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OFFICE OF THE  
**STATE POLLUTION CONTROL BOARD, ORISSA**

Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII,  
Bhubaneswar - 751 012

No. 31520 /Ind-II-NOC-4339

Date 30/12/06

OFFICE MEMORANDUM

In consideration of the application for obtaining Consent to Establish for M/s. **SMC Power Generation Ltd** the State Pollution Control Board has been pleased to convey its Consent to Establish for expansion of existing integrated steel plant under section 25 of Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981 for following plant facilities.

Plant facility	Product	Quantity (MTPA)
a) DRI plant	Sponge iron	2 X 500 TPD ( 3 lakh TPA)
b) Power plant	Power	75 MW (WHRB-10 MW + FBB-65 MW)
c) Steel plant (IF-LRF-CCR)	Steel Billets	3.0 lakh TPA
d) TMT Bar mills & Wire Bar mill	(Steel Rolled products) TMT Bar-1.0 Lakh TPA Wire Rod - 1.5 lakh TPA	2.50 lakh TPA
e) Pelletizing plant	Iron ore pellets	3.0 lakh TPA

at Village - Hirma, PO - Jharsuguda (As per the land schedule given in the application), in the district of Jharsuguda with the following conditions.

GENERAL CONDITIONS.

1. This Consent to establish is valid for the product, quantity, manufacturing process and raw materials as mentioned in the application & for a period of five years from the date of issue of this letter, provided commencement of production of the proposed project has not taken place in the meantime.
2. If the proponent fails to start operation of the project but substantial physical progress has been made then a renewal of this consent shall be sought by the proponent.

3. If the proponent fails to initiate construction of the project and no significant physical progress is made then, the proponent has to apply for consent to establish afresh after expiry of 5 years from the date of issue of this order.
4. Adequate effluent treatment facilities are to be provided such that the quality of sewage and trade effluent satisfies the standards as prescribed under Environment Protection Rule, 1986 or as prescribed by the Central Pollution Control Board and/or State Pollution Control Board or otherwise stipulated in the special conditions.
5. All emission from the industry as well as the ambient air quality and noise are to conform to the standards as laid down under Environment (Protection) Act, 1986 or as prescribed by Central Pollution Control Board/State Pollution Control Board or otherwise stipulated in the special conditions.
6. Adequate method of disposal of solid waste is to be adopted to avoid environmental pollution.
7. The industry is to comply to the provisions of Environment Protection Act, 1986 and the rules made thereunder with their amendments from time to time such as the Hazardous Waste (Management & Handling) Rules 1989, Hazardous Chemical Rules, /Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 etc. and amendments thereunder. The industry is also to comply to the provisions of Public Liability Insurance Act, 1991, if applicable.
8. The industry is to apply for grant of Consent to operate under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 & Air (Prevention & Control of Pollution) Act, 1981 at least 3 (three) months before the commercial production and obtain Consent to Operate from this Board.
9. This consent to establish is subject to statutory and other clearances from Govt. of Orissa and/or Govt. of India, as and when applicable.

**SPECIAL CONDITIONS :-**

1. This No Objection Certificate (Consent to establish) is issued under section 25 of Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981 and is subject to grant of environment clearance as stipulated under Environment Protection Act, 1986 by Ministry of Environment and Forests, Govt. of India, New Delhi.
2. This NOC is given for the capacity as mentioned above and any expansion in the capacity, change or modification in the process, addition, alternation of any nature has to be undertaken with the prior approval of the Board. For any change in the site or area fresh NOC has to be obtained from the Board.
3. Necessary preventive measures shall be taken during construction phase so that the ambient air quality including noise shall conform to National ambient air quality standards and standards for noise in industrial area.
4. The industry shall develop a thick green belt around the factory premises and specifically around the dust generation area, solid waste disposal area and in available vacant space.
5. The transportation of raw material during construction and operation on road shall be done with covered trucks/ vehicles. Industry shall regulate vehicles movement inside to avoid traffic congestion.
6. The minimum stack height of the boilers, furnaces, kilns etc., shall be according to the following formula:  

$$H = 14 (Q)^{0.3}$$
 meters  
 H = Height of the stack in meter and

- Q = Quantity of SO<sub>2</sub> emission in kg/hr
7. Desulphurization of flue gas from different sources if and when asked for shall be adopted by the industry. Therefore in future for such installation adequate space shall be earmarked at the installation stage.
8. The height of the stack attached to the D.G sets shall confirm to the following  
 $H = h + 0.2\sqrt{KVA}$  where  
 h = Height of the building where it is installed in meter  
 KVA = Capacity of D.G Set  
 H = Height of the stack in meter above ground level
9. The industry shall install air pollution control devices with adequate stack height at all sources of emissions (as per Environmental Management Plan) so as to meet the prescribed standard for particulate matter emission as follows :

