

# <u>Acknowledgement</u>

MPC Board is very thankful to Member Secretary, CPCB and HSM Division CPCB to promote and extending financial assistance to organize workshop for Mass awareness on implementation of Battery (Management & Handling) Rules, 2001. Board is also thankful to Mr. B. R. Naidu for sharing his precious knowledge with all the participants.

We are thankful from our bottom of heart to all the team of M/s. Exide industries Ltd., for making the workshop successful with their kind cooperation. we are giving our warm thanks who have helped us directly or indirectly in making workshop successful. Lastly, we are giving special thanks to all the participants who have encouraged us with their presence.

MPC Board will always look forward for the clean environment by arranging such awareness programmes to educate entrepreneurs as well as to society.

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# Report on Workshop for Mass Awareness on Implementation of Battery (Management & Handling) Rules, 2001

Maharashtra Pollution Control Board (MPCB) in association with Central Pollution Control Board (CPCB) have organized workshop on "Mass Awareness on Implementation of Battery (Management & Handling) Rules, 2001 on 6<sup>th</sup> March, 2009 at Pritam Hotel, Dadar, Mumbai.

Dr. Y. B. Sontakke, Regional Officer (HQ) I/C HSMD, MPCB briefed importance of this workshop. The lead metal is used since 6500 BC and because of its low melting point and cheap in cost and good connectivity. It is widely used in batteries. But when lead enters in bio-system it act as neurotoxin. Hence, it is need of the day to recycle batteries through authorized recycler to avoid exposure to poor people.

The workshop inauguration ceremony had carried out by **Shri. Sanjay Khandare, IAS, Member Secretary, MPCB**. The distinguished guests present for ceremony were Hon'ble T.V. Ramnathan, M.D. & C.A.O. of M/s. Exide Industries Ltd., and Shri. Naidu, Zonal Officer, CPCB.

Shri. Sanjay Khandare, Member Secretary firstly addressed to the invitees he welcomed all to this one day workshop on "Mass awareness of Implementation of the Lead Acid Batteries (Management and Handling) Rules, 2001".

In his speech he elaborated that, lead acid batteries contain sulphuric acid and large amounts of lead. The acid is extremely corrosive and also good carrier for soluble lead and lead particulate. If the acid leaks on to the ground, it may contaminate and the soil and then the soil will become a source of lead particulate as the solution dries out and the lead becomes incorporated into soil particles which may be blown by wind or raised by vehicle transit.

Lead is a highly toxic metal that produces range of adverse health effect particularly in young children. Exposure to excessive levels of lead

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can cause brain damage; affect child's growth, damage kidneys; impair hearing, cause vomiting, headaches and appetite loss like this so many problems.

Lead acid batteries contain components that have the ability to cause serious environmental contamination but the lead in old acid batteries should be recovered and reused.

Lead Acid Battery Rules was introduced in 2001. This rule represents a major step forward in the effort to facilitate the recycling of nickel-cadmium and lead-acid rechargeable batteries. For implementation of Battery rules effectively in the country for the collection, storage, and transportation of batteries covered by the Battery Rules 2001. Public education program on battery recycling and the proper handling and disposal of used batteries required to consult with manufacturers and retailers to carry out this initiative.

At present, approximately 73 percent of municipal solid waste is either land filled or incinerated. Neither of these methods is ideally suited for batteries that contain heavy Metals. In landfills, especially those without liners and controls, heavy metals have the potential to leach slowly into soil, ground water, and surface water. When incinerated, metals such as cadmium and lead can concentrate in the ash produced by combustion and enter the atmosphere through incinerator smokestack emissions. When disposed of, the metals in the incinerator ash can leach into the environment. In the environment, certain types of heavy metals can also concentrate in the tissues of organisms and make their way up the food chain. Several metals, such as cadmium, are known carcinogens. The possible health effects associated with ingestion or inhalation of water, food, or air that has been contaminated with high levels of heavy metals range from headaches and abdominal discomfort to seizures, cancer, comas, and even death. The severity of the health effects are usually dependent on the total concentration of the metals to which one is exposed over time recycling programs for Ni-Cd and Lead acid batteries can address the potential risks posed by land filling or Incinerating these

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batteries by diverting them from the waste stream. In the case of battery recycling, metals are recovered from the used batteries.

A public education program can heighten awareness of the recycling program, involve more individuals and businesses, and increase the number of batteries collected.

There were 58 nos. of Assemblers and Re-conditioners, 268 nos. of dealers, 50 nos. of importers, 18 nos. of recyclers and 71 nos. of Bulk Consumers of the lead acid batteries in Maharashtra. The various responsibilities of the this toxic waste management and handling are also goes to the Manufacturer, Importer, Assembler and Re-conditioner, Dealers, Recycler, Consumer or Bulk Consumer & Auctioneer of the Lead acid batteries.

As the Indian economy has grown, new types of hazardous waste are now becoming a concern. Electronic & electrical waste is one such example. biomedical waste and municipal solid waste also need priority, especially for improvement in urban areas.

Landfills and incineration are only partial solution to the problem. Use of newer technologies to minimize the waste generation, recycle and reuse of waste remain the key objectives for a meaningful and long-term solution.

In the inclusion he wished to say that the awareness among the peoples about the use and reuse of lead acid batteries needs to be elaborated for protecting the bio-diversity.

Then the workshop started with the technical session which is presented by Shri. D. T. Devale, Sr. Law Officer, MPCB on 'BMHR implementation and General overview' and Dr. Y. B. Sontakke, Regional Officer, MPCB on 'Role of Pollution Control Board in effective implementation'. Shri. B. R. Naidu of CPCB explained the replications of rules and schedules. He elaborated the health impacts which are well known and established fact. He also draws attention on the economic exception for recycler.

Similarly some technical presentations also represented from M/s. Exide Industries, M/s. Tata Batteries, M/s. BUI Group, Pune and Small Scale Battery Manufacturing Association.

MPCB Official highlighted in particular the need for effective implementation of the rule and the hazards posed due to unscientific disposals/recycling.

It was also brought to notice the notice by MPCB officials on the need for change in approach from "Manufacturer to User" to "User to Manufacturer" so that the missing link can be effectively addressed. It was principally agreed to convey the need for restructuring of taxation. The need for public awareness through public campaigning videos, films were agreed upon by MPCB and industries.

Finally the workshop was concluded by Open House discussion and question answer session, in which participants dealers conveyed their concern over the implementation of the Rules.

The media participation by Star TV and Doordarshan personals were not only attended the programme but also taken serious note of this workshop in the interest of the saving the lives of common man from threat of heath hazards being caused due to toxic pollutants like lead.

Concluding with the note that workshop was spontaneous response & attendance which may be a positive step towards implementation of the Battery (Management & Handling) Rules, 2001 with participation from all stakeholders.

# Programme Schedule

09.45-10.00	Registration	
10.00-10.15	Welcome	Dr. Y. B. Sontakke, Regional Officer (HQ), MPCB.
10.15-10.30	Key Note address	Shri. Sanjay Khandare, IAS, Member Secretary, MPCB
10.30- 10.40	Inaugural address	Valsa R. Nair Singh, IAS, Chairperson, MPCB.
10.40-10.50	Views from industries	T. V. Ramnathan, All India Batteries Manufacturers Association
10.50-11.20	Action plan for effective implementation	B. R. Naidu, CPCB
11.20-11.40	Tea Break	
Technical Sess	1	
11.40-12.00	BMHR implementation and General overview	Shri. D. T. Devle, Sr. law Officer, MPCB
12.00-12.30	Role of Pollution Control Board in effective implementation	Dr. Y. B. Sontakke, Regional Officer (HQ), MPCB.
12.30-01.00	BMHRimplementationScenariofromindustry,progress,Issuesandconstraints.	
01.00-02.00	Lunch Break	
Technical Sess		
02.00-02.30	Initiative in implementation of BMHR.	Shri. Laik Ahmed
02.30-03.00	BMHR implementation Scenario from small scale/ medium industries	
03.00- 03.15	Tea Break	
03.1504.30	Issues and constraints in effective implementation for Recyclers/ Dealers/ Importers/ Bulk Consumers/Auctioneer.	Open house discussions
04.30-05.00	Summing- up,	Question & answer session
05.00-05.10	Vote of Thanks	

### **Recommendations:**

1) During the question and answer while summing up the workshop several participants have raised the issue of responsibility of dealers in the process of implementation of BMHR and in the provisions of the rule all the manufacturers are kept responsible for submitting the returns to the SPCB. It was also raised that dealers shall be authorized by State Pollution Control Board and are made mandatory to file 6 monthly returns to the SPCB for streamlining the process.

The specific software for implementation of these rules can be made available for on line filing of returns by respective SPCBs.

2) There shall be covering of many awareness campaigns at least at district levels and if possible it should be conducted at Tahsil level. The issue was discussed and decided that the concern Association shall conduct these awareness campaigns and Officers from Local MPCB office will be attend it. The expenses incurred in conducting such workshops shall be borne by concern Association and MPCB in equally portion.

