

MAHARASHTRA POLLUTION CONTROL BOARD

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 Sion-Matunga Scheme Rd. No.8,
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 Mumbai-400 022.

RED/ LSI

Consent No. BO/JD(APC)/EIC No. CH-0648-11 & CH-1072-13/R/CC/**AC-806** Date **05/02/2013**.
Consent to Operate under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization / Renewal of Authorization under Rule 5 of the Hazardous Wastes (Management, Handling & Transbiundry) Rules 2008.

[To be referred as Water Act, Air Act and HW(M&H) Rules respectively].

CONSENT is hereby granted to

**M/s. Grace Industries Ltd., (Kiln-1,2,3 & 4),
 Plot No. A-23, MIDC, Tadali Growth Centre, Chandrapur,
 Tal & Dist. Chandrapur.**

located in the area declared under the provisions of the Water Act, Air act and Authorization under the provisions of HW(M&H) Rules and amendments thereto subject to the provisions of the Act and the Rules and the Orders that may be made further and subject to the following terms and conditions:

- The Consent to Operate is granted for a period up to - 30.6.2013.**
- The Consent is valid for the manufacture of -**

Sr.No.	Product	Maximum Quantity
1.	Sponge Iron	12000 MT/Month
2.	Char (By-Products)	2400 MT/Month

3. CONDITIONS UNDER WATER ACT :

- The daily quantity of trade effluent from the factory shall be Nil
- The daily quantity of sewage effluent from the factory shall not exceed **6.0 m³**.
- Trade Effluent Treatment:**
 - All efforts should be made to reuse and re-circulate the water and to maintain zero effluent discharge.
 - In case for maintenance / cleaning of the system the settling tanks effluent of wet scrubbing system of re-circulation system is required to be discharged, it should be treated suitably to conform the following standards:-

PH	Between 5.5 to 9.0
Total Suspended Solids (TSS)	Not to exceed -100 mg/l
Chemical Oxygen Demand (COD)	Not to exceed -250 mg/l
Oil and Grease (O & G)	Not to exceed -10 mg/l

- Sewage Effluent Treatment :** The applicant shall provide comprehensive treatment system as is warranted with reference to influent quality and operate and maintain the same continuously so as to achieve the quality of treated effluent to the following standards.

(1) Suspended Solids	Not to exceed	100 mg/l.
(2) BOD 3 days 27° C.	Not to exceed	100 mg/l.

- Sewage Effluent Disposal :** The treated domestic effluent shall be soaked in a soak pit which shall be got cleaned periodically. Overflow, if any, shall be used on land for gardening / plantation only.

(vi) Non-Hazardous Solid Wastes :

Sr. No.	Type Of Waste	Quantity	UOM	Treatment	Disposal
1	Bag filter dust	280.00	MT/M		by sale Or used in boiler
2	ESP dust	983.00	MT/M		used as fuel in boiler or by sale to bricks manufacturer
3	coal fine waste	525.00	MT/M		
4	Dolochar	1440.00	MT/M		
5	DSC sludge	90.00	MT/M		
6	Iron ore fines	750.00	MT/M		
7	Kiln accretion	24.90	MT/M		land filling
8	Raw material fines & Rejects	750.0	MT/Month		By sale

(vii) **Other conditions :**

1. Any entrepreneurs having more than 2x100 TPD kilns shall use WHRB for generation of Power. Power generation using char as a part of fuel for 650 TPD kiln or more, in FBC Boiler shall be implemented.
 2. For any new sponge iron plants which are coming along with other downstream facilities of converting the sponge iron into steel with/without further processing the steel should meet the target of utilization of sensible heat of DR Gas and Char for power generation Wet cleaning system for kiln off gas treatment for such plant may be avoided.
 3. The industry shall monitor effluent quality regularly.
 4. Forest/ Forest land/ Ecologically and/ or otherwise sensitive area: Minimum distance to be maintained is at least 2000 m (2 km).
 5. Location of Sponge Iron Plant should be at least 1 km from any nearby residential localities/ village with more than 200 populations. If any plant/clusters of plants are located less than 1 km from any residential area/ village they should be shifted by State Pollution Control Board. State Govt. in phased manner.
 6. In any circumstances char should not be disposed in agricultural fields/ other areas.
 7. Log book for Char production and uses must be maintained by industry and it should be made available to Board official during their inspection/visit.
4. The applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Cess Act, 1977 (to be referred as Cess Act) and Rules thereunder:

The daily water consumption for the following categories is as under:

Sr No	Consumption	Quantity
1	Domestic	7.5 CMD
2	Industrial Processing generating Biodegradable waste water	---CMD
3	Industrial Processing generating Non-Biodegradable waste water	---CMD
4	Industrial Cooling/Boiler	500 CMD
5	Other uses like gardening Etc	50 CMD

The applicant shall regularly submit to the Board the returns of water consumption in the prescribed form and pay the Cess as specified under Section 3 of the said Act.