Stack No.	Stack name	Height (m)	APC Devices	Prescribed standard for PM (mg/Nm <sup>3</sup> )
Stack - 1	Via kiln & WHRB	70	ESP	100
Stack - 2	Via kiln & WHRB	70	ESP	100
Stack - 3	Via kiln & FBB	70	ESP	100
Stack - 4	Via kiln & FBB	70	ESP	100
Stack-5	Induction furnace	20 mt	Swivelling hood,spark arrestor, bag filter	150
Stack-6	Induction furnace	20 mt	Swivelling hood,spark arrestor, bag filter	150
Stack-7	Induction furnace	20 mt	Swivelling hood,spark arrestor, bag filter	150
Stack-8	Induction furnace	20 mt	Swivelling hood,spark arrestor, bag filter	150
Stack-9	Induction furnace	20 mt	Swivelling hood,spark arrestor, bag filter	150
Stack-10	Induction furnace	20 mt	Swivelling hood,spark arrestor, bag filter	150
Stack-11	Stack attached to gravel hopper & screen	20 mt.	Bag filter	100
Stack-12	Stack attached to product separation	20 mt.	Bag filter	100
Stack-13	Stack attached to day bin	20 mt.	Bag filter	100
Stack-14	Stack attached to product storage bin	20 mt.	Bag filter	100
Stack - 15	Stack attached to cooler discharge-I	20 mt.	Bag filter	100
Stack-16	Stack attached to cooler discharge-II	20 mt.	Bag filter	100

10. The ambient air quality with respect to suspended particulate matter (SPM) and respirable particulate matter at the boundary of the factory premises shall conform to the standards hereby fixed as 300 ug/cubic meter and 90 ug/cubic meter respectively. The ambient air quality with respect to other parameters at the boundary of the factory premises shall conform to the standards prescribed under E(P) Act, 1986 for industrial area. At least 7 permanent ambient air quality monitoring stations shall be installed around the industry to monitor the above parameter.

11. Online continuous monitoring system with recording facilities shall be installed at stacks of different units for various critical pollutants and the monitoring result shall be submitted to the Board quarterly.
12. The unit shall provide swiveling hood for fume extraction, spark arrestor and bag filter in the stack attached to induction furnaces so that particulate matter shall not exceed 150 mg/Nm<sup>3</sup>.
13. Fugitive emissions generation points like various stock house, material transfer and junction points, product hoppers shall be provided with appropriate suction device connected to bag filter. Where provision of bag filter and other control devices are not feasible, water spraying arrangements shall be provided, particularly the coal yard, wagon tippler and truck tippler.
14. Truck mounted water spraying tankers shall be made to spray / sprinkle water on roads and other dust generating points.
15. Adequate water level shall always be maintained on the ash pond to prevent fly ash from blowing away along with surface wind.
16. Good house keeping practices shall be followed to improve the work environment. All roads and shop floors shall be cleaned regularly.
17. Air pollution control devices shall be maintained properly. Fabric bags and cages in bag house shall be checked regularly and replaced whenever required. Adequate availability of spares shall be ensured for immediate replacement.
18. The roads shall be black topped. Permanent high pressure water spraying system shall be installed for regular spraying of water on roads and work zone to minimizing fugitive dust emission.
19. Separate energy meter shall be installed for all the pollution control equipments and the records shall be maintained for verification of the Board from time to time.
20. **The total water consumption including domestic use shall not be more than 5 m<sup>3</sup>/ton of steel for long products and 8 m<sup>3</sup>/ton steel for flat products.**
21. The industry shall furnish the details scheme and design of effluent treatment plant for treatment of effluent generated from different sources and effluent re-circulation system indicating the size of settling tanks, chemical treatment, re-circulation pump capacity etc. as mentioned in the environmental management plan within 2 months from the date of issue of this order. Failure to submit the above plan shall automatically lead to revocation of this consent order.
22. The cooling tower blowdown of DRI Plant, boiler blowdown, cooling tower blowdown, ash handling plant blow down shall be treated in ETP and reused for dust suppression.
23. Wastewater from rolling mills shall be taken to scale pit. The overflow water shall be taken to cooling towers. Cooled water shall be re-circulated.
24. The DM plant and Softening Plant regeneration wastewater shall be taken to neutralizing pit and reused for ash quenching.
25. The overflow water from ash pond shall be collected in ash sump treated and reused for ash sluicing.
26. The blow down shall meet the following standards before it is discharged to the common monitoring basin for used for ash handling and coal dust suppression.