3) The issue of unauthorized smelters is found to be important; one being authorized smelters is taking all permissions and enough care to handle toxic metals and chemicals. However without adequate pollution control arrangements and permissions on other hand unauthorized smelters are enjoying the business is obviously discouraging factor for authorized dealers. It was concluded that MPCB will take necessary legal actions if somebody found operating such units. It was also appealed that the authorized smelters and stakeholders of the implementation of BMHR shall inform such things to the authority for further necessary legal action.

4) The imported batteries are recorded and permission is granted by the Authority but after importing no batteries are taken back from the dealers/end users and there is no binding for collecting back imported batteries. All the importers shall be made compulsory to file half yearly returns regularly.

5) There should be some provision for reporting bulk manufacturers to the MPCB for non-submission of the returns by dealers.

6) There should be some consideration for exemption in Excise duty and VAT for recovered batteries of used battery recovery.

7) While collecting the used batteries dealers and concern stakeholders shall take enough care for storage of used batteries. The special arrangements for storage of spent acid generated from emptying the batteries shall be stored in an acid proof container and shall be handed over to the reprocessor of spent acid.

8) The UPS used in computers and other electrical equipments shall be recorded and record of imported UPS shall be maintained at specific levels at present there is no provision for filing any kind of returns for UPS.

9) The penalty shall be fix in the principle of polluters pay and shall be applied all defaulters in implementation of the BMHR rule.

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1. Workshop for Mass awareness on implementation of Battery (Management & Handling) Rules, 2001



2. Registration of the Participants and handing over workshop course material to participants



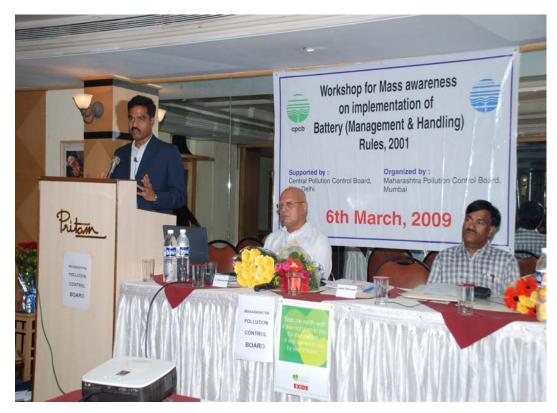
3. Enlightening lamp during inauguration of the workshop by Mr. Sanjay Khandare, Member Secretary, MPC, Board



4. Mr. Devale D. T., Sr. Law Officer, Enlightening lamp during inauguration of the workshop



5. Welcome of Mr. Sanjay Khandare, Member Secretary by Dr. Y. B. Sontakke, Regional Officer (HQ), MPC Board.



6. Inaugural Speech by Mr. Sanjay Khandare, Member Secretary, MPC Board and on disc Mr. Ramnathan, All India Batteries Large Scale Manufacturers & CEO, Exide Industries Ltd., Mr. B. R. Naidu, Zonal Officer, CPCB.



7. Addressing CPCB views on BMHR & its implementation by Mr. B. R. Naidu, Zonal Officer, CPCB, Vadadara.



8. Brief introduction of workshop by Dr. Y. B. Sontakke, Regional Officer (HQ), MPC Board



9. Addressing Large scale manufacturers by Mr. Ramnathan, All India Batteries Large Scale Manufacturers & CEO, Exide Industries Ltd



10. Presentation made by Exide Industries Ltd., Bulk Manufacturer.



11. Interview and brief of importance of workshop to soft media (Doordarshan), Mr. Sanjay Khandare, Member Secretary, MPC Board.



12. Presentation made by Tata Auto comp GY Batteries Pvt. Ltd, Pune, Bulk Manufacturer.



13. Interview and brief of importance of workshop to soft media (Doordarshan), Mr. Sanjay Khandare, Member Secretary, MPC Board.



14. Welcome of Mr. Shantilal Vora, Small scale manufacturer Association by Dr. Sontakke, Regional Officer (HQ), MPC Board



15. Small scale industries views by Mr. Shantilal Vora, Small scale manufacturer Association



16. Discussion Session, Dr. Sontakke, MPCB & Mr. Naidu, CPCB



17. Discussion session, Dr. Sontakke, MPCB & Mr. Naidu, CPCB



18. The Stakeholders of BMHR attended the workshop



19. The Stakeholders of BMHR attended the workshop



20. The Stakeholders of BMHR actively participating the awareness workshop

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Workshop for Mass awareness on implementation of  $Battery~({\rm M~\&~H})$  Rules, 2001 -  $6^{\rm th}$  March, 2009

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Expenditure made for workshop for Mass awareness on
implementation of Battery (Management & Handling) Rules, 2001 at
Pritam Hotel, Dadar, Mumbai.

Sr.	Particulars	Amount	Remarks
No.			
1	Charges of Hotel	Rs. 57,375/-	The expenditure incurred on hall, tea, breakfast & lunch.
2	Charges of LCD Projector	Rs. 3,500/-	The charges for display presentation by LCD
3	Charges of arrangement of stage, Transportation & Inauguration lamp	Rs. 4,501/-	The charges for decoration for stage, etc.
4	Digital video shooting	Rs. 3,700/-	Video shooting during the awareness workshop
5	Photography	Rs. 2,100/-	Photographs during the awareness workshop
6	Stationary & course material	Rs. 14,697/-	Stationary & course material including technical & legal information of Battery (M&H) Rules, 2001.
7	Banner	Rs. 399/-	Banner to display workshop details at stage & on gate of the hotel.
8	Booke	Rs. 900/-	To welcome the guest
9	Traveling charges of staff	Rs. 700/-	Traveling charges for taxis for organizing the workshop by staff.
10	Colour zerox of photo for report	Rs. 180/-	Zerox for report
11	Traveling charges of Mr. B. R. Naidu, CPCB, Vadodara	Rs. 2,000/-	The taxi provided from Airport to place of workshop at Dadar & back to guest house, Mahim for one day.
	Total	Rs. 90,052/-	

#### MAHARASHTRA POLLUTION CONTROL BOARD

#### STATUS REPORT ON IMPEMENTATION OF THE BATTERIES (MANAGEMENT AND HANDLING) RULES, 2001

#### INTRODUCTION:

Whether at work or at home, more and more Indian are enjoying the convenience of rechargeable batteries. They're being used in cellular phones, laptop computers, cordless power tools, video cameras & in many other items, In fact more than 40,90,194 nos. rechargeable batteries are purchased annually in India. When thrown away, these batteries can contribute to the toxicity levels of landfills and incinerator ash, as many of them contain heavy metals. Recycling rechargeable batteries not only gives new life to discarded products but it also helps to prevent the release of hazardous constituents into the environment.

Government of India made Lead Acid Battery (Management & Handling) Rules, 2001. The main objective of the Batteries (Management & Handling) Rules, is to regulate the collection and recycling of used lead acid batteries in the country both indigenously generated and imported. Responsibilities of various stakeholders as well as Central & State Govt. authorities are clearly spelt out in the Rules. This rule represents a major step forward in the effort to facilitate the recycling of nickel-cadmium and lead-acid rechargeable batteries.

Acknowledging the steady increase in the use of rechargeable batteries, as well as potential environmental impacts resulting from their improper disposal, Govt. of India made rules to increase collection and recycling of nickel-cadmium and Lead acid batteries. The Lead Acid Battery (Management & Handling) Rules, 2001 applicable to battery product manufacturers, Assembler, Re – Conditioner, Dealers, Bulk Consumer, Auctioneers, Importer and Recyclers.

To implement Battery rules effectively in the states for the collection, storage, and transportation of batteries covered by the Battery

Rules 2001. Public education program on battery recycling and the proper handling and disposal of used batteries required to consult with manufacturers and retailers to carry out this initiative.

#### WHAT ARE RECHARGEABLE BATTERIES?

Unlike single-use batteries, which must be replaced once their charge is used up, rechargeable batteries are designed for the long haul. Depending on the application, some rechargeable batteries can recharge up to 1,000 times! Recharging the battery simply reverses

the chemical reaction inside it. This changes the battery's components nearly back to their original state and allows them to be reused. About 80 percent of rechargeable batteries are currently composed of nickel and cadmium (known as "Ni- Cd"). Ni- Cd rechargeable batteries are commonly found in cellular and cordless telephones, video cameras, portable power tools, and laptop computers. The use of these batteries continues to grow. Lead acid batteries are used in emergency lighting, security and alarm systems, computer backup devices, and hospital equipment. They are also used in cellular phones, laptop computers, and power tools. As per static's available 4290194, 3340645 & 572475 batteries have been sold in the year 2004-05,2005-06,20006-07 resp.

Rechargeable batteries may initially be more expensive than singleuse batteries, and they sometimes require purchase of a recharge, but the upfront costs are often outweighed by the long-term cost savings and environmental benefits of rechargeable. Each rechargeable battery may substitute for hundreds of single-use batteries over its useful life.