5. **CONDITIONS UNDER AIR ACT :**

- (i) The applicant shall install a comprehensive control system consisting of control equipments as is warranted with reference to generation of emission and operate and maintain the same continuously so as to achieve the level of pollutants to the following standards :

A) **Control Equipment & Arrangements:**

- 1] ESP provided with gas conditioning towers after burning chambers to Kilns shall be provided.
- 2] All material handling stations shall be provided by centralized De-dusting systems.
- 3] Raw Material handling and Preparation
 - a. Unloading of coal by trucks or wagons should be carried out with proper care avoiding dropping of the materials from height. It is advisable to moist the material by sprinkling water while unloading.
 - b. Crushing and screening operation should be carried out in enclosed area. Centralizes de-dusting facility (collection hood and suction arrangements followed by de-ducting unit like bag- filter or ESP or equally effective method or wet scrubber and finally discharge of emission through a stack) should be provided to control Fugitive Particulate Matter Emissions. Particulate Matter emission level in the stack should not exceed 100 mg/ Nm³. Water sprinkling arrangement should be provided at raw material heaps and on land around he crushing and screening units.
 - c. Work area surrounding the plant shall be asphalted or concreted.
 - d. Enclosure should be provided for belt conveyors and transfer points of belt conveyors.

The above enclosures shall be rigid (and not of flexible/ cloth type enclosures) and to be fitted with self-closing doors and close fitting entrances and exists. Where conveyors pass through the enclosures, flexible covers should be installed at entries and exit of the conveyors to the enclosures, minimizing the gaps around the conveyors.

In wet system, provide water sprays/ sprinklers at following strategic locations for dust suppression raw material transfer.

- Belt conveyors discharge / transfer point
- Crusher / screen discharge locations.

4] Cooler Discharge and Product Separation Unit.

Enclosure should be provided for belt conveyors and transfer points of belt conveyors. Dust extraction cum control system to be installed preferably bag filter or ESP or equally effective method to arrest product loss in Cooler Discharge and Product Separation area, the stack emission not be exceed 100 mg/ Nm^3 . (particulate Matter).

5] Extensive plantation/ Green belt shall be developed along the roads and boundary line of the industry.

6] Stack, effluent, fugitive emission, noise monitoring shall be done as per CPCB regulation and MPCB,s consent condition.

7] Pollution control system shall be operated as an integral part of production to ensure minimum emissions. Pollution Control System shall start before conveyor operation/operation of plant. Similarly pollution control system shall be stopped only after completion of conveyor operation/operation of plant so that chances of settlement of dust in duct are avoided. Timely evacuation of dust (from Dust catchers, ESPs, Bag filter hopper etc.) shall be routinely organized.

8] Kiln off gas treatment with efficient de-dusting shall be provided Waste heat utilization for power generation should be followed.

- Provisions of Gas conditioning Tower followed by Pollution Control system for small capacity Kiln (size 100 TPD and below).
- Entrepreneur having more than 100 TPD kilns shall use WHPB for generation of power.

Adequately designed ESP or Bag Filter or Wet scrubbing system or any other adequate air pollution control system / combination of system should be installed to achieve the prescribed stack emission standards.

9] The safely cap/emergency stack of rotary kiln type plant, which is generally installed above the After Burner Chamber (ABC) of feed end column should not be used for discharging untreated emission, by passing the air pollution control device.

In the midst of a process, the auxiliary stack cap, which is generally kept closed, is opened only when,

- There is process disturbance and
- Non functioning of kiln off gas system

The above activity is carried out by manual intervention from the operation control desk of the PLC/DCS based automation system.

It is recommend that stack cap to be kept open to a minimum period of time and its opening must be recorded on a compulsory basis and reasons for opening must be logged and reported to MPCB. Further stack cap must be kept closed except.

- During startup, commissioning and bringing the kiln to stabilized operation.
- At the start of a fresh campaign
- In case of extreme emergency enumerated above.

