

**Form-V**  
**(See Rule 14)**

Environmental Statement for the financial year ending the 31<sup>st</sup> March 2019

**PART –A**

- (i) Name and address of the owner / occupier of the industry operation or process : Sh.Sunil Duggal CEO & Whole Time Director, HZL, Yashad Bhawan, Udaipur (Raj)
- (a) Name & Address of the Unit Head : Sh.Ram Murari, GM, HZL, RD Mine, Dariba-313211. Phone: 02952 – 265151, Fax: 02952- 265143
- (ii) Industry category : Major Industry  
Primary :- (STC Code)  
Secondary :- (STC.Code)
- (iii) Production capacity: Units : 1080000 TPA (Mining of Lead-Zinc Ore),  
1200000 TPA (Lead-Zinc Ore Beneficiation)
- (iv) Year of establishment : 1983
- (v) Date of the last environmental Statement submitted : 06.09.2018

**PART –B**

(1) Water and raw material consumption

Water consumption	Year 2017-18	Year 2018-19
Process	3522 m3/day	3438 m3/day
Cooling	3.26 m3/day	4.77 m3/day
Domestic	1380 m3/day	1133 m3/day

Name of products	Process water consumption per unit of product output	
	During the current financial year (2017-18)	During the current financial year (2018-19)
	1	1
Zinc Concentrate & Lead Concentrate	14.14 m3/MT of concentrate	11.0 m3/MT of concentrate

(2) Raw material consumption

*Name of raw materials	Name of products	Consumption of raw material	
		During the current financial year (2017-18)	During the current financial year (2018-19)
Lead-Zinc Ore	Lead-Zinc Concentrate	10.27 MT* per ton of concentrate produced	8.78 MT* per ton of concentrate produced
Copper Sulphate		302 MT	278 MT
Sodium Cyanide		26 MT	25 MT
Xanthate		108 MT	124 MT

\* Ore is being treated to separate Lead and Zinc Concentrate

Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.

### PART – C

#### Pollutant discharge to environment / unit of output

(Parameter as specified in consent issued)

Pollutants	Qty. of pollutants discharged (mass/day)	Concentrations of pollutants in discharged (mass/volume)		Percentage of variation from prescribed standard with reason
Trade effluents: Tailing slurry discharged to tailing dam	1657MT/day	pH	6.1-7.8	Zero discharge
		Suspended Solids	6-96	
		Oil & Grease	3-8	
		BOD	7-28.1	
		COD	49-177.4	
Air Dust Emission From Stack (SPM)	0.61-0.85 Kg/hr	61.78-79.76 mg/ Nm <sup>3</sup>		Within permissible limit

## PART- D

### HAZARDOUS WASTES

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

Hazardous Wastes	Total Quantity ( Kg.)	
	During the current financial year (2017-18)	During the current financial year (2018-19)
(a) From process	1) 55.91 KL used oil; 2) 281Kg residue from barrel cleaning; 3) 511 decontaminated Sodium Cyanide Containers.	1) 100 KL used oil; 2) 299 Kg residue from barrel cleaning; 3) 498 decontaminated Sodium Cyanide Containers. 4) 2.960 MT discarded asbestos
(b) From pollution control	Nil	Nil

## PART- E

### Solid Wastes

	Total Quantity	
	During the current financial year (2017-18)	During the current financial year (2018-19)
(a) From process (Tailings)	867095 MT	941671 MT
(b) From pollution control	Nil	Nil
(c) (1) Quantity recycled or re-utilized within the unit	433547 MT*	336813 MT*
(2) Sold	Nil	Nil
(3) Disposed to Tailing Dam	433547 MT	604858 MT

\*Used as fill material for filling of underground voids.

## PART – F

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

### Solid Waste:

In the process of lead –zinc beneficiation, the solid waste generated as mill tailing. The mill tailing containing 25% solids are pumped after classification by hydro cyclones. 50% of the coarse tailings of the cyclone underflow are utilized for back filling in the underground mine. The cyclone overflow tailings are fed to tailing thickener and allowed to settle in the tailing thickener. The reclaimed water as an overflow from thickener is used as make up process water for beneficiation. Tailing thickener underflow tailings containing about 40 % solids are pumped to the tailing dam where the tailings are impounded and the clear water from the tailing dam is recycled to plant for reuse. The analysis of mill tailing is – Lead: 0.26 %, Zinc: 0.81%, and Iron: 10.76 %

### Hazardous Waste:

#### Used Oil:-

The used lubricating oil is collected in empty drums and stored at earmarked place in the store yard for sale to actual users/re-processors duly registered by Ministry of Environment & Forests, Government of India, New Delhi.

#### Disposal of barrels of chemical substances:-

Sodium Cyanide is received in MS drums of capacity 50 Kg. Sodium Cyanide is used as depressant agent in Lead-Zinc flotation. The empty drums are de-contaminated by 5-7% Sodium Hypochlorite solution and given thorough wash with water. These drums are then flattened and stored in earmarked place and sent at common hazardous waste treatment storage facility at Gudli. The residue from this cleaning operation is reuse in process.

## PART – G

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

The pollution control measures taken on conservation of natural resources are:

- Storage of tailings in the tailing dam.
- Reclamation and reuse of the tailing water for the plant operation.
- Construction of garland drain to prevent any possibility of leachate at tailing dam.
- Maintaining zero discharge from tailing dam.

## PART- H

Additional measures / investment proposal for environmental protection including abatement of pollution, prevention of pollution.

- We have planted 6000 Nos. of plants during the last year 2016 -17 in the mine lease area. The planted species are Neem, Cassia, Sheesham etc.
- Storage of used oil in covered shed.
- Dust from ore crushing & handling equipments is being controlled by dust extraction system through wet scrubber & regular water spraying on industrial roads.
- Regular ambient air monitoring at 3 locations.
- Water quality of mine & wells around the mine complex is being monitored on monthly basis.
- Regular recycling of Tailing Dam Water for beneficiation plant reuse.
- Regular monitoring of noise & persons working in high noise area are provided with ear muffs & ear plugs.
- Overburden is dumped at the designated waste dump yard in a systematic manner.
- Expenditure on Environment for 2018-19 is Rs.17089605/-

## PART – I

Any other particulars for improving the quality of the environment.

- Environment and pollution monitoring equipment like Respirable Dust sampler, stack monitoring kit, DB Meter and water analysis kit etc are available for regular monitoring.
- On 5<sup>th</sup> June every year World Environment Day is celebrated with great enthusiasm.
- Rajpura Dariba Mines have been 4 Star rated by IBM for the year 2018-19.
- Rajpura Dairba Mines participated in the 29<sup>th</sup> Mine Environment and Mineral Conservation week – 2018-19 for Ajmer region and vigorously celebrated the week from 18.11.2018-24.11.2018. Rajpura Dariba Mines won the following shields in the Underground Mechanized Mines category-

Second Prize	Mineral Beneficiation
Second Prize	Afforestation