



ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ
PUNJAB POLLUTION CONTROL BOARD



PPCB/ROPTA/No.3639

Through e-mail

Dated: 02-10-2023

To

The Registrar,
Hon'ble National Green Tribunal,
New Delhi.

Subject: Final Report of Joint Committee in compliance of Hon'ble National Green Tribunal (NGT) orders in Appeal No. 19/2023 (I.A. No. 682/2023) titled as Federal Mogul Goetze (India) Limited Vs Punjab Pollution Control Board.

In regard to above, please find enclosed herewith the final report of Joint Committee constituted by Hon'ble National Green Tribunal, New Delhi in compliance of Hon'ble NGT orders in Appeal No. 19/2023 (I.A. No. 682/2023) titled as Federal Mogul Goetze (India) Limited Vs Punjab Pollution Control Board.

DA/As above

tmq
02/10/2023
For Member Secretary

ਖੇਤਰੀ ਦਫ਼ਤਰ, ਸੀ-23, ਮਾਡਲ ਟਾਊਨ, ਪਟਿਆਲਾ

Regional Office, C-23, Model Town, Patiala

E-mail : eero_patiala@yahoo.com

Subject: Final Report in compliance of Hon'ble National Green Tribunal (NGT) orders dated 29.08.2023 in Appeal No. 19/2023 (I.A. No. 682/2023) titled as Federal Mogul Goetze (India) Limited Vs. PPCB.

Background:

M/s Federal Mogul Goetze (India) Limited, Patiala has filed an Appeal bearing No. 19/2023 before the Hon'ble National Green Tribunal against the communication dated 18.08.2023 of the Punjab Pollution Control Board containing the decision to revoke/cancel the consents to operate granted under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981.

Having regard to the submissions, which have been made by the Counsel for the industry and also considering the nature of the lapses which have been noted in the impugned order and categorical stand of the counsel for the appellant that now the lapses noted in the order have been cured and the industry is complying with all the pollution norms, the Hon'ble Tribunal has permitted the industry to carry out the operation till the next date, subject to complying with the condition of deposit of Environment Compensation amount of Rs. 50 Lakhs contained in the impugned order and furnish Bank Guarantee of Rs. 1 crore as an assurance to comply with the environmental laws, pending the report, within a period of five working days.

After consideration of the matter, the Hon'ble NGT vide orders dated 29.08.2023 has constituted a Joint Committee comprising of Director, Central Pollution Control Board, Regional Officer, MoEF&CC, Chandigarh and State Pollution Control Board for carrying out the spot inspection and has directed to submit the report before the Tribunal on or before 13.09.2023 giving factual status of compliance of treated trade and sewage effluents in context of consented mode of disposal keeping adequate ferti-irrigation plan and also ensuring the mechanism for disposal of effluent during floods or seasons not requiring irrigation. The Hon'ble Tribunal has further given directions that the Committee may also give time-bound action plan for utilization of environment compensation. The committee has submitted interim report on 12.09.2023 in the Hon'ble National Green Tribunal.

The next date of hearing in the matter is fixed on 03.10.2023.

PPCB had issued show cause notice vide letter no. 5099 dated 19.07.2023 for revocation/cancellation of consents to operate under the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 along with notice

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to issue directions u/s 33-A of the Water (Prevention & Control of Pollution) Act, 1974 and u/s 31-A of the Air (Prevention & Control of Pollution) Act, 1981 along with opportunity of personal hearing before Chairman, PPCB on 25.07.2023. The decisions of the hearing were communicated to the industry bearing letter no. 6250 dated 18.08.2023, which are reproduced as under:

- i) Consent to operate granted to the industry under the provisions of Water Act, 1974 and the Air Act, 1981 be revoked / cancelled.
- ii) The industry shall deposit Environment Compensation amounting to Rs. 50 lakhs on the best assessment basis on polluter pay principle for the degradation of the environment made by it, within 7 days.
- iii) The industry shall submit a Bank Guarantee amounting to Rs.50 Lacs (Rs. Fifty lacs) as an assurance to comply with the Environmental Laws, within 7 days.
- iv) The industry shall get its water balancing carried out, within 15 days and submit the same to the Board.
- v) The industry shall install two piezometers around its plantation area to check the quality of the groundwater, within 15 days.
- vi) The industry shall comply with the other observations raised by the Board during the previous visits, within 15 days, failing which strict action shall be taken against the industry under the provisions of the various Environmental Laws.
- vii) Environmental Engineer, Regional Office, Patiala shall monitor the piezometers after installation of the same by the industry and check the groundwater contamination, if any, with the operation of the unit and submit its report, within one month.
- viii) Further action shall be taken after the receipt of the report from Regional Office, Patiala.

Visit of the Joint Committee

In compliance to the orders of the Hon'ble NGT, Joint Committee comprising of following officers visited the industry on 08.09.2023:

1. Er. Gurnam Singh, Regional Director, Central Pollution Control Board, Chandigarh.
2. Dr. Vimal Kumar Hatwal, Scientist-E, MoEF&CC, Regional Office, Chandigarh.
3. Er. Rohit Singla, Environmental Engineer, PPCB, RO, Patiala.

4. Er. Gurkaran Singh, Assistant Environmental Engineer, PPCB, RO, Patiala
5. Er. Mohit Singla, Assistant Environmental Engineer, PPCB, RO, Patiala
6. Dr. Gurpreet Singh, Assistant Scientific Officer, Head Office Lab, Patiala
7. Dr. Rupinder Kaur, Scientific Assistant, Head Office Lab, Patiala

Following representatives of the industry were contacted by the Joint Committee during the visit-

1. Sh. Sanjeev Sharma, Campus Director
2. Sh. Parsana Kumar, EHS Head (India)
3. Sh. Sukhdeep Singh, EHS Manager (Plant)
4. Sh. Sukhvinder Singh, Plant Manager
5. Sh. Atul Saini, Plant Manager

During visit, the Joint Committee observed as under:

1. The industry was in operation.
2. The industry is involved in manufacturing of Pistons, Piston Pins and Piston Rings.
3. During visit, it was observed that the effluent treatment plant installed by the industry was in operation. The industry has installed ETP for treatment of effluent generated from the final outlet of effluent treatment plant of chrome section, common stream of phosphating, tin plating, cooling tower blow down, washing of components, floor washing etc. The ETP is comprising of Oil & Grease removal tank, Equalization Tank, Dissolved Air Floatation, Tube settler, Multi Grade Filter, Activated Carbon Filter.
4. The industry has installed STP for treatment of domestic effluent generated from the premises, adjoining to the ETP and was in operation at the time of visit. The STP is consisting of collection tank, Aeration Tank-1 & 2, Tube Settler, Treated Water Tank, Multi Grade Filter and Activated Carbon Filter.
5. The industry has provided a Rain Water collection tank adjoining to the STP and ETP. Effluent was found lying stored in the tank.
6. The industry has provided 3 no. piezometers nearby the Green Belt / plantation area, where combined effluent from ETP and STP is being utilized.



7. Trade effluent samples were collected u/s 21 of the Water (Prevention and Control of Pollution) Act, 1974 from following locations:

- a) Inlet of ETP
- b) Outlet of ETP
- c) Outlet of STP
- d) Aeration Tank of STP
- e) Combined treated ETP and STP outlet
- f) Rainwater collection tank
- g) Piezometers 1 (installed in green area near ETP/STP and 2 (in front of admin block).

3 sets of samples were collected. 1st set of samples was sent to from Sophisticated Analytical Instruments laboratories Society. (SAI LAB Thapar Technology Campus, Bhadson Road, Patiala, 2nd set of samples were sent to Punjab Pollution Control Board, Head Office Lab, Patiala and 3rd set of samples was given to the industry for analysis.

The analysis report received from Sophisticated Analytical Instruments Laboratories Society. (SAI LAB Thapar Technology Campus, Bhadson Road, Patiala) and Punjab Pollution Control Board Lab, Patiala are reproduced as under.

A. Inlet of ETP

Sr. no.	Parameters (All Parameters in mg/l except pH)	Results	
		SAI LAB	PPCB Lab
1.	pH at 25°C	8.0	8.1
2.	Total Suspended Solid 105°C	346	358
3.	Phosphate as P	10.5	9.0
4.	Sulphate as SO ₄ at 800°C	200	220
5.	Nickel as Ni	0.13	0.18
6.	Chromium as Cr	0.36	0.36
7.	Copper as Cu	0.12	0.15
8.	Hexa Chromium as Cr+6	<0.05	BDL
9.	Sulphide as S ²⁻	<1.0	BDL
10.	Cyanide as CN	<0.05	BDL

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11.	Ammonical Nitrogen as N	4.05	4.0
12.	Oil & Grease at 80°C	62.9	52
13.	Iron	--	1.4
14.	Zinc	--	0.6
15.	Arsenic	--	BDL
16.	Mercury	--	BDL
17.	Lead	--	BDL
18.	Cadmium	--	BDL
19.	Tin	--	BDL