10] Interlocking facility should be provided to ensure stoppage of plant if the pollution control system is not in operation of safety cap of the rotary kiln is bypassing the emissions.

B) Conditions for D.G. Set :-

- 1] Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.

- 2] Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/acoustic treatment of the room should be designed for minimum 25 dB(A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB(A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 metres from acoustic enclosure/room and then average.
- 3] The industry shall take adequate measures for control of noise levels from its own sources within the premises in respect of noise to less than 75 dB(A) during day time and 70 dB(A) during the night time. Day time is reckoned between 6 a.m. to 10 p.m and night time is reckoned between 10 p.m to 6 a.m.
- 4] Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper siting and control measures.
- 5] Installation of DG Set much be strictly in compliance with recommendations of DG Set manufacturer.
- 6] A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
- 7] D.G. Set shall be operated only in case of power failure.
- 8] The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.

C) Standards for Emissions of Air Pollutants :

- | | | | |
|-------|----------------------|---------------------------------|------------------------|
| (i) | SPM/TPM | Not to exceed | 100 mg/Nm ³ |
| (ii) | SO ₂ | Not to exceed | 4.8 T/Day. |
| (iii) | Carbon Monoxide (CO) | NIL (Should be 100% combustion) | |

D) Noise Levels Standards

6.00 AM – 10.00 PM	10.00 PM-6.00AM
Noise level Leq 75 dB (9A)	Leq 70 dB (A)

E) Fugitive Emission Standards

The fugitive emissions level of suspended particulate matter (SPM) should not exceed 2000 ug/ m³ at a distance of - 10 mtrs approximately from the source. The applicant shall install de-dusting system at the following locations & monitor the fugitive emissions levels and submit report to the board monthly.

Sr.No.	Area	Monitoring Location
1.	Raw material handling area	Wagon tippler, Screen area, Transfer Points, Stock Bin area.
2.	Crusher area	Crushing plant, vibrating screen, transfer points.
3.	Raw material feed area	Feeder area, Mixing area, transfer points, day bins
4.	Cooler discharge area	Over size discharge area, Transfer points
5.	Product processing area	Intermediate stock bin area. Vibrating screens, Magnetic Separation unit. Transfer Points, Over size discharge area, Product separation area, Bagging area, hoppers/ storage bins.
6.	Other areas	Area as specified by State Pollution Control Board.

(ii) The applicant shall observe the following fuel pattern :-

Sr.No.	Type of Fuel	Quantity
1.	Coal	14005 MT/M.
2.	HSD (for DG set)	129.6 KL/M.

(iii) The applicant shall erect the chimney(s) of the following specifications :-

Sr. No.	Chimney Attached To	Height in Mtrs.
1	Kiln-III & IV	89.00 #
2	ID bin	25.00
3	Transfer house	25.00
4	Separation house	25.00

	(common for kiln I, II, III & IV)	
5	Product hosue (common for kiln I, II, III & IV)	25.00
6	Transfer house	25.00
7	Coal crusher / screen	25.00
8	Coal transfer house	25.00
9	Stock house / iron ore ground hopper	30.00
10	Iron ore crusher (kiln III & IV)	25.00
11	Coal and iron ore transfer house	25.00
12	Cooler discharge	30.00
13	Common Stack to Kiln-1 & 2	52.0 #
14	Coal Screen House	1.0 *
15	D.G.Set (1 x 600 KVA & 2 x 500 KVA)	5.5 *
16	Intermediate bin section	1.0 *
17	Cooler Discharge Area	1.0 *
18	Product Seperator	1.0 *
19	Product House	1.0 *
20	Coal Injection area	1.0 *

All de-dusting stack should be at least 2.5m above the nearest building height. Sampling Portholes and Platforms etc shall be provided as per CPCB guidelines.

* height above the roof of bldg., where it is installed.

- (iv) The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2 etc. and these shall be painted/displayed to facilitate identification.
- (v) The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB(A) during day time and 70 dB(A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
- (vi) The applicant shall install and operate continuous dust concentration monitoring equipments for stack emission monitoring with display arrangement and shall also have necessary provision of data loggers etc to electronically connect the data output to the Air Quality Monitoring network of MPCB.
- (vii) The applicant shall install one continuous automatic ambient air quality monitoring stations and one micrometeorological monitoring station at locations indicated by State Board in 6 months. These stations shall be installed and operated as per the technical specifications of Central Pollution Control Board to measure SO₂, NO_x and particulate matter. These CAAQMS shall also have necessary provision of data loggers etc to electronically connect the data output to the Air Quality Monitoring network of MPCB.
- (viii) **Other Conditions :**
- 1) The industry should not cause any nuisance in surrounding area.
 - 2) The industry should monitor stack emissions and ambient air quality regularly.

