

JAYPEE SIDHI CEMENT PLANT

**JAIPRAKASH
ASSOCIATES LIMITED**
Cement Division

JAL/JSCP/EC/2013

Date -25.09.2013

To,

The Member Secretary
M.P. Pollution Control Board
Parayavaran Parisar, E-5,
Arera Colony, Bhopal(M.P.)462016

**Subject- Environmental Statement Report under Environment Protection Act, 1986 for
Majhigawan Limestone Mines of M/s Jaiprakash Associates Ltd.**

Ref- Consent to Operate (Water & Air) granted by M.P. Pollution Control Board Vide letter
No.2036 & 2038/TS/Mine/MPPCB/2009, Bhopal, Dated 12.09.2009

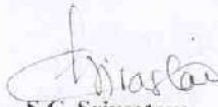
Dear Sir,

This has reference to above mentioned subject please find enclosed herewith Environmental
Statement Report for the period of FY-2012-2013 for Majhigawan Limestone Mines of M/s
Jaiprakash Associates Ltd.

This is for your kind information and record please.

Thanking you
Yours faithfully

For Jaypee Sidhi Cement Plant


S.C. Srivastava
Sr.V.P.(Tech.)

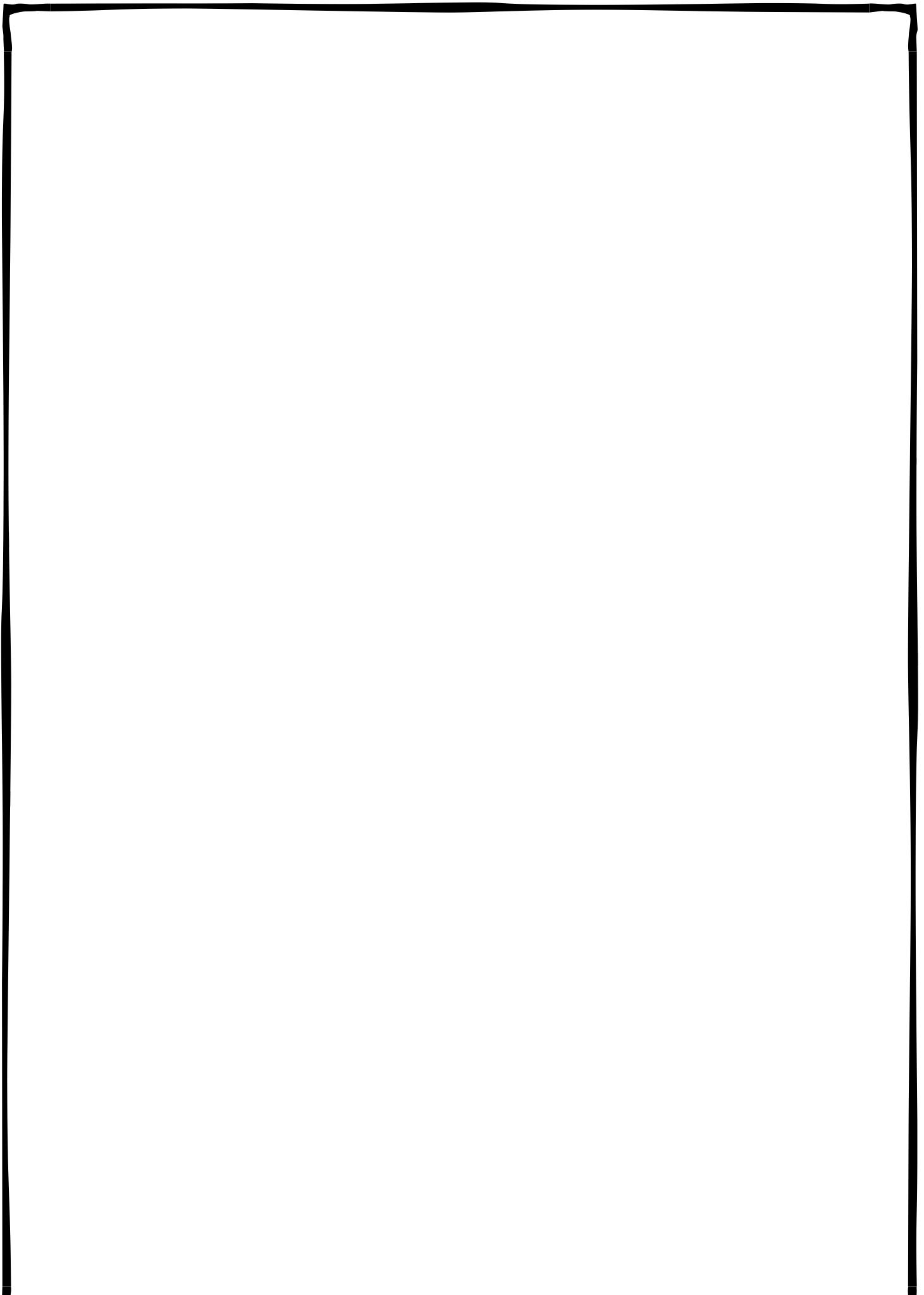


Encl: As above

CC-Regional Officer
M.P.Pollution Control Board
HIG-190 & 191, Nehru Nagar Colony
Rewa(M.P.)486001


JAYPEE
GROUP


JAYPEE
CEMENT



ENVIRONMENTAL STATEMENT REPORT



MAJHIGAWAN LIMESTONE MINE

Mine Lease area – 362.68 ha.

(A UNIT OF JAIPRAKASH ASSOCIATES LIMITED)

JAYPEE VIHAR, SIDHI (M.P)

2012-2013

**SUBMITTED TO
M.P.POLLUTION CONTROL BOARD
BHOPAL (M.P.)**

Jaypee Sidhi Cement Plant
(Jaiprakash Associates Limited)

Jaypee Group is 3rd largest cement producer in the country. The group produces special blend of Portland Pozzolana Cement under the brand name Jaypee Cement (PPC) and Ordinary Portland Cement brand name Jaypee Cement (OPC). Its cement division has currently operates modern, computerized process control system, Jaypee Sidhi cement plant (JSCP) and with an aggregate capacity of 3.5 MTPA Cement production.

The Group is committed towards the safety and health of employees and the public. Our motto is **Work For Safe, Healthy, Clean & Green Environment.**

