ENVIRONMENTAL STATEMENT REPORT

- 2019-20 -----

FOR

Bulk Drug Manufacturing [API(72 TPA) and Steroid (8 TPA)] Plant

At

Plot No. C-24 & 25, RIICO Industrial Area, Village Sotnala, Tehsil: Behror, District: Alwar, Rajasthan

SUBMITTED BY

Shree Jee Laboratory Pvt. Ltd.

Plot No. C-24 & 25, RIICO Industrial Area, Village Sotanala, Tehsil Behror, District Alwar (Rajasthan) Email:dranil@mankindpharma.com

ENVIRONMENTAL STATEMENT FORM-V

(See rule 14)

Environmental Statement for the financial year ending with 31st March 2020

PART-A

General Information

(i)	Name and address of the	Mr. Abhay Shrivastava			
	owner/occupier of the industry	M/s. Shree Jee Laboratory Pvt. Ltd.,			
	operation or process.	Plot No. C-24 & 25 , RIICO Industrial Area, Village:			
		Sotanala, Tehsil: Behror, District Alwar			
		(Rajasthan)			
(ii)	Industry category Primary- (STC Code)	Red Category			
	Secondary- (SIC Code)-				
(iii)	Production capacity	1. Bulk Drugs API (72 TPA)			
		2. Steroid (8 TPA)			
(iv)	Year of establishment	2015			
(v)	Date of the last environmental statement	25.09.2019			
	submitted				

PART-B WATER AND RAW MATERIAL CONSUMPTION

(i) Water consumption	n m³/day				
Particulars	Water Consu	mption (m³/day)			
Process	:	27.7			
Cooling		15.5			
Domestic		5.9			
Total	49.1				
	Process Water Consumption per	Unit of product Output			
Name of Products	During the previous financial	During the current financial year			
	year (2018-19)	(2019-20)			
Moxifloxacin HCL	15 (m³/day)	8.1 (m³/day)			
Etoricoxib	o (m³/day)	1.3 (m³/day)			
Haloperidol	o (m³/day)	2.9 (m³/day)			
Telmisaratan	o (m³/day)	4.1 (m³/day)			
Clomipiramine HCl	o (m³/day)	1.8 (m³/day)			
Sitagliptin Phosphate	o (m³/day)	1.2 (m³/day)			
Nitrofurantoin Macrocrystals	o (m³/day)	1.5 (m³/day)			
Ranolazine	o (m³/day)	2.5 (m³/day)			
Sugammadex Sodium	o (m³/day)	0.5 (m³/day)			
Acetone Semicarbazone	o (m³/day)	2.7 (m³/day)			
Dydrogesterone	o (m³/day)	1.1 (m³/day)			

M/s. Shree Jee Laboratory Pvt. Ltd.