#### Requirement of the Battery Rule –

The Battery Act changed the regulatory framework governing Lead acid batteries. It streamlined the framework in an effort to remove the regulatory barriers to increased recycling of rechargeable batteries

#### **Enforcement Authority –**

Authority for ensuring compliance of rule is the state Pollution Control Board and state Board has to submit annual compliance status report to the Central Pollution Control Board.

The Maharashtra Pollution Control Board (MPCB) was established in 1970 under the Maharashtra Water (Prevention & Control of Pollution) Act. In 1983 the State Legislature adopted the 'Water Prevention & Control of Pollution Act, 1974' enacted by the Central Government. MPCB is responsible for implementation of various Rules related to environment notified under the Environment (Protection) Act, 1986 from time to time by the Ministry of Environment and Forests, including the Battery Rules.

As per Rule 12 of the Battery Rules, the prescribed authority for ensuring compliance to the provisions of these Rules is the MPCB and the Board is required to file an annual compliance report to the Central Pollution Control Board by 30th April of every year.

#### Need of Awareness of Recycling of Rechargeable Batteries

Public education and participation are keys to the success of any recycling program--and are particularly important with materials like batteries that have not been commonly recycled. A public education program can heighten awareness of the recycling program, involve more individuals and businesses, and increase the number of batteries collected. EPA in consult action with Lead Acid Batteries battery manufacturers, rechargeable consumer product

manufacturers, and retailers has to establish a public education program on batteries recycling, proper handling and disposal of used Lead Acid batteries. Public education and participation are the keys to success of any recycling program and are particularly important with materials like batteries that have not been commonly recycled.

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#### Proper Disposal or Recycling Necessary for Lead Acid Batteries -

The toxic heavy metals, such as cadmium and lead, found in rechargeable Lead acid batteries perform critical functions within the battery. Heavy metals are contained within the battery's casing and pose no real risks while the battery is in use. But they can be of concern when discarded with ordinary municipal solid waste, as most batteries are, Lead acid batteries were estimated to represent approximately 75 percent of the cadmium found in municipal solid waste in 1995. EPA projected that lead-acid rechargeable batteries, of are a small percentage, would represent approximately 65 percent of the lead found in municipal solid waste in 1995.

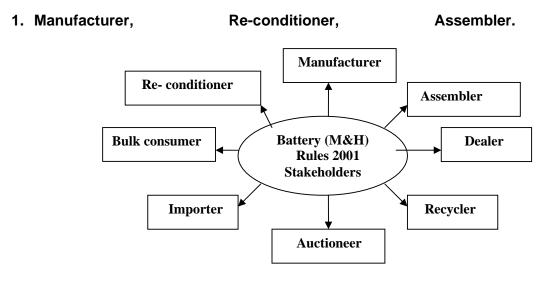
At present, approximately 73 percent of municipal solid waste is either land filled or incinerated. Neither of these methods is ideally suited for batteries that contain heavy Metals. In landfills, especially those without liners and controls, heavy metals have the potential to leach slowly into soil, ground water, and surface water. When incinerated, metals such as cadmium and lead can concentrate in the ash produced by combustion and enter the atmosphere through incinerator smokestack emissions. When disposed of, the metals in the incinerator ash can leach into the environment. In the environment, certain types of heavy metals can also concentrate in the tissues of organisms and make their way up the food chain. Several metals, such as cadmium,

are known carcinogens. The possible health effects associated with ingestion or inhalation of water, food, or air that has been contaminated with high levels of heavy metals range from headaches and abdominal discomfort to seizures, cancer, comas, and even death. The severity of the health effects are usually dependent on the total concentration of the metals to which one is exposed over time recycling programs for Ni-Cd and Lead acid batteries can address the potential risks posed by land filling or

Incinerating these batteries by diverting them from the waste stream. In the case of battery recycling, metals are recovered from the used batteries, and the remainder of the product is recycled or discarded.

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## STAKEHOLDERS: -



- 2. Dealer,
- 3. Recycler,
- 4. Auctioneer 5. Bulk Consumer 6. Importer

Steps taken by MPCB to implement the Battery Rules 2001 -

Maharashtra State Pollution Control Board had taken effective steps to implement Lead Acid Battery Rules – 2001, Following steps have been taken by MPCB so far,

- MPCB has issued public notices in the leading news papers in the Maharashtra in Marathi, English news paper for implementation of the Batteries (Management and Handling) Rules,2001 effectively in the state of the Maharashtra ( at flag A)
- Regional and Sub –Regional level surveys on Lead Acid Batteries have been conducted.
- Regular awareness campaigns for different target groups are being conducted.
- Implementation of Environmentally Sound Technology in used Lead Acid Battery recycling units is being ensured through Consent/ Authorization management.

- MPCB has issued letters to identified Manufacturer, Re-conditioner, Assembler, Importer ,Dealer, Recycler Bulk consumer & Auctioneer to comply by rules & submit Half Yearly returns in form I, IV,V, VII, VIII & IX resp.
- MPCB has issued directions to Regional officers, regarding stricter compliance of the Battery Rules in Maharashtra. MPCB is taking effective steps to achieve the compliance in this regard and needs more time to make appropriate inventory.
- Legal actions are being taken against defaulters as,

MPCB has issued SCN to 74 battery manufacturer and reconditioner & dealers, 15 battery importers. In response to these notices 58 manufacturers, re-conditioners & dealers and 15 battery importers have complied and submitted form no I, IV, V. In addition to this MPCB has issued 24 Closure directions to Battery Recyclers under the violation of Battery (M&H) Rules 2001, in response to these direction 24 numbers recyclers have complied and they have applied for Registration as Recycler to CPCB and they have furnished an irrevocable bank guarantee of amount Rs. 6,00,000/- to ensuring the compliance of consent conditions & these directions.

 MPCB has submitted Annual returns to CPCB as per section 12 of Battery Rules – 2001 for the period April 2004 to March 2005, April 2005 to March 2006 & April 2006 to March 2007.

# Details of Manufacturers/Importers/ Assemblers/Reconditioners/Dealers of Lead Acid Batteries in Maharashtra; -

List of trade marks Batteries; MICO, Amron, Panasonic, Amco, Merfi, Bosch, Exide, SMF, VRLAC, Prestilite, Union Batteries, Vin Batteries etc.

### List of Manufacturers:

- 1. **Exide Batteries**: 4 Units located at Mumbai, Navi Mumbai, Nagpur, Pune.
- 2. BUI Pvt. Ltd ; Pune

- 3. Base Corporation Ltd. ; Andheri, Mumbai.
- 4. Vin Batteries ; Pune
- 5. Mohan Batteries; Taloja, Navi Mumbai.
- 6. Santosh Batteries; Taloja, Navi Mumbai.

Number of Assemblers & Re-conditioners: - 82 Nos.

Number of Dealers: 277 Nos.

Number of Importers registered with MoEF : - 27

(List at Annex A)

Number of Lead Acid Battery Recycler registered with CPCB:

19 Nos.

#### Status regarding Collection of used Batteries

The current status of the compliance of Batteries (M&H) Rules, 2001 as under,

Table:-A Status of Lead Acid Battery Manufacturer, Reconditioner, Assembler

Sr. No	Type of category	Total Manufa Assem Condit	,	of Re-	Production batteries numbers	in	ad acid unit	Collection batteries numbers/y	in	d acid unit
		April 2004 to Marc h 2005	April 2005 to Marc h 2006	April 2006 to Marc h 2007	April 2004 to March 2005	April 2005 to March 2006	April 2006 to March 2007	April 2004 to March 2005	April 2005 to March 2006	April 2006 to March 2007
1	Manufact urer	04	03	06						
2	Re- condition er & Assemble r	79	47	82	429019 4	334064 5	572475	1153655	18595 5	73267

Sr. No	Type of categ	Total No	of Dealer	s	Production batteries numbers	in	ad acid unit	Collecti batterie number		l acid unit
	ory	April 2004 to March 2005	April 2005 to March 2006	April 2006 to March 2007	April 2004 to March 2005	April 2005 to March 2006	April 2006 to March 2007	April 2004 to March 2005	April 2005 to March 2006	Apr il 200 6 to Mar ch 200 7
1	Deale rs	229	146	277	110102	157987	188023	38307	43411	575 24

## Table:-B Status of Lead Acid Battery Dealer

# Table:-C Status of Lead Acid Battery Bulk consumer, Auctioneer.

Sr. No	Type of category	Total Consu Auctior		f Bulk	Collecti batterie number	s in	ad acid unit
		April 2004 to Marc h 2005	April 2005 to Marc h 2006	April 2006 to March 2007	April 2004 to March 2005	April 2005 to March 2006	April 2006 to March 2007
1	Bulk Consumer, Auctioneer	54	51	54	10944	8101	72,541

## Table:-D Status of Lead Acid Battery Recycler

Sr. No	Type of category	Total Recycle		Battery	Collecti batterie number	s in	ead acid unit
		April	April	April	April	April	April
		2004	2005	2006	2004	2005	2006
		to	to	to	to	to	То
		March	March	March	March	March	March
		2005	2006	2007	2005	2006	2007
1	Recycler	20	18	28	6476	6360	474498

Sr.	Type of	Total	No of	Battery	No. lea	ad acid	batteries
No	category	Importer			Imported numbers/year		
		April	April	April	April	April	April
		2004	2005	2006	2004	2005	2006
		to	to	to	to	to	to
		March	March	March	March	March	March
		2005	2006	2007	2005	2006	2007
1	Battery Importer		26	27		10692	9692

### Table:-E Status of Lead Acid Battery Importer

### Difficulties in implementation of Batteries (M&H) Rules, 2001: -

### (A) Difficulties faced by Manufacturers of Batteries

- Offering best price possible for scrap battery.
  - requires documentation to be done
  - cannot pay cash
  - cannot make the payment without bill
- Cannot complete with unauthorized users.
- Problems in collecting used batteries from dealers and sending them to the collection centers.
  - o Normally takes 7 days,
  - Payment can be made only after 7 days to the dealer in that manner
  - Cannot compete with unauthorized users as they are ready to pay cash on the spot.
- Market share of authorized manufacturers only 40% against 60% market share by unauthorized manufacturers, who are not effectively covered under the Rules.
- Only manufacturer is penalized, as it is the sole responsibility of manufacturers to get the forms (returns) from Dealers and file the same with MPCB.

