BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, NEW DELHI

Original Application No. 327 of 2023 (Disposed Off)

In the matter of Suo Moto Cognizance

In Re: News item Published in India Today dated 30.4.2023 titled "3 minors among 11 dead in Ludhiana Gas leak", Punjab Govt. announces 2 Lakh Ex-Gratia

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Date: 08.05.2024

Place: PATIALA

(Er. Gurindar Singh Majithia)
Member Secretary,
Punjab Pollution Control Board,
Nabha Road, Patiala.

Member Secretary
Punjab Pollution Control Board
Patiala.

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In Re: **News item Published in India Today dated 30.4.2023 titled "3 minors among 11 dead in Ludhiana Gas leak", Punjab Govt. announces 2 Lakh Ex-Gratia**

Report of Member Secretary, Punjab Pollution Control Board in complianceto order dated 05.03.2024.

RESPECTFULLY SHOWETH

1. That briefly submitted, the above-mentioned original application was registered suo moto by the Hon'ble National GreenTribunal on the basis of the newspaper report published in India Today dated 30.04.2023 disclosing death of 11 persons on account of gas leak in Giaspura area of Ludhiana city on April 30, 2023. The Hon'ble Tribunal by an order dated 02.05.2023 had formed an eight member Fact Finding Joint Committee (FFJC) under the Chairman Punjab Pollution Control Board, which had submitted the report confirming the incident of gas leak resulting in death of 11 persons and disclosing the reason for the alleged gas leak to be the escape of gases from sewer line.

2. That the Hon'ble Tribunal by an order dated 13.10.2023 had constituted a fresh Independent Joint Committee consisting of Joint Secretary, MoEF&CC, Member Secretary, CPCB and Professor from IIT Delhi having expertise in the field with a direction to the committee to visit the site and submit a comprehensive report. The Joint Committee had submitted the report dated 04.03.2023 stating that the gas leak happened due to 2 leakage/emission of sewer gas resulting into the accident and that high levels of H2S were detected. The Hon'ble Tribunal decided that the above

two reports themselves contain the observation that possibility of discharge of acidic effluent into sewer at the time of accident is not ruled out. However, considering a complaint received against M/s JBR company operating the CETP for electroplating factories, the Hon'ble Tribunal by passing an order dated 05.03.2024 had disposed of OA no. 327 of 2023 with direction to the Member Secretary, Punjab Pollution Control Board to furnish a report before the Registrar General disclosing the installed capacity of CETP run by M/s JBR and other details as mentioned in the order dated 05.03.2024. In this regard, the relevant extract of paragraph 7, 8 and 9 of the order dated 05.03.2024 is reproduced herein below for kind perusal and reference:

> *"7. Tribunal has also received a letter by one of the complainant disclosing that a common treatment plant is at phase-II focal point Ludhiana which is run by M/s JBR Company, which brings effluent discharge from all electroplating factories all over Punjab at its plant at Ludhiana and the treatment capacity of its CETP is 5,00,000 liter per day but the said project proponent has made agreement with the electroplating industries all over the Punjab for more than 10,00,000 liter per day and it throws about 5,00,000 litres untreated effluents into sewers. In the complaint it has been expressed that since the pH was found less than two, therefore, it proves that there was huge quantity of acid in the sewer. The said letter has been kept in the seal cover in this original application.*
>
> *8. Considering the above circumstances, we dispose of the original application directing the Member Secretary, Punjab PCB to furnish a report before Registrar General of the Tribunal disclosing installed*

capacity of the CEPT run by M/s JBR company and the details of the agreements which have been entered into by the JBR Company with the unit for collection of their effluent discharge and also the correctness of the allegations that about 5,00,000 litres of effluent discharge collected by the said proponent is thrown in the sewer. The Member Secretary, Punjab PCB will also submit the report explaining the issue relating to the pH being less and the quantity of acid being thrown in sewer.

9. Let this report be submitted by the Member Secretary, Punjab PCB within two months by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF. If found necessary, the matter will be listed for consideration before the Tribunal."

3. That considering the orders dated 05.03.2024 passed by the Hon'ble Tribunal, the matter has been examined and the comprehensive report with regard to the operation of M/s JBR Technologies Pvt. Ltd., may kindly be read in the following paragraphs.

