To,

Sr. Vice President
M/s Shyam SEL Ltd.
(Power Division ? Unit II)
?Viswakarma? 86 C, Topsia Road, 1st Floor
Kolkata ? 700 046

E-mail : rkkabra@shyamgroup.com / selsteel@vsnl.net ; Fax No.: 033?22852212 ;

Subject : Integrated Steel Plant (1.00 MTPA) [Ductile Iron Pipes, Seamless Tubes, ERW Tubes] alongwith Captive Power Plant (2 x 250 MW) at Village Jamuria, P.O. Bahadurpur, District Burdwan, West Bengal by M/s Shyam SEL Ltd. ? Environment clearance reg.


Sir,


2.0 The Ministry of Environment and Forests has examined your application. It is noted that proposal is for Integrated Steel Plant (1.00 MTPA) [Ductile Iron Pipes, Seamless Tubes, ERW Tubes] alongwith Captive Power Plant (2 x 250 MW) at Village Jamuria, P.O. Bahadurpur, District Burdwan, West Bengal by M/s Shyam SEL Ltd. Total land acquired earlier proposed as 2,000 acres is revised to 1,100 acres. No rehabilitation and resettlement (R & R) is involved. Total cost of the project is Rs. 3,151.50 Crores. Following facilities will be installed:

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Item(s)</th>
<th>Capacity</th>
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<tbody>
<tr>
<td>1</td>
<td>Mini Blast Furnace</td>
<td>2x250 m³ &amp; 1x450 m³</td>
</tr>
<tr>
<td>2</td>
<td>Sinter Plant</td>
<td>8,00,000 TPA</td>
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<tr>
<td>3</td>
<td>DRI Kilns</td>
<td>6x100 TPD &amp; 1x500 TPD</td>
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<tr>
<td>4</td>
<td>Induction Furnace</td>
<td>4x18 T (Continuous Billet cum Bloom Caster)</td>
</tr>
<tr>
<td>5</td>
<td>Electrical Arc Furnace</td>
<td>2x 45 T (Continuous Billet cum Bloom Caster)</td>
</tr>
<tr>
<td>6</td>
<td>Power Plant</td>
<td>2x250 MW</td>
</tr>
<tr>
<td></td>
<td>WHRB</td>
<td>75 MW</td>
</tr>
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<td></td>
<td>AFBC</td>
<td>425 MW</td>
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<tr>
<td>7</td>
<td>Pelletization &amp; Beneficiation Plant</td>
<td>6,00,000 TPA</td>
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<tr>
<td>8</td>
<td>Coke oven plant</td>
<td>0.25 MTPA</td>
</tr>
<tr>
<td>9</td>
<td>Coal washery</td>
<td>1.0 MTPA</td>
</tr>
<tr>
<td>10</td>
<td>Structurals and Long product</td>
<td>0.3 MTPA</td>
</tr>
<tr>
<td>11</td>
<td>Ductile iron plant</td>
<td>0.1 MTPA</td>
</tr>
</tbody>
</table>

3.0 Electrostatic precipitator (ESP), Dust Settling Chamber (DSC), After Burning Chamber (ABC), gas cleaning plant having dust catcher, wet scrubber, bag filters, dry fog system and water spraying system shall be provided to control air emissions within 100 mg/Nm³. Total water requirement from Ajay River will be 70,800 m³/day. No process wastewater will be discharged as water will be re-circulated and used for dust suppression on roads, material handling area and green belt development. Char, coal washery rejects and middlings will be used in FBC boiler of the power plant. MBF slag will be granulated and provided to cement manufacturers. The coke dust, iron ore fines and dust from steel plant will be used in sinter plants. ESP dust will be used for making bricks. Fly ash will be collected in ash pond in the form of slurry. ETP sludge will be used in green belt development. Dust from pellet plant will be recycled to blast furnace. SMS and ferro alloy slag will be used in environment-friendly manner. Fly ash from FBB will be used for cement and brick making.