### (B) Difficulties faced by the Dealers

- There is no guarantee that the customer will return the used battery after purchase of new battery to the same dealer.
- Legislation cannot cover the customer effectively.

- In case of battery sold to UPS/ Invertors as new assembly, dealer may not in a position to collect the used battery.
- Dealers can earn cash money if batteries are sold to unauthorized smelters. For that no paper work is required.

## (C) Difficulties faced by the Importers

- Sealed Maintenance Free L A B (SMF) Valve Regulated L A B (VRLA) are the main batteries imported.
- Sale of batteries along with consumer product : indirect contact with consumers economical
- SMF/ VRLA have new market having durability of life of four years
- There is no contract agreement between consumer and importer/dealer
- Presently there is no set-up/network of dealers of individual importers
- Presently there is no co-ordination amongst dealers of imported batteries, manufacturers and other dealers to collect used LABs.

### (D) Difficulties faced by the Recyclers

- In between period of application of Renewal of Registration up to obtained renewal of registration, they cannot purchase batteries.
- Xerox copies of registration are used by some other parties for purchasing batteries.
- Confusion due to lack of clarity between Batteries Rules 2001 and H. W. (M& H) Rules, 2003.

### Suggestions for improvement

- Joint regular meetings between Regulatory Bodies & Stakeholders for
- Better coordination
- Appropriate documentation
- Monitoring and it's impact and
- Improvement in operation systems
- Sustained multi media awareness campaigns
- Strict action against defaulters

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## Annexe - A

# List of Lead Acid Batteries Importer In Maharashtra -

Sr. No.	Name of Industries	Reg No.	Issused Date
1	M/s Silvex Exports Pvt. Ltd. Mulund (East) Mumbai	23-17/3/2004- HSMD	04//8/04
2	M/s Prime Products., Mumbai	23-17(4)/2004- HSMD	04/08/04
3	M/s Vinit Impex., Vapi (E)	23-17(7)//2004- HSMD	04/08/04
4	M/s Mukul Enterprises., Mumbei	23-17/(11)/2004- HSMD	04/08/04
5	M/s Insight Inmovation., Mumbai	23-17(13)//2004- HSMD	04/08/04
6	M/s Aplab Ltd., Thane	23-17(16)//2004- HSMD	04/08/04
7	M/s Silvex Exports., Silvex house New Minerva Cinema, Mumbai -400 007	23-17/(19)/2004- HSMD	04/08/04
8	M/s Autosofd Controls & Auto Mation (Pune) Pvt.Ltd. Pune	23-17/(36)/2004- HSMD	13/09/04
9	M/s D.B. Power Electronics (P) Ltd. Pune	23-17/(44)/2004- HSMD	29/09/04
10	M/s D.B. Technologies (P) Ltd., Satara	23-17/(45)/2004- HSMD	27/09/04
11	M/s Diamkr Chrysler Ind. Pvt., Ltd., Pune	23-17/(20)/2004- HSMD	08/10/04
12	M/s Sethi Batteries Nagpur	23-17/(64)/2005- HSMD	17/02/05
13	M/s Alrline Finacial support Services (Ind) Ltd., Mumbai	23-17/(59)/2005- HSMD	21/02/05
14	M/s The Arivind Mills Ltd., (Telecom Division), Pune	23-17/(63)/2005- HSMD	08/02/05
15	M/s Artiksy Engineering Workd, Ahmednagar.,A, Nagar	23-17/(73)/2005- HSMD	01/04/05
16	M/s Durga Agencies's Thane	23-17/(103)/2005- HSMD	13/07/05
17	M/s Enercon India (Ltd) Mumbai	23-17/(51)/2004- HSMD	01/12/04
18	M/s Skoda Auto Inida Pvt., Ltd., Aurangabad	23-17/(54)/2004- HSMD	29/12/04
19	M/s Suzlon Wind Form Services Ltd., Pune.	23-17/(55)/2004- HSMD	31/12/04
20	M/s Empire Industires., Mumbai	23-17/(81)/2005- HSMD	21/04/05
21	M/s Krishna Corporation, Bhayander (E), Thane	23-17/(130)/2005- HSMD	22/09/05
22	M/s Emerson Network Power	23-17/(128)/2005-	24/10/05

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	(India) Pvt. Ltd., Thane	HSMD	
23	M/s Seven Ocean Granites	23-17/(303)/2006-	12/12/06
	Pvt. Ltd., Mumbai	HSMD	
24	M/s Zaverchand Sports	23-17/(260)/2006-	05/10/06
	Equipment Pvt. Ltd. Mumbai	HSMD	
25	M/s Fiamm Global (India) Pvt.	23-17/(270)/2006-	26/10/06
	Ltd., Mumbai	HSMD	
26	M/s Wanon	23-17/(311)/2006-	16/01/07
	Telecommunication, Mumbai	HSMD	
27	M/s Accenture Services	23-17/(300)/2006-	15/12/06
	Pvt.Ltd., Mumbai	HSMD	

#### Annexe - B

#### List of Lead Acid Batteries Recycler In Maharashtra –

- **1.** M/s N.V. Metals & Alloys, Plot No.310, Near shrihari Ffabrics, At-Umroli,Tal- Palghat, Dist-Thane.
- **2.** M/s Nikhil Metals Industries, Plot No. 313, Near shrihari Ffabrics, At-Umroli,Tal- Palghat, Dist-Thane.
- M/s Shanti Metals Refinary, Near Sai Service Station, Kamon Road, Sathivali Vasai(E), Dist –Thane.
- **4.** M/s Hans Enterprises, Meera Gulani complex,Off. Vasai, Vejreshawari Road,Vasai(E), Thane.
- M/s Jerson Metal, 18,Ganesh Industrial Estate,Behind Burmashell Pump,NH.No.8, Vasai (E) Thane
- M/s Simplex India , Plot No. 04, Kokani Industrial Complex, Sativali, Vasai (E), Thane.
- 7. M/s New Metal Refinary, Arvind Brothers Compound,Old Belapur Road,Ganpati Pada, Dhige, Navi Mumbai, Thane
- M/S Nayan Metals Pvt. Ltd.D-06,MIDC,Lote Parshuram,Tal-Khed, Dist-Ratnagiri
- M/s Kadri Metal Refinery, Plot No. E-94/95, MIDC, Audhan, Dist-Dhule
- M/s Swastik Industries, Audyogic Vasahat, Plot No. 27, S.NO. 16/11, Bhusaval, Dist- Dhule.
- 11. M/s MRJS lead Pvt. Ltd. Gate No. 72, Alandi Markal Road, Khed,Dist- Pune
- M/s Sourabh Metal Refinery, Gat. No. 143, Plot No. B-4, Village Sapronde, Post-Uchat Tal- Wada Dist- Thane
- **13.** M/s Sharsi Metals, S.No.28/1, Part Sharshi Village, Tal-Wada Dist-Thane.
- 14. M/s Samarth Udyoug, At- Sarponda, Tal-Wada, Dist- Thane
- **15.** M/s Indian Lead Ltd. At-Kambare, Tal-Wada, Dist-Pune.
- M/s Tondon Metals Pvt. Ltd. Gate No. 124, Alandi Markal Road, Khed,Dist- Pune
- M/s Diamond Metal Refinaries, S.No.96. Plot No2, Shivani, Dist-Akola
- M/s Pooja pigments, Kh. No. 100, Kanptee octroi, Kalmna, Dist-Nagpur.

Workshop for Mass awareness on implementation of  $Battery~({\rm M~\&~H})$  Rules, 2001 -  $6^{th}$  March, 2009

# UPDATED STATUS REPORT ON IMPLEMENTATION OF THE BATTERY (MANAGEMENT AND HANDLING) RULES – 2001



MAHARASHTRA POLLUTION CONTROL BOARD KALPATARU POINT, SION (E), MUMBAI – 400022.

