

F. No. J-11011/288/2011- IA II (I)
Government of India
Ministry of Environment, Forests and Climate Change
(I.A. Division)

Indira Paryavaran Bhawan
Aliganj, Jorbagh Road
New Delhi – 110 003

E-mail : ik.bokolia@nic.in
Telefax : 011: 24695313
Dated: 11th February, 2016

To,

The Unit Head
M/s SKI Carbon Black (India) Pvt. Ltd.
Hi-Tech Carbon
(A Unit of Aditya Birla Nuvo Ltd.)
Village Lohop, Talava Patalganga,
Taluka Khalapur, District Raigarh
Maharashtra

E-mail : vinay.bhalerao@adityabirla.com; htcmum@adityabirla.com

Subject: Carbon Black Plant (1,20,000 TPA) at Patalganga, District Raigad, Maharashtra by SKI Carbon Black (India) Pvt. Ltd. (Formerly known as M/s Hi-Tech Carbon) – Amendment in Environmental Clearance reg.

**Ref. : (i) Ministry's letter no. J-11011/35/2007-IA II (I) dated 22nd March, 2013 and Ministry's letter no. J-11011/288/2011-IA II (I) dated 3rd February, 2015.
(ii) Your online proposal no. IA/MH/IND2/27746/2006 dated 20th July, 2015.**

Sir,

This is in continuation of this Ministry's letter referred above and your letter under reference, wherein it is requested to give permission for installation of Tail Gas Recycle Unit on each reactor to enable it recycle and use Waste Tail Gas from the current manufacturing process. It was noted that the Tail Gas Recycle Project of M/s SKI Carbon Black (India) Private Ltd., will result in significant reduction of Green House Gas emissions and there will not be any additional pollution load. This project would enable the project proponent to avoid burning additional fuel oil for carbon black reaction. The capital expenditure for the project shall be Rs.146.5 Crores. The proposed modification will not result in increase in production capacity of carbon black beyond the already approved capacity of 1,20,000 TPA. 'Tail gas recycle Project' is one of SKI Carbon Black (India) Pvt. Ltd., long term R&D based initiatives to develop and commercialize a novel process technology targeted to reduce oil consumption and GHG generation. Carbon Black Production process is essentially a Thermal cracking of heavy feedstock oil in refractory lined reactors. The Thermal Cracking reaction is a partial combustion process and requires to generate sufficient heat at around 2000° C in a reducing atmosphere in order to break-down the large oil molecules and produce fine carbon particles. Along with carbon particle some combustible gasses like CO and H₂ also other non-



combustibles like CO₂, N₂ and H₂O gases are produced which are termed as lean Tail Gas. This reaction is stopped by quenching with water spray in reactor. Carbon black and gas mixture is then passed through high efficiency Bag collectors for separation of lean Tail Gas and collection of fine carbon black particles. The filtered tail gas is then sent to the onsite captive power plant for combustion and generation of steam and electrical power. A small part of Tail gas is utilized to generate heat for Carbon black drying process in the Tail gas fired Rotary drum dryers. The new proposed process shall recycle a part of this lean tail gas and feed to Carbon Black reactors as heat source for the thermal cracking reaction and replace the auxiliary heavy fuel oil being utilized. Through this process modification a substantial reduction of total plant oil requirement can be achieved and this reduction is estimated in range of 12 to 15% on continuous basis. As most of the heavy fuel oil is imported, it shall save Foreign Exchange also.

Prior to recycling the lean Tail Gas to reactor, it needs to be pre-conditioned in order to achieve the desired heat input to the reactors. The conditioning process of tail gas shall involve dehumidification, compressing and heating operation prior to injecting into the reactor combustor. As part of tail gas is used as reactor fuel, the capacity to produce steam and power shall reduce in the plant while additional equipment shall need some power during operation. The project viability is studied based on all economical consideration. Project implementation shall not increase productivity and does not require any change in existing provisions for river water drawn for plant use or any additional liquid effluent stream generated from new process requiring installation of any additional waste water treatment process.

2.0 The proposal was considered by the Reconstituted Expert Appraisal Committee (Industry) in its 44th meeting held during 20th – 21st July, 2015 and the Committee recommended the proposal for following amendment in environmental clearance :

“Installation of Tail Gas Recycling Unit on existing Reactors.”

3.0 The Ministry accepts the recommendation of the Expert Appraisal Committee (Industry) for amendment in the existing environmental clearance subject to compliance of specific conditions and general conditions.

4.0 Manufacturing capacity of plant and sulfure content in the feed stock shall remain the same.

5.0 All other conditions will remain unchanged.

6.0 You are requested to keep this letter with the Environmental Clearance accorded vide letter No. J-11011/35/2007-IA II (I) dated 22nd March, 2013.

7.0 In future, in case of change in the scope of the project, the company shall obtain fresh environmental clearance.

8.0 This issues with the prior approval of the Competent Authority.



(Lalit Bokolia)
Additional Director

Copy to:-

- 1.0 The Principal Secretary, Environment Department, Government of Maharashtra, 15th Floor, New Administrative Building, Mantralaya, Mumbai - 400 032
- 2.0 The Chief Conservator of Forests (Central), Kendriya Paryavaran Bhavan, Link Road No.3, Bhopal-462016.
- 3.0 The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
- 4.0 The Chairman, Maharashtra Pollution Control Board, Kalpataru Point, 3rd and 4th floor, Opp. Cine Planet, Sion Circle, Mumbai-400 022.
- 5.0 Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
- 6.0 Guard File/Monitoring File/Record File.



(Lalit Bokolia)
Additional Director

