

D.O.No. 28016/6/2009-PC-II

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भारत सरकार
 GOVERNMENT OF INDIA
 रसायन और उर्वरक मंत्रालय
 MINISTRY OF CHEMICALS & FERTILIZERS
 रसायन और पेट्रोकेमिकल विभाग
 DEPARTMENT OF CHEMICALS & PETROCHEMICALS
 शास्त्री भवन, डॉ राजेन्द्र प्रसाद रोड़,
 SHASTRI BHAVAN, DR. RAJENDERA PRASAD ROAD,
 नई दिल्ली - 110 001
 NEW DELHI-110001

Dated : 3 July 2009

Dear Sir,

As you are aware, Government has approved the National Policy on Petrochemicals in 2007. The policy, inter alia, ^{आवश्यक} increase investments in the petrochemical sector, both upstream and downstream; increase the competitiveness of the industry through modernization, achieve environmentally sustainable growth through innovative methods of plastic waste management and adoption of latest recycling techniques, etc.

Plastics are per se chemically inert substances and due to their versatility have become a "wonder material". They are contributing to improved quality of life for consumers, ranging from both domestic as well as high-tech engineering applications. For example, the use of plastics in the packaging industry has made hygienic handling of food products possible, as also improved the shelf life of various food products. There are laid down guidelines and rules regarding the thickness, size and use of plastic carry bags but due to the problems associated with their disposal some State Governments have resorted to restrictive measures against plastic carry bags.

The Department of Chemicals and Petrochemicals has prepared its response on issues related to plastic carry bags in the form of a draft note for consideration of Committee of Secretaries which is enclosed herewith. You are requested to provide your comments on the same within 15 days from the issue of this letter. Based on the inputs received from various Ministries, the Note will be finalized and submitted for consideration of Committee of Secretaries.

With regards,

Yours sincerely,

(Neelkamal Darbari)

Shri Vijai Sharma
 Secretary
 Ministry of Environment & Forests
 Paryavaran Bhavan,
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 New Delhi

O/o Secretary (E & F)

Dy. No. 5202/11

Date 10/7/09

No. 28016/6/2009-PC.II
Ministry of Chemicals & Fertilizers
Department of Chemicals & Petrochemical

Copy No
New Delhi, dated ____ July, 2009

NOTE FOR COMMITTEE OF SECRETARIES

Subject: Ban on Plastic Bags

National Policy on Petrochemicals has been approved by Government of India and published in the Gazette of India Extraordinary Part-I on April 30, 2007. The aims of the policy are to increase investments in the petrochemical sector, both upstream and downstream; increase the competitiveness, value addition in the domestic downstream plastic processing industry through modernization, research and development measures and freeing it from structural constraints; achieve environment sustainable growth through innovative methods of plastic waste management and adoption of latest recycling techniques etc.;

2. National Policy on Petrochemicals on Plastics and Environment states (paragraph No. 4.8) that:-

"A policy that aims to increase the per capita consumption of plastics must also devote attention to issues relating to plastic waste disposal and its effect on environment. Plastic conserve natural reserves like wood, metals etc. Plastics are recyclable per se and not harmful to the environment. The presence of carbon and hydrogen in the polymer chains makes it a source for energy recovery. There is need to develop awareness on recyclable properties of plastics and eliminate its littering. Promotion of recycling technology for used plastics may be promoted as a parallel industry. The recycled plastics industries have already made a mark by providing employment in the manufacture of varied consumer products. Research projects are also underway to generate fuel from recycled plastic. Due emphasis will be given to this area. To address environmental problems concerted efforts by the Government, industry and non- government organizations are required for bringing awareness about the proper disposal of plastic wastes and for developing suitable mechanisms for systematic waste collection, recycling and promote products in the non-critical applications".