#### MAHARASHTRA POLLUTION CONTROL BOARD

#### STATUS REPORT ON IMPEMENTATION OF THE BATTERIES (MANAGEMENT AND HANDLING) RULES 2001

#### **INTRODUCTION:**

Whether at work or at home, more and more Indians are enjoying the convenience of rechargeable batteries. They're being used in cellular phones, laptop computers, cordless power tools, video cameras & in many other items, In fact more than 50,000 nos. rechargeable batteries are purchased annually in India. When thrown away, these batteries can contribute to the toxicity levels of landfills and incinerator ash, as many of them contain heavy metals. Recycling rechargeable batteries not only gives new life to discarded products but it also helps to prevent the release of hazardous constituents into the environment.

Government of India made Lead Acid Battery (Management & Handling) Rules, 2001. The main objective of the Batteries (Management & Handling) Rules, is to regulate the collection and recycling of used lead acid batteries in the country both indigenously generated and imported. Responsibilities of various stakeholders as well as Central & State Govt. authorities are clearly spelt out in the Rules. This rule represents a major step forward in the effort to facilitate the recycling of nickel-cadmium and lead-acid rechargeable batteries.

Acknowledging the steady increase in the use of rechargeable batteries, as well as potential environmental impacts resulting from their improper disposal, Govt. of India made rules to increase collection and recycling of nickel-cadmium and Lead acid batteries. The Lead Acid Battery (Management & Handling) Rules, 2001 applicable to battery product manufacturers, Assembler, Re – Conditioner, Dealers, Bulk Consumer, Auctioneers, Importer and Recyclers.

To implement Battery rules effectively in the states for the collection, storage, and transportation of batteries covered by the Battery Rules 2001. Public education program on battery recycling and the proper handling and disposal of used batteries required to consult with manufacturers and retailers to carry out this initiative.

#### WHAT ARE RECHARGEABLE BATTERIES?

Unlike single-use batteries, which must be replaced once their charge is used up, rechargeable batteries are designed for the long haul. Depending on the application, some rechargeable batteries can recharge up to 1,000 times! Recharging the battery simply reverses the chemical reaction inside it. This changes the battery's components nearly back to their original state and allows them to be reused. About 80 percent of rechargeable batteries are currently composed of nickel and cadmium (known as "Ni- Cd"). Ni- Cd rechargeable batteries are commonly found in cellular and cordless telephones, video cameras, portable power tools, and laptop computers. The use of these batteries continues to grow. Lead acid batteries are used in emergency lighting, security and alarm systems, computer backup devices, and hospital equipment. They are also used in cellular phones, laptop computers, and power tools. As per static's available 4290194, 3340645, 572475 & 208305 batteries have been sold in the year 2004-05, 2005-06, 20006-07 & 2007-08 respectively.

Rechargeable batteries may initially be more expensive than single-use batteries, and they sometimes require purchase of a recharge, but the upfront costs are often outweighed by the long-term cost savings and environmental benefits of rechargeable. Each rechargeable battery may substitute for hundreds of single-use batteries over its useful life.

#### Requirement of the Battery Rule –

The Battery Act changed the regulatory framework governing Lead acid batteries. It streamlined the framework in an effort to remove the regulatory barriers to increased recycling of rechargeable batteries

#### Enforcement Authority –

Authority for ensuring compliance of rule is the state Pollution Control Board and state Board has to submit annual compliance status report to the Central Pollution Control Board.

The Maharashtra Pollution Control Board (MPCB) was established in 1970 under the Maharashtra Water (Prevention & Control of Pollution) Act. In 1983 the State Legislature adopted the 'Water Prevention & Control of Pollution Act, 1974' enacted by the Central Government. MPCB is responsible for implementation of various Rules related to environment notified under the Environment (Protection) Act, 1986 from time to time by the Ministry of Environment and Forests, including the Battery Rules.

As per Rule 12 of the Battery Rules, the prescribed authority for ensuring compliance to the provisions of these Rules is the MPCB and the Board is required to file an annual compliance report to the Central Pollution Control Board by 30th April of every year.

#### Need of Awareness of Recycling of Rechargeable Batteries

Public education and participation are keys to the success of any recycling program--and are particularly important with materials like batteries that have not been commonly recycled. A public education program can heighten awareness of the recycling program, involve more individuals and businesses, and increase the number of batteries collected. EPA in consult action with Lead Acid Batteries battery manufacturers, rechargeable consumer product manufacturers, and retailers has to establish a public education program on batteries recycling, proper handling and disposal of used Lead Acid batteries. Public education and participation are the keys to success of any recycling program and are particularly important with materials like batteries that have not been commonly recycled.

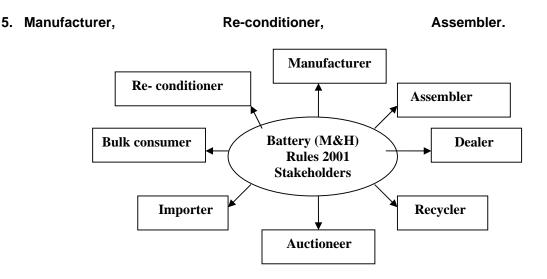
#### Proper Disposal or Recycling Necessary for Lead Acid Batteries -

The toxic heavy metals, such as cadmium and lead, found in rechargeable Lead acid batteries perform critical functions within the battery. Heavy metals are contained within the battery's casing and pose no real risks while the battery is in use. But they can be of concern when discarded with ordinary municipal solid waste, as most batteries are Lead acid batteries were estimated to represent approximately 75 percent of the cadmium found in municipal solid waste in 1995. EPA projected that lead-acid rechargeable batteries, of are a small percentage, would represent approximately 65 percent of the lead found in municipal solid waste in 1995.

At present, approximately 73 percent of municipal solid waste is either land filled or incinerated. Neither of these methods is ideally suited for batteries that contain heavy Metals. In landfills, especially those without liners and controls, heavy metals have the potential to leach slowly into soil, ground water, and surface water. When incinerated, metals such as cadmium and lead can concentrate in the ash produced by combustion and enter the atmosphere through incinerator smokestack emissions. When

disposed of, the metals in the incinerator ash can leach into the environment. In the environment, certain types of heavy metals can also concentrate in the tissues of organisms and make their way up the food chain. Several metals, such as cadmium, are known carcinogens. The possible health effects associated with ingestion or inhalation of water, food, or air that has been contaminated with high levels of heavy metals range from headaches and abdominal discomfort to seizures, cancer, comas, and even death. The severity of the health effects are usually dependent on the total concentration of the metals to which one is exposed over time recycling programs for Ni-Cd and Lead acid batteries can address the potential risks posed by land filling or Incinerating these batteries by diverting them from the waste stream. In the case of battery recycling, metals are recovered from the used batteries, and the remainder of the product is recycled or discarded.

#### STAKEHOLDERS: -



#### 6. Dealer,

- 7. Recycler,
- 8. Auctioneer 5. Bulk Consumer 6. Importer

#### Steps taken by MPCB to implement the Battery Rules 2001 -

Maharashtra State Pollution Control Board had taken effective steps to implement Lead Acid Battery Rules – 2001, Following steps have been taken by MPCB so far,

- MPCB has issued public notices in the leading news papers in the Maharashtra in Marathi, English news paper for implementation of the Batteries (Management and Handling) Rules, 2001 effectively in the state of the Maharashtra.
- Regional and Sub –Regional level surveys on Lead Acid Batteries have been conducted.
- Regular awareness campaigns for different target groups are being conducted.
- Implementation of Environmentally Sound Technology in used Lead Acid Battery recycling units is being ensured through Consent/ Authorization management.
- MPCB has issued letters to identified Manufacturer, Re-conditioner, Assembler, Importer ,Dealer, Recycler Bulk consumer & Auctioneer to comply by rules & submit Half Yearly returns in form I, IV,V, VII, VIII & IX resp.
- MPCB has issued directions to Regional officers, regarding stricter compliance of the Battery Rules in Maharashtra. MPCB is taking effective steps to achieve the compliance in this regard and needs more time to make appropriate inventory.
- Legal actions are being taken against defaulters as, MPCB has issued Notices to 74 battery manufacturer and re-conditioner & dealers, 37 battery importers. In response to these notices 58 manufacturers, re-conditioners & dealers and 15 battery importers have complied and submitted form no I, IV, V. In addition to this, MPCB has issued 24 Closure directions to Battery Recyclers under the violation of Battery (M&H) Rules 2001, in response to these direction 24 numbers recyclers have complied and they have applied for Registration as Recycler to CPCB and they have furnished an irrevocable bank guarantee of amount Rs. 6,00,000/- to ensuring the compliance of consent conditions & these directions.

- MPCB has submitted Annual returns to CPCB as per section 12 of Battery Rules – 2001 for the period April 2004 to March 2005, April 2005 to March 2006 & April 2006 to March 2007.
- MPC Board has organized one day workshop for Mass awareness on implementation of Battery (Management & Handling) Rules, 2001 on 6<sup>th</sup> march, 2009 at Mumbai. Mr. B. R. Naidu, Zonal Officer, CPCB was present during the workshop.