Report regarding CETP run by M/s JBR Technologies Pvt. Ltd., at Phase-8, Focal point, Ludhiana.

4. That there are several tiny and small-scale electroplating and allied units operating in the State of Punjab. Earlier these tiny units had installed their individual captive treatment plants, but they do not have the skilled manpower to operate the captive treatment plants. In order to facilitate these small scale and tiny units for treatment of the effluent at the single point source, it was proposed to install a Common Effluent Treatment Plant in 2007. The CETP has been installed by the Punjab Small Industries and Export Corporation (PSIEC), a subsidiary of the Government of Punjab, Department of Industries and Commerce, Punjab at Plot No. D-260-61, Phase-VIII, Focal

Point, Ludhiana for the treatment of trade effluent being generated by the electroplating and allied industries in the State of Punjab. The PSIEC has handed over the CETP to Special Purpose Vehicle (SPV) Ludhiana Effluent Treatment Society (LETS),for its operation and functioning. The LETS has further appointed M/s JBR Technologies Pvt. Ltd., Ludhiana as the operator of the CETP for electroplating units.

5. The CETP is having consented capacity for treatment of 500 KLD of effluent of electroplating and allied industries and the operator is lifting effluent from around 1618 small & medium scale electroplating & allied industries of Punjab State. The CETP has been granted consent to operate under the Water (Prevention & Control of Pollution) Act, 1974 vide no. CTOW/Varied/LDH4/2024/24762829 dated 01/03/2024 upto 30/06/2027 for treatment of trade effluent @ 500 KLD. The CETP Operator has also obtained Consent to Establish (NOC for expansion) for increasing the capacity from 500 KLD to 800 KLD vide no. CTE/Ext/LDH4/2024/24683269 dated 02.02.2024 from the Board, which is valid upto 01.08.2024.

6. The CETP has provided 55 vehicles for lifting of effluent from electroplating & allied industries and all the vehicles are fitted with GPS. The CETP is based on Zero Liquid Discharge (ZLD) technology and the treated water is being supplied to National Highway Authority of India (NHAI) for irrigation, Municipal Corporation Ludhiana (MCL), Construction Projects as well as Parks maintained by some large-scale industrial units such as M/s Vardhman Group and M/s Kay Jay Forging besides its own cooling tower. The CETP has provided Online Continuous Effluent Monitoring System (OCEMS) at the final outlet which is connected to the Board's server.

7. The list of its agreements/MoUs made by CETP Operator with various industries has been obtained vide CETPs email dated 11.03.2024. The list is enclosed herewith as **Annexure-A.** The detail of agreements executed by M/s JBR Technologies district wise quantity of effluent per month is tabulated below:

Sr. No.	Name of the District	Number of Units	Agreement Quantities(In KL/Month)	Agreement Quantities (In KL/Day)
1.	Amritsar	62	180	5.9
2.	Jalandhar	250	2009	66.9
3.	Mohali	15	430	14.35
4.	Ludhiana	1291	14285	476.2
	Total	**1618**	**16904**	**563.3**

8. Though the agreements made by the CETP operator are reflected on higher side but the average effluent lifted by the CETP operator during last one year is calculated to be around 427 KLD which is well within the consented quantity. The detail is tabulated below:

Sr. No.	Month	Total lifted quantity					
		Ludhiana ZONE(KL/month)	Jalandhar ZONE (KL/month	Amritsar ZONE (KL/month	Moha li ZONE (In KL/month	Total (KL/month)	Total (KL/Day
1	January, 2023	10918	1518	108	172	12716	**424**
2	February, 2023	10857	1541	100	121	12619	**421**
3	March, 2023	11766	1674	121	95	13655	**455**
4	April, 2023	11228	1572	110	84	12994	**433**
5	May, 2023	10191	1599	121	66	11977	**399**
6	June, 2023	10887	1570	100	67	12624	**421**
7	July, 2023	10987	1662	107	78	12834	**428**
8	August, 2023	10768	1620	106	100	12594	**420**
9	September, 2023	10927	1551	68	303	12849	**428**
10	October, 2023	10626	1488	93	486	12693	**423**
11	November, 2023	10684	1437	81	510	12712	**424**
12	December, 2023	11062	1670	109	629	13469	**449**

*Rounded off to nearest decimal point

9. It is pertinent to mention here that the industries had executed agreements with the CETP Operator considering their full scale (maximum) production

capacity. However, most of the industries are doing job work of electroplating and effluent is generated depending upon the operation of the units as per the availability of work. The operator is lifting the effluent from the units in rotation and the actual quantity of effluent lifted for treatment remains below the agreement quantity and the treated effluent also remains within the consented capacity.

