Ack. letter
Adviser
Kindly highlight action to be taken.
11/3/08

F. No. J-11011/1/2008- 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 : plahujarai@yahoo.com
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Dated: March 11, 2008

To,

The Chief Executive Officer
M/s Indian Strategic Petroleum Reserves Ltd.
424-425, World Trade Centre,
Babar Road,
New Delhi -110 001

Sub : Construction of 1.5 MMT Strategic Crude Oil Facility in Underground Rock Cavern at Mangalore District in Karnataka by M/s Indian Strategic Petroleum Reserves Ltd.(ISPRL)- Environmental Clearance reg.

Sir,

This has reference to your letter no. ISPRL/MoE&F/Mangalore dated 13th December, 2007 on the above mentioned subject.

2.0 The Ministry of Environment and Forests has examined your application. It is noted that the proposal submitted by M/s Indian Strategic Petroleum Resource Limited (ISPRL) is for setting up of 1.5 MMT Strategic crude oil storage facilities at villages Kalavar Padavu near Mangalore in Dakshin Kannada District in Karnataka. It is proposed to construct Rock Cavern with a capacity to store 1.5 MMT of Crude Oil of quality with high sulphur and low sulphur and would consist of two storage units. The Cavern will be designed as U shaped tunnels with D shaped cross-section. Crude oil storage will be received through 60,000 - 85,000 DWT Ship tankers at new Mangalore Port which will transfer the crude oil via MRPL'S existing 36" NB crude oil pipeline upto Booster station and then through a new pipeline at the project site. The crude will be supplied to the refineries in Kochi, Mangalore and Mumbai. Storage capacity of the two units will be 750,000 each and volume of 937,500m3. The area of the project will be 33.43 ha, out of which 18 ha of land will be developed for surface facility within the Mangalore SEZ. No National Park /Wildlife Sanctuary is located within 15km radius of the project. Mangroves in Gurupur estuary zone is at a distance of 5 to 7 km in the SSW direction. A steam boiler of 10 TPH capacity would be installed and operated intermittently for crude oil heating and for supply of steam inside caverns during devaxing period. A 250 KVA DG Set is also proposed as standby. Water requirement of 500m3/d will be met from the Netravati river. Seepage water after primary, secondary, tertiary treatment will be used within the project premises to achieve zero discharge. A holding pond of 5 days capacity for treated seepage water will be provided for conducting bio assay test. About 3 million cubic meter of underground rock excavated from the Cavern would be generated which will be used for civil works and it will be stacked temporarily at some locations near the project site. However, a new area is being identified for dumping of rock for which NITK, Suratkal has been engaged to study the feasibility. The cost of the project is Rs. 732 crores.

3.0 Public hearing is not required as per para 7(i) III (f). Stage (3) public consultation of EIA Notification, 2006.

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

A. SPECIFIC CONDITIONS :

1). CONSTRUCTION PHASE:

i. Company shall take precautions for proper rock blasting during construction of shafts and cavern galleries to reduce vibrations.

ii. Proper safety measures shall be taken for the construction workers to prevent accidents during underground construction activities. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. Insurance shall be taken for all the employees working during construction of underground cavern.

iii. Suitable arrangements shall be made for the treatment and proper disposal of domestic wastewater generated by labour during the construction. The construction workers shall be provided with adequate basic facilities including shelter, water supply and sanitation facilities.

iv. Dust suppression methods shall be provided to control the dust generated during the excavation, leveling and transportation activities.

v. The rocks have crevices through which groundwater will seep and provide a water curtain around the stored crude. The project proponent shall observe the ground water table conditions and monitor the quality of ground water regularly due to uncertainties associated with the water balance and water crude oil interface. Adequate remedial measures shall be adopted to prevent ground water contamination.

vi. The ground and seepage water pumped out from the cavern shall be suitably stored and treated to ensure compliance with prescribed standards.

vii. The storage and handling of hazardous materials such as explosives / chemicals, detonators, petroleum lubricants etc. at the site during construction phase shall be as per the prescribed regulatory norms.

viii. All the necessary precautions for laying new pipeline mentioned in the ANSI code shall be strictly followed. Continuous censors/digital control system or SCADA system shall be installed for monitoring the pipeline. Regular monitoring of corrosion and fatigue of pipelines, valves, heat exchangers, cables etc. shall be carried out at scheduled intervals.