3. There has been a steady growth in the Petrochemicals sector world over. It is established that globally, ethylene (the main building block for petrochemicals) consumption and polymer consumption in the downstream plastic articles have strong

correlation with the growth of Gross Domestic Products (GDP) and has a multiplier effect on GDP growth. The domestic consumption of polymers in 2007-08 was around 5.8 million tonnes, as compared to the annual global consumption of around 200 million tonnes. The present domestic per capita consumption of polymer is about 5.2 kg per person as against the world average of 25 kg. The domestic petrochemical industry employs about 3.4 million persons both in upstream as well as downstream processing industry.

5. Plastics satisfy various requirements of the mankind due to its versatility in usage from commodity to high performance engineering applications. Plastics being a 'wonder material' has improved the quality of life in the modern society and has become a natural choice in varied applications by virtue of its own merits. In fact plastics have permeated every facet of human life viz. agriculture and water consumption, building construction, communication, small and bulk packaging, education, medicine, transportation, defence, consumer durables to name a few. One major reason for the popularity of plastics has been due to the tremendous range of properties exhibited by them. Besides, their contribution to resource conservation, energy reduction and cost competitiveness, has resulted in an increasing role of plastics in modern living.

6. As per the CPCB report of 1999-2000, on the status of solid waste generation, collection, treatment and disposal in Metro cities, the percentage of various solid wastes in MSW was indicated for 23 cities in India. The average percentage of each category was:- Paper 5.7%, Textile 3.5%, Leather 0.8%, Plastics 3.9%, Metal 1.9, Glass 2.1%, Ash, Fine Earth & Others 40.3%, Compostable Matter 41.80%. The plastic contents in the MSW which are difficult to recycle are those of lower thickness, multi layer flexible laminates/pouches, etc.

7. The methods and technologies for recycling of plastic waste employed depend on the availability and type of plastic to be recycled, level of investment and techno-economic feasibility for recovery of costs. The technologies used for recycling are Mechanical Recycling, Mixed Waste Recycling, Chemical/ Feedstock Recycling, etc. Some new methods being attempted are recovery of liquid/fuel/hydrocarbons, use of plastic wastes in construction of asphalt roads and scientific disposal of wastes in cement kilns etc. Although various technology options for recycling of plastic waste/ scrap are in existence today, it is the indiscriminate littering of plastic material and the issues of organized

segregation/collection/cleaning of plastic waste in urban centers, which appears to be the problem.

8. A chronological sequence of the major initiatives taken by various Ministries/ Departments to tackle the issue of management of plastic waste is as follows:-

(A) National Plastics Waste Management Task Force (1997)

A Task Force was constituted in Sept.1996, by Ministry of Environment and Forest under the chairmanship of Chairman Central Pollution Control Board. The Task Force submitted the report on 22nd August 1997. A copy of the recommendations of the report are at **Annexure 1..**

In the light of the recommendations by the Task Force, the following actions were taken:

I Indian Centre for Plastics in the Environment (1999)

ICPE was setup in 1999 under the Societies Act in the State of Maharashtra. ICPE has participation of Industry Associations, Government and Institutions. The objectives of ICPE include: to encourage, promote and support upgradation of the plastics waste management/plastic industry, environmentally and technologically develop and sustain a respectable and environment - friendly image of the plastics industry, associate and seek cooperation and participation of the plastics industry (raw-material manufacturers, processors, machinery manufacturers, packers), consumers, associations including waste dealers and re-processors, etc. The initiatives taken by ICPE so far are at **Annexure 2.**

II. Bureau of Indian Standards has published the following Indian Standards:

- Guidelines for Recycling of Plastics vide IS 14534: 1998 – which included type of plastic waste / scrap, classification of recycling, identification coding and typical suggested end-products using appropriate types of recycled / reprocessed plastic waste/scrap .(**Refer Annexure 3**).

III. Municipal Solid Wastes (Management and Handling) Rules, 2000

The Ministry of Environment & Forest as per powers conferred under Section 3, 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), notified Rules to regulate the management.