10. That the 3rd Party Audit of CETP was also conducted by Maharaja Ranjit Singh Punjab Technical University, Bathinda & Associate University for the period from April 2022 to August 2023 in respect of the effluent collected, effluent treated, chemicals used in treatment and disposal of hazardous waste and treated waste water. The data maintained by the industry was physically verified by the institute and all the data presented was based on the data maintained by the industry. Based on the monthly effluent collected for the audit period, it was observed that on average the effluent quantity treated ranged from 430 to 480 KL/D and was always less than 500 KL/D, i.e. less than the limit provided under consent to operate by Punjab Pollution Control Board. The 3rd party CETP audit report has been submitted to Punjab Pollution Control Board vide reference no. DC/CUP/ENV/02 dated 21.12.2023 wherein it concluded that overall, the operation and treatment of the plant was found normal and satisfactory. A Copy of the CETP audit report is enclosed herewith as **Annexure-B.**

The Correctness of allegations made by the complainant

11. The allegations leveled in the complaint that the CETP at Phase-8, Focal Point, Ludhiana run by M/s JBR Technologies has made an agreement with the electroplating industries all over the Punjab for more than 10.00 Lacs Litres / day and it throws about 5 lacs liters untreated effluents into sewer are not factually correct. In view of the above recorded facts, it is submitted that the effluent collected and treated by the CETP is within the consented capacity allowed by the Board @ 500 KL/day.

Issue relating to the pH being less at site.

12. The site of the incident has been visited by various experts as well as the members of the Fact-Finding Joint Committee, Independent Joint Committee constituted by the Hon'ble Tribunal and the **probable reasons for low pH in the sewer as given by the experts are reproduced as under**:

a) *"Some hydrogen sulfide gas diffuses into the headspace environment above the wastewater. Moisture evaporated from warm sewage may condense on unsubmerged walls of sewers, and is likely to hang in partially formed dropletsfrom the horizontal crown of the sewer. As a portion of the hydrogen sulfide gas and oxygen gas from the air above the sewage dissolves into these stationary droplets, they become a habitat for sulfur oxidizing bacteria (SOB),of the genus Acidithiobacillus. Colonies of these aerobic bacteria metabolize thehydrogen sulfide gas to sulfuric acid. Favorable conditions for Sulfur Oxidizing bacteria (SOBs) and acid regression may be the cause for reducing the pH to 2-3."*

(**Reference**: Part no. 7.2, Page no. 23 of the report of the Independent Joint Committee constituted by Hon'ble NGT vide order dated 13.10.2023 consisting of Prof. Sreedevi Upadhyayula, Department of Chemical Engineering, IIT Delhi, Raja Ram Singh, DIGF, MoEF&CC, Chandigarh, Bharat Kumar Sharma, Member Secretary, CPCB). The report has already been submitted to the Hon'ble NGT and relevant extract of the report is enclosed herewith as **Annexure-C**

b) "Low pH in the range of 2.5 reported in the sewerage samples collected from manholes near the affected site indicated anaerobic conditions in the said sewer line portion. pH conditions are reported to be in the range 4.4 to 5.7 inthe upstream and downstream stretches of the sewer line, which indicates building up of anaerobic condition only in the accident area and sustaining in adjoining pockets. High concentrations

of sulphides in the range 56-60 mg/L inthe affected sewerage pockets as compared to 6-8.8 mg/L in the upstream anddownstream pockets might have come from anaerobic biodegradation of the organic matter and conversion of sulphates to sulphides in acidic (low pH) conditions, especially in the focused stretch of the underground sewer line accompanied with inadequate slime stripping, long detention and insufficient design planning of the sewer line."