The Limestone Mining lease named as Majhigawan is spread over revised area 362.68 ha. in villages Majhigawan, Patna, Sarda, Kariajhar, Piprav, Malgaon, Dhorahra in Rampur Naikin Tehsil of Sidhi District in M.P. and Geographically, it is located at Latitude 24⁰ 18' 35" to 24⁰ 20' 00" North and Longitude 81⁰ 17' 50" to 81⁰ 22' 45" East. Our Mines is Captive Lime Stone Open Cast Mechanized Mine and rated capacity of mine 1.25 MTPA Limestone Production

FORM- V

(See rule 14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE
31st MARCH 2013

PART- A

- (i) Name and address of the owner/ Occupier of the Industry, operation Or process : **Majhigawan Limestone Mines**
JAYPEE SIDHI CEMENT PLANT
Baghwar, Sidhi (M.P.) - 486776
- (ii) Industry Category : **Red Category, Large Industry**
Primary (STC CODE) **Primary STC Category**
Secondary (SIC CODE)
- (iii) Production Capacity : **1.25 MTPA**
- (iv) Year of Establishment : **March, 2009**
- (v) Last Environment Statement Submitted : **30.09.2012**

PART- B

WATER AND RAW MATERIAL CONSUMPTION

(i) **Water consumption m³/d**

Spraying	:	105.0
Domestic	:	4.19
Process	:	Nil

Name of Products	Process water consumption per unit of Product output M ³ /MT	
	During the previous Financial Year (2011-12)	During the Current Financial Year (2012-13)
Limestone	0.0368	0.0383

(ii) **Raw Material Consumption**

Name of raw material consume	Name of products	Consumption of raw material Per unit of output MT/ MT of Limestone	
		During the Previous Financial Year (2011-12)	During the Current Financial Year (2012-13)
1. Diesel (HSD)	Limestone	1.55 Lit /MT of L.S.	1.49Lit /MT of L.S.
2. Explosive		0.16Kg /Tones of L.S	0.13 Kg /Tones of L.S

(iii) **Production of Limestone (MT)**

Production	During the Previous Financial Year(11-12)	During the Current Financial Year(12-13)
Limestone	1113184	1236704

PART- C

Pollution discharges to environment/ unit of output.

