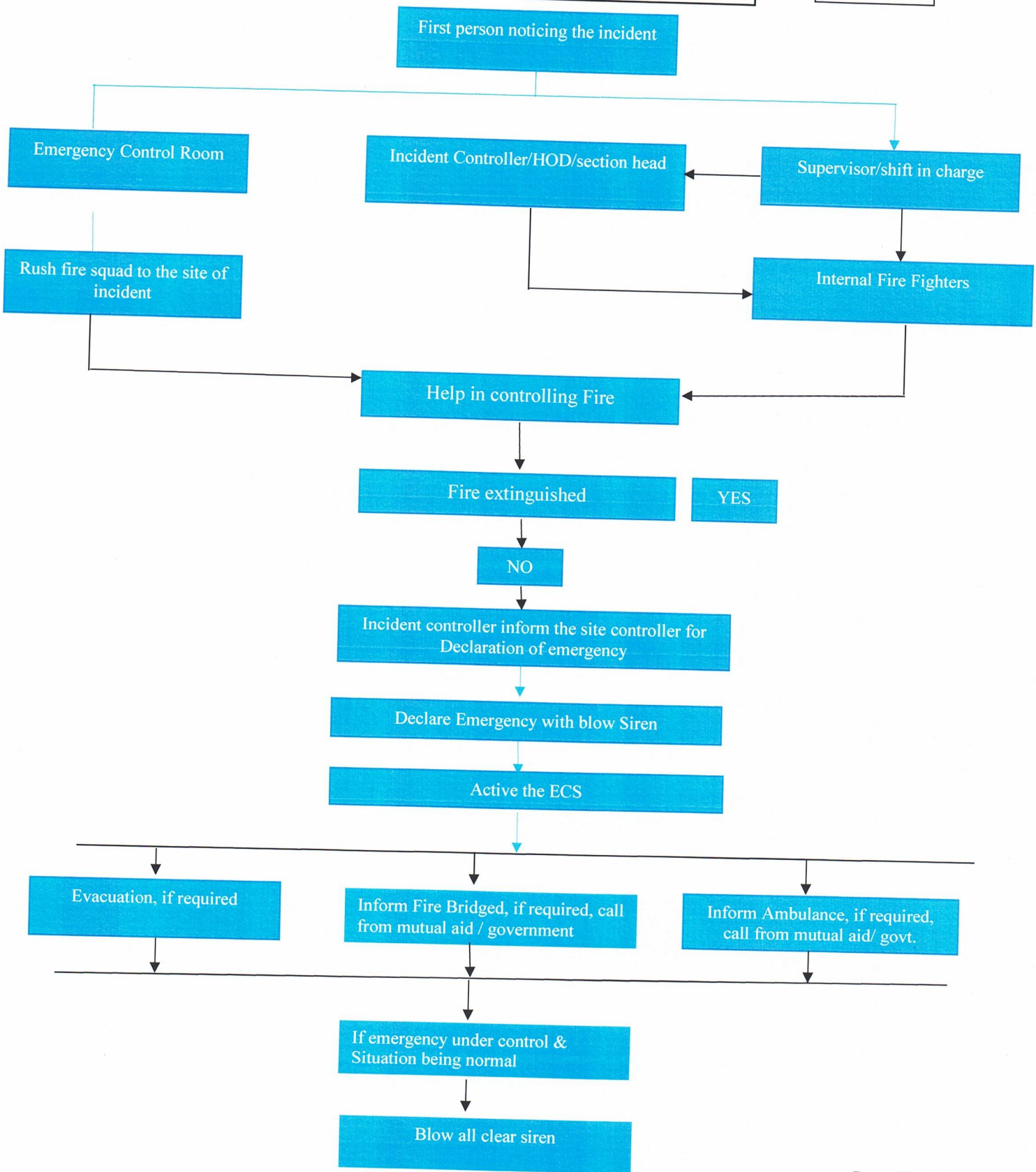
EMERGENCY COMMANDING STRUCTURE

ANNEX-1



Emergency Information System

ANNEX-2



Annexure-3

CONTACTS FOR KEY PERSONNEL

CONTACT RESOURCES	LOCATION	CONTACT NUMBER
Site Controller	Unit Head	09950998047
Incident Controller	Head (Tech.)	09979848721
Communication Co-ordinator	Security Office Main Gate	01477-220087 Ext. 11000
Area / Section Incharge	Plant / Deptt	----
Rescue Co-ordinator	Security Office	01477 -220084 Ext.12159
Medical Co-ordinator	Dispensary	01477-220084 Ext. 12058
Safety	Safety Deptt.	01477-220087 Ext.12249/10
Fire Co-oridnator	Fire Station	Mob:9829570722/9690374681
Material Co-ordinator	Gen. Office	01477-220087 Ext.12058
Liaisoning & Public Relations Co-ordinator	Personnel Department	01477-220087 Ext. 12015 9799334999,
Incharge Power Supply	Electrical Department	01477-220087 Ext.12070
Incharge Water Supply	Mechanical Workshop	01477-220087 Ext. 12157
Co-ordinator Mech. Eqpt. Utilities	Mech. Maintenance Mills / Kiln	01477-220087 Ext. 12011
Welfare Co-ordinator	Training Centre	01477-220087 Ext. 12117
Security Officer (Night Emergency)	Security Officer	01477-220087 Ext. 11000

CONTACTS FOR EMERGENCY SERVICES

CONTACT RESOURCES	LOCATION	CONTACT TELEPHONE NUMBER
Emergency Control Centre	Near Main Gate	01477-220087 Ext.11000
Communication	-do-	-do-
Emergency Alarm	-do-	-do-
Transport	-do-	-do-
Ambulance	Plant Dispensary	01477-220087 Ext.12058
Medical Aid	-do-	01477-220087 Ext.12058
Fire Equipment	Fire Station	01477-220087 Ext.10000
Water Supply	Pump House	01477-220087 Ext.12085
Safety Equipment	General store	01477-220087 Ext.12246
Power Supply	Electrical Deptt.	01477-220087 Ext.12077 & 12067
Mechanical Eqpts. and Accessories	Mech. Maint.(Mills & Kiln)	01477-220087 Ext.12011 / 12014
Liaisoning and Co-ordination	Personnel Deptt.	01477-220087 Ext.12015 (O) 12215 (R)

CONTACTS FOR EXTERNAL HELP

The contact Telephones for External support are given as below:

CONTACT RESOURCES	LOCATION	CONTACT TELEPHONE NUMBER
NIMBAHERA		**STD CODE – 01477**
Administration	SDM Office	220002
Police	Dy. S.P. Office	220039
Govt. Hospital	Chief Medical Officer	221189
Post & Telegraph Office	Post Master	220061
Telephone Exchange	Junior Engineering	220100
Railway Station	Station Master	220088
Municipality	Near City Rly. Station	220041
R.S.E.B.	Exec. Engineer	220583
Water Works	Asstt. Engineer	220070
OUT SIDE NIMBAHERA		
Sr. Inspector Factories & Boilers	Chittorgarh	01472 - 241213
Chief Inspector, Factories & Boilers	Jaipur	0141 – 2519659 – 2519619
District Magistrate	D.M.'s Office,chittorgarh	01472 - 240001
Police	S.P. Office, Chittorgarh	01472 – 240006
Distt. Hospital	C.M.O. Chittorgarh	01472 - 241114
MUTUAL AID SCHEME		
Fire Brigade	JKCW, MANGROL	9929590506
Fire Brigade	Wonder Cement	8003299650
Fire Brigade	Municipality, Nimbahera	01477-220041