As per these Rules every municipal authority shall, within the territorial area of municipality, be responsible for the implementation of the provisions of these rules, and for any infrastructure development for collection, storage, segregation, transportation,

processing, disposal of municipal solid wastes. The waste processing and disposal facilities to be set up by the municipal authority on their own or through an operator of a facility shall meet the specifications and specified standards. The State Pollution Control Board shall monitor the compliance of the standards.. The Central Pollution Control Board shall co-ordinate with the State Boards and the Committees for the implementation and review of standards.

IV. Recycled Plastic Manufacture and Usage Rules 1999 and amendment in 2003

The Ministry of Environment and Forests, notified the Recycled Plastics Manufacture and Usages Rules, 1999, under the Environment (Protection) Act, 1986. (Refer Annexure 4). Ministry of Environment and Forest has issued the Notification No. SO 705 (E) dated 21.09.1999 and SO 68 (R) dated 17.06.2003 issued under the Environment (Protection) Act, 1986 (29 of 1986) for manufacture of Plastic Carry Bags which stipulates that thickness of plastic bags to be not less than 20 microns. (Annexure 5). The State Governments have been empowered to issue separate Notifications under the Environment (Protection) Act, 1986 (Para 3 A) and they are free to adopt more stringent guidelines in comparison to those issued by the Central Government. Various States have adopted minimum thickness norms which include Punjab 30 microns, Haryana 30 microns, West Bengal 40 microns, Goa 40 microns, Meghalaya 40 microns, Maharashtra 50 microns, Himachal Pradesh 70 microns, etc. Almost all States have imposed a ban on the use of Plastic carry bags and throw away cups etc in places of tourist attraction/Zoos/National Parks. Details are in Annexure 6.

(B) Justice Ranganath Misra, Committee Report (2002)

In the conference of Ministers of Environment and Forests held on January 29-30, 2001, at Coimbatore, it was decided to constitute a committee under the Chairmanship of Shri Ranganath Mishra, Member of the Parliament and former Chief Justice, Supreme Court of India. The Committee was assigned the task of examining the regulations on plastics wastes and to suggest appropriate measures for collection, segregation, treatment and disposal of plastics waste. A report was submitted by the Committee in Feb, 2002 to Ministry of Environment and Forest. A copy of Recommendations made by Committee is at Annexure 7.

(C) Justice Chopra Committee report (May 2008)

In a PIL filed by V.K. Jain against the Government of NCT Delhi before the High Court of Delhi, the Court in its Order dated 19.11.2007 constituted a Committee, with the directions to study the issues relating to environmental hazards including health hazards, arising out of the use of plastics bags in the City of Delhi. The Committee consisting of Justice R.C.Chopra (Retd), Former Judge Delhi High Court, Shri J.M. Mauskar, Chairman, Central Pollution Control Board Shri J.K.Dadoo, Chairman, Delhi Pollution Control Committee, submitted its report in May 2008. (Refer Annexure 8)

(D) Order of Honourable High Court of Delhi dated 7.8.2008:

The High Court of Delhi in the judgment dated 7.8.2008 (Refer Annexure 9) allowed the petition only in part to the following extent:

- i) The respondent Government of NCT of Delhi shall issue a proper notification fixing the minimum thickness of plastic bags at 40 micron in place of 20 micron currently stipulated.
- ii) The respondents, Government of Delhi, the Pollution Control Committee of Delhi and the civic agencies shall take immediate steps for closure of unlicensed recycling units operating from non-conforming areas by using unsound methods for recycling of plastic bags.
- iii) Government of India shall expedite the constitution of the committee for verifying protocols for degradable and biodegradable plastics in India if the same has not already been done.
- iv) Government of NCT of Delhi shall issue an appropriate notification forbidding use of plastic bags in the main markets and local shopping centre apart from hotels, hospitals and malls where use of such bags is already forbidden.

(E) Notification 7th January 2009 by Government of NCT Delhi

Subsequent to the above order, Delhi Government vide Notification dated 7.1.2009 announced a ban on the use, sale and storage of all kinds of plastics bags. (Refer Annexure 10)

(F) Writ Petitions in High Court of Kerala

Writ Petition (c) 13759/08 & Writ Petition (c) 15307/08 filed by the Kerala Plastic Manufacturers Association before the High Court of Kerala during 2008, in which

proceedings are going on. The petitioners are the manufacturers of plastic carry bags and plastic containers and are aggrieved by the notification issued by the Kerala State Pollution Control Board dated 29th March 2008 whereby the minimum thickness of plastic carry bags and containers was revised from 30 microns to 50 microns.