B. Outlet of ETP

Sr. no.	Parameters (All Parameters in mg/l except pH)	Results		Prescribed Standard
		SAI LAB	PPCB Lab	
1.	pH at 25°C	8.0	8.2	6.0 to 9.0
2.	Total Suspended Solid 105°C	<10	12	100
3.	Phosphate as P	1.79	1.4	5
4.	Sulphate as SO ₄ at 800°C	176	BDL	400
5.	Nickel as NI	<0.05	BDL	3
6.	Chromium as Cr	<0.05	BDL	2
7.	Copper as Cu	<0.05	BDL	3
8.	Hexa Chromium as Cr+6	<0.05	BDL	0.1
9.	Sulphide as S ²⁻	<1.0	BDL	2
10.	Cyanide as CN	<0.05	BDL	0.2
11.	Ammonical Nitrogen as N	2.36	2.5	50
12.	Oil & Grease at 80°C	14.9	8.8	10
13.	Iron	--	BDL	3
14.	Zinc	--	BDL	5
15.	Arsenic	--	BDL	--
16.	Mercury	--	BDL	--
17.	Lead	--	BDL	0.1
18.	Cadmium	--	BDL	2
19.	Tin	--	BDL	2

C. Final Outlet of STP

Sr. no.	Parameters(All Parameters in mg/l except pH)	Results		Prescribed Standard
		SAI LAB	PPCB Lab	
1.	pH at 25°C	8.2	8.1	5.5-9
2.	Total Dissolved Solid at 180°C (TDS)	1636	1588	--
3.	Total Suspended Solid 105°C	<10	12	100
4.	Chemical Oxygen Demand (COD)	29	34	--
5.	Biochemical Oxygen Demand for 3 days at 27°C (BOD)	<5.0	6	100
6.	Oil & Grease at 80°C	4.3(<5.0)	4.0	10
7.	Total Arsenic as As	<0.005	BDL	--
8.	Chromium as Cr	<0.05	BDL	--
9.	Copper as Cu	<0.05	BDL	--
10.	Iron as Fe	<0.20	BDL	--
11.	Lead as Pb	<0.10	--	--
12.	Magnesium as Mg	22.5	BDL	--
13.	Manganese as Mn	0.05	BDL	--
14.	Nickel as Ni	<0.05	BDL	--
15.	Zinc as Zn	0.08	BDL	--
16.	Antimony	<0.10	--	--
17.	Cobalt as Co	<0.10	--	--
18.	Aluminum as Al	0.34	0.28	--
19.	Barium	1.03	--	--
20.	Silver as Ag	<0.10	--	--
21.	Cadmium as Cd	<0.01	--	--
22.	Cyanide as CN	<0.05	--	--
23.	Mercury as Hg	--	BDL	

D. Aeration Tank of STP

Sr. no.	Parameters (All Parameters in mg/l except pH)	Results	
		SAI LAB	PPCB Lab
1.	Mixed Liquid Suspended Solids	4233	4310
2.	Mixed Liquid Volatile Suspended Solids	2945	2980

E. Combined Outlet of ETP+STP

Sr. no.	Parameters (All Parameters in mg/l except pH)	Results		Prescribed Standards
		SAI LAB	PPCB Lab	
1.	pH at 25°C	8.2	8.3	6.0 to 9.0
2.	Total Suspended Solid 105°C	<10	14	100
3.	Phosphate as P	2.12	1.6	5
4.	Sulphate as SO ₄ at 800°C	186	194	400
5.	Nickel as Ni	<0.05	BDL	3
6.	Chromium as Cr	<0.05	BDL	2
7.	Copper as Cu	<0.05	BDL	3
8.	Hexa Chromium as Cr+6	<0.05	BDL	0.1
9.	Sulphide as S ²⁻	<1.0	BDL	2
10.	Cyanide as CN	<0.05	BDL	0.2
11.	Ammonical Nitrogen as N	3.49	3.6	50
12.	Oil & Grease at 80°C	23.7	14	10
13.	Iron	--	BDL	3
14.	Zinc	--	BDL	5
15.	Arsenic	--	BDL	--
16.	Mercury	--	BDL	--
17.	Lead	--	BDL	0.1
18.	Cadmium	--	BDL	2
19.	Tin	--	BDL	2

Observations:

- a) The analysis results received from SAI lab reveals that the concentration of Oil & Grease at the inlet of ETP is 62.9 mg/l , outlet of ETP is 14.9 mg/l , outlet of STP is 4.3 mg/l and combined outlet of ETP and STP is 23.7 mg/l . The concentration of Oil and Grease at the outlet of ETP and combined outlet of ETP and STP is beyond

permissible standards of 10 mg/l as given in Environment (Protection) Rules, 1986 for electroplating industry.

- b) The analysis results from the Punjab Pollution Control Board Lab reveals that the concentration of Oil & Grease at the inlet of ETP is 52 mg/l , outlet of ETP is 8.8 mg/l , outlet of STP is 4 mg/l and combined outlet of ETP and STP is 14 mg/l . The concentration of Oil &Grease at the combined outlet of ETP and STP is beyond permissible standards of 10 mg/l .
- c) The concentration of rest of the relevant parameters are within permissible limits at the Outlet of STP ,Outlet of ETP and the combined ETP and STP outlet as per SAI LAB and PPCB LAB reports .

F. Rain Water Collection Tank

Sr. no.	Parameters (All Parameters in mg/l)	Results	
		SAI LAB	PPCB Lab
1.	Total Arsenic as AS	0.006	BDL
2.	Chromium as Cr	0.12	BDL
3.	Copper as Cu	0.05	BDL
4.	Iron as Fe	5.59	5.4
5.	Lead as Pb	<0.10	BDL
6.	Magnesium as Mg	34.8	--
7.	Manganese as Mn	0.17	--
8.	Nickel as Ni	0.09	BDL
9.	Zinc as Zn	0.24	0.35
10.	Antimony as Sb	<0.10	--
11.	Cobalt as Co	<0.10	--
12.	Aluminium as Al	6.62	--
13.	Berium as Ba	0.10	--
14.	Silver as Ag	<0.10	--
15.	Cadmium as Cd	<0.01	BDL
16.	Cyanide as CN	0.78	--
17.	Mercury as Hg	<0.001	BDL
18.	Hexa Chrome	--	BDL
19.	Tin	--	BDL

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Observations:

- a) The industry has provided a Rain Water collection tank adjoining to the STP and ETP. Effluent was found lying stored in the tank. The effluent was having blackish colour and objectionable odour.
- b) The analysis results received from SAI lab reveals that the there is presence of metals in the rain water collection tank, which reflects that there is intermixing of effluent carrying metals with the effluent in the storm water drain leading to this rainwater collection tank.
- c) The analysis results received from PPCB, lab reveals that the there is presence of iron & Zinc in the rain water collection tank, which reflects that there is intermixing of effluent carrying metals with the effluent in the storm water drain leading to this rainwater collection tank.

G. Analysis Results of Piezometer**G1. Piezometer 1 installed in green area near ETP/STP- 34.5 m depth**

Sr. no.	Parameters (all parameters in mg/l except pH)	Results		Prescribed standards (Drinking water BIS Standards 10500:2012)	
		SAI LAB	PPCB Lab	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source
1.	pH at 25°C	7.5	7.4	6.5-8.5	No relaxation
2.	Total Dissolved Solid at 180°C (TDS)	1800	1690	500	2000
3.	Total Suspended Solid 105°C	<10	BDL	--	--
4.	Biochemical Oxygen Demand for 3 days at 27°C (BOD)	<5.0	BDL	--	--
5.	Sulphide	<1.0	BDL	0.05	No relaxation
6.	Fluoride as F	5.44	4.6	1.0	1.5
7.	Chloride as Cl	200	194	250	1000

8.	Nitrate as No ₃	20.7	16	45	No relaxation
9.	Phosphate as P	1.00	0.8	--	--
10.	Sulphate as SO ₄ at 800°C	220	214	200	400
11.	Total Hardness as CaCO ₃	413	330	200	600
12.	Total Arsenic as As	<0.005	BDL	0.01	0.05
13.	Chromium as Cr	<0.05	BDL	0.05	No relaxation
14.	Copper as Cu	<0.05	BDL	0.05	1.5
15.	Iron as Fe	<0.20	0.4	0.3	No relaxation
16.	Lead as Pb	<0.10	BDL	0.01	No relaxation
17.	Magnesium as Mg	40.9	13	30	100
18.	Manganese as Mn	0.21	BDL	0.1	0.3
19.	Nickel as Ni	<0.05	BDL	0.02	No relaxation
20.	Zinc as Zn	0.44	0.69	5	15
21.	Antimony as Sb	<0.10	BDL	--	--
22.	Cobalt as Co	<0.10	BDL	--	--
23.	Aluminium as Al	0.26	BDL	0.03	0.2
24.	Barium as Ba	<0.10	BDL	0.7	No relaxation
25.	Silver as Ag	<0.10	BDL	0.1	No relaxation
26.	Cadmium as Cd	<0.01	BDL	0.003	No relaxation
27.	Cyanide as CN	<0.05	BDL	0.05	No relaxation
28.	Mercury as Hg	<0.001	BDL	0.001	No relaxation
29.	Chemical Oxygen Demand	--	40	--	--

Observations:

- a) The analysis results received from SAI Lab reveals that the concentration of TDS 1800 mg/l, Total hardness 413 mg/l, Magnesium 40.9 mg/l, Manganese .21 mg/l, Sulphate 220 mg/l in Piezometer 1 is beyond Acceptable limits of 500 mg/l, 200 mg/l, 30 mg/l, 1 mg/l, 200 mg/l respectively but within Permissible limits in the

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absence of alternate source i.e 2000 mg/l and 600 mg/l ,100 mg/l ,.3 mg/l and 400 mg/l respectively.

