

**ENCLOSURE-1**

[ FORM-V ]  
(See rule 14)

**Environmental Statement for the financial year ending the 31/03/2018**

**PART-A**

(I) Name and address of the owner/ occupier of the industry operation or process	Sh. Abhay Kumar Sharma Bharat Rasayan Limited. VPO: Mokhra, Dist: Rohtak (Haryana)-124001
(II) Industry category Primary-(STC Code) Secondary- (SIC code)	SME
(III) Production capacity – Units(Annexure-I)	<b>Metaphenoxy Benzaldehyde</b> <b>80 / MONTH</b> <b>Fenvalerate Technical</b> <b>75 / MONTH</b> <b>Cypermethrin Technical</b> <b>50 / MONTH</b> <b>P-Chlorobenzyl Cyanide</b> <b>40 / MONTH</b>
(IV) Year of establishment	1991
(V) Date of the last environmental statement submitted.	02/08/2017

**PART -B**

**Water and Raw Material Consumption**

**(3) Water consumption m<sup>3</sup>/d**

Process	47.0 m <sup>3</sup> /day (Annexure-XI B)
Cooling & boiler	70.0m <sup>3</sup> /day
Domestic & Gardening.	60.0m <sup>3</sup> /day

Name of Products	Process water consumption per unit of product output.	
	During the previous financial year	During the Current Financial year
	(1)	(2)
(1) Meta Phenoxybenzaldehyde	6.3 ltr/kg.	6.3 ltr/kg.
(2) Fenvalerate Technical	7.42 ltr/kg.	7.42 ltr/kg.
(3) Cypermethrin Technical	2.11 ltr/kg.	2.11 ltr/kg.
(4) P- Chlorobenzyl Cyanide	3.54 ltr/kg.	3.54 ltr/kg.

**(i) Raw Material Consumption**

See Annexure- IIB, IIIB, IVB, & VB

**(ii) See Annexures :-**

- a. See annexure-VII , VIII for Material Balance of spent Cyanide Detoxification and Effluent generated per month for maximum production, respectively.
- b. See Annexure-XG -A and XG B For the actual effluent generated during the yr-2016-2017 & 2017 – 2018

- c. The above effluent are taken to remove TDS & volatile components in MEE than pass through bio-reactor. After biodegradation taken to clarifier, Carbon Filter, Sand Filter before recycling in CTW or scrubber.

**PART-C**

Pollution discharged to environment/ unit of output

(Parameter as specified in the consent issued)

(1) Pollutants		Quantity of pollutants discharged (mass/ day)	Concentrations of pollutants in discharges (mass/ Volume)		Percentage of variation from prescribed standards with reasons		
a) Water		No discharge		No discharge		Nil	
			During Previous yr-2016-2017	During current yr-2017-2018			
<b>Air</b>	<b>Boiler</b>	SPM	70.02 mg/ NM <sup>3</sup>	122.36 mg/ NM <sup>3</sup>	Below Prescribed Limit	No Violation	
		Sulfur Dioxide	39.26 mg/ NM <sup>3</sup>	24.86 mg/ NM <sup>3</sup>	Below Prescribed Limit	-do-	
		Oxide of Nitrogen	48.92 mg/ NM <sup>3</sup>	38.57 mg/ NM <sup>3</sup>	Below Prescribed Limit	-do-	
	<b>DG-1250 KVA</b>	SPM	47.30 mg/ NM <sup>3</sup>	47.68 mg/ NM <sup>3</sup>	Below Prescribed Limit	-do-	
		CO	105.71 mg/ NM <sup>3</sup>	88.56 mg/ NM <sup>3</sup>	Below Prescribed Limit	-do-	
		Oxide of Nitrogen	124.83 ppmV	128.51 ppmV	Below Prescribed Limit	-do-	

**PART-D**

**HAZARDOUS WASTES**

(as specified under Hazardous Wastes/ Management and Handling Rules,1989)

<b>Hazardous Waste</b>	<b>Total Qty (kg.)</b>		<b>Method of disposal</b>
	<b>During Previous Year-2016 -2017</b>	<b>During Current Year-2017-2018</b>	
<b>a) Process</b>			
1) Residue From Distillation	485.2008 kg/day	507.333 kg/day	Incinerator
2) Oil & Oil Emulsion	1.4444 kg/day	1.699 kg/day	Incinerator
3) Cotton Waste, Gland Pkg. etc.	2.6 kg/day	1.443 kg/day	Incinerator
<b>b) From Pollution Control Activities</b>			
1) Lime Sludge from Waste Water treatment Plant	1783.530 kg/day	2512.103 kg/day	<b>Dispose off for land fill at GEPIL -Faridabad Pali</b>
2) Activated Carbon	0.427 kg/day	0.416 kg/day	Incinerator

