

F. No. J-11011/275/2007- IA II (I)

Government of India
Ministry of Environment and Forests
(I.A. Division)

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Dated 16th July, 2007

To,

The Chairman & Managing Director
M/s Guru Gobind Singh Refineries Ltd.
3rd Floor UCO Bank Building, Sansad Marg
New Delhi 110 001

Sub: Modification of Refinery Configuration of 9 MMTPA Refinery Project at Village Phulo Khari, Tehsil Talwandi Saboo, in District Bathinda, Punjab by M/s Guru Gobind Singh Refineries Limited - Environmental Clearance reg.

Sir,

This has reference to your communication No. nil dated 14.3.2007 on the above-mentioned project. The Ministry of Environment and Forests has examined your application. It is noted that the proposal envisages modification of refinery configuration to meet the Euro-III/IV norms. Land area required for the project is 2000 acres. The project does not involve displacement of people. Water requirement of 3700 M3/hr would be met from the nearby canal through raw water intake channel at a distance of 12kms from Bangi Head of Kotla Branch to refinery site for which permission has been obtained from the State Government on 19.9.1997. Besides 165MW captive power plant will be set up. Cost of the project is Rs.13119 crores. The proposed changes in the refinery configuration and product pattern is given below:

| | | Previous Configuration | Modified Configuration |
|---|------------------------------------|------------------------|-----------------------------------|
| | Crude oil Refining Capacity | 9 MMTPA | 9 MMTPA |
| | MODIFIED UNITS | | |
| | CDU/VDU | 9 MMTPA | 9 MMTPA |
| | NHT/CCR | 0.6846 MMTPA | NHT - 1.4 MMTPA CCR- 0.5 MMTPA |
| | Diesel Hydrotreater | 2.43 MMTPA | 4.2 MMTPA |
| | Delayed Coker | 2.22 MMTPA | 3 MMTPA |
| | Hydrogen Plant | 0.06 MMTPA | 2 x 0.04 MMTPA |
| | Sulphur Recovery Unit | 600 TPD | 2 x 300 TPD |
| | Sour Water Stripper | 156 M3/HR | 300 + 77 M3/HR |
| | Amine Regeneration Unit | 600 TPH | 2 x 500 TPH |
| | Mild Hydrocracker/ VGO-HDT | 2.49 MMTPA | 3.0 MMTPA |
| 0 | LPG Sweetening Unit/ Treating Unit | 0.37 MMTPA | 0.15 & 0.94 MMTPA |

| | | Previous Configuration | Modified Configuration |
|-----------------|---|-------------------------|-----------------------------------|
| 1 | Naphtha Sweetening Unit/ Treating Unit | 0.63 MMTPA | 0.06 MMTPA |
| 2 | Kerosene/ATF sweetening Unit | 0.78 MMTPA | 0.78 MMTPA |
| DELETED UNITS | | | |
| 3 | Kerosene Hydrotreater | 0.2 MMTPA | |
| 4 | Adjacent Power Plant | 440 MW* | |
| NEW UNITS | | | |
| 5 | ISOMERISATION UNIT | | 0.28 MMTPA |
| 6 | FCC with PRU | | 2.2, 0.8 MMTPA |
| 7 | Poly Propylene Unit (PPU) | | 0.35 MMTPA |
| 8 | Captive Power Plant | | 165 MW |
| 9 | Hexane Recovery Unit (HRU) | | 0.005 MMTPA |
| PRODUCT PATTERN | | | |
| 0 | LPG | 312 TMTPA | 737 TMTPA |
| 0 | Naphtha | 544 TMTPA | 396 TMTPA |
| 1 | Gasoline | 799 TMTPA (BS 2000) | EURO IV REG 750 EUROIV PRE 250 |
| 2 | ATF | 121 TMTPA | 500 TMTPA |
| 3 | Kerosene | 775 TMTPA | 200 TMTPA |
| 4 | Diesel | 4823 TMTPA (BS 2000) | 3692 TMTPA (Euro IV) |
| 5 | Fuel Oil | 257 TMTPA | |
| 6 | Sulphur | 150 TMTPA** | 198 TMTPA |
| 7 | Coke | 734 TMTPA*** | 904 TMTPA# |
| 8 | Hexane | | 5 TMTPA |
| 9 | Motor Turpentine Oil | | 25 TMTPA |
| | Polypropylene | | 358 TMTPA |

| | Previous Configuration | Modified Configuration |
|----|------------------------|------------------------|
| 10 | | |

MMTPA: Million Tonne Per Annum
 TMPTA: Thousand Tonne Per Annum

2 The proposal has been appraised in accordance with para 7(i) of the Environmental Impact Assessment Notification, 2006. The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification, 2006 subject to strict compliance of the following specific and general conditions.