- b) The analysis results received from PPCB lab reveals that the concentration of TDS 1890 mg/l and Total hardness 230 mg/l in Piezometer 1 is beyond Acceptable limits of 500 mg/l & 200 mg/l respectively but within Permissible limits in the absence of alternate source i.e 2000 mg/l and 600 mg/l respectively.
- c) The analysis results received from PPCB lab reveals that the concentration of Iron is 0.4 mg/l in Piezometer 1 is beyond Acceptable limits (.3 mg/l) and no relaxation is given under the head of Permissible limits in the absence of alternate source.
- d) There is concentration of COD found in the ground water.

G2. Piezometer -2 Installed in front of Admin Block- 27.5 m depth

Sr. no.	Parameters(all parameters in mg/l except pH)	Results		Prescribed standards (Drinking water BIS Standards 10500:2012)	
		SAI LAB	PPCB Lab	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source
1.	pH at 25°C	7.7	7.8	6.5-8.5	No relaxation
2.	Total Dissolved Solid at 180°C (TDS)	2418	1918	500	2000
3.	Total Suspended Solid 105°C	<10	BDL	--	--
4.	Biochemical Oxygen Demand for 3 days at 27°C (BOD)	<5.0	BDL	--	--
5.	Sulphide	<1.0	BDL	0.05	No relaxation
6.	Fluoride as F	0.23	0.4	1.0	1.5
7.	Chloride as Cl	309	303	250	1000
8.	Nitrate as No ₃	257	46	45	No relaxation
9.	Phosphate as P	1.44	1.2	--	--
10.	Sulphate as SO ₄ at 800°C	289	280	200	400
11.	Total Hardness as CaCO ₃	938	730	200	600
12.	Total Arsenic as As	<0.005	BDL	0.01	0.05

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13.	Chromium as Cr	<0.05	BDL	0.05	No relaxation
14.	Copper as Cu	<0.05	BDL	0.05	1.5
15.	Iron as Fe	<0.20	0.26	0.3	No relaxation
16.	Lead as Pb	<0.10	BDL	0.01	No relaxation
17.	Magnesium as Mg	105	60	30	100
18.	Manganese as Mn	0.12	BDL	0.1	0.3
19.	Nickel as Ni	<0.05	BDL	0.02	No relaxation
20.	Zinc as Zn	0.92	0.90	5	15
21.	Antimony as Sb	<0.10	BDL	--	--
22.	Cobalt as Co	<0.10	BDL	--	--
23.	Aluminium as Al	0.24	BDL	0.03	0.2
24.	Barium as Ba	<0.10	BDL	0.7	No relaxation
25.	Silver as Ag	<0.10	BDL	0.1	No relaxation
26.	Cadmium as Cd	<0.01	BDL	0.003	No relaxation
27.	Cyanide as CN	<0.05	BDL	0.05	No relaxation
28.	Mercury as Hg	<0.001	BDL	0.001	No relaxation
29.	Chemical Oxygen Demand	--	30	--	--

Observations:

- a) The analysis results received from **SAI lab** reveals that the concentration of Chloride 309 mg/l, Manganese 0.12 mg/l, Sulphate 289 mg/l in Piezometer 2 is beyond Acceptable limits of 250 mg/l, 0.1 mg/l and 200 mg/l, respectively but within Permissible limits in the absence of alternate source i.e 1000 mg/l, 0.3 mg/l and 400 mg/l, respectively.
- b) The analysis results received from **SAI LAB** reveals that the concentration of TDS 2418 mg/l, Total hardness 938 mg/l, Nitrate 257 mg/l, Magnesium 105 mg/l, Aluminium 0.24 mg/l in Piezometer 2 is beyond Acceptable limits 500 mg/l, 200 mg/l, 45 mg/l, 30 mg/l, 0.03 mg/l, respectively and Permissible limits in the

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absence of alternate source i.e. 2000 mg/l, 600 mg/l, no relaxation, 100 mg/l and 0.2 mg/l, respectively.

- c) The analysis results received from PPCB lab reveals that the concentration of TDS 1918 mg/l in Piezometer 2 is beyond Acceptable limits of 500 mg/l but within Permissible limits in the absence of alternate source i.e 2000 mg/l.
 - d) The analysis results received from PPCB lab reveals that the concentration of Total hardness 730 mg/l in Piezometer 2 is beyond Acceptable limits 200 mg/l and Permissible limits in the absence of alternate source i.e 600 mg/l.
 - e) There is concentration of COD found in the ground water.
8. The stack emission samples were taken u/s 26 of the Air (Prevention and Control of Pollution) Act, 1981 from the following stacks:
- a) Common Stack of 4 no. induction furnaces (Capacity of each furnace is 1 T/heat)
 - b) Common Stack of SK-1 and SK-2 of melting furnace
 - c) De-chlorination furnace
 - d) Grinding Unit of Ring Foundry

The stack samples were sent to Punjab Pollution Control Board, Head Office Lab for analysis.

The results received from PPCB lab are as under:

Stack emission analysis results:

S No.	Point of Sample Collection	Parameter	Results	Permissible limits
1.	From port hole on common stack of 4 no. Induction Furnaces after APCD	Particulate Matter (mg/Nm ³)	18	150
2.	From port hole on common stack of SK1 & SK2 Melting Furnace after APCD	Particulate Matter (mg/Nm ³)	29	150
3.	From port hole on stack of Dechlorination Furnace after APCD	Particulate Matter (mg/Nm ³)	BDL	150
		Acid Mist As HCl (mg/m ³)	BDL	50
4.	From port hole on stack of grinding unit of Ring Foundry after APCD	Particulate Matter (mg/Nm ³)	10	150

Observations

- a) The stack emission analysis results reflect that the concentration of particular matter is within permissible limit as prescribed for foundries and electroplating units in Environment (Protection) Rules, 1986.

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9. The industry has submitted permission from PWRDA for abstraction of ground water @ 24000 KL/Month. The industry has submitted record of fresh water consumption from the borewells installed from 01.04.2023 to till date.
10. The industry is maintaining record of operation of ETP & STP and has submitted the record of ETP outlet, energy meter readings, ETP and STP chemical consumption details from 01.04.2023 to till date.
11. The industry is maintaining and submitted record of hazardous waste generated and disposed from 01.04.2023 to till date and has also submitted made an agreement with various hazardous waste recyclers.
12. The industry has submitted copy of raw material procurement, copy of Environmental Clearance obtained from State Competent Authority, Govt. of Punjab.
13. The industry has submitted copies of analysis reports of effluent as well as air sample done in the last one year.
14. The representative of the industry informed that they have hired 3rd party M/s R4 Environ, #7, Sukh Enclave, Patiala to carry out water audit of the industry. The industry has submitted copy of letter of intent, which is enclosed.
15. The industry has submitted point wise compliance to the observations of the PPCB officers earlier. The comparative report viz-a-viz comments of Joint Committee are as under: -

Sr. No	Observations of the PPCB Officers during visit to the industry on 07.07.2023 as reported in communication dated 18.08.2023 by PPCB	Status given by the industry vide its letter bearing no. 226 dated 09.09.2023	Status observed by the Joint Committee as on date
i.	The industry has not provided any water meter on the inlet of main ETP	We have flow meter at inlet of ETP and monitoring it on regular basis.	The industry has now provided EMF at the inlet of main ETP.
ii.	Dozing pumps for equalization tanks were found out of order. The industry was found imparting alum manually in collection tanks only.	Dozing process for Alum & Caustic is being carried out by dozing pumps for treatment of the effluent	The dozing pumps have now been repaired and were operational during the present visit.

iii.	The clarifier of ETP was found filled with sludge, showing improper working of the same.	Please note that this is not a clarifier. This process is called Dissolved Air Flootation (DAF) which is intended to remove sludge from the top with the help of revolving scooper. Clear water is taken out from center of the DAF to the tube settler followed by MGF & ACF.	1) Two Dissolved Air Flootation Systems (DAFs) were installed at site, which were given name as Clarifier (SDF). The industry was asked to modify this name as per the treatment. 2) The effluent treatment plant is batch type and at the time of visit the DAFs were not in operation. 3) Effluent samples have been collected from the inlet & outlet of ETP. Concentration of oil and grease is beyond the permissible limits.
iv.	The industry has removed the tube settler of ETP, as the same was damaged	We have installed Tube settler to improve our effluent treatment process.	New tube settler has been installed by the industry for treatment as one of the components of ETP.
v.	During visit, the water in aeration tank of STP was found blackish, showing a lot of dead mass	We have improved our aeration process for STP and achieving the results as per prescribed standards	Effluent samples have been collected from the inlet & outlet of STP. Combined treated effluent does not conform to the standards of Oil and grease.
vi.	The industry was found discharging its wastewater of STP directly from tube settler to final disposal area, bypassing the MGF and ACF	The wall height has been increased further for the treated water trench to make sure that the treated water doesn't go to final treatment tank w/o passing through MGF & ACF. All parameters of the water are under prescribed limits as per PPCB norms	The industry has increased the wall height to stop the treated water to bypass final treatment tank.

