

Brief Note on Contribution in “Swachh Bharat Abhiyan” by Mangalam Cement Limited, Morak (Rajasthan)

At Mangalam Cement Limited (MCL), we are operating cement manufacturing with dry process technology, in which no such industrial waste generates, however small quantity of stationary waste, e-waste, battery waste, used/spent oil as hazardous waste, food waste etc are generated from the offices, plant machineries & canteen. In addition to these kitchen waste, house hold waste from colony and garden waste from the green belt are generated.

As a responsible corporate, we have adopted Waste management practices & inculcate the culture of waste minimization in our employees, their families & our surroundings. MCL is also having ISO 14001:2008 for Environment Management System with the aim of environment conservation which includes waste management.

- i. **An overview Picture of the complete Cement Plant covering its greenery & surrounding**





- ii. **Waste Management in Offices:** MCL is implementing the 3Rs policy (i.e. Reduce, Reuse & Recycle) to manage the waste in systematic way.

Waste reduction is the prime concern at MCL; hence various actions have been taken towards paperless working in the offices such as SAP implementation, installation of common printers, both side of printing, communication through e-mail, motivational scheme for e-book readers to promote digitalization, etc.

Reuse of used envelopes, rough papers, proper utilization of the stationary is the common practice at MCL. To stop the wastage & enhance collection of waste effectively, we have started Return-Issue Policy in which new stationary is being issued to offices after returning of consumed stationary only.

For the recycling, unwanted used papers is being shredded in the paper shredder and shredded paper waste & other stationary wastes collected in the store are being given to recycler only.

In addition to these, uses of plastic bags & plastic items i.e. cups, spoons are totally ban in our premises including canteen, guest house, colony etc. even in functions also. To promote this anti-plastic campaign, we made cotton bags from old paints/cloths & distributed not only in the colony but also in the nearby community.

iii. **Segregation of Waste Collection:** No such variety of waste is generated in the cement plant, only some varieties of waste are generated in the offices & colony, these different wastes are being segregated at the point of generation and disposed off in the environmentally sound manner. Different wastes with their collection methods & mode of disposal are tabulated as given below:

S. No.	Waste Type	Source of Generation	Collection Points	Mode of Disposal
1.	Paper Waste	Offices	Shredder at Store	Sent to Recycler
2.	Used Stationary	Offices	Store	Sent to Recycler
3.	E-Waste	Offices/ Colony	E-Waste Storage Room at Store	Sent to Registered E-Waste Recycler
4.	Used/Spent Oil (Hazardous Waste)	Plant Machineries	Used Oil Storage Room at Store	Sold to Registered Recycler
5.	Battery Waste	Plant Machineries	Battery Waste Storage Room at Store	Sold to Registered Recycler
6.	Fly Ash	Captive Power Plant	Fly Ash Silo	Used in Cement Manufacturing
7.	Bio-Medical Waste	Dispensary	Separate Colour Coded Bins at Dispensary	Sent to Registered CBWTF
8.	Food Waste	Canteen & Colony	Collected from each house	Used as Manure after Vermi-composting
9.	Garden Waste	Green Belt	Collected by regular sweeping	Used as Manure after Vermi-composting
10.	Dust	Plant Operation	Collected in APCM & Road Sweeping Machines	Reused in the System
11.	Sewage	Toilets in Plant & Colony	Sewage Treatment Plant through closed conduits	Treated water used in the gardening and sludge used as manure.
12.	Boiler Feed & RO Reject	Captive Power Plant	Effluent Treatment Plant	Treated water used in dust suppression/coal yard

iv. Solid Waste Management: Dust collected in the Air Pollution Control Measures (i.e. ESP, Bag-filters) & Fly ash generated from CPP are main solid wastes, which are generated from the process. These are 100% recycled in the Cement manufacturing, hence no solid waste from process is sent outside the premises. In addition to these E-waste & Battery wastes also generate from the offices & plant equipments, which are being collected at earmarked area & sent to registered recyclers only respectively. For Bio-medical waste, we have authorization from RSPCB. Bio-medical waste is being sent to CBWTF for proper disposal.

v. Hazardous Waste Management: Used/Spent oil is the only hazardous waste, which is generated from plant machineries. For the same we have authorization from the RSPCB. Used oil is being stored at ear marked area & sold to registered recycler for further disposal as per Hazardous Waste Rules.