# Details of Manufacturers/Importers/ Assemblers/Re-conditioners/Dealers of Lead Acid Batteries in Maharashtra; -

List of trade marks Batteries; MICO, Amron, Panasonic, Amco, Merfi, Bosch, Exide, SMF, VRLAC, Prestilite, Union Batteries, Vin Batteries etc.

- No. of trade marks of Batteries
  - MIO, Prestllite, Amron, Panasonic, Amco, Merfi, Bosch, Exide, SMF, VRLAC
- No. of Bulk Manufacturer: 4 Nos.
  - Exide Industries Ltd: 3 units located at Mumbai, Taloja, Pune
  - TataGreen Batteries, at Pune
  - BUI Pvt. Ltd., at Pune
  - Sai Accumulator Industries, Sangamner
- No. of Assemblers and Re-conditioner : 58 Nos.
- No. of Dealers of batteries: 268.
- No. of Importers : 50 Nos.
- No. of Lead Acid Batteries Recycler: 19 Nos.
- No. of Bulk Consumers : 71 Nos.

## Status regarding Collection of used Batteries

The current status of the compliance of Batteries (M&H) Rules, 2001 as under,

# Table:-A Status of Lead Acid Battery Manufacturer, Re-conditioner, Assembler

Sr. No	Type of category	Total No Manufacturer, Assembler, Conditioner		of Re-		Production of lead acid batteries in unit numbers/year			of lea in ear	d acid unit
		April 2005 to March 2006	April 2006 to Marc h 2007	April 2007 to March 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008
1	Manufacturer Re- conditioner & Assembler	03	06	58	3340645	572475	530464	185955	73267	73559

#### Table:-B Status of Lead Acid Battery Dealer

Sr. No	Type of	Total No of Dealers			Sale of lead acid batteries in unit numbers/year			Collection of lead acid batteries in unit numbers/year			
	catego ry	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 te March 2008	o
1	Dealer s	146	277	268	157987	188023	208305	43411	57524	61555	

Table:-C Status of Lead Acid Battery Bulk consumer, Auctioneer.

Sr. No		Total Consun	No o ner, Auct		Collection batteries numbers	s in	ad acid unit
		April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008
1	Bulk Consumer, Auctioneer	51	54	71	8101	72,541	81058

Workshop for Mass awareness on implementation of Battery (M & H) Rules, 2001 -  $6^{th}$  March, 2009

Sr.	Туре	of	Total	No of	Battery	Collectio		ead acid
No	category		Recycle	r		batteries	s in unit nur	mbers/year
			April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008
1	Recycler		18	28	28	6360	474498	4304

#### Table:-D Status of Lead Acid Battery Recycler

#### Table:-E Status of Lead Acid Battery Importer

Sr.	Type of		No of	Battery		ad acid	
No	category	Importer	ſ		Imported	d numbers	s/year
		April	April	April	April	April	April
		2005	2006	2007	2005	2006	2007 to
		to	to	to	to	to	March
		March	March	March	March	March	2008
		2006	2007	2008	2006	2007	2000
1	Battery Importer	26	27	50	10692	9692	

#### Difficulties in implementation of Batteries (M&H) Rules, 2001: -

#### (B) Difficulties faced by Manufacturers of Batteries

- Offering best price possible for scrap battery.
  - requires documentation to be done
  - cannot pay cash
  - cannot make the payment without bill
- Cannot compete with unauthorized users.
- Problems in collecting used batteries from dealers and sending them to the collection centers.
  - o Normally takes 7 days,
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- Xerox copies of registration are used by some other parties for purchasing batteries.
- Confusion due to lack of clarity between Batteries Rules 2001 and H. W. ( M& H) Rules, 2003.

#### Suggestions for improvement

- Joint regular meetings between Regulatory Bodies & Stakeholders for
- Better coordination
- Appropriate documentation
- Monitoring and it's impact and
- Improvement in operation systems
- Sustained multi media awareness campaigns
- Strict action against defaulters

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### Annex - A

#### List of Lead Acid Batteries Importer in Maharashtra -

Sr. No.	Name of the Importer & Address	Registration No.	Date of Issue
1.	M/s. Om sales Corporation, Bldg. No. 1/3, R.No.7, Marine Street, Dhobi Talao, Marine Lines, Mumbai.	23-17 (541)/2007- HSMD	16/11/2007
2.	Veritas Software India Pvt. Ltd., Symphony, Sr. o. 210-A-1, Range Hills, Pune.	23-17 (529)/2007- HSMD	07/11/2007
3.	Triton Holding Ltd., 1st Spectra Bldg., High Street, Hiranandani Business Park, Powai, Mumbai.	23-17 (508)/2007- HSMD	08/10/2007
4.	Transocean Discoverer, 534, LLC Tansocean23-17 (511)/200House, Lake Boulevard Road, HiranandaniHSMDBusiness Park, Powai, Mumbai.HSMD		08/10/2007
5.	Tata Consultancy Services Ltd., Air India Bldg., Nariman Point, Mumbai.	23-17 (561)/2007- HSMD	20/12/2007
6.	Zicom Electronics Systems Ltd., Zicom House, 45, Chimbai Road, Behind St. Andrewaj Church, Bandra (W), Mumbai.	23-17 (507)/2007- HSMD	15/10/2007
7.	CRISIL Ltd., CRISIL House, 121-122, Andheri Kurla Road, Andheri (E), Mumbai.	23-17 (559)/2007- HSMD	13/12/2007
8.	ABN AMRO Central Enterprises Services Pvt. Ltd., Empire Complex, 114, Senapati Bapat Marg, Lower Parel, Mumbai.	23-17 (551)/2007- HSMD	03/12/2007
9.	Mind Tree Mercantile Company Pvt. Ltd., Bldg. No. 1/3, Room No. 7, 4th Marine Street Corner, Marine Lines, Mumbai.	23-17 (552)/2007- HSMD	04/12/2007
10.	R & B Falcon (A) Pvt. Ltd., Transocean House, Lake Boulevard Road, Hiranandani Business Park, Powai, Mumbai.	23-17 (510)/2007- HSMD	08/10/2007
11.	Transocean Offshore Deep Water Drilling Inc., Tansocean House, Lake Boulevard Road, Hiranandani Business Park, Powai, Mumbai.	23-17 (509)/2007- HSMD	08/10/2007
12.	Sedco Forex International Drilling Inc., 1st Spectra Bldg, High Street, Hiranandani Business Park, Powai, Mumbai.	23-17 (512)/2007- HSMD	08/10/2007
13.	IDIA Cellular Ltd., Sharda Centre, 11/1, Erandwane, Off Karve Road, Pune.	23-17 (499)/2007- HSMD	28/09/2007
14.	Intelenet Global Services Pvt. Ltd., 7th Floor, Ramon House, H. T. Parekh Marg, 169, Backbay Reclamation, Colaba, Mumbai.	23-17 (472)/2007- HSMD	22/08/2007
15.	Godrej & Boyce Mfg. Co. Ltd., Phirojsha Nagar, L. B. S. Marg, Vikhroli, Mumbai.	23-17 (491)/2007- HSMD	13/09/2007
16.	Navjivan Agency, 407, BNG House, 201, D. N. Road, Nr. Central Camera bldg., Mumbai.	23-17 (480)/2007- HSMD	05/09/2007
17.	Sunlight Industries, 403, Xanandu-D- Prathamesh Complex, Veera Desai Road, Andheri (W), Mumbai	23-17 (481)/2007- HSMD	05/09/2007
18.	Compuage Infocom Ltd., 3, Dhuru Bldg., 1st Floor, 329, Vitthalbahi Patel Road, Mumbai.	23-17 (441)/2007- HSMD	13/08/2007
19.	Powerica Ltd., 115-B, Mittal Court, Nariman Point, Mumbai.	23-17 (468)/2007- HSMD	13/08/2007