See Annexure- X F for quantity of residue for the year-2016-2017 & 2017-2018

**PART-E**

Solid Waste	Total Qty(kg.)		Method of disposal	Characteristics	Composition
	During Previous Yr. 2016-2017	During Current Yr. 2017-2018			
<b>a) Process</b>					
1) Residue From Distillation	485.2008 kg/day	507.333 kg/day	Incinerator	Combustible	Polymeric Compound
2) Oil & Oil Emulsion	1.4444 kg/day	1.699 kg/day	Incinerator	Combustible	Contains traces of organics
3) Cotton Waste, Gland Pkg. Etc.	2.6 kg/day	1.443 kg/day	Incinerator	Combustible	Contaminated with traces of chemicals
<b>b) From Pollution Control Activities</b>					
1) Limes Sludge from Waste water treatment plant	1783.53 kg/day	2512.103 kg/day	Dispose off for land fill at GEPIL - Faridabad Pali	Fused lime sludge	Lime sludge containing salt potassium calcium etc.
2) Activated Carbon	0.4277 kg/day	0.416 kg/day	Incinerator	Combustible	Contaminated with traces of organics from effluent
<b>c)</b>				<b>For the Yr-2016-2017 (Qty. MT/yr)</b>	<b>For the Yr-2017 -2018 (Qty. MT/yr)</b>
.i) Quantity recycled				Nil	Nil
Quantity Sold to : M/s. Shiv Oil Refinery-Sampla (Hr.)				<b>0.520</b>	<b>0.6115</b>
ii) Oil & Emulsion					
iii) Quantity disposed (TSDF site )				<b>MT.</b>	<b>MT.</b>
A) Lime sludge				<b>642.071</b>	<b>904.357</b>
B) Residue for distillation				<b>174.673</b>	<b>182.639</b>
C) Cotton Waste				<b>0.936</b>	<b>0.520</b>
D) Activated Carbon				<b>0.154</b>	<b>0.150</b>

### PART-F

Please specify the characterizations (in terms of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

The Characterization/ Composition of hazardous as well as solid wastes is given in *FORM - 4*  
(Already submitted vide our letter No. BRL/AG/2017-2018/F-13 Date: 08/05/2018)

### PART D & E

- 1) The Ash obtained is stored in Drums, Jumbo bags before desposing for land fill or sale to bricks manufacturers.
- 2) FROM ETP:-
  - I) Lime Sludge is stored in bags/Jumbo bag in HDPE lined Shad.

### PART-G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

- a) Better Pollution control measurement & continuous process monitoring resulted in better working environment thus in turn improved productivity.
- b) Continuous monitoring of scrubber system resulted in much lower scope of corrosive gases in atmosphere. Which give much more life to steel structure & also reduce painting effort, thus reduce maintenance cost significantly.
- c) **Occupational Health and Safety Improvement:** Training is given to all staff at site. OHC managed by full time doctor and very senior physician (M.D) is visiting at site every week for review the EHS impact.
- d) Lower effluent load resulted in saving of energy & treatment cost.
- e) **Green Belt Development:** Developed green belt in 16068 m<sup>2</sup> area and last year 1000 plants are also planted.
- f) **Establishment of Analysis:** Qualified officers carry out analysis in fully developed laboratory. On line monitoring of effluent and boiler stack has been monitored by the competent person. Apart from the above as per guide line of HSPCB monitoring and analysis is also being carried out by approved 3<sup>rd</sup> party on quarterly basis.

## PART-H

Installed Effluent Treatment Plant comprises of :-

- a) Oil & Grease trap.
- b) Primary treatment.
- c) Flocculation & Sludge Drying Bed.
- d) Multi Effect Evaporation ( MEE)
- e) Bio-Reactor .
- f) Clarifier & tertiary treatment :

The above equipments have been operated with skilled manpower. Online monitoring of effluent/boiler stack has given a thrust to keep the environment protection under control.

The approach of reduce recycle & re-use has been adopted to control the Environment.

STP treated water recycle nicely for the gardening.

## PART-I

Any other particulars for improving the quality of the environment.

1) Training program for doing safe operation is given to all operating staff to avoid any damage to environment.

1. Proper preventive maintenance will be ensured to maintain and ensure correct and effective, uninterrupted functioning of Scrubbers & other pollution control equipments.
2. Training to operators are being given for correct operation of Equipments for abatement of Air Pollution and also Effluent Treatment plant.
3. Training program for doing safe operation is given to all operating staff to avoid any damage to environment.

4. **Environment Management System ISO – 14001:2015, Occupational Health & Safety Management System Standards 18001:2007 OHSAS & Quality Management system QMS - ISO-9001-2015, keep the thrust on team to maintain the environment norms within limits.**

1. **Methods of waste Reduction**:- Continuous process improvement through in House R&D and subsequently implementation in plant through recycle the washings and for minimization of the waste.

- 3. Mass balance indicating raw material, products, Solid, liquid and gaseous. (Enclosed)
- 4. Environmental sound layout.

2. Maintain of Ecological balance by compensatory methods

Tree plantation

<u>Name of species</u>	<u>No. of Plants.</u>	<u>Age of Plant</u>
a) <b>TOTAL PLANT</b> planted (Details enclosed)	: 18816	-
b) Plan for future tree plantation:	: 1000	
c) Utilization of organic waste for manure	: Nil	
d) Utilization of Bio- Pesticides for horticulture	: Nil	

For BHARAT RASAYAN LTD.

  
(Authorized Signatory)