6. **CONDITIONS UNDER HW (M,H &TM) RULES, 2008 :**

(i) The applicant shall handle hazardous wastes as specified below:

Sr.No.	Item No. of Process generating HW as per Schedule-I	Type of Waste	Quantity	Disposal
1	5.1	Used/ Spent oil	0.19 MT/M	Sale to authorized re-processor

(ii) The authorization is hereby granted to operate a facility for collection, storage, transport and disposal of hazardous waste.

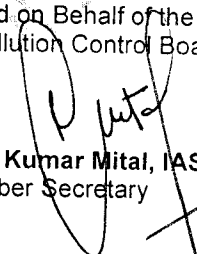
7. Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.

8. **General conditions:**

- (i) The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a yearly statement by 30th September every year on available open plot area, no. of trees surviving as on 31st March of the year and no. of trees planted by September end.
- (ii) The applicant shall provide for an alternate electric power source sufficient to operate all pollution control facilities installed by he applicant and operate the same in case of power failure to maintain compliance with the terms and conditions of the consent. In the absence of same, the applicant shall stop, reduce or otherwise, control production to abide by terms & conditions of this consent regarding pollution levels.
- (iii) **The applicant shall make an application for renewal of the consent at least 60 days before the date of the expiry of the consent.** The applicant shall not change or alter quantity, quality, the rate of discharge, temperature or the mode of the effluent/ emissions or hazardous wastes or control equipments provided for without previous written permission of the Board.
- (iv) The firm shall submit MPCB, the Environmental Statement Report for the financial year ending 31st March in the prescribed Form-V as pre the provisions of rule 14 of the Environment (Protection) (Second Amendment) Rules, 1992 before 30th September every year.
- (v) The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained. The applicant shall also submit a comparative statement of designed power and chemical consumptions vis-a vis actual power and chemical consumption alongwith Environmental statement.
- (vi) Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers down- stream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system. Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
- (vii) The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous wastes to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf. An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
- (viii) The industry shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.

- (ix) The applicant shall maintain good house keeping and take adequate measures for control pollution from all sources so as not to cause nuisance to surrounding area / inhabitants.
- 8 The consent is issued pursuant to the decision of Consent Appraisal Committee meeting of Board held on 31.01.2013.
9. Industry shall implement mechanical close type transportation system for coal/minerals(iron ore) handling trucks.
10. This consent is issued with the overriding effect of the consent issued by Board to Kiln-I & Kiln –II Plant vide No.BO/JD(APC)/EIC No.CH-0648-11/R/CC-504 dated 18.10.2011.
11. The applicant shall submit the irrevocable bank guarantee of Rs.5.0/- Lacs towards the operation & maintenance of pollution control system, drawn in favor of Regional Office, Chandrapur within 15 days valid for one year period.
12. Total Gross Capital Investment of the industry (Kiln I,II,III & IV) is Rs.259.83/- Crores

For and on Behalf of the
Maharashtra Pollution Control Board,


(Rajeev Kumar Mital, IAS)
Member Secretary

To,
M/s. Grace Industries Ltd., (Kiln-1,2,3 & 4),
Plot No. A-23, MIDC, Tadali Growth Centre, Chandrapur,
Tal & Dist. Chandrapur.

Copy to:

- 1) Regional Officer, MPCB, Chandrapur 2) Sub-Regional Officer, MPCB, Chandrapur.

They are directed to submit the performance report along with the results and compliance of directions issued by Board within one month period. Also obtain Bank guarantee of Rs.5.0/-lacs from the industry.

- 3) Chief Accounts Officer, MPCB, Mumbai

Received Consent fee of -

<u>Amount</u>	<u>D.D.No.</u>	<u>Date</u>	<u>Drawn on</u>
Rs. 1,00,000/-	282140	28.5.2011	HDFC.
Rs. 10,000/-	968517	13.7.2011	SBI.
Rs. 50,000/-	807484	05.10.2011	HDFC Bank.
Rs. 215763/-	427950	23.10.2012	ICICI Bank

- 4] Cess Branch, MPCB. 5] Master file.