20.	CaliberPoint Business Solution Ltd., Bldg. No. 152, Millenium Business Park, Sector 3, TTC	23-17 (402)/2007- HSMD	17/08/2007
	Indl. Area, Mahape, Navi Mumbai.	00.47.40.0.40.007	00/07/0007
21.	Mahindra & Mahindra Ltd., (Automotive Sector) Mahindra Tower, Worli Road, No. 13, Mumbai.	23-17 (434)/2007- HSMD	06/07/2007
22.	Persistant Systems Pvt. Ltd., Plot No. 9 A/12, CTS 12 A/12, Nr. Padale Palace, Pune.	23-17 (406)/2007- HSMD	04/07/2007
23.	Net Magic Solutions Pvt. Ltd., Bldg. No. 22, Nirlon Complex, W. E. Highway, Goregoan (E), Mumbai.	23-17 (398)/2007- HSMD	12/06/2007
24.	Falcon International, Shanti Flat No., A/03, Gr. Floor, Sarvodaya Nagar, Jain Mandir Road, Mulund (W), Mumbai.	23-17 (378)/2007- HSMD	25/04/2007
25.	Accenture Services Pvt. Ltd., 17th Floor, Express Tower, Nariman Point, Mumbai.	23-17 (300)/2006- HSMD	06/12/2006
26.	Seven Ocean Granites Pvt. Ltd., 236/238, Samuel Street, 4th Floor, Room No. 15, Masjid Bunder, Mumbai.	23-17 (303)/2006- HSMD	06/12/2006
27.	Island City Motors Pvt. Ltd., B-1, Manoj Co- op., Hsg. Society, 162, Shankar Ghanekar Marg, Prabhadevi, Mumbai.	23-17 (310)/2007- HSMD	28/01/2007
28.	Grameen Surya Bijlee Foundation, 5/L, Laxmi Indl. Estate, New Link Road, Andheri (W), Mumbai.	23-17 (329)/2007- HSMD	05/02/2007
29.	Priyanka Corporation, 86/861, Siddhivinayak Apt., Mahavir Nagar, Kandivali (W), Mumbai.	23-17 (330)/2007- HSMD	05/20/2007
30.	S. R. Electrotrade, 10-A, Harisadan Bldg., Mamlatdarwadi Main Road, Nr. United Western Bank, Malad (W), Mumbai.	23-17 (353)/2007- HSMD	14/04/2007
31.	Zaverchand Sports Equipments Pvt. Ltd., C/o Krishna Corporation (BOM) Pvt. Ltd., 3rd Floor, Dena Bank Bldg., 17-B Hornimal Circle, Mumbai.	23-17 (260)/2007- HSMD	12/09/2006
32.	HSBC Software Development India Pvt. Ltd., HSBC Centre, Riverside West Avenue, 25-B Kalyani Nagar, Pune.	23-17 (345)/2007- HSMD	15/05/2007
33.	Wanon Telecommunication, 68/70, Samadhan Bldg., 2nd Floor, Sutar Chawl, Zaveri Bazar, Mumbai.	23-17 (311)/2006- HSMD	22/12/2006
34.	KFT Associates, 1-K, NH-4, P. B. Road, At & Post, Sarno Batwadi, Tq: Karveer, Dist: Kolhapur.	23-17 (337)/2006- HSMD	22/02/2007
35.	Essel Propack Ltd., Times Tower, Kamala City, Senapati Bapat Road, Lower Parel, Mumbai.	23-17 (403)/2007- HSMD	15/06/2007
36.	Reliance Communication Ltd., H-Block, 1st Floor, Dhirubhai Ambani Knowledge City, Navi Mumbai.	23-17 (415)/2007- HSMD	25/06/2007
37	G.T.L. Limited, Electronic Sadan No. II, MIDC TTC Industrial Area, Mahape, Thane	23-17 (582)/2008- HSMD	10/01/1008
38	D. B. operations International Pvt. Ltd. Nicholas Piramal Tower, Peninsula Corporate	23-17 (580)/2008- HSMD	10/01/2008

	Park,		
	G.K. Marg, Lower Parel, Mumbai		
39	First Offshoring Technologies Pvt. Ltd	23-17 (603)/2008-	06/02/2008
	Gate. No.4, Plot- 10, Godrej & Boyce	HSMD	
	Complex,		
	Pirojshanagarr, LBS Marg, Vikhroli – W,		
10	Mumbai- 400 079.	00.47(000)(0000	00/00/0000
40	Puri Electronics,	23-17 (600)/2008-	06/02/2008
	Post Bag. No. 4033, 104-105, Shiv Lila, 57,	HSMD	
	Alilbhai Premji Road, Grant Road (E), Opp. Grant Road Parcel Office,		
	Mumbai – 400 007		
41	Cipla Limited, Mumbai Central, Mumbai – 400	23-17 (597)/2008-	25/01/2008
	008	HSMD	20,01/2000
42	M/s. Nomura Financial Advisory & Securities	23-17 (787)/2008-	
	(India) Pvt. Ltd., Mumbai	HSMD	
43	M/s. BNY Mellon International Operation	23-17 (813)/2008-	16/10/2008
	(India) Pvt. Ltd., Tower 3, 3 <sup>rd</sup> floor, Magarpatta	HSMD	
	City, Hadapsar, Pune-411013		
44	M/s. Megatech Power Equipments Pvt. Ltd.	23-17 (820)/2008-	22/2008
	36/1/1, Holkarwadi, Tal: Haveli, Dist: Pune (Maharashtra)	HSMD	
45	Empire Industries,	 	
45	2, Madhusudan Industrial Estate, Mogra		
	Village, Andheri (E), Mumbai- 400 069		
46	Aditya Electronics, 101, pleasant Park, Yogi	23-17 (410)/2007-	
	Hills, Off. B. R. Road, Mulund (W), Mumbai -	HSMD	
	400 080		
47	Mars International, 104, Blue Mountain, Yogi	23-17 (412)/2007-	
	Hills, Off. B. R. Road, Mulund (W), Mumbai -	HSMD	
	400 080		
48.	M/s. Mother Impex, A/606, Preeti Sagar, New	23-17(857)/2008-	18/12/2008
40	Link Road, Borivali (W) Mumbai -400 091	HSMD	40/40/0000
49	M/s. Rico Appliances Pvt. Ltd., 95/205, Hind Rajasthan Building, D. S. P. Road, Dadar (E),	23-17(858)/2008- HSMD	18/12/2008
	Mumbai -400 014		
50	M/s. DHL Lemuir Logistics Pvt. Ltd., 8 <sup>th</sup> Floor,	23-17(861)/2008-	29/12/2008
	The Leela Galleria, Andheri Kurla Road,	HSMD	20/12/2000
	Andheri (E), Mumbai -400 059		

#### Annex - B

#### List of Lead Acid Batteries Recycler in Maharashtra –

- **19.** M/s N.V. Metals & Alloys, Plot No.310, Near shrihari Fabrics, At-Umroli,Tal- Palghat, Dist-Thane.
- **20.** M/s Nikhil Metals Industries, Plot No. 313, Near shrihari Fabrics, At-Umroli,Tal- Palghat, Dist-Thane.
- **21.** M/s Shanti Metals Refinary, Near Sai Service Station, Kamon Road, Sathivali Vasai(E), Dist –Thane.
- **22.** M/s Hans Enterprises, Meera Gulani complex,Off. Vasai, Vejreshawari Road,Vasai(E), Thane.
- 23. M/s Jerson Metal, 18,Ganesh Industrial Estate,Behind Burmashell Pump,NH.No.8, Vasai (E) Thane
- **24.** M/s Simplex India , Plot No. 04, Kokani Industrial Complex, Sativali, Vasai (E), Thane.
- 25. M/s New Metal Refinary, Arvind Brothers Compound,Old Belapur Road,Ganpati Pada, Dhige, Navi Mumbai, Thane
- 26. M/S Nayan Metals Pvt. Ltd.D-06,MIDC,Lote Parshuram,Tal-Khed, Dist-Ratnagiri
- M/s Kadri Metal Refinery, Plot No. E-94/95, MIDC, Audhan, Dist-Dhule
- 28. M/s Swastik Industries, Audyogic Vasahat, Plot No. 27, S.NO. 16/11, Bhusaval, Dist- Dhule.
- **29.** M/s MRJS lead Pvt. Ltd. Gate No. 72, Alandi Markal Road, Khed,Dist- Pune
- **30.** M/s Sourabh Metal Refinery, Gat. No. 143, Plot No. B-4, Village Sapronde, Post-Uchat Tal- Wada Dist- Thane
- **31.** M/s Sharsi Metals, S.No.28/1, Part Sharshi Village, Tal-Wada Dist-Thane.
- 32. M/s Samarth Udyoug, At- Sarponda, Tal-Wada, Dist- Thane
- **33.** M/s Indian Lead Ltd. At-Kambare, Tal-Wada, Dist-Pune.
- M/s Tondon Metals Pvt. Ltd. Gate No. 124, Alandi Markal Road, Khed,Dist- Pune
- M/s Diamond Metal Refinaries, S.No.96. Plot No2, Shivani, Dist-Akola
- M/s Pooja pigments, Kh. No. 100, Kanptee octroi, Kalmna, Dist-Nagpur

# Annual Report Lead Acid Batteries Management (April 2007 – March 2008)

#### **INTRODUCTION:**

Whether at work or at home, more and more Indians are enjoying the convenience of rechargeable batteries. They're being used in cellular phones, laptop computers, cordless power tools, video cameras & in many other items, In fact more than 50,00,000 nos. rechargeable batteries are purchased annually in India. When thrown away, these batteries can contribute to the toxicity levels of landfills and incinerator ash, as many of them contain heavy metals. Recycling rechargeable batteries not only gives new life to discarded products but it also helps to prevent the release of hazardous constituents into the environment.

Government of India made Lead Acid Battery (Management & Handling) Rules, 2001. This rule represents a major step forward in the effort to facilitate the recycling of nickel-cadmium and lead-acid rechargeable batteries.

