



# ENVIS Madhya Pradesh Newsletter

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**Dear Readers,**

This newsletter for the quarter April- June, 2009 has been compiled by the ENVIS Centre Madhya Pradesh on the hazardous waste management.

In addition to releasing gases and particles into the atmosphere, humans produce waste that is dumped on the environment. Often, this waste is hazardous and dangerous to both nature and human life. The levels of dangerous wastes continue to grow. Industries and individuals continue to be largely unaware of this major environmental problem. As a result, many people and industries are failing to prevent the creation of hazardous waste or to limit the negative effects it produces.

Individuals often throw out goods without realizing that they are headed for a landfill and could be dangerous for the environment. No matter where people put these hazardous waste materials, there is always a chance that they could find their way into the ground, and eventually into our bodies.

Corporations usually want to avoid the costs associated with having to limit creation of hazardous waste. Consequently, they build landfills on site and fill them with waste, or sometimes pay to have their waste removed. Often, hazardous materials are transported to areas that accept money to take the waste.

It may prove very difficult to reduce hazardous waste in the future. Unlike many other environmental problems, waste creation is something people do not often think about. In the future, people may have to reduce not only their generation of hazardous waste, but also their consumption of many products that end up in landfills.

We hope the information provided in this issue would be useful to voluntary groups, government agencies, educational institutions, researchers and all those actively engaged in environmental conservation.

**ENVIS - MP**

## PREAMBLE

India is the second most populous country, which has about 16% of the world population and 25% of the land area. Rapid industrialization last few decades have led to the depletion of pollution of precious natural resources in India depletes and pollutes resources continuously. Further the rapid industrial developments have, also, led to the generation of huge quantities of hazardous wastes, which have further aggravated the environmental problems in the country by depleting and polluting natural resources. Therefore, rational and sustainable utilization of natural resources and its protection from toxic releases is vital for sustainable socio-economic development.

Hazardous waste management is a new concept for most of the Asian countries including India. The lack of technical and financial resources and the regulatory control for the management of hazardous wastes in the past had led to the unscientific disposal of hazardous wastes in India, which posed serious risks to human, animal and plant life.

In order to manage hazardous waste (HW), mainly solids, semi-solid and other Industrial wastes which are not covered by the Water & Air Acts, and also to enable the authorities to control handling, treatment, transport and disposal of waste in an environmentally sound manner, Ministry of Environment & Forests (MoEF). Government of India notified the Hazardous Waste (Management & Handling) Rules (HWM Rules) on July 28, 1989 under the provisions of the Environment (Protection) Act, 1986 and was further amended in the year 2000 & 2003. These amendments enable to identify hazardous wastes by means of industrial processes and waste streams in Schedule I and also by way of concentrations of specified constituents of the hazardous waste in Schedule II. Categories of wastes banned for export and import have also been defined (Schedule-8) The procedure for registration of the recyclers /reprocessors with environmentally sound facilities for processing waste categories such as used lead acid batteries, non-ferrous metal and used oil as contained in schedule-4 and schedule-5 respectively has also been laid down.

Further, separate Rules have also been notified in continuation of the above Rules for bio-medical wastes as well as used lead acid batteries.

## Hazardous Wastes Management in Madhya Pradesh

The important role of industries in the growth and development of India was realized in the early years of independence. To encourage industrialization in selected areas and to curb unplanned growth of industries, the industrial estates that is, clusters of industries at a designated site with appropriate infrastructure facilities, have been set up in different parts of the countries.

In Madhya Pradesh there are about 119 industrial areas distributed in 50 districts of the State. The present report is an inventory of hazardous waste management in the State. The compilation of the report has been carried out in view of the rules and the directions received from the Ministry of Environment & Forests, New Delhi and the Central Pollution Control Board, Delhi. Various aspects covered in this report are: -

- General information and salient features of the hazardous wastes (management, handling & trans boundary movement) Rules, 2008.
- Brief of the hazardous waste Management Division at M.P. Pollution Control Board and the procedures adopted for grant/renewal of Authorization.
- District-wise information on hazardous waste generating industries.
- Quantification and segregation of generated hazardous wastes based on their disposal practices.

- Statistical analysis of the hazardous waste being generated in the State.
- Details of the common treatment, storage & disposal facility of the State.
- Brief of the captive hazardous waste disposal facilities in the State.

### General Information

Environmental Protection Act (EPA) 1986 takes care of hazardous waste and its management. The Ministry of Environment & Forests (Govt. of India), notified Hazardous Waste (M&H) Rules 1989 on 28th July, 1989. Latter on these rules were amended in 2000 (notified on 6th January, 2000) and 2003. (Notified on May 23, 2003).

