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भारत सरकार
पर्यावरण एवं वन मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT & FOREST
पर्यावरण भवन, सी. जे. ओ. कॉम्प्लेक्स
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F.No. J.11011/7/94-IA II

14th March, 1995

OFFICE MEMORANDUM

Sub: Copper Smelter Project and Captive Jetty Facility at Dahej, Baruch District of M/s. Indo Gulf Fertilisers and Chemicals Corp. Ltd. - Env. Clearance.

This has reference to M/s. Indo Gulf Fertilisers and Chemicals Corp. Ltd. letter No. CSP/SVV/20/94 dated the 17th December '94 regarding their proposal to manufacture 1 lakh Tonnes per annum of copper cathode at Dahej based on imported copper concentrate to be received at the proposed captive jetty (270 M x 270 M) at a distance of 2 Kms. from shoreline. Further, it has also been noted that by products like Sulphuric Acid (296,000 TPA), Phosphoric Acid (50,000 TPA), Silver (28 TPA), and Gold (3 Kg./A) will also be produced.

The environmental aspects of the projects have been examined by this Ministry and environmental clearance is accorded subject to implementation of the following conditions:-

- i) The project authority must strictly adhere to the stipulations laid down by the State Pollution Control Board and the State Govt.
- ii) Any expansion of the plant either with the existing product mix or new products can be taken up only with the prior approval of this Ministry.
- iii) Comprehensive EIA report for the proposed copper smelter and captive jetty facilities should be submitted within a period of 15 months.

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- iv) The gaseous emissions from various process units should conform to the standards prescribed by the concerned authorities from time to time. At no time the emission level should go beyond the stipulated standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be put off operation immediately and should not be restarted until the control measures are rectified to achieve the desired efficiency.
- v) Adequate number of ambient air quality monitoring station should be set up in the down wind direction as well as where maximum ground level concentration are anticipated, especially covering the human settlements, for the estimation of particulates, fluoride dust SO_x etc. in consultation with the State Pollution Control Board. Monitoring network should be designed taking into consideration the existing land-use pattern, location of stacks, meteorological condition and topographic features including existing ambient air quality data.
- vi) All the stacks of the plant must be provided with on-line stack emission monitoring equipment for the estimation of SO_x , Fluoride, SPM etc. Stack emission and ambient air quality data must be submitted to the State Pollution Control Board once in 3 months and once in 6 months to the Ministry of Environment and Forests along with statistical analysis and interpretation.
- vii) Fugitive emission of dust/mist/vapours, fumes, SO_x and HC should be controlled and work environment monitored for prevailing contaminants regularly. Fugitive dust generated during pyrite crushing, screening and handling at various transfer points should be reduced to the minimum by installing adequate dust collection and extraction system and regularly monitored.
- viii) Adequate scrubbing system must be provided to remove silica, fluoride and rock phosphate dusts from flue gases.
- ix) There should be no change in the stack design without prior approval from the State Pollution Control Board and this Ministry.
- x) Adequate number of effluent monitoring station must be set up in consultation with the State Pollution Control Board. If the effluent quality at any time exceeds the standards prescribed, the corresponding unit of the plant which is contributing to the excessive pollution level shall be immediately stopped from operating till the quality of pollutant discharged from the respective units are brought down to the required standards.
- xi) The treated effluents should conform to the prescribed standards and discharged into the sea at a point approved by the State Pollution Control Board and NIO, Goa. Efforts should also be made to recycle the treated effluents for green belt development to the maximum possible extent.
- xii) The industry should provide separate drain for storm water, sanitary waste water and process effluents and the entire lay out plan for the above must have the approval of the State Pollution Control Board.

- xiii) A guard pond must be constructed near the terminal end of all the effluents before final disposal of effluents. This pond must have two compartments of which one will be kept empty while the other will be operated as a routing guard pond. When the concentration of effluents are high in the final effluents, corrective measures should be taken at source and the effluent shall be discharged at a regulated rate after treatment, to conform to the prescribed standards.
- xiv) Disposal site of phospho-gypsum, spent cathodes etc. should be made impervious to avoid ground water contamination. These sites should have the approval of State Pollution Control Board. Adequate monitoring of the impounded sites (soil, surface and ground water) should be carried out regularly and record maintained.
- xv) The radium content in the Jordanian rocks proposed to be imported should be intimated to Ministry of Environment and Forests.
- xvi) Spent Cathode should be enclosed in reinforced cement concrete vaults/container before disposal. Recovery of carbon and fluoride from the spent cathode lining should be attempted.
- xvii) Fluoride levels in the ground water around the project site should be monitored on a regular basis and report submitted to this Ministry every 6 months.
- xviii) Detailed risk analysis should be carried out and inventories located in such a manner so as to contain the impact zone under the worst scenario within the plant boundary. The risk analysis should include hazard identification using standard methods, fault tree analysis, reliability and failure analysis and worst scenario for MCA such as catastrophic failure of tanks and pipelines. The risk analysis report should be submitted in this Ministry for review within a period of one year.
- xix) Efforts should be made to sell Sulphuric Acid (H_2SO_4) to the maximum extent possible. The capacity of the proposed phosphoric acid plant should also be reduced to half so that the quantity of phospho-gypsum generated is reduced.
- xx) Long term workable plan for utilization and disposal of phospho-gypsum should be worked out and report submitted to this Ministry for review within 10 months.
- xxi) A study to assess the impact due to disposal of solid waste/sludge on land should be carried out and report submitted to this Ministry for review within 6 months.
- xxii) A study to assess the impact of the proposed pipeline for disposal of treated effluent should be carried out and report submitted to this Ministry for review within 6 months.
- xxiii) A community welfare scheme for improving the socio-economic environment should also be worked out and report submitted to this Ministry for review within 6 months.
- xxiv) The project authorities must submit on-site/off-site Emergency Preparedness plan based on detailed risk analysis. Approval from the nodal agency should be obtained for the above plan.

