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F. No. J-11011/092/2007- IA II (I)
Government of India
Ministry of Environment and Forests
(I.A. Division)

Paryavaran Bhawan
CGO Complex, Lodhi Road
New Delhi - 110 003

E-mail : pb.rastogi@nic.in
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Dated 11th December, 2008

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To, M/s Nirma Ltd.
Nirma House, Ashram Road
Ahmedabad -35009, Gujarat

E.Mail : yndesai@nirma.co.in / cement_project@nirma.co.in
Fax No.: 079-27546999

Subject : Cement Plant (Cement Plant 1.91 MTPA; 1.50 Clinker), Coke Oven Plant (1.5 LTPA) and Captive Power Plant (50 MW) near Village Padhiarka, Taluka Mahuva, District Bhavnagar, Gujarat by M/s Nirma Ltd. - reg.
Ref. : Your letter no.>NNL/CP/VND/2009/175/07-08 dated 5th September, 2007.

Sir,
This has reference to your letter no.>NNL/CP/VND/2009/175/07-08 dated 5th September, 2007 alongwith project documents including Application in Form I, Feasibility Report, draft Terms of Reference and EIA/EMP seeking environmental clearance and subsequent clarifications furnished vide communications 9th January, 2008, 7th July, 2008, 8th & 10th October, 2008 regarding the above mentioned cement project.

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2.0 The Ministry of Environment and Forests has examined your application. It is noted that proposal is for the Cement Plant (Cement Plant 1.91 MTPA; 1.50 Clinker), Coke Oven Plant (1.5 LTPA) and Captive Power Plant (50 MW) near Village Padhiarka, Taluka Mahuva, District Bhavnagar, Gujarat by M/s Nirma Ltd. Total project area is 268 ha. No National Park/Wildlife sanctuary/Reserve forest is located within 10 km radius of the project. Total cost of the project is Rs. 893.52 Crores.

3.0 Limestone from captive mine (Padhiarka); Clay from Goga, Gujarat, Sand from Bhavnagar, Gujarat; Gypsum from Barmer, Rajasthan, Coal (Import), Lignite from Kutch, Fly ash from CPP and Gandhinagar, Gujarat will be used as raw material. Lime will be sourced from captive limestone located at pit head and will be transported through conveyers. Mining lease is yet to be approved by the State Govt. Dry process technology will be adopted. Pre-calcination with rotary kiln and 6-stage cyclone pre-heater technology will be adopted for manufacturing Ordinary Portland Cement (OPC) and Pozzollona Portland Cement (PPC). Coke oven (non-recovery type) will be adopted for coke manufacturing which will be used to generate power for the cement plant and also as fuel for lime plant. Circulating Fluidized Bed Combustion (CFBC)

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boilers (2x25 MW) having Turbo-alternators with water-cooled condensers will be provided in Captive Power Plant (CPP).

4.0 Electrostatic precipitators (ESPs), bag house and bag filters will be provided to control emissions within 50 mg/Nm³. Dust suppression will be provided at transfer points and coal/lignite handling area to control fugitive emissions. Total water requirement from Sea through desalination plant will be 8,500 m³/day for the process and 20,000 m³/hr sea water for the CPP. Permission has been accorded by Gujarat Water Infrastructure Ltd. vide letter dated 3rd September, 2004 for the drawl of 1.50 MGD water from Narmada pipeline. No effluent will be generated from the coke oven since the effluent will be used for quenching. No liquid effluent and solid waste will be generated from the cement plant. No by-products will be generated from the coke oven plant. Dust collected in various air pollution control equipments will be recycled back to the process. Fly ash will be used in manufacturing PPC. High calorific hazardous waste will be utilized in the kiln as fuel. Energy will be recovered through WHRB and used for the power generation.

5.0 Public hearing meeting was held on 9th September, 2008.

6.0 The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 27th January, 1994 as amended subsequently subject to strict compliance to the following specific and general conditions:

A. SPECIFIC CONDITIONS :

- i. Continuous stack monitoring facilities to monitor gaseous emissions from all the stacks shall be provided. After expansion, limit of SPM shall be controlled within 50 mg/Nm³ by installing adequate air pollution control system such as electrostatic precipitator (ESP) to clinker cooler, waste heat recovery boiler (WHRB) and captive power plant (CPP), bag house to Kiln/Raw mill and Lignite/Coal mill, Cement mill and bag filters to coal mill and cement mill. Efforts shall also be made to reduce SO₂ and NO_x emissions. Stack emission monitoring reports shall be submitted to the Ministry's Regional Office at Bhopal, GPCB and CPCB regularly.
- ii. Proper and full utilization of coke oven gases in power plant using heat recovery steam generators (WHRB) shall be ensured and no flue gas shall be discharged into the air.
- iii. The prescribed emission standards for coke oven plants as notified vide notification no. GSR 46 (E) dated 3rd February, 2006 shall be complied with.
- iv. Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines / Code of Practice issued by the CPCB in this regard shall be followed.
- v. The company shall install adequate dust collection and extraction system to control fugitive dust emissions from different sources viz. raw material storage yards, loading and unloading operations, transfer points, crusher, coal mill and packing plant. Bag filters and water sprinkling arrangements shall be made in raw material stock yards and cement bag loading areas etc. and all the raw material stock piles shall be covered. All conveyers shall be covered with GI sheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be