(ii) **Raw material consumption** Consumption of raw material per unit S.No. Name of the Raw materials* Name of the Products During the During the current financial previous financial year (2018-19) year (2019-20) Methanol Moxifloxacin HCL 36575 Ltr. 103633 Ltr 1. **Boric Acid** Moxifloxacin HCL 1526 Kg. 1408.5 Kg 2. Gati acid Moxifloxacin HCL 4575 Kg. 720 Kg 3. Acetone Moxifloxacin HCL 39420 Ltr. 125020 Ltr 4. Moxifloxacin HCL Acetic anhydride cr grade 8525 Kg. 15988 Kg 5. Moxifloxacin HCL 6. Acetonitrile cr grade 14685 Ltr. 18951 Ltr Moxifloxacin HCL Triethyle amine 1673.75 Ltr. 1263.23 Ltr. 7. Moxifloxacin HCL 1990 Kg. 8. Hydrochloric acid 30% 6551.26 Kg Moxifloxacin HCL Non int step- v 2018.25 kg. 2850.61 Kg 9. Gati ester Moxifloxacin HCL 4122 Kg 10. 375 Kg. 2-Chloro-1,3BIS (hfp-1) for 11. Etoricoxib o Kg 456.2 Kg EU Acetic Acid Glacial Etoricoxib o Kg 770 Kg 12. Activated Carbon Etoricoxib o Kg 13. 75 Kg Ammonium Acetate Etoricoxib o Kg 101.25 Kg 14. Isopropyl Alcohol Etoricoxib o Ltr 1028 Ltr 15. 16. Ketosulfone FOR EU Etoricoxib o Kg 375 Kg Liquid Ammonia Solution Etoricoxib o Ltr 1501 Ltr 17. 18. Methanol Etoricoxib o Ltr 2010 Ltr NN Dimethyl Formamide Etoricoxib o Ltr 600 Ltr 19. Potassium Tert-Butoxide Etoricoxib 20. o Kg 158.5 Kg Sodium Hydroxide Etoricoxib 225 Kg 21. o Kg Tert-Butanol Etoricoxib o Ltr 2843 Ltr 22. Toluene Etoricoxib o Ltr 3716 Ltr 23. 4-(4--Chlorophenyl)-4-24. Haloperidol o Kg 400 Kg Piperidinol (HL2) 4-Chloro-1-(4-25. Fluorophenyl)BUTAN-1-Haloperidol o Kg 1137.6 Kg ONE Acetone Haloperidol o Ltr 26. 1316 Ltr Activated Carbon Haloperidol o Kg 112 Kg 27. Haloperidol 28. Decanoic Acid o Kg 172.8 Kg 29. **Ethyl Acetate** Haloperidol o Ltr 13350 Ltr Methanol Haloperidol o Ltr 8405 Ltr 30. Methylene Dichloride 31. Haloperidol 2788 Ltr o Ltr (MDC) N-Heptane (Haloperidole) Haloperidol o Ltr 5196 Ltr 32. Haloperidol **Oxalyl Chloride** o Kg 153.6 Kg 33. Potassium Iodide Haloperidol o Kg 63.2 Kg 34. Sodium Bicarbonate Haloperidol 35. o Kg 1033.6 Kg Toluene Haloperidol o Ltr 3675 Ltr 36. Haloperidol **Triethyle Amine** 80 Kg 37. o Kg