4.0 Public hearing/Public consultation meeting was held on 15th July, 2008.

5.0 The Ministry of Environment and Forests hereby accords environmental clearance to the above project under EIA Notification dated 14th September, 2006 subject to strict compliance of the following conditions:

A. **SPECIFIC CONDITIONS** :

i) Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan should be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks and adequate air pollution control devices shall be provided to keep the emission levels below 100 mg/Nm³. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit. Reports for ambient air, stack and fugitive emissions shall be submitted to the WBPCB, CPCB and Ministry?s Regional Office at Bhubaneswar six monthly.

ii) Electrostatic precipitator (ESP) shall be provided to DRI plant, Pellet Plant, WHRB and ABC boilers to control air emissions within 100 mg/Nm³. Hot gases from DRI kiln shall be passed through Dust Settling Chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in waste heat recovery boiler (WHRB). The gas then shall be cleaned in ESP before leaving out into the atmosphere through ID fan and stack. Bag filters shall be provided to control fugitive emissions from MBF, SMS, DRI Ferro alloy plant, coal washery etc. Gas cleaning plant having dust catcher and bag filter shall be provided to blast furnace (BF).

iii) Data on ambient air quality, stack emissions and fugitive emissions shall be uploaded on the Company?s website and also regularly submitted on-line to the Ministry?s Regional Office at Bhubaneswar, West Bengal Pollution Control Board (WBPCB) and Central Pollution Control Board (CPCB) as well as hard copy once in six months. Data on SPM, SO₂ and NOₓ shall also be displayed prominently outside the premises at the appropriate place for the information of general public.

iv) Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed. The emission standards issued by the Ministry in May, 2008 for the sponge plants shall be followed.
v) Vehicular pollution due to transportation of raw material and finished product shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product.

vi) In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Dust extraction system with bag filters shall be provided at various dust generating points. Dust catcher, saturator, venturi scrubber shall be provided to mini blast furnace. Agglomerative dust suppression system shall be provided to control dust emissions at material transfer points of Sinter Plant. Dry defogging system shall be installed at raw material handling zones of pelletization plant. Water spraying system shall be provided to control fugitive emissions in CPP. Bag filters and ESP shall be provided to DRI kilns. Bag filters shall be provided to control fugitive emissions from MBF, SMS, DRI, ferro alloy plant, coal washery etc. Bag filters (dust suppression system) shall also be provided in raw material crushing and screening plant. Dry Fog system and bag filters shall be provided to Coal washery. Fume extraction system shall be provided to induction furnace to extract fume and then discharged to the atmosphere through the stack of adequate height. Fugitive dust emissions from storage, transportation and raw material handling areas shall be controlled by water sprinkling and other dust suppression measures.

vii) All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines. Proper and full utilization of coke oven gases in power plant using waste heat recovery steam generators shall be ensured and no flue gases should be discharged into the air.

viii) Continuous monitoring of Total Organic Compounds (TOC) shall be done at the outlet of ETP (BOD plant).

ix) Total water requirement from Ajay River shall not exceed 70,800 m$^3$/day. Effluent Treatment Plant (ETP) shall be installed for the treatment of process water. Cooling towers and boiler blow down shall be used for coal handling, dust suppression, ash slurry system and green belt development. The treated wastewater from all other processes shall be recycled into the process to the maximum extent possible and reused either in the process or for dust suppression or green belt development. No effluent shall be discharged outside the premises and ?zero? discharge shall be strictly adopted. Domestic effluent shall be appropriately treated in septic tank and then in common wastewater treatment plant and used for green belt development within the premises.

x) The water consumption shall not exceed 16 m$^3$/Ton of Steel as per prescribed standard. No wastewater shall be discharged outside the premises and ?Zero? effluent discharge shall be ensured.