- used for fly ash handling. Dust suppression system shall be provided at transfer points and coal/lignite handling area to control fugitive emissions. Automatic dust cleaning system for removing dust from floors, concrete/tar topped roads inside the plant to avoid dispersion of dust and good house keeping shall be adopted to control fugitive emissions.
- vi. Asphaltting/concreting of roads and water spray all around the stockyard and loading/unloading areas in the cement plant shall be carried out to control fugitive emissions. Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. It shall be ensured that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
 - vii. Ambient air quality including ambient noise levels shall be monitored at different locations including fence of the sanctuary and must not exceed the standards stipulated under EPA or by the State authorities. Monitoring of ambient air quality, fugitive and stack emissions shall be carried out regularly in consultation with GPCB and reports submitted to the to the Ministry's Regional Office at Bhopal, GPCB and CPCB regularly.
 - viii. As proposed, total water requirement for cement plant from Narmada pipeline shall not exceed 1.50 MGD as per the permission accorded by Gujarat Water Infrastructure Ltd. vide letter dated 3rd September, 2004. Total water requirement from Sea through desalination plant shall not exceed 8,500 m³/day for the process and 20,000 m³/hr sea water for the CPP respectively. All the treated wastewater shall be recycled and reused in the process and/or for ash quenching, dust suppression, green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted. All the effluent from the coke oven shall be used for quenching. Rejects from the desalination plant shall be disposed off in the Sea. Sewage treatment plant (STP) shall be installed to treat domestic effluent.
 - ix. Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including coal, fly ash, gypsum etc. shall be transported in the closed containers only and shall not be overloaded. Suitable steps shall be taken to avoid traffic congestion. Vehicular emissions shall be regularly monitored.
 - x. All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from various pollution control devices shall be 100 % recycled and reused in the process and used for cement manufacturing. Coal and coke fines shall be recycled and reused in the process. Refractory bricks shall be sold to authorized agencies. All the solid waste generated from colony and STP shall be disposed after segregating the waste into bio-degradable and non-degradable. Treated STP sludge shall be used for green belt development. The spent transformer oil, waste oil, scrapped automobile batteries etc. shall be properly disposed off as per the Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendments and shall be sold to authorized recyclers / reprocessors only.
 - xi. An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly.
 - xii. Efforts shall be made to use low grade lime, more fly ash and solid waste in the cement manufacturing.

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- xiii. All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003. Efforts shall be made to use fly ash maximum in making Pozollona Portland Cement (PPC).
- xiv. As proposed, green belt shall be developed in at least 33 % area in and around the plant as per the CPCB guidelines in consultation with the local DFO in collaboration with the State Forest Department.
- xv. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement and Coke Oven Plants shall be implemented.
- xvi. CRZ clearance for laying the pipeline in coastal area under the CRZ Notification shall be obtained from the concerned department/authority.
- xvii. An impact assessment study shall be carried out for the disposal of treated effluent into the seawater and all the recommendations shall be implemented.
- xviii. The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

B. GENERAL CONDITIONS :

- i. The project authority must adhere to the stipulations made by Gujarat Pollution Control Board (G PCB) and State Government.
- ii. No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.
- iii. The gaseous (SO_2 , NO_x , CO) and particulate matter emissions from various units shall conform to the standards prescribed by the Gujarat Pollution Control Board. Inter-locking facility shall be provided between pollution control equipment and the process operation so that in the event of the pollution control equipment not working, the respective unit(s) is shut down automatically.
- iv. Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.
- v. The company shall harvest surface as well as rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.
- vi. The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environmental (Protection) Act, 1986

Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time). Compliance to all the standards for DG sets for noise shall be ensured and acoustic enclosures around DG sets shall be provided.

- vii. Proper house keeping and adequate occupational health programmes must be taken up. All the persons working in the sensitive areas shall wear protective covers. Occupational Health Surveillance programme shall be done on a regular basis and records maintained. The programme must include lung function and sputum analysis tests once in six months.
- viii. The company shall undertake eco-development measures including community welfare measures in the project area.
- ix. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the Rapid and Comprehensive EIA/EMP.
- x. A separate environmental management cell with full fledged laboratory facilities to carry out various management and monitoring functions shall be set up under the control of Senior Executive.
- xi. As proposed, Rs 38.79 Crores and Rs 4.46 Crores shall be earmarked towards capital cost and recurring cost/annum for environmental pollution control measures shall be used exclusively to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. A time bound action plan along with the implementation schedule for all the conditions stipulated herein shall be submitted to the Ministry, GPCB and CPCB. The funds so provided shall not be diverted for any other purposes.
- xii. The Regional Office of this Ministry at Bhopal/CPCB/GPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data alongwith statistical interpretation shall be submitted to them regularly.
- xiii. The Project Authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.
- xiv. The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the GPCB and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>. This shall be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office.

7.0 The Ministry or any competent authority may stipulate any further condition(s) on receiving reports from the project authorities. The above conditions shall be monitored by the Regional Office of this Ministry located at Bhopal.

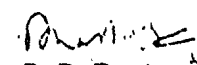
8.0 The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.

571

9.0 Any other conditions or alteration in the above conditions shall have to be implemented by the project authorities in a time bound manner.

10.0 Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

11.0 The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act, 1974 the Air (Prevention and Control of Pollution) Act, 1981 the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 alongwith their amendments and rules.


(Dr. P. B. Rastogi)
Director

Copy to :

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1. The Secretary, Department of environment and forests, Govt. of Gujarat Gandhi Nagar, Gujarat.
 2. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office (West), Link Road No. 3, E - 5, Arera Colony, Bhopal-462 016, M. P.
 3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
 - ✓ 4. The Chairman Gujarat Pollution Control Board, Paryavaran Bhawan, Sector 10-A, Gandhi Nagar - 382 010, Gujarat.
 5. Adviser-IA-II (I), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
 6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
 7. Guard File.
 8. Monitoring File.
 9. Record File.


(Dr. P. B. Rastogi)
Director