vii.	The sludge drying beds of STP were found full of wastewater.	Owing to heavy rains and flood like situation in Bahadurgarh and its adjoining regions, lot of water got accumulated in the green area and STP sludge drying beds due to side showers. We have completely removed the water and re-treated through STP process. Treated water and sludge is being used as manure in horticulture activities	No sludge was found in sludge drying beds of STP.
viii.	The industry has provided new sapling in the plantation area. However, the treated water was found in stagnated condition due to very less plantation	The industry is maintaining green area (lawn cover, tree plantation etc.) and has planted more than 2000nos. and additional 1000+ nos. of plants in the premises.	Using the Karnal Technology, Unit has planted a monoculture plantation (Eucalyptus) in an area of around 6 Acres that has not been effectively developed and maintained. Fresh plantation, however, was noticed in some places. Additionally, the unit has made decent attempts to plant trees in the surrounding area within the premises.
ix.	The industry has installed 4 nos. induction furnaces, which are equipped with top section hood, followed by wet scrubber, as APCD. During visit wet scrubber was found not in operation.	Due to heavy rains and flood like situation in Bahadurgarh and its adjoining regions, the panel of APCD's was affected and the same was rectified by the maintenance team on urgent basis. Now all APCD's are in running condition.	Wet scrubber was found operational. Emission sample has been collected. Analysis results found within permissible limits.
x.	The industry has installed 3nos. melting furnaces, operated on PNG. The same are equipped with top suction hoods, followed by wet scrubber as APCD. During visit, wet scrubber was found not in operation.		

xi.	The industry has provided U Tube manometers across different parts of APCD. All of these were found out of order	We have rectified & replaced the U tube Manometers. Now manometers are in working condition.	The industry has now provided U-Tube manometers with APCDs.
xii.	The industry has provided around 60 nos. holding furnace to hold molten metal for casting. The same were provided with suction system to capture fumes from molten metal. During visit, the suction channel was found damaged and suction capacity was found very less.	Please note that these are not air pollution control devices. It is a ventilation system which is provided for air exchanges from the working area for comfortable working environment.	Submission given by the industry is found in order.
xiii.	The industry has not provided any water meters for its metal surface treatment plants i.e. phosphating & chrome plating. No record of fresh water used; chemical used is maintained.	We are having water consumption meter on borewell and feeding point of RO to process all machines at a single point. We are also, maintaining the records of water consumption & chemical consumption in SAP system. We are in the process of carrying out water audit of the entire plant through competent agency and the purchase order for the same has already been released. We will submit the water audit report to your office after completion of the same.	The industry has not yet provided water meters for its metal surface treatment plants i.e. phosphating & chrome plating separately.
xiv.	The industry shall deposit Environment Compensation amounting to Rs. 50 Lacs (Rupees fifty lacs) on the best assessment basis on polluter pay principle for the degradation of the environment made by it, within 7 days.	We have deposited the Environment Compensation on 31.08.2023 along with our letter reference no. PAT:FMGIL: PPCB:214 dated 31.08.2023.(Rs Fifty lacs only-Vide Cheque no.-944786 dated 31.08.2023)	Decisions revised by Hon'ble NGT. However, the industry has complied with the decision of Hon'ble NGT by depositing Rs. 50 lacs as environmental compensation to PPCB on 01.09.2023.

Handwritten signatures and initials in blue ink, including a large signature on the left and several smaller initials and marks in the center and right.

xv.	The industry shall submit a Bank Guarantee amounting to Rs. 50 Lacs (Rs. Fifty lacs) as an assurance to comply with the Environment Laws, within 7 days.	We have submitted the Original Bank Guarantee on 05.09.2023 with our letter reference no. PAT:FMGIL:PPCB:4470 dated 05.09.2023.(Bank Guarantee no. 002BG03232450001 dated 02.09.2023 of Rupees One Crore as per Hon'ble NGT's Order)	Decisions revised by Hon'ble NGT. However, the industry has complied with the decision of Hon'ble NGT by depositing Rs. 1.0 Cr. as bank guarantee (with validity up to 30.09.2023) to PPCB on 04.09.2023 and now with validity upto 30.11.2023 to PPCB on 25.09.2023.
xvi.	The industry shall get its water balancing carried out, within 15 days and submit the same to the Board.	We are in process of carrying out water audit of the entire plant through competent agency and purchase order for the same has already been released. We will submit the water balance to your office after completion of the same by Oct'2023	Water balance is yet to be submitted by industry. However, an order has been placed by the industry on 02.09.2023 to M/s R4 Enviro, Sukh Enclave, Patiala.
xvii.	The industry shall install two piezometers around its plantation area to check the quality of the ground water, within 15 days.	The piezometers are already available at plant premises and continuously monitoring the water quality through MoEF labs approved by Hon'ble PPCB.	The industry has provided 3 no. piezometers nearby the Green Belt / plantation area, where combined effluent from ETP and STP is being utilized.

Further, in compliance to the orders of Hon'ble NGT, the industry has deposited in the office of PPCB, Environment Compensation (EC) of Rs. 50 lakhs on 01.09.2023 and Bank Guarantee of Rs. 1.0 crore (with validity up to 30.11.2023) on 04.09.2023 / 25.09.2023.

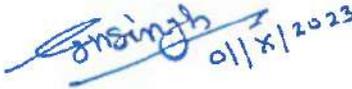
Photographs clicked during the visit of the Joint Committee are attached as **Annexure-1**. Analysis reports of PPCB lab, Patiala and SAI lab, Thapar Technology Campus, Bhadson Road, Patiala are attached as **Annexure-2**.

Recommendations

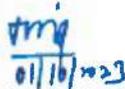
1. The industry shall install tertiary treatment facilities and shall explore the possibility of reuse of treated wastewater into process to reduce the consumption of fresh ground water. The industry will submit a time bound action plan to Punjab Pollution Control Board.

Handwritten signatures and initials in blue ink, including a large signature on the left, a smaller one in the middle, and another on the right.

2. The industry shall stop the use of treated effluent being used in Karnal Technology as ground water contamination is observed in piezometers 1 and 2 after installation of tertiary treatment plant.
3. Since, the concentration of oil and grease is beyond the permissible limits in treated effluent, the industry shall upgrade the oil and grease recovery system and action plan be submitted to Punjab Pollution Control Board.
4. The Bank Guarantee submitted by the industry should be released only after installation of tertiary effluent treatment facilities.
5. The industry shall install Online Continuous Effluent Monitoring System (OCEMS) system at final outlet and its link will be uploaded to PPCB website. The real time results will also be displayed at main gate of the industry.
6. The water stored in rain water collection tank will be treated and intermixing of effluent with rain water collection system must be identified by the industry and stopped immediately.
7. The industry shall engage institute of repute for detailed ground water contamination study within the radius of 5 km from the Environment Compensation (EC) fund deposited with PPCB in order to suggest remedial measures if any based on the ground water study.
8. Since, there is no Municipal Solid Waste management facility in Bahadurgarh area, the industry shall provide infrastructure / machinery for management of solid waste generated by Bahadurgarh area in consultation with Department of Rural Development and Panchayat / Department of Local Government from the EC funds.


01/11/2023
Er. Gurnam Singh,
Regional Director,
CPCB, Chandigarh


Dr. Vimal Kumar Hatwal,
Scientist-E, MoEF&CC,
Regional Office,
Chandigarh


01/11/2023
Er. Rohit Singla,
Environmental Engineer,
PPCB, RO, Patiala


11/10/23
Er. Gurkaran Singh,
AEE, PPCB, RO, Patiala


Er. Mohit Singla,
AEE, PPCB, RO, Patiala



Effluent Treatment Plant



Committee Members visiting the site



Oil and grease removal section



Equilization tank



Sewage Treatment Plant



Final treated water storage collection tank



Plantation area developed for irrigation of treated effluent



Plantation area developed for irrigation of treated effluent



Piezometer installed near the plantation area



Rainwater collection tank near the ETP

REPORT BY THE STATE BOARD ANALYST (see Rule 24)**Report No. 43****Dated: 08.09.2023**

I hereby certify that I Smt. Shaminder Kaur, JSO State Board Analyst duly appointed under sub section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974) received a sample of M/s Federal Mogul Goetze (India) Ltd, Patiala on the 8th September, 2023 from Sh. Dalip Singh, FA, for analysis. The samples were in a condition fit for analysis reported below: -

I further certify that I have analyzed the aforementioned samples from 08.09.2023 to 19.09.2023 and declare the results of the analysis reported below: -

The analysis has been made as per methods given in relevant parts of I.S:3025, I.S:1622 Indian Standard Methods and test for industrial effluents. The details of the analysis are as follows: -

Point of sample collection: - As per data Sheet.

Sr. No.	Parameters	Final Outlet of STP	Aeration Tank of STP
1	pH	8.1	-
2	Total Suspended Solids mg/l	12	-
3	Total Dissolved Solids mg/l	1588	-
4	Chemical Oxygen Demand mg/l	34	-
5	Bio-Chemical Oxygen Demand mg/l	6	-
6	Oil & Grease mg/l	4.0	-
7	Iron mg/l	BDL	-
8	Zinc mg/l	BDL	-
9	Nickel mg/l	BDL	-
10	Copper mg/l	BDL	-
11	Arsenic mg/l	BDL	-
12	Mercury mg/l	BDL	-
13	Zinc mg/l	BDL	-
14	Aluminum mg/l	0.28	-
15	Manganese mg/l	BDL	-
16	Total Chrome mg/l	BDL	-
17	Mixed Liquid Suspended Solids mg/l	-	4310
18	Mixed Liquid Volatile Suspended Solids mg/l	-	2980

Note: 1) All the results are in mg/l except pH,
2) Entire sample was consumed in Testing.

The condition of the seals, fastening and container on receipt was as follows: -

Seals & fastenings of the container were found intact.