38.	2-Cyano-4-Bromo(BR- OTBN)	Telmisaratan	o Kg	7913 Kg
39.	2-N-Propyl-4 Methyl-6- Benzimidazole(BIM)	Telmisaratan	o Kg	9225 Kg
40.	Acetic Acid Glacial	Telmisaratan	o Ltr	5619 Ltr
41.	Acetone	Telmisaratan	o Ltr	625 Ltr
42.	Acetonitrile CR Grade	Telmisaratan	o Ltr	22810 Ltr
43.	Acetic Anhydride CR Grade	Telmisaratan	o Kg	119 Kg
44.	Activated Carbon	Telmisaratan	o Kg	805 Kg
45.	Boric Acid	Telmisaratan	o Kg	21 . 55 Kg
46.	Calcium Chloride	Telmisaratan	o Kg	2040 Kg
47.	Ethylene Glycol CR Grade	Telmisaratan	o Ltr	12289 Ltr
48.	Gati Ester	Telmisaratan	o Kg	75 Kg
49.	Hydrochloric Acid 30%	Telmisaratan	o Kg	32 Kg
50.	Methanol	Telmisaratan	o Ltr	61897 Ltr
51.	Methylene Dichloride (MDC)	Telmisaratan	o Ltr	8279 Ltr
52.	Potassium Hydroxide Flakes	Telmisaratan	o Kg	7112.06 Kg
53.	Triethtle Amine	Telmisaratan	o Kg	23.65 Kg
54.	3-Dimethyl Aminopropylchloridehcl(CL OMI)	Clomipiramine HCl	o Kg	125 Kg
55.	5-Acetyl-3-Chloro-10,11- Dihydro-5h-Dibe	Clomipiramine HCl	o Kg	360 Kg
56.	Acitic Anhydride cr Grade	Clomipiramine HCl	o Kg	12 Kg
57.	Ethyl Methyl Ketone	Clomipiramine HCl	o Ltr	5251 Ltr
58.	Hydrochloric Acid 30%	Clomipiramine HCl	o Kg	131.41 Kg
59.	Methanol	Clomipiramine HCl	o Ltr	2587 Ltr
60.	Methylene Dichloride (MDC) CR Grade	Clomipiramine HCl	o Ltr	110 Ltr
61.	N-Butanol	Clomipiramine HCl	o Ltr	2100 Ltr
62.	n-Heptane	Clomipiramine HCl	o Ltr	3988 Ltr
63.	Potassium Hydroxide Powder	Clomipiramine HCl	o Kg	516 Kg
64.	Sodium Carbonate	Clomipiramine HCl	o Kg	20.05 Kg
65.	Sodium Chloride Tech	Clomipiramine HCl	o Kg	180 Kg
66.	Sodium Hydroxide	Clomipiramine HCl	o Kg	553.74 Kg
67.	Toluene	Clomipiramine HCl	o Ltr	1393 Ltr
68.	(3R)-3(tert- butoxycarbonyl)butanoicac id	Sitagliptin Phosphate	o Kg	675 Kg
69.	1-Hydroxybenzotriazole (HOBT)	Sitagliptin Phosphate	o Kg	287.46 Kg
70.	3-(Trifluoromethyl)-5,6,7,8- Tetrahydro-	Sitagliptin Phosphate	o Kg	505.8 Kg
71.	EDC HCL	Sitagliptin Phosphate	o Kg	465.3 Kg
72.	Ethyl Acetate	Sitagliptin Phosphate	o Ltr	5374 Ltr
73.	Hydrochloric Acid 30%	Sitagliptin Phosphate	o Kg	273 Kg
74.	Isopropyl Alcohol	Sitagliptin Phosphate	o Ltr	6477 Ltr

75.	Methanol	Sitagliptin Phosphate	o Ltr	7445 Ltr
76.	Methylene Dichloride (MDC) CR Grade	Sitagliptin Phosphate	o Ltr	10290 Ltr
77.	NN Diisopropyl Ethylamine	Sitagliptin Phosphate	o Kg	783 Kg
78.	Orthophosphoric Acid	Sitagliptin Phosphate	o Kg	179.34 Kg
79.	Sodium Carbonate	Sitagliptin Phosphate	o Kg	1403.24 Kg
80.	Sodium Hydroxide	Sitagliptin Phosphate	o Kg	228.3 Kg
81.	Tert-Butyl Methyl Ether	Sitagliptin Phosphate	o Ltr	5985 Ltr
82.	5-Nitro-2-Furfural Diacetate	Nitrofurantoin Macrocrystals	o Kg	985 Kg
83.	Acetic Acid Glacial	Nitrofurantoin Macrocrystals	o Kg	7793.3 Kg
84.	Acetone Semicarbazone	Nitrofurantoin Macrocrystals	o Kg	627.4 Kg
85.	Ethyl Chloroacetate	Nitrofurantoin Macrocrystals	o Kg	900.8 Kg
86.	Hydrochloric acid 30%	Nitrofurantoin Macrocrystals	o Kg	2647.1 Kg
87.	Methanol	Nitrofurantoin Macrocrystals	o Ltr	4211 Ltr
88.	Sodium Methoxide Sol 30%	Nitrofurantoin Macrocrystals	o Kg	3614.07 Kg
89.	1,4-Dioxane	Ranolazine	o Ltr	837 Ltr
90.	2,6-Dimethylaniline	Ranolazine	o Kg	540 Kg
91.	Acetone	Ranolazine	o Ltr	25139 Ltr
92.	Activated Carbon(PH-8 TO 10)	Ranolazine	o Kg	6.75 Kg
93.	Chloro Acetyl Chloride	Ranolazine	o Kg	823.2 Kg
94.	Cyclohexane	Ranolazine	o Ltr	3690 Ltr
95.	Epichlorohydrine	Ranolazine	o Ltr	1793 Ltr
96.	Guaiacol (2- Methxoyphenol)	Ranolazine	o Kg	950 Kg
97.	Hydrochloric Acid 30%	Ranolazine	o Kg	1596 Kg
98.	Hyflo Supercell	Ranolazine	o Kg	58 Kg
99.	Isopropyl Alcohol	Ranolazine	o Ltr	5900 Ltr
100.	Methanol	Ranolazine	o Ltr	19678 Ltr
101.	Methylene Dichloride (MDC) CR Grade	Ranolazine	o Ltr	12240 Ltr
102.	Piperazine (Anhydrous)	Ranolazine	o Kg	1342.75 Kg
103.	Sodium Chloride Tech	Ranolazine	o Kg	190 Kg
104.	Sodium Hydroxide	Ranolazine	o Kg	2261 Kg
105.	Sulphuric Acid	Ranolazine	o Kg	922.5 Kg
106.	Toluene	Ranolazine	o Ltr	14451 Ltr
107.	Dimethyl Sulphoxide	Sugammadex Sodium	o Ltr	439 Ltr
108.	Isopropyl Alcohol	Sugammadex Sodium	o Ltr	2453 Ltr
109.	Methanol	Sugammadex Sodium	o Ltr	1571 Ltr
110.	Sugammadex Sodium stage-2	Sugammadex Sodium	o Kg	26 Kg
111.	Acetone	Acetone Semicarbazone	o Ltr	7380 Ltr
112.	Hydrazine Hydrate cr 80%	Acetone Semicarbazone	o Kg	1174.8 Kg