xi) Prior permission for the drawl of 1,705 m$^3$/hr make up water from Ajay River from the concerned department shall be obtained.

xii) Ground water monitoring around the solid waste disposal site / secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's Regional Office at Bhubaneswar, CPCB and WBPCB.

xiii) Proper utilization of fly ash shall be ensured as per Fly ash Notification, 1999 as amendment in 2003.

xiv) AFBC Plant shall be installed before installation of Sponge Iron Plant so that utilization of char in the AFBC boiler is ensured. All the char from DRI plant, coal washery rejects and middling shall be used in AFBC based power plant and shall not be disposed off anywhere else. DRI Fines, Coke breeze, dust from sinter plant, GCP, SMS, scales, iron
ore fines shall be used in Sinter Plant. Dust from Pellet plant will be recycled to blast furnace. All the blast furnace (BF) slag shall be granulated and provided to cement manufacturers for further utilization. SMS slag shall be properly utilized. ESP dust will be used for making bricks. ETP sludge shall be used in green belt development. All the other solid wastes including SMS slag and broken refractory mass shall be properly disposed off in environment-friendly manner. Oily waste shall be provided to authorized recyclers/reprocessors or properly disposed off as per the Hazardous Waste (Management & Handling) Rules, 1989 and subsequent amendments.

xv) The slag shall be used for road making only after passing through Toxic Chemical Leachability Potential (TCLP) test. The output waste shall be disposed in secured landfill as per CPCB guidelines.

xvi) A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal.

xvii) Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bhubaneswar, WBPCB and CPCB.

xviii) As proposed, green belt should be developed in 37 % area within and around the plant premises to mitigate the effects of fugitive emissions as per the CPCB guidelines in consultation with DFO.

xix) All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Sector shall be implemented.

xx) 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 shall adhere to the stipulations made by West Bengal Pollution Control Board (WBPCB) 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 emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescriber from time to time. The West Bengal Pollution Control Board (WBPCB) may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.

iv. Ambient air quality monitoring stations shall be set up as per statutory requirement in consultation with the WBPCB. Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State authorities. Monitoring of ambient air quality and shall be carried out regularly in consultation with WBPCB and data submitted to the CPCB and WBPCB regularly. The instruments used for ambient air quality monitoring shall be calibrated time to time.

v. 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, enclosures etc. on all sources of noise generation. The ambient noise level shall conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
vi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

vii. All the environment management measures given in the EIA/EMP shall be implementer and complied with.

viii. All the recommendations mentioned in the Corporate Responsibility for Environment Protection (CREP) of CPCB issued for the steel plants shall be implemented.

ix. The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.

x. Proper house keeping and adequate occupational health programmes shall be taken up

xi. The company shall undertake eco-development measures including community welfare measures in the project area.

xii. A separate environmental management cell to carry out various management and monitoring functions shall be set up under the control of Senior Executive.

xiii. Adequate funds shall be earmarked towards capital cost and recurring cost/annum respectively for environment pollution control measures shall be used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.

xiv. The Regional Office of this Ministry at Bhubaneswar / CPCB / WBPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data alongwith statistical interpretation shall be submitted to them regularly.

xv. 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.

xvi. The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the W. B. Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in. This should 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 at Bhubaneswar.

6.0 The Ministry or any other 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 Bhubaneswar.

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

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

9.0 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.

10.0 The above conditions shall 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,

(Dr. P. B. Rastogi)
Director

Copy to:

1. The Secretary, Department of Environment, Govt. of West Bengal, Kolkata, West Bengal.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
3. The Chairman, West Bengal Pollution Control Board, Parivesh Bhawan, 10A Block-LA Sector-Iff, Salt Lake, Kolkata - 700091, West Bengal.
4. The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests, A-3 Chandrashekharapur, Bhubaneswar 751 023, Orissa
5. Adviser IA-II(I), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
7. Guard File.
9. Record File.

(Dr. P. B. Rastogi)
Director