(Parameter as specified in the consent issued)

(i) Pollution	Quality of Pollutants Discharged (Mass/day) (Tons/day)	Concentration of Pollutants discharges (mass/volume) (mg/Nm ³)	Percentage of variation from prescribed standards
(a) Water i) Domestic ii) Industrial	Zero discharge is maintained. Treated domestic water is being used in horticulture and plant process		
(b) Air	RSPM parameter within limit and report attached as Annexure-I		

PART- D
HAZARDOUS WASTES

Hazardous Wastes	Total Quantity (Kg.)	
	During the previous financial Year (2011-12)	During the current financial Year (2012-13)
(a) From process Used Oil(5.1)	Nil	Nil
(b) From pollution Control Facilities	N.A.	N.A.

PART- E
SOLID WASTES

TOTAL QUANTITY (Ts)		
	During the Previous Financial Year (2011-12)	During the Current Financial Year (2012-13)
(a) From Process- Over Burden waste from mines	562068.0 MT Over Burden is generated during the limestone mining and stored at earmarked location.	620090 MT Over Burden is generated during the limestone mining and stored at earmarked location.
(b) From Pollution Control facilities	All the collected material is recycled in the process.	All the collected material is recycled in the process.
(c) (i) Qty. recycled or reutilized within the unit.	Nil	Nil
(ii)Sold	Nil	Nil
(iii)Disposed	Nil	Nil

PART- F

Please specify the characterizations (in terms of composition of quantum) of Hazardous as well solid waste and indicate disposal practice adopted for both these categories of wastes.

Solid waste: OB is generated during the limestone mining 620090 MT (Period of FY 2012-2013).

PART- G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production

Pollution Control Measures Adopted for Control of Pollution

1. Wet drilling process adopted for control the fugitive dust emission.
2. Water sprinkling on roads by water tanker capacity of 20 KL for control of dust emission.
3. Blasting is done with Nonel to control the ground vibrations
4. Top soil if any available is stack at earmarked location and used for plantation work
5. Green Belt Development Measures: As a part of green belt development, planted more than 4584 plant sapling in 2.5 ha. Mines area up to FY 2012-13.

Following measures have been adopted for abatement of pollution, conservation of natural resources:-

1. Wet drilling

We are very conscious for the fugitive emission during drilling operation. We have adopted wet drilling practices for drilling of limestone in mines. The water are injected along the drill rod through compressed air in the bore and simultaneously drilling is being done. System is very effective and no emission is observed. Also we have provided all PPEs to the operator and drill helper.

WET DRILLING



2. Controlled Blasting-

Blasting is being done in controlled way by adoption of NONEL Delay detonators for control of noise pollution. After blasting water spray is being done for reduction of fugitive dust emission. During blasting all surrounding area & road junctions are kept in a no-mens land way.

3. Loading activity

Loading of blasted lime stone in wet condition is being done with the help of sufficient capacity 4.2 m³ shovels and transported by the high capacity 35 MT dumper. The high capacity of shovel and dumper reduces the fugitive emission during material handling.

4. Plying of water tanker on haulage road

We have a dedicated water tanker capacity of 20 m³ for mines haulage road water spraying. Direct rainwater, seepage water from Bansagar canal and catchment area rainwater by peripheral garland drain which has been provided all around the working pit collected in mines reservoir. This water is being used for water spraying on haulage road. The haulage roads are always kept in wet condition so fugitive emission is minimal.

WATER SPRAY TANKER



5. Water spraying system at crusher dump hopper

Blasted limestone is transported by dumper through wet haulage road and dumped to the plant crusher hopper. A self innovated water spraying system namely "ECO FRIEND" has been installed at crusher dump hopper. The system is equipped with high rpm fan and high pressure water pipeline for generation of moist air for suppression of dust generated after limestone dumping.

6. Treatment of Auto workshop effluent

A gravity settler oils separator has been installed for treatment of auto workshop effluent. The treated water is used for spraying on mines haulage road for dust suppression & collected oil is sold out to authorized recycler. The basic concept of oil and grease trap is to separate the oily water generated during washing and cleaning of the Heavy Earth Moving Equipment. Gravity settler oil separator compartments are made to give retention time to water to separate oil from water and oil will be collected from the upper surface manually in empty oil drum and water will be collected in last compartment will be used for road dust suppression. No water will be allowed to discharge outside the mine premises. Zero discharge is maintained. The treated water is used for spraying on mines haulage road for dust suppression & collected oil is sold out to authorized recycler.