10. In the context of the above, the Department of Chemicals and Petrochemicals would like to emphasize that plastic bags are a preferred medium of packing world-wide due to their inherent advantages. Some of the notable advantages of plastic bags are summarized in **Annexure 11**.

11. Considering all aspects of the matter, Department of Chemicals and Petrochemicals would like submit the following for consideration:

- The ban imposed by Government of NCR Delhi on use of plastic carry bags is an extreme step. While the need to regulate the thickness and size of plastic carry bags cannot be disputed, a complete ban on its use is neither desirable nor practicable considering the various advantages in use of plastics, as enumerated in Annexure 14. The larger issue of solid waste management has got ignored while plastic waste has got undue attention. India has a strong plastic recycling industry, with over 30 % of total consumption being recycled. This is amongst the highest in the world. In view of this a balanced approach is required, and the Government of NCR Delhi may be requested to lift the ban and put in place a deterrent mechanism based on minimum thickness, dimensions and quality of plastic carry bags. At the same time they may launch a campaign to educate the people of Delhi to be responsible citizens and say no to littering.
- Over the past few decades, the **use of plastics in disposable consumer goods** has grown tremendously. This growth has also been proving to be a burden on the waste disposal system. With increased economic development and higher disposable incomes, there have been changes in the life style of the consumers. More and more young people with higher compensation packages are creating a retail boom. The higher consumption of goods have also led to larger quantities of plastics being used as packaging materials etc. With the economy still growing at around 6 % (likely to resume to a double digit growth after global trends improve)

this tendency of higher consumerism is going to increase exponentially, leading to more generation of plastic wastes. Hence plastic waste management is the answer rather than banning its use in one form or another. More affluent economies have similar consumerism and related plastic waste generation patterns. Based on the practices in vogue in many developed countries in which the consumer ultimately pays for the disposal of the plastic waste, some options are available regarding levying of a charge on each consumer good having a significant plastics content or those that use plastics as packaging material. Similarly, a charge could be levied on the use of plastic carry bags and other plastic packaging material at the time of purchase, which would encourage buyers to re-use such bags or dispose them off in a systematic manner. The amount so collected could be used for the management of plastic waste in the country. The mechanism for levying and collecting this extra cost e.g. a 'Disposal Charge' as done by other countries could be an option. Alternatively, setting up of a Plastic Waste Reprocessing Fund could be considered (just as Educational Cess), where funds are made available by way of levying a charge @ 0.5 % on the manufacture and import of plastics in the country. Ultimately, it would be the consumer who would bear the impact of this Cess. The funds so generated could be used in promoting plastic waste management schemes/projects.

- The Ministry of Environment and Forests vide notifications issued in 1999 and 2003 under the Environmental Protection Act 1986 has specified that the **minimum thickness** of carry bags made of virgin plastics or recycled plastics shall not be less than 20 microns with size not less than 8x12 inches (20x30 cm). The Environmental Protection Act, 1986, Para 3-A empowers the State Pollution Control Boards to specify more stringent standards for the relevant parameters with respect to specific industry or locations after recording reasons thereof in writing. Accordingly, there is presently a wide variation in the thickness/specifications of plastic carry bags notified by the State Governments. For example, a state like Punjab has adopted a higher minimum thickness norm like Punjab 30 microns. In Haryana it is 30 microns, in West Bengal it is 40 microns, in Goa it is 40 microns, in Meghalaya it is 40 microns, in Maharashtra it is 50 microns, in Himachal Pradesh it is 70 microns, etc. There is no scientific study to corroborate any of these