Signed this 19th September, 2023

Address: -

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

Shau
19/9/23
(Signature)
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office, Patiala

Authorization Letter No.- 21626

Dated - 19/9/23

Endst No. 21627-28

dt. 19/9/23

A copy of the above is forwarded to the:-

1. The Chief Environmental Engineer (Water), Punjab Pollution Control Board, Ludhiana
2. The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I, Patiala

Shau
19/9/23
(Signature)
State Board Analyst

Shau

REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Report No.41
Dated: 08.09.2023

I hereby certify that I Smt. Shaminder Kaur, JSO State Board Analyst duly appointed under sub section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974) received a sample of Ground Water M/s Federal Mogul Goetze (India) Ltd, Vill Bahadurgarh, Patiala on the 8th September, 2023 from Sh. Dalip Singh, FA, for analysis. The samples were in a condition fit for analysis reported below: -

I further certify that I have analyzed the aforementioned samples from 08.09.2023 to 19.09.2023 and declare the results of the analysis reported below: -

The analysis has been made as per methods given in relevant parts of I.S.3025, I.S.1622 Indian Standard Methods and test for industrial effluents. The details of the analysis are as follows: -
Point of sample collection - As per data Sheet

Sr. No.	Parameters	Piezometer 1	Piezometer 2
1	pH	7.4	7.6
2	Total Suspended Solids mg/l	BDL	BDL
3	Total Dissolved Solids mg/l	1690	1918
4	Chemical Oxygen Demand mg/l	40	30
5	Bio-Chemical Oxygen Demand mg/l	BDL	BDL
6	Sulphide mg/l	BDL	BDL
7	Flouride mg/l	4.6	0.4
8	Chloride mg/l	194	303
9	Nitrate mg/l	16	46
10	Sulphate mg/l	214	280
11	Phosphate mg/l	0.8	1.2
12	Hardness mg/l	730	730
13	Arsenic mg/l	BDL	BDL
14	Chromium mg/l	BDL	BDL
15	Copper mg/l	BDL	BDL
16	Iron mg/l	0.4	0.26
17	Lead mg/l	BDL	BDL
18	Zinc mg/l	0.69	0.90
19	Nickel mg/l	BDL	BDL
20	Manganese mg/l	BDL	BDL
21	Mercury mg/l	BDL	BDL
22	Antimony mg/l	BDL	BDL
23	Cobalt mg/l	BDL	BDL
24	Aluminium mg/l	BDL	BDL
25	Barium mg/l	BDL	BDL
26	Magnesium mg/l	13	60
27	Silver mg/l	BDL	BDL
28	Cadmium mg/l	BDL	BDL
29	Cyanide mg/l	BDL	BDL

- Note: 1) All the results are in mg/l except pH.
2) Entire sample was consumed in Testing

The condition of the seals, fastening and container on receipt was as follows: -

Seals & fastenings of the container were found intact

Signed this 19th September, 2023

Address: -

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala


(Signature)
State Board Analyst

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office, Patiala

Authorization Letter No.- 21620

Dated - 19/9/23

Endst No. 21621-22

dt. 19/9/23

A copy of the above is forwarded to the:-

- The Chief Environmental Engineer (Water), Punjab Pollution Control Board, Ludhiana.
- The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I, Patiala


(Signature)
State Board Analyst

REPORT BY THE STATE BOARD ANALYST (see Rule 24)

Report No. 42

Dated: 08.09.2023

I hereby certify that I Smt. Shaminder Kaur, JSO State Board Analyst duly appointed under sub section (3) of section 53 of the Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974) received a sample of M/s Federal Mogul Goetze (India) Ltd, Bahadurgarh, District Patiala on the 8th September, 2023 from Sh. Dalip Singh, FA, for analysis. The samples were in a condition fit for analysis reported below: -

I further certify that I have analyzed the aforementioned samples from 08.09.2023 to 19.09.2023 and declare the results of the analysis reported below: -

The analysis has been made as per methods given in relevant parts of I S:3025. I.S:1622 Indian Standard Methods and test for industrial effluents. The details of the analysis are as follows: -

Point of sample collection: - As per data Sheet.

Sr. No.	Parameters	Inlet of ETP	Outlet of ETP	Combined Outlet of ETP+STP	Rain water Collection Tank
1	pH	8.1	8.2	8.3	-
2	Total Suspended Solids mg/l	358	12	14	-
5	Phosphate as P mg/l	9.0	1.4	1.6	-
6	Sulphate mg/l	220	188	194	-
7	Sulphide mg/l	BDL	BDL	BDL	-
8	Cyanide mg/l	BDL	BDL	BDL	-
9	Ammonical Nitrogen mg/l	4.0	2.5	3.6	-
10	Oil & Grease mg/l	52	8.8	14	-
11	Iron mg/l	1.4	BDL	BDL	5.4
12	Zinc mg/l	0.6	BDL	BDL	0.35
13	Nickel mg/l	0.18	BDL	BDL	BDL
14	Copper mg/l	0.15	BDL	BDL	BDL
15	Arsenic mg/l	BDL	BDL	BDL	BDL
16	Mercury mg/l	BDL	BDL	BDL	BDL
17	Lead mg/l	BDL	BDL	BDL	BDL
18	Cadmium mg/l	BDL	BDL	BDL	BDL
19	Total Chrome mg/l	0.36	BDL	BDL	BDL
20	Hexa Chrome mg/l	BDL	BDL	BDL	BDL
21	Tin mg/l	BDL	BDL	BDL	BDL

- Note 1) All the results are in mg/l except pH.
2) Entire sample was consumed in Testing.

The condition of the seals, fastening and container on receipt was as follows: -

Seals & fastenings of the container were found intact.

Signed this 19th September, 2023

Address: -

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

To

The Environmental Engineer,
Punjab Pollution Control Board
Regional Office, Patiala

Authorization Letter No.- 21623

Endst No. 21624-25

Dated - 19/9/23

dt. 19/9/23

A copy of the above is forwarded to the:-

- The Chief Environmental Engineer (Water), Punjab Pollution Control Board, Ludhiana
- The Senior Environmental Engineer, Punjab Pollution Control Board, Zonal Office-I, Patiala

S. Kaur
19/9/23
(Signature)
State Board Analyst

S. Kaur
19/9/23
(Signature)
State Board Analyst



Sophisticated Analytical Instruments Laboratories Society (Registered as Society with Registrar of Firms & Societies, Punjab, Chandigarh)
Thapar Technology Campus, Bhadson Road, Patiala-147 004 (India)

TEST REPORT

Sample ID	NN/23-24/340	Date:	18.09.2023
Service No.	NN/23-24/340 (01)	Customer's Ref.	Sample submitted by customer on dtd: 08.09.2023 (Time: 6:30 pm) as per letter on dtd. 08/09/2023
Customer's name and address: Punjab Pollution Control Board Regional Office Patiala Kind Attn : Mr. Gurkaran Singh (AEE , PPCB)			
Sample Description	Effluent (Sample Collected by PPCB R.O Patiala From M/s Federal Mogul Goetze (India) Ltd. Patiala)		
Condition of the sample received	O.K.		
Customer's sample identification No. (if any)	01 – Final Outlet of STP		
Quantity/number of samples	8.5 Liter / 2		
Sampling Procedure (if any), Standard/ Specification	-		
Mode of Sampling/ Environmental Condition During Transport	Not Applicable		
Test parameters	1 – (General parameters) pH, TSS, TDS, BOD 2- O&G 3- COD 4- Total Metals (As, Cr, Cu, Fe, Pb, Mn, Mg, Ni, Zn, Antimony, Co, Al, Ba, Hg, Cd, CN)		
Method followed	As mentioned below		
Deviations (if any)	--		
Documents constituting this report (if any)	--		
Date of Receipt of Job	Date of Completion of Job	Total Number of Pages	
.09.2023	18.09.2023	2	

TEST RESULTS

Sr. No.	Parameters	Test Method	Unit	Results
				01
1	pH at 25°C	APHA 23rd Edn.4500-H+B:2017	--	8.2
2	Total Dissolved Solid at 180°C (TDS)	APHA 23rd. Edn.2540-C:2017	mg/l	1636
3	Total Suspended Solid 105°C (TSS)	APHA 23rd. Edn.2540-D:2017	mg/l	<10
4	Chemical Oxygen Demand (COD)	APHA 23rd Edn. 5220B:2017	mg/l	29
5	Biochemical Oxygen Demand for 3 days at 27°C (BOD)	IS: 3025 (Part 44)-1993, Reaffirmed 2019	mg/l	<5.0
6	Oil & Grease at 80°C	APHA 23rd. Edn. 5520 B:2017	mg/l	4.3(<5.0)
7	Total Arsenic as As	IS:3025 (Part-37)1988, reaff. 2019, Atomic Absorption Method	mg/l	<0.005
8	Chromium as Cr	APHA 23rd. Edn.3120 B:2017	mg/l	<0.05
9	Copper as Cu	APHA 23rd. Edn.3120 B:2017	mg/l	<0.05
10	Iron as Fe	APHA 23rd. Edn.3120 B:2017	mg/l	<0.20
11	Lead as Pb	APHA 23rd. Edn.3120 B :2017	mg/l	<0.10
12	Magnesium as Mg	IS:3025 (Part-21) 2009, reaff. 2019, EDTA Method	mg/l	22.5
13	Manganese as Mn	APHA 23rd. Edn.3120 B:2017	mg/l	0.05
14	Nickel as Ni	APHA 23rd. Edn.3120 B:2017	mg/l	<0.05
15	Zinc as Zn	APHA 23rd. Edn.3120 B:2017	mg/l	0.08
16	Antimony	APHA 23rd. Edn.3120 B:2017	mg/l	<0.10
17	Cobalt as Co	APHA 23rd. Edn.3111 B:2017	mg/l	<0.10
18	Aluminium as Al	APHA 23rd. Edn.3120 B:2017	mg/l	0.34
19	Barium	APHA 23rd. Edn.3120 B:2017	mg/l	1.03
20	Silver as Ag	APHA 23rd. Edn.3120 B:2017	mg/l	<0.10
21.	Cadmium as Cd	APHA 23rd. Edn.3120 B:2017	mg/l	<0.01
22	Cyanide as CN	APHA 23rd. Edn 4500 CN A & F:2017	mg/l	<0.05