113.	Methanol	Acetone Semicarbazone	o Ltr	5180 Ltr
114.	Toluene	Acetone Semicarbazone	o Ltr	7052 Ltr
115.	Urea CR grade	Acetone Semicarbazone	o Kg	1760 Kg
116.	Solid Material	Dydrogesterone	o Kg	4940 Kg
117.	Sodium bicarbonate	Dydrogesterone	o Kg	2197.05 Kg
118.	Petroleum Ether	Dydrogesterone	o Ltr	11025 Ltr
119.	Sodium Chloride	Dydrogesterone	o Kg	1131.29 Kg
120.	Toluene	Dydrogesterone	o Ltr	13922 Ltr
121.	Ethyl Acetate	Dydrogesterone	o Ltr	45337 Ltr
122.	Carbon (8-10 pH)	Dydrogesterone	o Kg	385.68 Kg
123.	Methylene Dichloride	Dydrogesterone	o Ltr	48306 Ltr
124.	Hyflow Supercell	Dydrogesterone	o Kg	103.5 Kg
125.	Isopropyl Alcohol IP/EUR	Dydrogesterone	o Kg	107 . 5 Kg
126.	Dichloromethane PH. EUR	Dydrogesterone	o Kg	258 Kg

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

PART-C

Pollution discharged to environment/unit of output

(Parameter as specified in the consent issued)

Pollutants		Quantity of	Concentrations of	Percentage of variation					
		Pollutants	pollutants in	from					
		discharged	discharges (mass/	prescribed standards with					
		(mass/day) volume)		reason					
(a)	Air	Monitoring Result i	Monitoring Result is enclosed as Annexure- I						
(b)	Noise	Monitoring Result is enclosed as Annexure- II							

PART-D HAZARDOUS WASTES

(As specified under Hazardous Wastes Management and handling Rules, 1989 and amended in 2002)

	Total Quantity (MT.)					
Hazardous Waste	During the previous financial year (2018-19)	During the current financial year (2019-20)				
(a) From process	8.790	16.58				
(b) From Pollution Control facilities	37.256	32.69				

S. No	Solid waste	Total Quantity (MT.)				
		During the previous financial year	During the current financial year			
		(2018-19)	(2019-20)			
(a)	From Process	8.790	16.58			
(b)	From pollution control facility	37.256	32.69			
	(1) Quantity recycled or re-utilized within the	NIL	NIL			
(c)	(2) Sold	NIL	NIL			
	(3) Disposed	NIL	NIL			