- xxv) All recommendations made in the EMP based on comprehensive EIA report and detailed risk analysis reports should be implemented.
- xxvi) A detailed green belt development plan should be submitted to this Ministry for review within 3 months. The proposed green belt design should have scientific basis and plant species identified should be indigenous and not exotic varieties.
- xxvii) The project authorities must set up laboratory facilities for collection and analysis of samples under the supervision of competent technical personnel who will directly report to the Chief Executive.
- xxviii) A separate Environmental Management Cell with suitable qualified people to carry out various functions should be set up under the control of senior executive who will report directly to the Head of the Organisation.
- xxix) The funds earmarked for the environmental protection measures should not be diverted for any other purpose and yearwise expenditure should be reported to the Ministry.
- xxx) Proposed Jetty and the related infrastructure should be in conformity with the provisions of the Coastal Regulation Zone.
- xxxi) Screening of pollutants in the harbour waters should be taken up by the project authorities and periodical monitoring reports on water quality parameters must be forwarded to this Ministry at six monthly intervals.
- xxxii) A comprehensive Disaster Management Plan considering worst case disaster scenarios with respect to specific cases like oil/chemical spills, fire/explosion, terrorist attack, flood etc. Spelling-out definite/adequate measures to be taken to prevent and contain such disasters. A report on this must be forwarded to this Ministry within six months from the date of issue of the environmental clearance.
- xxxiii) To prevent discharge of sewage, bilge wastes and other liquid wastes into the marine environment, adequate system for collection, treatment and disposal of liquid wastes including shoreline interceptor for receiving liquid wastes from all shoreline installations and special hose connection for ships to allow for discharge of sewage must be provided.
- xxxiv) Appropriate devices such as oil water separator, oil monitor, oil skimmer etc. must be provided to remove all flammable material including oil spills while re-fuelling the vessels, because of operations of cargo handling equipment and allied machinery, cranes, tractors etc. to tackle the oil pollution in the port area and marine environment.
- xxxv) Proper fire fighting arrangements must be ensured by providing adequate number of fire hydrants in fire prone areas. The entire fire fighting line must be maintained under pressure through jockey pumps. Appropriate volume of dead storage water must be ensured for this use. The employees must be kept alert and trained to combat fire by conducting regular fire drills to keep these facilities in working conditions.

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- xxxvi) The quality of treated effluents, solid wastes, emissions and noise levels etc. must conform to the standards laid down by the competent authorities including Central/State Pollution Control Board and under the Environment (Protection) Act, 1986, whichever are more stringent.
 - xxxvii) The project authority should take necessary measures to avoid adverse impact on marine life in consultation with the Zoological Survey of India.
 - xxxviii) The project authority should take approval of State Pollution Control Board for the proposed dumping site within the plant area and provide proper lining of the area.
 - xxxix) With respect to the facilities, if any to be provided within 500 mts. of HTL, the directions issued by the Supreme Court on 12.12.94 in respect of Writ Petition No. 664/93 and 561/94 should be complied with. In view of this no construction work pertaining to jetty etc within 500 MT of HTL should be undertaken.

The Ministry or any other competent authority may stipulate further conditions after reviewing the comprehensive EIA report, risk analysis, environmental audit or any other report prepared by the project authorities.

The Ministry may revoke clearance if implementation of the conditions is not satisfactory.

The above conditions will be enforced inter-alia along with Water (Prevention and Control of Pollution) Act, 1994; the Air (Prevention and Control of Pollution) Act, 1981; the Environmental (Protection) Act, 1986; and the Public Liability Insurance Act, 1991 along with their amendments and rules made from time to time.

(Dr. R. Warrier)
Joint Director

The Chairman,
M/s. Indo Gulf Fertilisers and
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Copy to:-

1. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-Cum-Office Complex, East Arjun Nagar, Delhi-32.
2. The Chairman, Gujarat Pollution Control Board, Gandhinagar, Gujarat.
3. The Chief Conservator of Forests, WESTERN Regional Office, Bhopal.

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4. The Director, Regional Office, Min. of Env. & Forests, Paryavaran Bhavan, New Delhi.
5. The Adviser (PAD), Planning Commission, Yojana Bhavan, New Delhi-I.
6. The Adviser (P&E), Planning Commission, Yojana Bhavan, New Delhi-I.
7. The Joint Secretary(Plan Finance), Deptt. of Exp. North Block, New Delhi.
8. Guard File
9. Monitoring File
10. Record File

(Dr. R. Warrier)
Joint Director