(Reference : Report of the Expert Committee comprising of Professor Sushil Mittal (Member, Royal Society of Chemistry, United Kingdom), Vice Chancellor, Sardar Beant Singh State University, Gurdaspur (Now Vice Chancellor, Punjab Technical University) and Professor Raj Kumar Gupta, Sr. Professor Department of Chemical Engineering, Thapar Institute of Engineering and Technology (TIET), Patiala who visited the site on 02.05.2023. Copy of the report is enclosed as **Annexure-D**

c) *"Once again based upon the onsite discussions with concerned officials, I could co-relate this incident as a case of sewer blockage where anaerobic digestion of organic matter led to formation of H_2S. During anaerobic digestion / fermentation, blo-chemical reactions lead to the formation of gases like carbonmonoxide along with other gases like H_2S, CH4, CO2, N2O, Hz. Also, H_2S combines with oxygen to form sulphuric acid which eventually can lead to reduction in pH of slurry."*

(**Reference** : Report of Dr. Anoop Verma, Professor and Head, School of Energy and Environment, Thapar Institute of Engineering and Technology (TIET), Patiala who visited the site on 01.05.2023). Copy of the report is enclosed as **Annexure- E**

d) "Hydrogen Sulphide is Biochemically oxidized in presence of moisture to form Biogenic Sulphuric Acid. Colonisation by aggressive acidophilic bacteria is capable of generating enough sulphuric acid to reduce the surface pH to 1-2, whereas Thiobacilli is capable of generating sufficient

sulphuric acid to further reduce the pH to 1. Higher concentration of H2S in sewer lines leads to increased bio-chemical oxidation of Sulphides to sulphuric Acid. Further, the Sulphuric acid is also generated in the Municipal Sewers through Chemical Oxidation of H2S in presence in aqueous medium. The rate of chemical Sulphide oxidation increases exponentially with Hydrogen Sulphide concentrations and chemical sulphide oxidation is resultant into the formation of Sulphuric Acid. Hence, with the increase in the concentration of H2S, there is increase in Sulphuric Acid generation."

(**Reference**: International Journals: Biogenic sulphuric acid attacked on concrete pipe published by Concrete Pipe Association of Australasia (September, 2013), Activity of Sulfur Oxidizing Microorganisms and impacts on concrete pipe corrosion (2007), University of Colorado at Boulder Gutierrez-Padilla, M. and Dolores, G. (2007), Acid attack in a concrete sewer pipe-a petrographic and chemical investigation 2005 ,Jana, D. and Lewis,
R.A. (2005), The Rapid Chemically induced corrosion of Concrete sewer at high H2S concentration, University of Wollongong (2019) also part of FFJC Report). Copy of the international journals attached as **Annexure-F**

Quantity of acid being thrown in sewer

The issue relating to the quantity of acid being thrown in sewer has already been examined by the experts as well as the members of the Fact-Finding Joint Committee, Independent Joint Committee constituted by the Hon'ble Tribunal and the relevant remarks given by the experts are reproduced herein below:

a) After the incident, the site was immediately visited by all the concerned authorities like District Administration, Police Department, NDRF Department, MCL, PPCB, Health Department etc. CCTV

cameras of the area were scanned by the Police Authorities and *"sudden discharge of any chemical by any tanker or other means has been ruled out by the Police at the tragedy site upto 1 KM of the incident. Further, as per joint survey of MCL and PPCB, no acid consuming industrywas found located within 100 meters radius of the tragedy site. No illegal dischargewas observed from any unit during joint visit of MCL and PPCB upto 500 meters upstream and 200 meters downstream of the tragedy point."*

(**Reference**: Page no. 14 of the report of the 8 Member Fact-Finding Joint Committee constituted by Hon'ble NGT and headed by Prof. (Dr.) Adarsh Pal Vig, Chairman, PPCB). The report has already been submitted to the Hon'ble NGT and relevant extract of the report is enclosed as **Annexure-G**.

b) The joint team constituted by the Hon'ble NGT consisting of Prof. Sreedevi Upadhyayula, Department of Chemical Engineering, IIT Delhi, Raja Ram Singh, DIGF, MoEF&CC, Chandigarh, Bharat Kumar Sharma, Member Secretary, CPCB has verified *"the records maintained by the units as well as M/S JBR Technologies (the CETP operator) generated receipt/manifest for one year i.e. 1.4.2022 to 30.4.2023 and no discrepancies were observed. The amount of water consumption by these units as reflected by the water meters installed by the units was found in synchronization with the effluent lifted by CETP operator as per verification data."*