SPECIFIC CONDITIONS:

- i. All the conditions stipulated by this Ministry vide its letter no.J-11011/24/98-IA-II (I) dated 6th November, 1998 shall be strictly implemented.
- ii. The gaseous emissions (SO₂, NO_x, HC, H₂S and Benzene) from the various process units shall conform to the standards prescribed under Environment (Protection) Rules, 1986 or norms stipulated by the SPCB whichever is more stringent. At no time, the emission level should go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.
- iii. Adequate ambient air quality monitoring stations, (SPM, SO₂, NO_x and HC, Benzene) shall be set up in consultation with SPCB, based on occurrence of maximum ground level concentration and down-wind direction of wind i.e. maximum impact zone. The monitoring network must be decided based on modeling exercise to represent short-term GLCs. Continuous on-line stack monitoring equipment shall be installed for measurement of SO₂ and NO_x. The company shall install online monitors for VOC measurements. Data on VOC shall be monitored and submitted to the SPCB / Ministry.
- iv. Measures for fugitive emissions control shall be taken by provision of double mechanical seals to all pumps handling high vapour pressure materials, sensors for detecting HC/ toxic gas leakages at strategic locations, regular inspection of floating roof seals, maintenance of valves and other equipments and regular skimming of separators/equalization basin.
- v. All new standards/norms that are being proposed by the CPCB for oil refineries and petrochemicals shall be applicable for the proposed refinery configuration. The project authorities shall take necessary measures to comply with the above proposed emission norms including monitoring facilities and intimate the same to this Ministry.
- vi. The Company shall adopt Leak Detection And Repair (LDAR) programme for quantification and control of fugitive emissions.
- vii. The company shall also ensure that the total SO₂ emissions shall not exceed 1000 kg/hr. Sulphur recovery units with more than 99% efficiency shall be installed.

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viii. To mitigate NOx emission, the company shall install low NOx burners.

ix. The waste water effluent shall not exceed 450m³/hr. The wastewater shall be segregated in different streams at the source. The treated effluent shall comply with the standards stipulated by PSPC/CPCB for discharge on land for irrigation. The treated effluent shall be recycled and reused for cooling, service, green belt, dust suppression and fire water etc.

x. The oily sludge generated from the ETP after oil recovery shall be disposed in the secured land fill as per CPCB requirement. The spent catalyst from various units shall be returned to manufacturers for reuse/recycle. The pet coke generated should be sold. The design of the secured landfill site shall be as per the Central Pollution Control Board guidelines.

xi. Green belt shall be provided to mitigate the effects of fugitive emissions all around the plant in an area of 300 acres in consultation with DFO as per CPCB guidelines.

xii. Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

xiii. The company shall prepare comprehensive EIA/EMP report and submitted to the Ministry within one year.

xiv. Detailed risk analysis report of the refinery and associated facilities shall be prepared once the engineering designs and layout is frozen. On site and off site emergency preparedness plan must be prepared and approval from the nodal agency shall be obtained before commissioning the project.

B. GENERAL CONDITIONS:

i. The project authorities must strictly adhere to the stipulations made by the Punjab State Pollution Control Board and the State Government.

ii. No further expansion or modernization in the plant should be carried out without prior approval of the Ministry of Environment and Forests.

iii. At no time, the emissions should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be immediately put out of operation and should not be restarted until the desired efficiency has been achieved.

iv. The overall noise levels in and around the plant area should be kept well within the standards (75 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

- v. The project authorities must strictly comply with the provisions made in Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 as amended in 2000 for handling of hazardous chemicals etc. Necessary approvals from Chief Controller of Explosives must be obtained before commission of the project.
 - vi. The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/disposal of hazardous wastes.
 - vii. The project authorities will provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes.
 - viii. The stipulated conditions will be monitored by the Regional office of this Ministry at Chandigarh/Central Pollution Control Board/State Pollution Control Board. A six monthly compliance report and the monitored data should be submitted to them regularly.
 - ix. 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 State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://www.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 should be forwarded to the Regional office.
 - x. The Project Authorities should 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.
3. The Ministry may revoke or-suspend the clearance, if implementation of any of the above conditions is not satisfactory.
4. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner will implement these conditions.

5. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.


(Dr. P. L. Ahujara)
Director

Copy to:

1. The Secretary, Deptt. Of Environment, Government of Punjab, Secretariat, Chandigarh.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
3. Chairman, Punjab Pollution Control Board, Vatavaran Bhavan, Nabha Road, patiala-147001.
4. Conservator of Forests, Regional Office (NZ), Bays No. 24-25, Sector 31-A, Dakshin Marg, Chandigarh - 160 047
5. JS(CCI-I), Ministry of Environment and Forests
6. Monitoring Cell, Ministry of Environment & Forests, New Delhi.
7. Monitoring file.
8. Guard file.
9. Record file.

(Dr. P. L. Ahujara)
Director