PART-E SOLID WASTE

PART-F

PLEASE SPECIFY THE CHARACTERIZATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS MATERIAL AS WELL AS SOLID WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES

Hazardous Waste	Storage	Mode Of Disposal
Organic: ETP Sludge through	Closed packed in leak proof double	TSDF
MBBR	liner and stored in dedicated HW	
Inorganic: ETP Sludge through	storage area	
RO-1, RO-2 and followed by MEE		
Process Residue And Waste	Fiber Box/ HDPE/MS/GI/ Drums	TSDF
Used / Spent Oil	HDPE / MS Drums	Approved Cycler
Spent Catalyst/ Carbon	Closed Dry Container and away from	TSDF
	strong oxidizer such as Ozone,	
	liquid oxygen and chlorine	
Spent Organic Solvent	HDPE/GI Drums	Approved Recycler
Date expired, discarded and off	Closed Packed Liner / Carton	TSDF
specification products /		
medicine		
Discarded containers / barrels/	Stored at dedicated hazardous	TSDF
liners/ used PPE contaminated	waste storage area	
with Hazardous waste/		
chemicals		

The company has obtained Authorization for collection, storage and disposal of hazardous waste under the hazardous waste management, handling and trans-boundary movement Rules, 2008 and have done agreement for hazardous waste disposal.

PART-G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION

 During the excavation top soil was conserved at site and the same was simultaneously used for greenbelt development and land escaping. Plantation done is a mix of hardy tress and is chosen on the basis of their rate of growth. Total No. of plantation done during FY 2019-2020 is approx. 160 trees.

Photographs showing greenbelt plantation at the plant site are attached as **Annexure 3.**

- The requirement of total fresh water is fulfilled from RIICO (Rajasthan State Industrial Development and Investment Corporation).No groundwater is extracted.
- Zero effluent discharge is adopted by the industry and no effluent is discharged outside the plant premises and is treated in Effluent Treatment Plant.
- The company has constructed rainwater harvesting structure to harvest rainwater from the roof-tops of the building and storm water drains to recharge the ground water and use same water for process activities of the plant to conserve fresh water.



Rainwater Harvesting Structure

• The industry has constructed the separate bund wall with spillage control pit in chemical storage area to avoid the mixing of all kind of spillage with storm water drain.





- Under the guidance of environment management cell we have done the energy saving in ETP and minimized the water losses.
- The industry is a member of Common Hazardous Waste-Treatment, Storage and Disposal Facility (CHW-TSDF).

PART-H

ADDITIONAL MEASURES/INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT OF POLLUTION, PREVENTION OF POLLUTION

Sr. No.	Particulars	During the previous financial year (2018-2019)	During the current financial year (2019-2020)
1.	Air Pollution Control	197455.00	176800.00
2.	Water Pollution Control	10800.00	10800.00
3.	Noise Pollution Control	21600.00	21600.00
4.	Environment Monitoring and Management	10000.00	104000.00
5.	Occupational Health	385360.00	296364.00
6.	Green Belt	179525.00	17710.00
7.	Others (CSR)	158812.00	177870.00
	Total	1053552.00	805144.00

Existing Expenditure on Environment Management (2019-20)

PART- I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF THE ENVIRONMENT

Any other Particulars for improving the quality of the environment

- Water meter is installed at all point of water distribution system to evaluate the domestic and industrial water consumption on daily basis and accordingly optimize the wastage of water in best possible way.
- Monitoring of environmental parameters such as ambient air & stack, Noise and wastewater being done on regular basis through MoEF and NABL recognized laboratory.
- Quality of treated effluent is monitored on regular basis. Online monitoring instrument has also been attached to monitor the effluent discharge.
- We have installed continuous emission monitoring system at discharge points of process stack.
- Treated water is recycle/reused for process/cooling tower makeup & other activities
- CSR activity Distribution of Books in School at Jaipur & Installation of Drinking water line for outsiders, outside the factory boundary.