Oil & Grease Separator



7. Collection of Hazardous waste

Used oil generated from the maintenance of heavy machinery at auto workshop is collected at identified storage shed and sold out to authorized recyclers.



8. **Use of STP treated water for the plant purpose-**We have latest and advance aerobic technology based Sewage Treatment Plant which comprises of:

Sewage Treatment Plant – 800KLD



1. Screen Chamber with Oil & Grease Trap-800 KLD
2. Equalization Tank-69.60 m³/hr
3. Aerator I&II-64.0 m³/hr
4. Tube Settlers Tank-75.0 m³/hr
5. Primary Sand Filter (PSF)-33.30 m³/hr
6. Activated Carbon Filter-33.30 m³/hr
7. Chlorine Contact Tank-34.20 m³/hr
8. Treated Water Tank-188.10 m³/hr
9. Sludge dry beds-15.0-unit 4 m³

The capacity of sewage treatment plant is 800 KL per day. The sewage generated at different parts of colony and plant is being collected in raw sewage tank where blowing is being done for homogenization of raw sewage water. Then this homogenized sewage water comes to aeration tank for sufficient aeration of sewage and then conveyed to clarifier where the suspended particle is settles. After this clarified water is collected in intermediate holding tank and sludge settled at the bottom of clarifier is transported to sludge drying beds. Now the water from the intermediate tank is passed through pressure sand filter and activated carbon filter. It is ultimately collected in the final holding tank.

9. **Extensive plantation in and around the plant-** We have a dedicated team of skilled horticulturists for the forestation and greenery development program at our plant and mines under the supervision of senior experienced person. As a part of green belt development, planted more than 4584 plant sapling in 2.50 ha. Mines area up to financial year 2012-13.

10. Silt control measures for formation of garland drains around the over burden dump

The Garland drain has been constructed all around the mine pit and waste dump area .To control outside rainwater entering into the mines working area, Peripheral garland drains have been provided and all those garland drains have been connected to settling ponds which has been already provided in mines for settle down the heavy particles. Muddy rainwater collected inside the pit is allowed to settle down before it is pumped out. Settling ponds have been constructed at mines. To check soil erosion from the overburden (OB) dumps retaining wall have been provided around the matured over burden dump. Grass and bushes are also being planted over the OB dump to stabilize the loose overburden.

SETTLING POND AT MINES



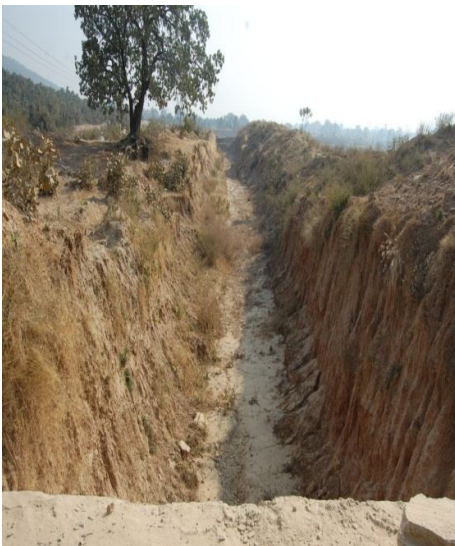
TOE WALL AT OVER BURDEN DUMPS

Toe Wall /Retaining wall have been provided in Majhgawan Limestone Mine at the toe of the temporary OB dump to check runoff and siltation.



GARLAND DRAIN

Catch drain / peripheral garland drain have been constructed around the working pit and temporary OB dump to prevent runoff and siltation simultaneously all those garland drain have been connected to settling ponds which have been provided in mine for settle down the heavy particles. This water is used for water spraying on haulage road.



Monitoring: We have established fully equipped Environment Lab with modern instrument facilities for monitoring environment parameters under control of Sr. Vice President (Technical).

PART- H

Any other particulars for improving the quality of the environment.

Ground vibration study is already done by CIMFR, Dhanbad and all suggestions are implemented at our mines.