Recently, The Ministry of Environment and Forests, in exercise of the powers conferred by section 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) and in supersession of the Hazardous Wastes (Management and Handling) Rules, 1989 notified new Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 on dated 24th September, 2008.

### Salient Features of the Hazardous Wastes Rules

As per the rules "hazardous waste" means any waste which by reason of any of its physical, chemical, reactive, toxic, inflammable, explosive or corrosive

characteristics that causes danger or is likely to cause danger to the public health or environment, whether alone or when in contact with other wastes or substances.

- Hazardous waste includes:

(a) The wastes specified under column (3) of Schedule-I,

(b) Wastes having constituents specified in Schedule-II if their concentration is equal to or more than the limit indicated in the said Schedule; and

(c) Wastes listed in part 'A' and part 'B' of Schedule-III in respect of import or export of such wastes in accordance with rules 12,13, and 14 or the wastes other than those specified in part A or part B, if they possess any of the hazardous characteristics specified in part C, of the Schedule.

- As per these rules, any occupier generating hazardous wastes is required to take all practical steps to ensure that such wastes are properly handled and disposed off without any adverse effects, which may result from such wastes and the occupier shall also be responsible for proper collection, reception, treatment, storage and disposal of these wastes either himself or through the operator of a facility.

- Every person who is engaged in generation, processing, treatment, package, storage, transportation, use, collection, destruction, conversion, and offering for sale, transfer or the like of the hazardous waste is required to obtain an authorization from the State Pollution Control Board.

- The State Pollution Control Board should not issue an authorization unless satisfied that the operator of a facility or an occupier, as the case may be, possesses appropriate facilities, technical capabilities and equipment to handle hazardous wastes safely.

- The inclusion of waste containing in Schedule-I does not preclude the use of Schedule-II to demonstrate that the waste is not hazardous. In case of dispute, the matter would be referred to the Technical Review Committee constituted by Ministry of Environment and Forests.

The high volume low effect wastes such as fly ash, phosphogypsum, red mud, slags from pyrometallurgical operations, mine tailing and ore beneficiation rejects are excluded from the category of hazardous wastes. Separate guidelines on the management of these wastes shall be issued by the Central Pollution Control Board.

## Responsibilities of Entrepreneurs

- To obtain Authorization from SPCBs for generation, processing, treatment, package, storage, transportation, use, collection, destruction, conversion, offering for sale and transfer of the like of the hazardous wastes.
- To comply with terms & conditions laid down in the authorization pertaining to the management of hazardous wastes.
- To submit the requisite information in the prescribed formats to the Board.
- To maintain the up to date record of generated hazardous wastes.
- To submit the manifest regarding transportation of hazardous wastes.
- To apply for renewal on expiry of the validity of authorization.

## Hazardous Waste Management Cell at Madhya Pradesh Pollution Control Board

Madhya Pradesh Pollution Control Board has established a separate cell for this purpose named as "Hazardous Substance Management Division" (HSMD) at Head Office level. The head office is supported with a network of Regional Offices across the State for

regular vigil on the Industries and issues authorization/ renewal to large and medium scale industries, while authorization to small-scale industries is issued by Regional Office.

## Authorization Procedure

### 1. Inputs from industry:

- Form- I from the industry completely filled.
- Questionnaire/inventory from the industry.
- Administrative expenses.

### 2. Procedure:

- Scrutiny at Head Office level.
- Inspection report from the Regional Office.
- Waste quantification.
- Waste characterization.
- Compliance of Rules 5.

### 3. Issuance of Authorization.

## Renewal of Authorization

- Application for renewal is to be made before the expiry of its term.

### 1. Inputs from industry:

- Form-1 from the industry completely filled.
- Requisite administrative fee.
- Form-4.
- Form-13.
- Latest inventory of the hazardous wastes generated by the industry.

## 2. Procedure:

- Industry's compliance with the terms & conditions laid down in the authorization.
- Submissions of manifest documents, annual returns regarding generation/disposal of hazardous wastes etc.)
- Proper record keeping of hazardous wastes.
- Efforts made for minimization of hazardous wastes (If applicable)
- Timely implementation of the directions issued from time to time in context to management of hazardous wastes.

- Inspection report from the Regional Office.
- Compliance of Rules 5.

## Issuance of Renewal of Authorization

### Laboratory for the analysis of hazardous wastes samples

M.P. Pollution Control Board has developed a laboratory for characterization of hazardous wastes at its Research Center, Bhopal. This laboratory has been recognized under Environment (Protection) Act, 1986 and is carrying out the analysis of hazardous wastes samples.