Annexure – 1

AMBIENT AIR QUALITY MONITORING RESULTS

		Monitoring Parameters										
Monitoring	PM2.5	(µg/m³)	PM 10 ((µg/m³)	NO _x (į	ug/m³)	SO₂(µ	ıg/m³)	CO (m	ng/m³)	VOC (J	ug/m³)
Locations	I	II	I	II	I	II	I	II	I	II	I	II
	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter
Plant Site	46.07	41.90	93.77	83.15	26.34	25.37	10.99	9.16	0.71	0.68	4.18	3.92
Near ETP	42.09	38.27	86.25	81.35	26.10	23.19	10.66	11.13	0.67	0.60	0.50	2.10
Near Admin Block	39.00	32.88	83.11	76.34	24.08	22.04	10.47	9.13	0.69	0.65	3.52	3.18
Near Warehouse	43.50	35.33	87.07	78.25	23.61	20.19	10.27	9.50	0.62	0.60	4.03	3.77
NAAQS	6	0	10	00	8	0	8	0	2	ł	-	-

1st Half Yearly Monitoring Results (April to September, 2019)

*Note: I & II Quarter correspond to April – June, 2019 & July – September, 2019 respectively.

	Monitoring Parameters											
Monitoring	PM2.5 (µg/m³)		PM 10 (µg/m³)		NO _x (µg/m³)		SO ₂ (µg/m ³)		CO (mg/m ³)		VOC (µg/m³)	
Locations	I	II	I	II	I	II	I	II	I	II	I	II
	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter	Quarter
Plant Site	47.18	50.01	92.71	95.78	27.13	30.66	10.27	13.35	0.71	0.76	3.59	3.98
Near ETP	45.29	44.80	83.45	86.24	25.10	29.42	12.73	15.11	0.64	0.60	2.58	2.89
Near Admin Block	38.57	43.58	80.10	90.51	25.29	28.58	9.85	12.12	0.63	0.67	2.52	2.85
Near Warehouse	37.18	42.01	80.55	85.16	23.06	26.06	8.98	11.05	0.54	0.64	3.11	3.51
NAAQS	6	0	10	00	8	0	8	0		1	-	-

2nd Half Yearly Monitoring Results (Oct., 2019 to March, 2020)

*Note: I & II Quarter correspond to October – December, 2019 & January – March, 2020 respectively.

FY: 2019 - 2020

Annexure – 2 AMBIENT NOISE LEVEL MONITORING RESULTS

	Monitoring Locations	Noise level monitoring {Leq dB(A)}				
S. No.		Apr. – June, 2019		July – Sept., 2019		
		Day Time	Night Time	Day Time	Night Time	
1	Plant Site	63.7	56.7	60.4	49.6	
2	Near ETP	62.8	57.9	62.1	58.9	
3	Near Admin Block	56.3	51.5	55.7	50.8	
4	Near Warehouse	56.3	46.2	55.7	45.5	
CPCB Limits in {Leq dB(A)} Industrial Area		75.0	70.0	75.0	70.0	

1st Half Yearly Monitoring Results (April to September, 2019)

2nd Half Yearly Monitoring Results (October, 2019 to March, 2020)

S. No.	Monitoring Locations	Noise level monitoring {Leq dB(A)}				
		Oct., 19 – Dec., 19		Jan., 20 – Mar., 20		
		Day Time	Night Time	Day Time	Night Time	
1	Plant Site	58.5	49.1	58.4	50.3	
2	Near ETP	60.9	56.3	60.5	55.4	
3	Near Admin Block	53.2	45.9	54.6	45.8	
4	Near Warehouse	57.5	44.5	58.4	44.1	
CPCB Limits in {Leq dB(A)} Industrial Area		75.0	70.0	75.0	70.0	

M/s. Shree Jee Laboratory Pvt. Ltd.

Annexure - 3 PHOTOGRAPHS SHOWING GREENBELT AND PLANTATION DEVELOPED

