

F. No. 10/29/2014-OC
Government of India
Ministry of Environment, Forest and Climate Change
(Ozone Cell)

Indira Paryavaran Bhawan,
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Date: 13th October, 2016

ORDER

Sub.: Control of emission/venting of Hydrofluorocarbon (HFC)-23, produced as by product while manufacturing of Hydrochlorofluorocarbon (HCFC)-22, in the atmosphere.

1. *Whereas*, India is Party to the Vienna Convention for the Protection of the Ozone Layer, 1991 the Montreal Protocol on Substances that Deplete the Ozone Layer and all its subsequent amendments;
2. *Whereas*, India is currently implementing the HCFC Phase-out Management Plan (HPMP) for the accelerated phase-out of HCFCs, which are ozone depleting substances, in the consumption sectors, and is phased out by 2030;
3. *Whereas*, the Production of HCFC - 22 for feedstock use will continue beyond 2030 and expected to grow and reach one million tons by 2035;
4. *Whereas*, there are five registered enterprises producing HCFC-22 in India, namely, (i) M/s SRF Limited; (ii) M/s Gujarat Fluorocarbons Limited; (iii) M/s Navin Fluorine International Limited; (iv) M/s Chemplast Sanmar Limited; and (v) M/s Hindustan Fluorocarbons Limited;
5. *Whereas* Hydrofluorocarbons – 23 (HFC -23) or Trifluoromethane is a by-product in the manufacture of refrigerant HCFC-22 and is one of the most potent greenhouse gases, having a Globally Warming Potential (GWP) of 14,800;
6. *Whereas*, HFC – 23 a high GWP gas and included in the basket of six Green House Gases (GHGs) controlled under the United Nations Framework Convention on Climate Change (UNFCCC). Was brought under the Clean Development Mechanism

(CDM) and Joint Implementation (JI) under the Kyoto Protocol to the UNFCCC with a view to promote destruction of HFC-23 and reduce its adverse impact on environment;

7. *Whereas*, Nineteen projects were sanctioned worldwide under the CDM mechanism for destruction of HFC – 23 including all the five enterprises producing HCFC - 22 in India as mentioned in para 4 above, and all these projects have earned Certified Emission Reductions in terms of CO₂ equivalents in the past due to destruction of HFC-23;

8. *Whereas*, there is a potential to avert 444 million CO₂ equivalent emission at peak production of HCFC-22 (based on HFC-23/HCFC-22 waste ratio of 3 percent), if HFC-23 is captured and destroyed as by-product of HCFC manufacturing process;

9. *Whereas*, India is party to the Paris Agreement under the UNFCCC and its committed to reduce emissions intensity of its GDP by taking necessary measures as part of its intended nationally determined contributions;

10. The government, hereby directs that the producers of HCFC-22 mentioned in para 4 above and/or any other producers that may be covered by the ongoing or anticipated Phase-out Management Plan (HPMP) for the accelerated phase –out of HCFCs, which are Ozone Depleting Substances controlled under the Montreal Protocol to the Vienna Convention for the Protection of the Ozone Layer, will take the following measures urgently and immediately:-

11.1 (i) All HCFC-22 plants to destroy HFC-23 produced as a by-product of HCFC-22 production through incineration using an efficient and proven technology such as thermal oxidation.

(ii) All HCFC-22 plants to ensure proper upkeep and maintenance of incineration plants of HFC-23, so that the down time of incineration plants is maintained below 10 per cent.

(iii) All HCFC-22 plants to create and maintain sufficient storage capacity to ensure that all HFC-23 is stored during any authorized incineration shutdown, so that no venting occurs. Under no circumstances HFC – 23 shall be vented in the atmosphere.

(iv) The producers of HCFC – 22 shall, while filing their report on production of Ozone Depleting Substances under Ozone Depleting Substances Rules, 2000, and its amendments, certify the status of HFC – 23 production in each category like being incinerated / used as feedstock / used for any other purpose, on an annual basis.

(v) HFC – 23 may be used as feedstock for production of other chemicals.

11.2 Concerned State Pollution Control Board (SPCB) shall ensure compliance of this order while renewing Consent to Operate or through their regular inspection. Additionally, Central Pollution Control Board and concerned Regional Office of the Ministry shall also ensure compliance.

12. The order comes into force with immediate effect.

13. This issues with the approval of Competent Authority.

Manoj
13.10.16
(Manoj Kumar Singh)
Joint Secretary

To,

- (i) **M/s SRF Limited**, Village & P.O.- Jhiwana, Tehsil-Tijara, District Alwar, Rajasthan-301019.
- (ii) **M/s Gujarat Fluorocarbons Limited**, Plot No. 12 A, GIDC Industrial Area, Dahej, District- Bharuch, Gujarat-392130.
- (iii) **M/s Navin Fluorine International Limited**, Udhana-Navsari Road, Surat, Gujarat-395023.
- (iv) **M/s Chemplast Sanmar Limited**, Mettur Dam RS, Salem District, Tamil Nadu-636 402.
- (v) **M/s Hindustan Fluorocarbons Limited**, Ganesh Gadda, Rudraram, Sangareddy Taluka, District – Telangana-502329.

Copy for kind information:

- (i) PS to ME FCC
- (ii) PS to Secretary (ME FCC)
- (iii) PS to SS (RRR)