Page 1 of 2



M. Agarwal
Technical Manager
(Authorized Signatory)

- Note:
1. The results listed refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied
 2. Samples will be destroyed after one month (except water, wastewater) from the date of issue of the test report unless otherwise specified
 3. This report is not to be reproduced wholly or in part and cannot be used as an evidence in the products is neither inferred nor implied. court of law and should not be used in any advertising media without special permission in writing.
 4. In case any reconfirmation of contents of the test report is required, please contact the authorized signatory of the test report within 15 days of the issue of test report



**Sophisticated Analytical Instruments Laboratories
Society** (Registered as Society with Registrar of Firms & Societies, Punjab, Chandigarh)
Thapar Technology Campus, Bhadson Road, Patiala-147 004 (India)

TEST REPORT

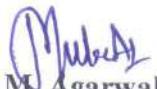
Sample ID	NN/23-24/340	Date:	18.09.2023
Service No.	NN/23-24/340 (02)	Customer's Ref.	Sample submitted by customer on dtd: 08.09.2023 (Time: 6:30 pm) as per letter on dtd. 08/09/2023
Customer's name and address:			
Punjab Pollution Control Board Regional Office Patiala Kind Attn: Mr. Gurkaran Singh (AEE , PPCB)			
Sample Description	Effluent (Sample Collected by PPCB R.O Patiala From M/s Federal Mogul Goetze (India) Ltd. Patiala)		
Condition of the sample received	O.K.		
Customer's sample identification No. (if any)	02 – Aeration Tank of STP		
Quantity/number of samples	8.5 Liter / 2		
Sampling Procedure (if any), Standard/ Specification	--		
Mode of Sampling/ Environmental Condition During Transport	Not Applicable		
Test parameters	02- MLSS, MLVSS		
Method followed	As mentioned below		
Deviations (if any)	--		
Documents constituting this report (if any)	--		
Date of Receipt of Job	Date of Completion of Job	Total Number of Pages	
11.09.2023	18.09.2023	2	

TEST RESULTS

Sr. No.	Parameters	Test Method	Unit	Results
				02
1	MLSS @ 105°C	APHA 23rd. Edn.2540-D:2017	mg/l	4233
2	MLVSS @ 105°C	APHA 23rd. Edn.2540-E:2017	mg/l	2945

Page 2 of 2

.....End of the report....


M. Agarwal

**Technical Manager
(Authorized Signatory)**

- Note:
1. The results listed refer only to the tested samples and applicable parameters. Endorsement of products is neither inferred nor implied
 2. Samples will be destroyed after one month (except water, wastewater) from the date of issue of the test report unless otherwise specified
 3. This report is not to be reproduced wholly or in part and cannot be used as an evidence in the products is neither inferred nor implied. court of law and should not be used in any advertising media without special permission in writing.
 4. In case any reconfirmation of contents of the test report is required, please contact the authorized signatory of the test report within 15 days of the issue of test report



**Sophisticated Analytical Instruments Laboratories
Society** (Registered as Society with Registrar of Firms & Societies, Punjab, Chandigarh)
Thapar Technology Campus, Bhadson Road, Patiala-147 004 (India)

TEST REPORT

Sample ID	NN/23-24/341	Date:	18.09.2023
Service No.	NN/23-24/341 (01-05)	Customer's Ref.	Sample submitted by customer on dtd: 08.09.2023 (Time: 6:30 pm) as per letter on dtd. 08/09/2023
Customer's name and address:			
Punjab Pollution Control Board Regional Office Patiala Kind Attn : Mr. Gurkaran Singh (AEE , PPCB)			
Sample Description	Effluent (Sample Collected by PPCB R.O Patiala From M/s Federal Mogul Goetze (India) Ltd. Patiala)		
Condition of the sample received	O.K.		
Customer's sample identification No. (if any)	01 -05 - (Inlet of ETP)		
Quantity/number of samples	9 Liter / 5		
Sampling Procedure (if any), Standard/ Specification	--		
Mode of Sampling/ Environmental Condition During Transport	Not Applicable		
Test parameters	01 (1) - pH, TSS, P, SO ₄ , 02 (2) - Ni, Hexa Cr, T.Cr, Cu, 03 (3) - Sulphide, CN, 04 (4) - AN, 05 (5) - Oil & Grease		
Method followed	As mentioned below		
Deviations (if any)	--		
Documents constituting this report (if any)	--		
Date of Receipt of Job	Date of Completion of Job	Total Number of Pages	
11.09.2023	18.09.2023	1	

TEST RESULTS

Sr. No.	Parameters	Test Method	Unit	Results				
				1	2	3	4	5
1	pH at 25°C	APHA 23rd Edn.4500-H+B:2017	--	8.0	--	--	--	--
2	Total Suspended Solid 105°C	APHA 23rd. Edn.2540-D:2017	mg/l	346	--	--	--	--
3	Phosphate as P	APHA 23rd. Edn. 4500-PC:2017	mg/l	10.5	--	--	--	--
4	Sulphate as SO ₄ at 800°C	APHA 23rd. Edn.4500 SO ₄ -2 C:2017	mg/l	200	--	--	--	--
5	Nickel as Ni	APHA 23rd. Edn.3120 B:2017	mg/l	--	0.13	--	--	--
6	Chromium as Cr	APHA 23rd. Edn.3120 B:2017	mg/l	--	0.36	--	--	--
7	Copper as Cu	APHA 23rd. Edn.3120 B:2017	mg/l	--	0.12	--	--	--
8	Hexa Chromium as Cr+6	APHA 23rd. Edn.3500 Cr B:2017	mg/l	--	<0.05	--	--	--
9	Sulphide as S ²⁻	APHA 23rd. Edn. 4500 S-2 F:2017	mg/l	--	--	<1.0	--	--
10	Cyanide as CN	APHA 23rd. Edn 4500 CN A & F:2017	mg/l	--	--	<0.05	--	--
11	Ammonical Nitrogen as N	APHA 23rd .Edn. 4500 NH ₃ N:2017	mg/l	--	--	--	4.05	--
12	Oil & Grease at 80°C	APHA 23rd. Edn. 5520 B:2017	mg/l	--	--	--	--	62.9

....End of the report....



M. Agarwal
Technical Manager
(Authorized Signatory)

- Note:
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Thapar Technology Campus, Bhadson Road, Patiala-147 004 (India)

TEST REPORT

Sample ID	NN/23-24/342	Date:	18.09.2023
Service No.	NN/23-24/342 (01-05)	Customer's Ref.	Sample submitted by customer on dtd: 08.09.2023 (Time: 6:30 pm) as per letter on dtd. 08/09/2023
Customer's name and address: Punjab Pollution Control Board Regional Office Patiala Kind Attn : Mr. Gurkaran Singh (AEE , PPCB)			
Sample Description	Effluent (Sample Collected by PPCB R.O Patiala From M/s Federal Mogul Goetze (India) Ltd. Patiala)		
Condition of the sample received	O.K.		
Customer's sample identification No. (if any)	06 – 10 – Outlet of ETP		
Quantity/number of samples	9 Liter / 5		
Sampling Procedure (if any), Standard/ Specification	--		
Mode of Sampling/ Environmental Condition During Transport	Not Applicable		
Test parameters	01 (06) - pH, TSS, P, SO4 02 (07) - Ni, Hexa Cr, T.Cr, Cu, 03 (08) - Sulphide, CN, 04 (09) - AN, 05 (10) - Oil & Grease		
Method followed	As mentioned below		
Deviations (if any)	--		
Documents constituting this report (if any)	--		
Date of Receipt of Job	Date of Completion of Job	Total Number of Pages	
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TEST RESULTS

Sr. No.	Parameters	Test Method	Unit	Results				
				06	07	08	09	10
1	pH at 25°C	APHA 23rd Edn.4500-H+B:2017	--	8.0	--	--	--	--
2	Total Suspended Solid 105°C	APHA 23rd. Edn.2540-D:2017	mg/l	<10	--	--	--	--
3	Phosphate as P	APHA 23rd. Edn. 4500-PC:2017	mg/l	1.79	--	--	--	--
4	Sulphate as SO4 at 800°C	APHA 23rd. Edn.4500 SO4-2 C:2017	mg/l	176	--	--	--	--
5	Nickel as Ni	APHA 23rd. Edn.3120 B:2017	mg/l	--	<0.05	--	--	--
6	Chromium as Cr	APHA 23rd. Edn.3120 B:2017	mg/l	--	<0.05	--	--	--
7	Copper as Cu	APHA 23rd. Edn.3120 B:2017	mg/l	--	<0.05	--	--	--
8	Hexa Chromium as Cr+6	APHA 23rd. Edn.3500 Cr B:2017	mg/l	--	<0.05	--	--	--
9	Sulphide as S ²⁻	APHA 23rd. Edn. 4500 S-2 F:2017	mg/l	--	--	<1.0	--	--
10	Cyanide as CN	APHA 23rd. Edn 4500 CN A & F:2017	mg/l	--	--	<0.05	--	--
11	Ammonical Nitrogen as N	APHA 23rd .Edn. 4500 NH3N:2017	mg/l	--	--	--	2.36	--
12	Oil & Grease at 80°C	APHA 23rd. Edn. 5520 B:2017	mg/l	--	--	--	--	14.9

....End of the report....