thickness standards, and the rationale for the same is just the common perception regarding the economic viability of its collection and segregation. NEERI in its study of 2005 indicated that the purpose of laying down the 20 micron thickness rule was that these plastics would be recyclable and therefore will be picked up mostly at source by the population or rag-pickers. But poor enforcement has ensured that these are not being picked up and are landing at landfill sites. NEERI has further indicated that on an average plastics occupy 8-9 times space per unit of weight and hence create a problem at landfill sites which have limited space in cities like Mumbai, Delhi etc. It is felt that MOEF should lay down specifications on the minimum thickness and dimensions, keeping in mind the economic viability of segregation of plastic bags at source. A thickness of 60 microns could be considered for plastic bags manufactured from virgin and recycled plastics with dimensions of the carry bags not being less than 12 X 18 inches (30 X 45 cm). The said notification could be issued under the Environment Protection Act 1986.

- Problems are faced by the enforcement agencies, i.e. Central Pollution Control Board and State Pollution Control Boards, in monitoring and enforcing the regulations on the **thickness of plastic bags**. To overcome this, it may be desirable to mandate printing of address of the manufacturers on each carry bags, along with basic information regarding CPCB/ State Pollution Control Board registration number, size, grade and thickness of the bags, so that the non-conforming units could be proceeded against.
- Guidelines for **recycling of plastics** have been issued by Bureau of Indian Standards (IS 14534:1998) which include adoption of identification/symbol for the use of particular polymer material by the manufacturer of plastic end products. The fact that a certain bag has been made of recycled plastics and the number of times it has been recycled, should be clearly brought out in a symbol form on the bag, as laid down in BIS Guidelines. This will help the re-processors to identify the quality of plastic waste to be recycled. The typical end products using appropriate type of recycled/reprocessed plastic waste/scrap has also been suggested in the above said specifications. These guidelines have been incorporated in Recycled Plastic Manufacture and Usage Rules, 1999 (amended in 2003 by MOEF). **Mandation** of the above guidelines will regulate the market and help in creating consumer

awareness also. **Plastic bags manufactured from recycled plastic materials should be mandated for use in the manufacture of dustbins and garbage containers, bin-liners etc.**

- Reservation of plastic items under the **Small Scale Industries** list includes currently, polyethylene films less than 0.1 mm (100 micron) and product of polyethylene film [30350101 & 30350102], which are reserved for exclusive manufacture in the small scale sector. Plastic bags are manufactured from such polyethylene films. Due to protection available by virtue of reservation of these items in SSI list, there is lack of competitiveness in the sector which allows obsolescence and lack of effective regulation. De-reservation of these items will help in increasing the competitiveness of Indian industry and enable the manufacturers to adopt higher end technologies in the manufacture of plastic bags. At the same time they could be effectively regulated.
- State governments/civic agencies may be directed to take immediate steps for **closure of unregistered recycling units** that use unsound methods for recycling and those operating in non-conforming areas as per the directives of State Director of Industries.
- **Municipal wastes**, of which plastic wastes also form a constituent, are being handled by local bodies/local self governments. The Municipal Solid Wastes (Management and Handling) Rules, 2000 dated 25.09.2000 notified by Ministry of Environment and Forest are applicable to every Municipal Authority responsible for collection, segregation, storage, transportation, processing and disposal of municipal solid waste. The municipal solid wastes also include certain percentage of plastic waste, which needs proper reprocessing instead of making it part of landfill. The plastic waste needs to be segregated and sent to recycling/plastic waste management centers using appropriate technologies. This can be achieved through a properly devised collection system based on public-private partnership and community participation, including RWAs. Presently, technologies are available which involve mechanical recycling into products, conversion through chemical processing of plastic wastes to basic raw materials or fuel or for use in bitumen, and incineration of plastic wastes to generate energy. Each State must promote specific projects for plastic waste management which could use

appropriate recycling technology depending upon the variety and quantum of plastic waste available. Government of India could assist the States in setting up such reprocessing facilities, by providing assistance in the form of Credit Linked Capital Incentives and other fiscal incentives to be worked out by DCPC.