(**Reference**: Page no. 20 of the report of the of the report of the Joint CommitteeConstituted by Hon'ble NGT consisting of Prof. Sreedevi Upadhyayula, Department of Chemical Engineering, IIT Delhi, Raja Ram Singh, DIGF, MoEF&CC, Chandigarh, Bharat Kumar Sharma, Member Secretary, CPCB). The report has already been submitted to the Hon'ble NGT and relevant extract of the report is

enclosed as **Annexure-H.**

No acidic effluent was found to be thrown into the sewer by the Committees formed by the Hon'ble Tribunal.

Conclusion

In view of the facts given and recorded herein above it is concluded that the effluent collected and treated by the CETP is within the consented capacity of the CETP @ 500 KL/day. The allegations made in the complaint that the CETP at Phase-8, Focal Point, Ludhiana run by M/s JBR Technologies has made an agreement with the electroplating industries of more than 10.00 Lacs Litres / day against the capacity of 5.00 Lacs Liters / day are not factually correct.

Various experts have suggested that there are several biogenic reasons such as acid regression by colonies of aerobic bacteria metabolizing the hydrogen sulfide gas to sulfuric acid, generation of Sulphuric acid in the Municipal Sewer through Chemical Oxidation of H2S in presence of aqueous medium and building up of anaerobic conditions in affected pockets as a reason for low pH at the sewer site.

Submission of Report

13. That the report is hereby submitted in compliance to order 05.03.2024 passed by the Hon'ble NGT in OA no. 327 of 2023.

Submitted by

Date: 08.05.2024

Place: PATIALA

(Gurindar Singh Majithia)
Member Secretary,
Punjab Pollution Control Board, Patiala

Member Secretary
Punjab Pollution Control Board
Patiala.