2). **OPERATIONAL PHASE :**

i. Ambient air quality for SO_2, NO_X, HCs, CO and secondary air pollutants (Aldehydes, Oxidants) shall be regularly monitored at requisite numbers of ambient air quality monitoring stations in consultation with KSPCB at and around the proposed project site based on occurrence of maximum ground level concentration and down wind direction of wind i.e. maximum impact zone.

ii. The possibility of hydrocarbon vapour recovery and re-injection back into the cavern system during crude oil filling, discharge and excess pressure / safety vent operation periods shall be explored and implemented in view of large volume of caverns to prevent significant loss of HCs as well as mitigate air pollution impacts. HCs / VOCs monitors shall be installed at critical locations (Pumps, Valves, Flanges, Joints, Bends in pipeline etc.) with compatible on-line data recording and alarm system at the control room.

iii. Measures shall be taken for provision of double mechanical seals in pumps / compressors operated at surface facilities and maintenance of valves and other equipments.

iv. Permission for drawl of 500 m3/d of water from the Netravati river shall be obtained from the State Government authority. The seepage water contaminated with oil & grease after primary, Secondary and tertiary treatment and conforming to the prescribed standards shall be sent to holding pond of 5 days retention capacity for conducting bio-assay test prior to reuse of treated effluent. No wastewater shall be discharged outside the project premises. The domestic wastewater at storage location will be treated in septic tank and discharged to soak pits to be reused for the green belt development within the plant premises.

v. The ground water quality as well as coastal marine water quality monitoring with special reference to oil & grease as well as hydrocarbons shall be done at different locations around the project site in consultation with KSPCB as per the general discharge standards applicable to coastal marine discharges and specific discharge standards stipulated by the KSPCB. Ground water monitoring with respect to quality (oil & grease; Sulfides/Sulfates) as well as water table variations at different locations shall be carried out in consultation with KSPCB / SGWB / CGWA.

vi. The oily sludge collection, transportation, storage and disposal shall be strictly as per the Hazardous Waste (Management and Handling) Rules, 1989 and its amendments.

vii. As mentioned in the EIA/EMP, 50 m green belt shall be developed along the boundary of the industry to mitigate the effects of fugitive emissions all around the plant in consultation with DFO as per CPCB guidelines.

viii. Rainwater harvesting shall be carried out at project site keeping in view the runoff from adjacent hill slopes towards proposed surface facilities to conserve and reduce the water consumption. The proponent shall ensure that effluent shall not enter the Rainwater harvesting structure.

ix. The layout of the underground storage facility shall be designed as per OISD 118. The fire protection facility shall be as per OISD 116. The pressure piping and process valves shall be as per API standards.

x. All the recommendations / precautions mentioned in the Risk Assessment and Disaster Management Plan shall be strictly followed.

B. GENERAL CONDITIONS:

i. The project authorities must strictly adhere to the stipulations made by the Karnataka State Pollution Control Board and the State Government. All the statutory approvals for the construction of underground cavern and tunnels etc. shall be obtained from the concerned Statutory Authorities and a copy submitted to the Ministry. Standards issued by the Oil Industries Safety Directorate (OISD) and other national and international bodies and guidelines shall be followed.

ii. No expansion or modernization in the system shall be carried out without prior approval of the Ministry of Environment and Forests.

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

iv. All the recommendations made in the EIA/EMP report and risk assessment report shall be implemented.

v. The overall noise levels in and around the installation 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 EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

vi. 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 commissioning of the project.

vii. 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 K. S. Pollution Control Board must be obtained for collections/treatment/ storage/disposal of hazardous wastes.

viii. Project authorities shall provide adequate funds for environmental pollution control measures 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.

ix. The stipulated conditions will be monitored by the Regional of this Ministry at Bangalore / CPCB / KSPCB. A six monthly compliance report and the monitored data shall be submitted to them regularly.

x. 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 Karnataka 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 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.

xi. 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.

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

6.0. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner will implement these conditions.

7.0. 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.

P. Ahujarai

(Dr. P L Ahujarai)
Director

Copy to :

i. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
ii. Chairman, Karnataka State Pollution Control Board, 6,7,8&9th Floor, (Public Utility Building) Subhas Chandra Bose Building, M.G. Road, Bangalore-560001, Karnataka.
iii. Chief Conservator of Forests (Central), Regional Office (SZ), Kendriya Sadan, IVth Floor, E&F Wing, 17th Main Road, Koramangala, Bangalore-560034.
iv. Secretary, State Department of Environment and Forests, Govt. of Karnataka, Bangalore.
v. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
vi. Guard File.
vii. Monitoring File.
viii. Record File.

(Dr. P L Ahujarai)
Director