## Scenario of the Hazardous Waste Generating Industries in Madhya Pradesh

In Madhya Pradesh 1319 units have been accorded authorization, which includes industrial establishment involved in production activities and the non-industrial establishments such as printing press, oil depots, hotel, hospitals and education institutions. All these units either have installed DG-sets or storing petroleum products and thus generating used oil waste as hazardous waste owing to which these units have been covered under the Rules and granted authorization. Region wise hazardous waste generated by the units of Madhya Pradesh in metric tonnes (MT) is presented in the tables below: -

| S. No. | Regional Office | S.L.F. (MT)      | Reuse/Sale (MT)     | Incineration (MT) | Total (MT)          |
|--------|-----------------|------------------|---------------------|-------------------|---------------------|
| 1.     | Bhopal          | 2261.363         | 17834.2869          | 1230.39           | 21326.0399          |
| 2.     | Dhar            | 2197.2365        | 60471.0328          | 361.965           | 63030.2343          |
| 3.     | Guna            | 698.84           | 1799.6908           | 0.0               | 2498.5308           |
| 4.     | Gwalior         | 1023.565         | 1402.716            | 26.7385           | 2453.0195           |
| 5.     | Indore          | 2133.516         | 5292.56732          | 51.727            | 7477.80132          |
| 6.     | Jabalpur        | 2033.446         | 22636.3226          | 0.72              | 24670.488           |
| 7.     | Sagar           | 0.0              | 154.4307            | 0.0               | 154.4307            |
| 8.     | Satna           | 2708.59          | 692.4231            | 40.0              | 3441.0131           |
| 9.     | Rewa            | 1888.758         | 10897.7695          | 16.312            | 12802.8395          |
| 10.    | Ujjain          | 19688.0345       | 9336.0142           | 1715.665          | 30739.7137          |
|        | <b>Total</b>    | <b>34633.349</b> | <b>130517.25392</b> | <b>3443.5175</b>  | <b>168594.11082</b> |

## Common TSDF

Common Treatment, Storage and Disposal Facility has been constructed and has become operational from November 2006, at Plot No. 104, Industrial Area No. II, Pithampur Distt. Dhar (M.P), by M/s. M.P. Waste Management Facility (A group of M/s. Ramky Enviro Engineers Ltd. Hyderabad) on BOOT basis.

### **The TSDF has following facilities:**

1. Temporary storage area for storage of wastes.
2. Solidification/stabilization.
3. Incineration. (Under installation)
4. Secured land fill.
5. SEP for leachates.
6. Lab for analytical purposes.
7. Other facilities such as weigh bridge, tyre wash area etc.

The TSDF is designed to dispose following wastes for 20 years:-

- Direct land fill. - 50,000 MT./Y
- Solidification/stabilization followed by land fill - 20,000 MT/Y
- Incineration (Under Installation) - 20,000 MT/Y

Till March 2009 about 33,409.912 MT of hazardous waste has been disposed off in the facility.

## Captive Disposal Facilities

In M. P., following 10 units have their own Captive Secured Land Fill facility: -

- M/s. Grasim Industries Ltd., Nagda.
- M/s. Hukumchand Jute Industries (Amlai)Shahdol.
- M/s. Century Denim, Khargone.
- M/s. RPG Transmission Ltd., Jabalpur.
- M/s. Lupin (Mandideep),Raisen
- M/s. Telecom Ltd., Richhai,Jabalpur under construction.
- M/s. Eternti Everest , Kymore.
- M/s. Ranbaxy, Dewas

- M/s. Bhansali Engineering Polymer Ltd., (Sousar) Chhindwara.
- M/s. Hotline (CPT), Malanpur, Bhind.

**Captive Incineration facilities: -**

In M. P., following 12 units have installed captive incinerators for incinerating wastes: -

- M/s. Kinetic Motors, Pithampur, Dhar
- M/s. Eicher Motors, Pithampur, Dhar
- M/s. Birla Ericsson, Rewa
- M/s. Vindhya Telelinks, Rewa
- M/s. Lupin Industries, Mandideep, Raisen.
- M/s. ICPA Lab., Ratlam
- M/s. Ranbaxy, Dewas
- M/s. Premier Industries, Sousar, Chhindwara
- M/s. Gwalior Chemicals, Nagda
- M/s. Force Motors, Pithampur, Dhar
- M/s National Steel CRM Div. Ghatabillod, Dhar
- M/s Ruchi Strips, Ghatabillod Dhar.

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