M. Agarwal
Technical Manager
(Authorized Signatory)

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Thapar Technology Campus, Bhadson Road, Patiala-147 004 (India)

TEST REPORT

Sample ID	NN/23-24/343	Date:	18.09.2023
Service No.	NN/23-24/343 (01-05)	Customer's Ref.	Sample submitted by customer on dtd: 08.09.2023 (Time: 6:30 pm) as per letter on dtd. 08/09/2023
Customer's name and address: Punjab Pollution Control Board Regional Office Patiala Kind Attn : Mr. Gurkaran Singh (AEE , PPCB)			
Sample Description	Effluent (Sample Collected by PPCB R.O Patiala From M/s Federal Mogul Goetze (India) Ltd. Patiala)		
Condition of the sample received	O.K.		
Customer's sample identification No. (if any)	11 – 15 (Combined Outlet of ETP + STP)		
Quantity/number of samples	9 Liter / 5		
Sampling Procedure (if any), Standard/ Specification	--		
Mode of Sampling/ Environmental Condition During Transport	Not Applicable		
Test parameters	01 (11) - pH, TSS, P, SO4 02 (12) - Ni, Hexa Cr, T.Cr, Cu 03 (13) - Sulphide, CN 04 (14) - AN 05 (15) - Oil & Grease		
Method followed	As mentioned below		
Deviations (if any)	--		
Documents constituting this report (if any)	--		
Date of Receipt of Job	Date of Completion of Job	Total Number of Pages	
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TEST RESULTS

Sr. No.	Parameters	Test Method	Unit	Results				
				11	12	13	14	15
1	pH at 25°C	APHA 23rd Edn.4500-H+B:2017	--	8.2	--	--	--	--
2	Total Suspended Solid 105°C	APHA 23rd. Edn.2540-D:2017	mg/l	<10	--	--	--	--
3	Phosphate as P	APHA 23rd. Edn. 4500-PC:2017	mg/l	2.12	--	--	--	--
4	Sulphate as SO4 at 80°C	APHA 23rd. Edn.4500 SO4-2 C:2017	mg/l	186	--	--	--	--
5	Nickel as Ni	APHA 23rd. Edn.3120 B:2017	mg/l	--	<0.05	--	--	--
6	Chromium as Cr	APHA 23rd. Edn.3120 B:2017	mg/l	--	<0.05	--	--	--
7	Copper as Cu	APHA 23rd. Edn.3120 B:2017	mg/l	--	<0.05	--	--	--
8	Hexa Chromium as Cr+6	APHA 23rd. Edn.3500 Cr B:2017	mg/l	--	<0.05	--	--	--
9	Sulphide as S ²	APHA 23rd. Edn. 4500 S-2 F:2017	mg/l	--	--	<1.0	--	--
10	Cyanide as CN	APHA 23rd. Edn 4500 CN A & F:2017	mg/l	--	--	<0.05	--	--
11	Ammonical Nitrogen as N	APHA 23rd .Edn. 4500 NH3N:2017	mg/l	--	--	--	3.49	--
12	Oil & Grease at 80°C	APHA 23rd. Edn. 5520 B:2017	mg/l	--	--	--	--	23.7

....End of the report....

M. Agarwal

Technical Manager
(Authorized Signatory)

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Thapar Technology Campus, Bhadson Road, Patiala-147 004 (India)

TEST REPORT

Sample ID	NN/23-24/344	Date:	18.09.2023
Service No.	NN/23-24/344 (01)	Customer's Ref.	Sample submitted by customer on dtd: 08.09.2023 (Time: 6:30 pm) as per letter on dtd. 08/09/2023
Customer's name and address:			
Punjab Pollution Control Board Regional Office Patiala Kind Attn : Mr. Gurkaran Singh (AEE , PPCB)			
Sample Description	Rain Water (Sample Collected by PPCB R.O Patiala From M/s Federal Mogul Goetze (India) Ltd. Patiala)		
Condition of the sample received	O.K.		
Customer's sample identification No. (if any)	Rain Water Collection Tank		
Quantity/number of samples	9 Liter / 1		
Sampling Procedure (if any), Standard/ Specification	--		
Mode of Sampling/ Environmental Condition During Transport	Not Applicable		
Test parameters	01- As, Cr, Cu, Fe, Pb, Mn, Mg, Ni, Zn, Antimony, Co, Al, Ba, Hg, Cd, CN		
Method followed	As mentioned below		
Deviations (if any)	--		
Documents constituting this report (if any)	--		
Date of Receipt of Job	Date of Completion of Job	Total Number of Pages	
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TEST RESULTS

Sr. No.	Parameters	Test Method	Unit	Results
				01
1	Total Arsenic as As	APHA 23 rd . Edn.3120 B:2017	mg/l	0.006
2	Chromium as Cr	APHA 23 rd . Edn.3120 B:2017	mg/l	0.12
3	Copper as Cu	APHA 23 rd . Edn.3120 B:2017	mg/l	0.05
4	Iron as Fe	APHA 23 rd . Edn.3120 B:2017	mg/l	5.59
5	Lead as Pb	APHA 23 rd . Edn.3120 B :2017	mg/l	<0.10
6	Magnesium as Mg	IS 3025 Part 21 reaffirmed 2019 EDTA Method	mg/l	34.8
7	Manganese as Mn	APHA 23 rd . Edn.3120 B:2017	mg/l	0.17
8	Nickel as Ni	APHA 23 rd . Edn.3120 B:2017	mg/l	0.09
9	Zinc as Zn	APHA 23 rd . Edn.3120 B:2017	mg/l	0.24
10	Antimony as Sb	APHA 23 rd . Edn.3120 B:2017	mg/l	<0.10
11	Cobalt as Co	APHA 23 rd . Edn.3120 B:2017	mg/l	<0.10
12	Aluminium as Al	APHA 23 rd . Edn.3120 B:2017	mg/l	6.62
13	Barium as Ba	APHA 23 rd . Edn.3120 B:2017	mg/l	0.10
14	Silver as Ag	APHA 23 rd . Edn.3120 B:2017	mg/l	<0.10
15	Cadmium as Cd	APHA 23 rd . Edn.3120 B:2017	mg/l	<0.01
16	Cyanide as CN	APHA 23 rd . Edn 4500 CN A & F:2017	mg/l	0.78
17	Mercury as Hg	IS:3025(Part-48)-1994, reaff. 2019 Cold Vapour Atomic Absorption Method	mg/l	<0.001

....End of the report....


M. Agarwal

Technical Manager
(Authorized Signatory)

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Thapar Technology Campus, Bhadson Road, Patiala-147 004 (India)

TEST REPORT

Sample ID	NN/23-24/345	Date:	18.09.2023
Service No.	NN/23-24/345 (01)	Customer's Ref.	Sample submitted by customer on dtd: 08.09.2023 (Time: 6:30 pm) as per letter on dtd. 08/09/2023
Customer's name and address: Punjab Pollution Control Board Regional Office Patiala Kind Attn : Mr. Gurkaran Singh (AEE , PPCB)			
Sample Description	Waste Water (Sample Collected by PPCB R.O Patiala From M/s Federal Mogul Goetze (India) Ltd. Patiala)		
Condition of the sample received	O.K.		
Customer's sample identification No. (if any)	01 – Piezometer Installed in green area near ETP/ STP- 34.5 m depth		
Quantity/number of samples	8 Liter / 1		
Sampling Procedure (if any), Standard/ Specification	--		
Mode of Sampling/ Environmental Condition During Transport	Not Applicable		
Test parameters	1 – General Parameter - pH ,TSS, TDS BOD, S ₂ , F, Cl, NO ₃ , P, SO ₄ , Total Hardness 2 – Metals (As, Cr, Cu, Fe, Pb, Mn, Mg, Ni, Zn, Antimony, Co, Al, Ba, Mg, Ag, Cd, CN , Hg)		
Method followed	As mentioned below		
Deviations (if any)	--		
Documents constituting this report (if any)	--		
Date of Receipt of Job	Date of Completion of Job		Total Number of Pages
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TEST RESULTS