Acknowledging the steady increase in the use of rechargeable batteries, as well as potential environmental impacts resulting from their improper disposal, Govt. of India made rules to increase collection and recycling of nickel-cadmium and Lead acid batteries. The Lead Acid Battery (Management & Handling) Rules, 2001 applicable to battery manufacturers, Assembler, Re-Conditioner, Dealers, Bulk Consumer, Auctioneers, Importer and Recyclers.

To implement Battery rules effectively in the states for the collection, storage, and transportation of batteries covered by the Battery Rules 2001. Public education program on battery recycling and the proper handling and disposal of used batteries required to consult with manufacturers and retailers to carry out this initiative.

#### WHAT ARE RECHARGEABLE BATTERIES?

Unlike single-use batteries, which must be replaced once their charge is used up, rechargeable batteries are designed for the long haul. Depending on the application, some rechargeable batteries can recharge up to 1,000 times! Recharging the battery

simply reverses the chemical reaction inside it. This changes the battery's components nearly back to their original state and allows them to be reused. About 80 percent of rechargeable batteries are currently composed of nickel and cadmium (known as "Ni-Cd"). Ni- Cd rechargeable batteries are commonly found in cellular and cordless telephones, video cameras, portable power tools, and laptop computers. The use of these batteries continues to grow. Lead acid batteries are used in emergency lighting, security and alarm systems, computer backup devices, and hospital equipment. They are also used in cellular phones, laptop computers, and power tools. As per static's available 2,08,305 batteries have been sold in the year April 2007 to March 2008.

Rechargeable batteries may initially be more expensive than single-use batteries, and they sometimes require purchase of a recharge, but the upfront costs are often outweighed by the long-term cost savings and environmental benefits of rechargeable. Each rechargeable battery may substitute for hundreds of single-use batteries over its useful life.

#### Requirement of the Battery Rule -

The Battery Rule changed the regulatory framework governing Lead acid batteries. It streamlined the framework in an effort to remove the regulatory barriers to increased recycling of rechargeable batteries.

#### Enforcement Authority –

Authority for ensuring compliance of rule is the state Pollution Control Board and state Board has to submit annual compliance status report to the Central Pollution Control Board.

#### Need of Awareness of Recycling of Rechargeable Batteries

Public education and participation are keys to the success of any recycling program and are particularly important with materials like batteries that have not been commonly recycled. A public education program can heighten awareness of the recycling program, involve more individuals and businesses, and increase the number of batteries collected. EPA in consult action with Lead Acid Batteries battery manufacturers, rechargeable consumer product manufacturers, and retailers has to establish a public education program on batteries recycling, proper handling and disposal of used Lead Acid batteries. Public education and participation are the keys to success of any recycling program and are particularly important with materials like batteries that have not been commonly recycled.

#### Proper Disposal or Recycling Necessary for Lead Acid Batteries -

The toxic heavy metals, such as cadmium and lead, found in rechargeable Lead acid batteries perform critical functions within the battery. Heavy metals are contained within the battery's casing and pose no real risks while the battery is in use. But they can be of concern when discarded with ordinary municipal solid waste, as most batteries are, Lead acid batteries were estimated to represent approximately 75 percent of the cadmium found in municipal solid waste in 1995. EPA projected that lead-acid rechargeable batteries are a small percentage, would represent approximately 65 percent of the lead found in municipal solid waste in 1995.

At present, approximately 73 percent of municipal solid waste is either land filled or incinerated. Neither of these methods is ideally suited for batteries that contain heavy Metals. In landfills, especially those without liners and controls, heavy metals have the potential to leach slowly into soil, ground water, and surface water. When incinerated, metals such as cadmium and lead can concentrate in the ash produced by combustion and enter the atmosphere through incinerator smokestack emissions. When disposed of, the metals in the incinerator ash can leach into the environment. In the environment, certain types of heavy metals can also concentrate in the tissues of organisms and make their way up the food chain. Several metals, such as cadmium, are known carcinogens. The possible health effects associated with ingestion or inhalation of water, food, or air that has been contaminated with high levels of heavy metals range from headaches and abdominal discomfort to seizures, cancer, comas, and even death. The severity of the health effects are usually dependent on the total concentration of the metals to which one is exposed over time recycling programs for Ni-Cd and Lead acid batteries can address the potential risks posed by land filling or Incinerating these batteries by diverting them from the waste stream. In case of battery recycling, metals are recovered from the used batteries, and the remainder of the product is recycled or discarded.

#### Action taken by MPC Board –

State Pollution Control Board plays an important role in developing and implementing a successful battery recycling program.

- MPCB has issued letters to identified Manufacturer and Importer to comply by rules & submit annual returns in prescribed form.
- MPCB has also issued directions to Regional officers regarding stricter compliance of the Battery Rules in Maharashtra. MPCB is taking effective steps to achieve the compliance in this regard and needs more time to make appropriate inventory.

The information on the sale of batteries by the dealers throughout the State of Maharashtra has been collected by the Regional offices of MPCB. There are difficulties in getting correct information in this regard due to lack of awareness among the battery consumers. The paucity of manpower at MPCB is also an issue in ensuring compliance of the Battery Rules. However, efforts are being made by MPCB to overcome these difficulties.

The information collected by MPCB from the **Battery Manufacturer**, **Assembler**, **Re- conditioner**, **Dealers**, **Bulk Consumer and Recycler** from different regions of Maharashtra is given in the table below.

The current status of the compliance of Batteries (M&H) Rules, 2001 as under,

Sr. No	Type of category	Total No Manufacturer, Assembler, Conditioner		of Re-		Production of lead acid batteries in unit numbers/year			of lea in ear	d acid unit
		April 2005 to March 2006	April 2006 to Marc h 2007	April 2007 to Marc h 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008
1	Manufacturer Re- conditioner & Assembler	03	06	58	3340645	572475	530464	185955	73267	73559

#### Table:-B Status of Lead Acid Battery Dealer

Sr.	Туре	Total No of Dealers	Sale of lead acid batteries in	Collection	of	lead	acid
No	of	Total NO OF Dealers	unit numbers/year	batteries in	unit n	umbers	/year

Workshop for Mass awareness on implementation of  $Battery~({\rm M~\&~H})$  Rules, 2001 -  $6^{th}$  March, 2009

		April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008
1	Dealer s	146	277	268	157987	188023	208305	43411	57524	61555

#### Table:-C Status of Lead Acid Battery Bulk consumer, Auctioneer.

Sr. No	Type of category	Total Consun	No o ner, Auct		Collection of lead acid batteries in unit numbers/year		
		April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008
1	Bulk Consumer, Auctioneer	51	54	71	8101	72,541	81058

#### Table:-D Status of Lead Acid Battery Recycler

Sr. No	Type of category	Total No of Battery Recycler			Collection of lead acid batteries in unit numbers/year			
	catogory	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	April 2005 to March 2006	April 2006 to March 2007	April 2007 to March 2008	
1	Recycler	18	28	28	6360	474498	4304	

Table:-E Status of Lead Acid Battery Importer

Sr.	Type of	Total	No of	Battery	No. le	ad acid	batteries	
No	category	Importer	-		Imported numbers/year			
		April	April	April	April	April	April	
		2005	2006	2007	2005 2006		2007 to	
		to	to	to	to	to	March	
		March	March	March	March	March	2008	
		2006	2007	2008	2006	2007	2008	
1	Battery Importer	26	27	50	10692	9692		

Apart from the major battery manufacturers, there are few new lead acid batteries importers who have obtained registration from Ministry of Environment & Forest under the Rule 4 of the HW Rules for sale of lead acid batteries in India. There are 50 such importers of new lead acid batteries in the State of Maharashtra.

The information collected by MPCB on repurchase of lead acid batteries by the dealers and disposal of the batteries by the bulk consumers by auction, reveals that the percentage of the batteries returned to the dealers continues to be poor as compared to the percentage of batteries auctioned by the bulk consumers. Although the percentage in respect of collection of batteries by the dealers appears less the number of batteries returned to the dealers is more. The percent compliance in respect of bulk consumers is more or less steady and they are maintaining the compliance status.

In the State of Maharashtra, the major bulk consumers of lead acid batteries are Maharashtra State Road Development Corporation, Maharashtra Electricity Board, Airport Authority of India and Military establishments in and around Mumbai, Municipal Transport (BEST) and Railways. From the information gathered by the Board, it is seen that these bulk consumers generally auction used lead acid batteries as per the Hazardous Waste (Management & Handling) Amendment Rules, 2003 only to the authorized recyclers / re-refiners having EST along with valid registration from CPCB.

There are 20 nos. of Lead acid Battery recycling units having valid registration from CPCB. Most of the units have submitted half yearly returns on recycling of the batteries. The information from the remaining units is being collected.

It has been observed that there is general lack of awareness among the consumers, dealers, bulk consumers, re-conditioners and assemblers of the batteries, importers and recyclers about the compliance of Battery (M&H.) Rules, 2001 Efforts are being made by MPCB with the help of its Regional offices to create awareness among the various stakeholders to ensure that they comply with the Batteries Rules.

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