**Boiler Blow down**

Suspended Solids	-	100.0 mg/l (Max.)
Oil & Grease	-	20.0 mg/l (Max.)
Copper (Total)*	-	1.0 mg/l (Max.)
Iron (Total)	-	1.0 mg/l (Max.)

Cooling Tower Blow down

Free available Chlorine	-	0.5 mg/l (Max.)
Zinc	-	1.0 mg/l (Max.)
Chromium (Total)	-	2.0 mg/l (Max.)
Phosphate	-	0.2 mg/l (Max.)

27. The wastewater from internal drains of the plant premises shall be mixed with the drains of repair / maintenance shop, laboratory and other utilities. The combined drain shall be taken to ETP. ETP outlet water will be 100% reused for dust suppression, pellet making and other areas.
28. The domestic effluent generated from the industries premises shall be treated properly in sewage treatment plant and the treated effluent shall be utilized for Horticulture.
29. The storm water drains shall be maintained separately without being mixed up with the industrial effluent or sewage effluent. The domestic effluent from the industry as well as the colony shall be treated in proper sewage treatment plant to meet the prescribed BIS standard (SS-30 mg/l, BOD-20 mg/l) before being discharged or utilized for green belt development.
30. The industry shall adopt high density slurry disposal method for ash disposal.
31. The ash pond shall be located in such a manner that the bottom of outer embankment of ash pond shall be at least 500 mtrs away from nearest Highway and Human habitation.
32. Internal drainage arrangement like vertical sand chimney, horizontal sand blanket, rock toe, etc. shall be made for guiding the seepage water flow to the downstream side without any material erosion.
33. A minimum free board of 1.5 m shall be kept to prevent any chances of overtopping of the dyke, even during rainy season.
34. The internal and external slopes of the dykes with stone rip, turfing, etc. shall be adequately protected to take care of erosion due to wave action, rain cuts.
35. Provision of cut-off trench filled with impervious soils below the dyke section shall be made. This shall increase the length of seepage water flow in the foundation, thereby controlling the exit gradient, which safeguards erosion problem.
36. The foundation shall be prepared by removal of weak and organic materials, compaction by rolling, filling the voids and controlling the moisture on land surface. The dykes shall be constructed in layers compacted with rollers appropriate to the type of soil used to achieve a dry density of above 95%.
37. Regular inspection of the dykes shall be carried out with reference to the following aspects:
  - i) Water level in ponds
  - ii) Presence of cracks, rat holes, etc.
  - iii) Any sign of foundation heaving, sink holes, etc.
  - iv) Developments of any wet area or seepage flow on the embankment slope or on the foundation surface near the toe of the dyke.
38. The overflow from the ash pond if any along with seepage water if any shall be completely recycled and in no case shall be allowed to be discharged to outside. The collection facility shall be developed for surface run off from ash pond during rain and the same shall be recycled after treatment. The entire process shall be made automatic.