Sr. No.	Parameters	Test Method	Unit	Results
				01(PZ-1)
1	pH at 25°C	APHA 23rd Edn.4500-H+B:2017	--	7.5
2	Total Dissolved Solid at 180°C (TDS)	APHA 23rd. Edn.2540-C:2017	mg/l	1800
3	Total Suspended Solid 105°C (TSS)	APHA 23rd. Edn.2540-D:2017	mg/l	<10
4	Biochemical Oxygen Demand for 3 days at 27°C (BOD)	IS: 3025 (Part 44)-1993, Reaffirmed 2019	mg/l	<5.0
5	Sulphide as S ²	APHA 23rd. Edn. 4500 S-2 F:2017	mg/l	<1.0
6	Fluoride as F	IS:3025(Part 60)-2008, reaff. 2019 Electro Chemical Probe Method	mg/l	5.44
7	Chloride as Cl	IS: 3025 (Part 32)-1998, reaff. 2019 Argentometric Method	mg/l	200
8	Nitrate as NO ₃	APHA 23rd Edn.4500 NO ₃ B:2017	mg/l	20.7
9	Phosphate as P	APHA 23rd. Edn. 4500-PC:2017	mg/l	1.00
10	Sulphate as SO ₄ at 800°C	APHA 23rd. Edn.4500 SO ₄ -2 C:2017	mg/l	220
11	Total Hardness as CaCO ₃	IS:3025 (Part-21)2009, reaff. 2019, EDTA Method	mg/l	413
12	Total Arsenic as As	APHA 23rd. Edn.3120 B:2017	mg/l	<0.005
13	Chromium as Cr	APHA 23rd. Edn.3120 B:2017	mg/l	<0.05
14	Copper as Cu	APHA 23rd. Edn.3120 B:2017	mg/l	<0.05
15	Iron as Fe	APHA 23rd. Edn.3120 B:2017	mg/l	<0.20
16	Lead as Pb	APHA 23rd. Edn.3120 B :2017	mg/l	<0.10
17	Magnesium as Mg	IS:3025 (Part-21)2009, reaff. 2019, EDTA Method	mg/l	40.9
18	Manganese as Mn	APHA 23rd. Edn.3120 B:2017	mg/l	0.21
19	Nickel as Ni	APHA 23rd. Edn.3120 B:2017	mg/l	<0.05
20	Zinc as Zn	APHA 23rd. Edn.3120 B:2017	mg/l	0.44
21	Antimony as Sb	APHA 23rd. Edn.3120 B:2017	mg/l	<0.10
22	Cobalt as Co	APHA 23rd. Edn.3120 B:2017	mg/l	<0.10
23	Aluminium as Al	APHA 23rd. Edn.3120 B:2017	mg/l	0.26
24	Barium as Ba	APHA 23rd. Edn.3120 B:2017	mg/l	<0.10
25	Silver as Ag	APHA 23rd. Edn.3120 B:2017	mg/l	<0.10
26	Cadmium as Cd	APHA 23rd. Edn.3120 B:2017	mg/l	<0.01
27	Cyanide as CN	APHA 23rd. Edn 4500 CN A & F:2017	mg/l	<0.05
28	Mercury as Hg	IS:3025(Part-48)-1994, reaff. 2019 Cold Vapour Atomic Absorption Method	mg/l	<0.001

....End of the report...

M. Agarwal

Technical Manager
(Authorized Signatory)

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Thapar Technology Campus, Bhadson Road, Patiala-147 004 (India)

TEST REPORT

Sample ID	NN/23-24/345	Date:	18.09.2023
Service No.	NN/23-24/345 (02)	Customer's Ref.	Sample submitted by customer on dtd: 08.09.2023 (Time: 6:30 pm) as per letter on dtd. 08/09/2023
Customer's name and address:			
Punjab Pollution Control Board Regional Office Patiala Kind Attn : Mr. Gurkaran Singh (AEE , PPCB)			
Sample Description	Waste Water (Sample Collected by PPCB R.O Patiala From M/s Federal Mogul Goetze (India) Ltd. Patiala)		
Condition of the sample received	O.K.		
Customer's sample identification No. (if any)	02 – Piezometer Installed in front of Admin Block - 27.5 m depth		
Quantity/number of samples	8 Liter / 1		
Sampling Procedure (if any), Standard/ Specification	--		
Mode of Sampling/ Environmental Condition During Transport	Not Applicable		
Test parameters	1 – General Parameter - pH ,TSS, TDS,BOD, S ₂ , F, Cl, NO ₃ , P, SO ₄ , Total Hardness 2 – Metals (As, Cr, Cu, Fe, Pb, Mn, Mg, Ni, Zn, Antimony, Co, Al, Ba, Mg, Ag, Cd, CN , Hg)		
Method followed	As mentioned below		
Deviations (if any)	--		
Documents constituting this report (if any)	--		
Date of Receipt of Job	Date of Completion of Job	Total Number of Pages	
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TEST RESULTS

Sr. No.	Parameters	Test Method	Unit	Results
1	pH at 25°C	APHA 23rd Edn.4500-H+B:2017	--	02(PZ-2) 7.7
2	Total Dissolved Solid at 180°C (TDS)	APHA 23rd. Edn.2540-C:2017	mg/l	2418
3	Total Suspended Solid 105°C (TSS)	APHA 23rd. Edn.2540-D:2017	mg/l	<10
4	Biochemical Oxygen Demand for 3 days at 27°C (BOD)	IS: 3025 (Part 44)-1993, Reaffirmed 2019	mg/l	<5.0
5	Sulphide as S ²	APHA 23rd. Edn. 4500 S-2 F:2017	mg/l	<1.0
6	Fluoride as F	IS:3025(Part 60)-2008, reaff. 2019 Electro Chemical Probe Method	mg/l	0.23
7	Chloride as Cl	IS: 3025 (Part 32)-1998, reaff. 2019 Argentometric Method	mg/l	309
8	Nitrate as NO ₃	APHA 23rd Edn.4500 NO ₃ B:2017	mg/l	257
9	Phosphate as P	APHA 23rd. Edn. 4500-PC:2017	mg/l	1.44
10	Sulphate as SO ₄ at 800°C	APHA 23rd. Edn.4500 SO ₄ -2 C:2017	mg/l	289
11	Total Hardness as CaCO ₃	IS:3025 (Part-21)2009, reaff. 2019, EDTA Method	mg/l	938
12	Total Arsenic as As	APHA 23rd. Edn.3120 B:2017	mg/l	<0.005
13	Chromium as Cr	APHA 23rd. Edn.3120 B:2017	mg/l	<0.05
14	Copper as Cu	APHA 23rd. Edn.3120 B:2017	mg/l	<0.05
15	Iron as Fe	APHA 23rd. Edn.3120 B:2017	mg/l	<0.20
16	Lead as Pb	APHA 23rd. Edn.3120 B :2017	mg/l	<0.10
17	Magnesium as Mg	IS:3025 (Part-21)2009, reaff. 2019, EDTA Method	mg/l	105
18	Manganese as Mn	APHA 23rd. Edn.3120 B:2017	mg/l	0.12
19	Nickel as Ni	APHA 23rd. Edn.3120 B:2017	mg/l	<0.05
20	Zinc as Zn	APHA 23rd. Edn.3120 B:2017	mg/l	0.92
21	Antimony as Sb	APHA 23rd. Edn.3120 B:2017	mg/l	<0.10
22	Cobalt as Co	APHA 23rd. Edn.3120 B:2017	mg/l	<0.10
23	Aluminium as Al	APHA 23rd. Edn.3120 B:2017	mg/l	0.24
24	Barium as Ba	APHA 23rd. Edn.3120 B:2017	mg/l	<0.10
25	Silver as Ag	APHA 23rd. Edn.3120 B:2017	mg/l	<0.10
26	Cadmium as Cd	APHA 23rd. Edn.3120 B:2017	mg/l	<0.01
27	Cyanide as CN	APHA 23rd. Edn 4500 CN A & F:2017	mg/l	<0.05
28	Mercury as Hg	IS:3025(Part-48)-1994, reaff. 2019 Cold Vapour Atomic Absorption Method	mg/l	<0.001

....End of the report....


M. Agarwal
Technical Manager
(Authorized Signatory)

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PUNJAB POLLUTION CONTROL BOARD,
NABHA ROAD, PATIALA
FORM- IV
(See Sub-Rule (2) of Rule (12))
REPORT BY THE STATE BOARD ANALYST

Report No. Air Lab 16/2023-24
Dated 08/09/2023

I hereby certify that Mrs. Shaminder Kaur, State Board Analyst duly appointed under sub section (2) of section 29 of the Air (Prevention and Control of Pollution) Act, 1981 received on the 8th of September, 2023 from Sh. Gurpreet Singh, ASO PPCB samples of M/s Federal Mogul Goetze India Ltd, Bahadurgarh, Patiala for analysis. The sample was in a condition fit for analysis reported below:-

I further certify that I have analysed the aforementioned samples on 08.09.2023 to 19.09.2023 and declared results of the analysis to be as follows:

The condition of the seals, fastening and container on receipt was as follows:-

S.No	Point of Sample Collection	Parameter	Results
1.	From port hole on common stack of 4 no. Induction Furnaces after APCD	Particulate Matter (mg/Nm ³)	18
2.	From port hole on common stack of SK1 & SK2 Melting Furnance after APCD	Particulate Matter (mg/Nm ³)	29
3.	From port hole on stack of Dechlorination Furnance after APCD	Particulate Matter (mg/Nm ³)	BDL
		Acid Mist As HCl (mg/m ³)	BDL
4.	From port hole on stack of grinding unit of Ring Foundary after APCD	Particulate Matter (mg/Nm ³)	10

The Seals and fastings were found intact

Signed this 19th day of September, 2023

Address:-

Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road,
Patiala

To

21617

The Environmental Engineer,
Punjab Pollution Control Board,
Regional Office-Patiala.

Shaminder Kaur
19/9/23
(Signature)
State Board Analyst

19/9/23

Authorization letter No. 21618-19 dated 19/9/23

A copy of the above is forwarded to the:

1. The Chief Environmental Engineer (Air), Punjab Pollution Control Board, Jalandhar.
2. The Senior Environmental Engineer, Punjab Pollution Control Board, ZO 1 Patiala.

Shaminder Kaur
19/9/23
(Signature)