- The current awareness campaign through advertisements/hoardings promotes banning of plastic without suggesting any alternative. There is a need for **promoting awareness** for segregation at source of various recyclable materials including plastic waste for which the appropriate recycling technology options and effective solid waste management principles can be adopted for the benefit of the society. Mandatory prohibition against littering and strict enforcement of the same would provide long-term solutions. Nuisance Detection Squads need to be formed through NGO involvement for building awareness and also for nuisance detection. One of the proactive ways to dissuade people from indulging in littering would be to impose heavy fines or go through mandatory 2-3 hours of awareness video screening at pre-designated locations in the cities.

12. This note has been circulated to Ministry of Environment and Forests, Ministry of Urban Development, Department of Commerce, Department of Industrial Policy and Promotion, Department of Economic Affairs, Ministry of Consumer Affairs, Ministry of Small & Medium Enterprises, Ministry of Food Processing Industries, Department of Science and Technology, Planning Commission, Department of Agriculture and Co-operation, Ministry of Textiles, Ministry of Labour, Ministry of Road Transport & Highways, Ministry of Petroleum & Natural Gas, Department of Legal Affairs, and Government of NCR Delhi.

13. The specific points on which the recommendations of the Committee of Secretaries are solicited are as follows:

- 1) Ministry of Environment & Forests to put in place stipulations, and a deterrent mechanism as far as plastics carry bags are concerned, for a **uniform specification** on the minimum thickness, dimensions and quality. A minimum thickness of 60 microns and dimensions not less than 12 X 18 inches (30 X 45 cm) for plastic bags, manufactured from both virgin and recycled plastics could be considered by way of necessary amendments in the Rules framed under the Environment Protection Act 1986.

- 2) Government of National Capital Territory of Delhi should be requested to lift the ban on Plastic carry Bags and other restrictive measures. They could, instead, launch a drive to educate the citizen of Delhi against littering
- 3) A review is required to be made of the implementation of Recycled Plastic Manufacture and Usage Rules, 1999 (amended in 2003 by MOEF) framed under the Environment Protection Act 1986, stipulating adherence to guidelines for **recycling of plastics** issued by Bureau of Indian Standards (IS 14534:1998). MoE&F may in consultation with Bureau of Indian Standards consider to lay down mandatory colour code and markers for bio-degradable and recyclable bags separately for each source material.
- 4) Strict implementation of the existing provisions on **registration** of plastic manufacturers and recyclers is required. A time limit, of say three months, may be given by Mo E & F to all such units to get themselves registered. Thereafter, they may carry out a review of unregistered plastic recycling units that use unsound methods for recycling and take appropriate action.
- 5) Ministry of Urban Development to ensure proper **collection, segregation and storage** of plastic wastes, and efficient transportation and processing through the involvement of RWAs, NGOs, Local Municipal Authorities, Private entities, etc. This could be done through various ongoing programs of the Government including the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), or a special scheme could be launched for the purpose in consultations with stakeholders, including Central Pollution Control Board, Central Institute of Plastic Engineering and Technology and Department of Chemicals & Petrochemicals and the concerned State Governments. Awareness building programmes, along with formation of Nuisance Detection Squads could also be taken up in a more structured form.
- 6) A **Plastic Waste Reprocessing Fund** (on the pattern of Education Cess) be created by levying a charge @ 0.5 % on manufactured price of polymers produced or imported into the country. This fund would be utilized in promoting the setting up of plastic waste reprocessing units based on chemical reprocessing for which an administrative mechanism under the DCPC will be created. DCPC has drafted a scheme for creation and management of the Fund (**Annexure 12**) and further

refinement of the same will be carried out on completion of the consultation process with other Departments.

7) Ministry of Small and Medium Scale Enterprises should be requested to de-reserve polyethylene films less than 0.1 mm (100 micron) and products of polyethylene film [30350101 & 30350102] from the list of items reserved for exclusive manufacture in the small scale sector.

14. This note has the approval of Secretary Department of Chemicals and Petrochemicals.

(Surjit Bhujabal)

Director

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Dated July, 2009