39. The Thermal Power Plant shall comply with the provisions of fly ash notification 1999 and amendment thereafter.
40. Oil catch pits shall be provided in oil handling area of CPP for collection of spillage.
41. Sewage treatment plant should be installed for the treatment of domestic effluent generated from the colony and also for in the plant itself so as to meet the prescribed standard of the Board for discharge to inland surface water. The plant domestic waste water after treatment shall be reused for horticulture and allied activities and shall not be discharged outside the plant premises.
42. Detailed long term planning for at least 20 years for solid waste disposal including SMS and Slag shall be submitted to the Board within 6 months from the date of the issue of this order. While arrangement of the complete utilization of BF, slag decide for a final action plan for its disposal. A solid waste management cell shall be created under Environmental management cell and complete utilization of all solid waste shall be envisaged and implemented in sustained manner. All the available research and development options shall be scouted in this regard. The exact utilization of solid waste shall be finalized in consultation with the State Pollution Control Board.
43. The industry shall develop hazardous waste disposal site as per guideline of Central Pollution Control Board, Delhi for disposal of Hazardous Waste.
44. Separate application shall be made to obtain letter of authorization for disposal of all hazardous wastes under Hazardous (Management & Handling) rule, 1989 and amendment thereafter.
45. All compliance shall be made with respect to manufacture, storage and import of Hazardous Chemical Rule, 1989 and other provisions of the Environment Protection Act, 1986.
46. The industry shall comply to all the conditions stipulated under Charter on Corporate Responsibility for Environmental Protection (CREP) guidelines in a time bound manner as envisaged there in.
47. Standby pollution control equipments or alternate arrangements shall be kept ready so that no point of time even under worst condition any emission or effluent shall be discharged without meeting the prescribed norms.
48. Depending on the environmental condition, stricter standards may be imposed for the effluent or restriction for discharge may be made for which adequate facilities from the beginning shall be made to meet such situation in future.
49. The industry shall take up adequate measure for routine health check up of its employees / workers and the people residing in the neighborhood of the plant free of cost.
50. The industry shall set up a full fledged environment monitoring laboratory and an environment management cell with qualified personnel for monitoring of pollutants and effective remedial measures in case of necessity.
51. Rain water harvesting shall be followed by utilizing the rain water collected from the roof of the administrative buildings for recharging of ground water within the premises as per the concept and practices prescribed by CPCB.
52. The civil construction shall be carried out with the fly ash bricks. If the fly ash bricks are not available locally the civil construction may carried out with other bricks with prior intimation to the concerned Regional Office of SPC Board. A quarterly statement indicating the use of fly ash bricks during the construction period shall be submitted to the Board for record.

53. The industry shall obtain clearance of Central Ground Water Authority for drawal of water (if applicable) and shall submit the Board while applying for consent to operate.
54. The land on which the unit is proposed to be established shall be converted to industrial use Kisam by the competent authority. The copy of said land conversion document shall be submitted to the Board alongwith consent to operate application
55. The Board may impose further conditions or modify the conditions stipulated in this order during installation and /or at the time of obtaining consent to operate and may revoke this clearance in case the stipulated conditions are not implemented and /or any information suppressed in the application form.
56. The project proponent shall apply for grant of consent (consent to operate) under section 25/26 of the Water (Prevention and Control of Pollution) Act, 1981 preferably before 4 (four) months of the commercial production where further conditions may be imposed. But the conditions laid down in No Objection Certificate shall be fulfilled before applying for consent.
57. **No production activity shall commence prior to installation of all pollution control measures. In case, it is found that the plant is operating without installation of appropriate pollution control equipment(s) and without permission for trial operation from the Board, a direction of closure shall be issued u/s 31-A of Air (PCP) Act, 1981 and / or u/s 33-A of Water (PCP) Act, 1974 without any further notice in this regard.**
58. This consent to establish is granted subject to compliance of recommendation made in the proceeding of public hearing conducted on 12.9.06.

  
30/12/06  
MEMBER SECRETARY

To,

Sri U. C. Govil, Vice-president  
M/s. SMC Power Generation Ltd.  
Hirma - 768202, Jharsuguda, Orissa

Memo No. \_\_\_\_\_ /Dt.

Copy forwarded to :

1. The Secretary, Steel & Mines, Govt. of Orissa, Bhubaneswar
2. The Collector, Jharsuguda
3. District Industries Centre, Jharsuguda
4. Regional Officer, SPC Board, Sambalpur
5. Director, Factories & Boiler, Bhubaneswar,
6. Environment Engineer-I,
7. DFO, Jharsuguda
8. Copy to Guard file/Consent to establish register,

SR. ENV. ENGINEER