PART- I

Any other particulates in respect of environmental protection and abatement of pollution: Nil

Prepared By: Environment Cell

Dated: 26.08.2013

For Jaypee Sidhi Cement Plant

(Authorized Signatory)

S.C.Srivastava

Sr. Vice President (Tech)

Annexure-1

MAJHIGAWAN LIME STONE MINES

AMBIENT AIR QUALITY MONITORING REPORT (CORE ZONE) APRIL-2012 TO MARCH- 2013

LOCATION ->	Near Drilling Side				Near L/S Loading Side				Near L/S Unloading Side				Near Haulag Road			
PARAMETERS ->	RPM $\mu\text{g}/\text{m}^3$	SO ₂ $\mu\text{g}/\text{m}^3$	NOX $\mu\text{g}/\text{m}^3$	CO $\mu\text{g}/\text{m}^3$	RPM $\mu\text{g}/\text{m}^3$	SO ₂ $\mu\text{g}/\text{m}^3$	NOX $\mu\text{g}/\text{m}^3$	CO $\mu\text{g}/\text{m}^3$	RPM $\mu\text{g}/\text{m}^3$	SO ₂ $\mu\text{g}/\text{m}^3$	NOX $\mu\text{g}/\text{m}^3$	CO $\mu\text{g}/\text{m}^3$	RPM $\mu\text{g}/\text{m}^3$	SO ₂ $\mu\text{g}/\text{m}^3$	NOX $\mu\text{g}/\text{m}^3$	CO $\mu\text{g}/\text{m}^3$
Apr-12	57.0	8.0	22.0	120.0	56.3	9.0	21.0	115.0	55.4	7.0	23.0	128.0	54.5	8.0	21.0	130.0
May-12	60.3	6.0	20.0	122.0	58.6	7.0	22.0	127.0	57.1	9.0	21.0	124.0	56.2	8.0	24.0	128.0
Jun-12	61.6	5.0	21.0	130.0	59.7	6.0	20.0	124.0	58.2	8.0	23.0	125.0	57.6	7.0	22.0	127.0
Jul-12	50.3	6.0	22.0	140.0	48.5	5.0	21.0	131.0	46.4	7.0	20.0	128.0	42.1	6.0	19.0	130.0
Aug-12	46.3	6.0	20.0	151.0	47.8	4.0	18.0	138.0	45.9	6.0	21.0	126.0	40.1	5.0	18.0	131.0
Sep-12	47.4	5.0	21.0	165.0	47.5	6.0	20.0	145.0	46.5	4.0	18.0	141.0	44.5	5.0	20.0	152.0
Oct-12	49.4	8.0	16.0	120.0	50.13	10.0	17.0	110.0	51.2	11.0	14.0	104.0	48.66	9.0	12.0	109.0
Nov-12	64.79	9.0	24.0	110.0	58.32	11.0	23.0	115.0	52.5	12.0	20.0	125.0	50.81	10.0	18.0	117.0
Dec-12	62.16	8.0	21.0	108.0	56.21	10.0	22.0	113.0	54.29	11.0	21.0	120.0	48.66	12.0	19.0	115.0
Jan-13	50.32	6.00	22.00	140.00	48.51	5.00	21.00	131.00	46.43	7.00	20.00	128.00	42.12	6.00	19.00	130.00
Feb-13	61.32	6.00	21.00	190.00	59.24	5.00	20.00	172.00	60.31	4.00	18.00	168.00	56.32	5.00	16.00	160.00
Mar-13	61.10	6.00	22.00	190.00	60.30	4.00	20.00	170.00	58.93	7.00	21.00	169.00	56.84	5.00	19.00	162.00
AVERAGE ->	56.00	6.58	21.00	140.50	54.26	6.83	20.42	132.58	52.78	7.75	20.00	132.17	49.86	7.17	18.92	132.58
MPPCB LIMIT	100.0	80.0	80.0	2000.0	100.0	80.0	80.0	2000.0	100.0	80.0	80.0	2000.0	100.0	80.0	80.0	2000.0
Min	46.34	5.00	16.00	108.00	47.45	4.00	17.00	110.00	45.93	4.00	14.00	104.00	40.08	5.00	12.00	109.00
Max	64.79	9.00	24.00	190.00	60.30	11.00	23.00	172.00	60.31	12.00	23.00	169.00	57.56	12.00	24.00	162.00