In addition to this, we are exploring the possibilities of utilization of waste, which is generated from other industries in our kiln as co-processing.

vi. Recycling & Reuse of Waste: Domestic waste water is 100% reused in the green belt development after treatment in STP and sludge is being used as manure. Waste water generated from captive power plant is used in dust suppression after treatment; hence we are zero discharge unit. 100% dust & fly ash is being used in the system for manufacturing of Cement.

In addition to these, we are planning to reuse of heat released from our stack by installing Waste Heat Recovery System, which will save the natural fuel of the country. We are also planning to utilize Kota stone slurry (an Industrial waste) and sulphuric acid (a waste from HZL) to form chemical gypsum, which will use in cement manufacturing. This initiative will reduce the waste as well conserve the natural resources.

vii. Industry Participation in Construction of Public / Community Toilets: Financial assistance was provided for construction of toilets, in line with the Swachh Bharat Abhiyan. Over 300 beneficiaries were motivated and constructed toilets in their houses.

viii. Industry's role to effect behavioral change regarding healthy sanitation practices:

- Company has organized various awareness programs under health & sanitation scheme in & around the plant premises.

- Motivate Sarpanch of villages, to identify the person who is not using toilets even after construction of toilets in his/her house & motivate those persons who are not using toilets.

ix. Industry's role in generating awareness about sanitation and its linkage with public health:

Company has taken the initiative to sensitize our employees, their families & community for construction & utilization of toilets, sanitation & its health benefits through various means, i.e.:

- Nukkad Natak in community
- Awareness rally by employees & children
- Cleaning campaigning by senior executive at Morak Railway Station.
- Awareness programs by our employees in 36 Panchayats of Khairabad (nearby Tehsil) was organized.

x. Industry's role in Eradication of Manual Scavenging & Elimination of open defecation:

Company has provided adequate numbers of toilets, separately for gents & ladies employees. All the toilets are attached to Sewage Treatment Plant through closed conduits to avoid manual scavenging.

With our active participation with Government bodies, it is proud to say that villages around MCL such as Morak, Morak Station, Chechat, Hirakhet declared as ODF by the Government of Rajasthan.

xi. Planting trees in office complex: At MCL, Green Belt Development is our ongoing activity. We have planted around 2,41,650 numbers of saplings. Out of these 110033 numbers of saplings in plant area and 131617 numbers of saplings in mines area.

- Awareness programmes: MCL organised Nukkad Natak, rallies, and swatch bharat campaign in convergence with grampanchayats with an objective of creating awareness on the envisioned objective of swachbharat mission and its benefits to the Indian citizens.

1. Awareness campaign on swachbharat for sarpanchas & ward members at MCL.



2. Organised Nukkad natak to sensitize the community towards swach Bharat mission and its impact on heath & hygiene results in quality of life of public at large.



Nukkad natak at progress by MCL



President Sri 'ss.jain' flag-off to inaugurate the swachbharat rally by Mangalm DAV students& Mangalm cement.

Mangalm DAV students & Mangalm staff participated in rally raising slogans on swachbharat to draw the attention of villagers& public at large besides setting an example of maintaining clean green environment. This event stimulated the public at bottom of the pyramid to realise and participate in swachbharat mission with the dream of team INDIA.

Swachh Bharat campaign in convergence with Morak Station Gram Panchayat.



Senior officers of Mangalm & Panchayat members and village members have participated in the Clean India campaign at Morak Station Gram Panchayat to be aware and avail of the opportunities in maintaining the clean & green village.

- Financial assistance for construction of toilets: MCL extended motivational amount of Rs 3000 per head towards the construction with the budget outlay of Rs 10,28,380.



President & Sr. Jt. President (Commercial) handover the cheque to beneficiaries



Model toilet constructed at morak

- Provided infrastructure to panchayats: MCL extended financial assistance towards procurement of tractor and dustbins, cleaning of drainages and plantation work.

President sri s.s.jain handover the tractor to morak grampanchayat