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List of agreements of Ludhiana as on 11.03.2024				
S No.	NAME	DT. OF AGRMNT	DT. OF RNWL	COMMITTMENT
1	**A.A. ENTERPRISES**			
	OLD ADD >:- BXXIX-536-D/B, G.T. ROAD. INDL. AREA-C, NEW ADD.:- B/29/536/14/A-105, STATION ROAD, SURINDERA BROTHERS, AICCTA MARKET, SINGLA CYCLE ROAD, LUDHIANA	23-06-2022	05-02-2024	5000
2	**AAR AAR INDUSTRIES**			
	B-XXIX-536/21/2/1A, INDL. AREA-C,, STATION ROAD, DHANDARI KALAN, LUDHIANA	05-11-2007	19-09-2020	5000
3	**AARAV INDUSTRIES**			
	13206/1A1,LINK ROAD,, DHOLEWAL, LUDHIANA	12-06-2019	21-06-2022	4000
4	**Aarti Steel International LTD. (HCL)**			
	Steel Wire Division, Focal Point, Ludhiana	30-03-2023		100000
5	**Aarti Steel International Ltd. (Steel Wire Division)**			
	Focal Point, Ludhiana, Ludhiana	30-03-2023		10000
6	**AARYANS INDUSTRIES**			
	544/1-C, GURU RAM DASS ROAD, DHANDARI KALAN, G.T. ROAD,	26-11-2018	28-06-2022	2000
7	**AASHTHA METALS**			
	PLOT NO. 60/35, M/480, STREET NO. 1/4, GURMEET NAGAR, GIASPURA, LUDHIANA	16-10-2017	08-10-2021	2000
8	**ABHEY STEEL (P) LTD.**			
	WORKS:- H.B.19, PHASE-VI, FOCAL POINT, LDH, OFFICE:- 39/18, G.T. ROAD, MILLER GANJ, LUDHIANA	29-11-2021		10000
9	**Abhishek Dhall Enterprises**			
	Plot No. 3198 Street No. 12/5, Radha Swami Road, Chet Singh Nagar, Gill Road, Ludhiana	28-02-2022		2000
10	**ABHISHEK ENTERPRISES H.N.**			
	HARGOBIND NAGAR, INDUSTRIAL AREA-C, OSWAL AGRO ROAD,	07-02-2014	31-08-2017	3000
11	**ABHISHEK ENTERPRISES (S.PURI)**			
	1711/28, STREET NO. 3, KWALITY CHOWK, SHIMLAPURI,	06-09-2017	25-09-2021	2000
12	**A.B. INDUSTRIES**			
	SHANTI NAGAR, GIASPURA SUA ROAD, NEAR THEKA, LUDHIANA	20-05-2019	06-09-2023	3000
13	**ACCORD INDUSTRIES**			
	INDUSTRIAL AREA-C,SUA ROAD, DHANDARI KALAN, LUDHIANA,	10-09-2008	13-07-2022	125000
14	**ACCURATE HOSIERY NEEDLES**			
	DUGRI ROAD, CANAL BRIDGE, LUDHIANA. 141013	01-10-2015	11-10-2021	2000
15	**ACME AUTO TECH PVT LTD**			
	V.P.O - CHHANDRAN, CHANDIGARH ROAD, E-627, PH-7, F.P,	28-09-2011	14-07-2021	5000
16	**ACME STEEL & WIRES**			
	Khasra No. 26/17, Village:- Mehlon,, Near Kohara, Distt.:-	01-08-2019	19-09-2023	5000
17	**A.D.CYCLE INDUSTRIES**			
	F-145, PHASE-7,FOCAL POINT, LUDHIANA	08-07-2007	07-06-2022	10000
18	**ADHUNIK CYCLE PVT LTD**			
	F-36, PHASE VII, FOCAL POINT, LUDHIANA	22-08-2014	26-12-2022	35000
19	**ADI INDUSTRIES**			
	VILL.:- JANDIALI,CHD. ROAD,, LUDHIANA..	07-11-2019	19-09-2023	25000
20	**ADITRAGH INDUSTRIES**			
	D-27 PHASE-5 FOCAL POINT, LUDHIANA	28-08-2010	18-06-2022	75000
21	**ADVANCED TECHNOLOGIES (INDIA)**			
	C-261, PHASE-8, FOCAL POINT, LUDHIANA	15-07-2019	22-06-2022	4000
22	**AEROPLANE INDUSTRIES**			
	B-XXIX, 87/3/2 STREET NO 7, G.T ROAD , DABA ROAD, LUDHIANA	25-02-2014	05-02-2024	1000
23	**AFFIX SCAFFOLDING INDIA PVT. LTD.**			
	B-29, 1250/C/6/2, KNGANWAL ROAD, JASPAL BANGAR, LUDHIANA	16-03-2023		25000
24	**AG FORM & FORGE**			
	STATION ROAD DHANDRI ROAD, LDH, LUDHIANA	11-07-2008	19-08-2022	15000
25	**AGGARSON FASTNERS**			
	F-61 , PHASE - VII, FOCAL POINT, 8437319183, 5013501,	20-02-2013	19-09-2023	3000
26	**AGGARWAL CONCAST (P) LTD**			
	VILLGE CHNDRAN , CHNDIGRH ROAD, LUDHIANA.141013.	31-01-2022	16-08-2023	5000
27	**AGGARWAL CYCLE INDUSTRIES**			
	E-264, PHASE-4A, FOCAL POINT,, LUDHIANA	08-07-2007	20-09-2021	13000
	A.H EXPORTS			

Member Secretary
Punjab Pollution Control Board
Patiala.

	PLOT NO 12 VPO JUGIYANA G.T.RD LDH, LUDHIANA	06-12-2010	18-11-2022	7000
29	**AHUJA INDUSTRIES**			
	1864/2 BACK SIDE STATE BANK OF PATIALA, JANTA NAGAR, GILL ROAD, OLD-3638, DABA RD, ST-16,, LUDHIANA	19-11-2008	24-06-2022	3500
30	**AHUJA PRECI-TECH INDUSTRIES**			
	E-232,PHASE-4A,FOCAL POINT, 01615043618,613, LUDHIANA	23-03-2011	21-06-2022	11000
31	**AIROTECH HARD CHROME & ENGG.**			
	# 97-R, INDL. AREA-B,, NEAR BHAGWAN CHOWK, LUDHIANA,	21-09-2018	23-06-2023	4000
32	**AJAIB SINGH & CO.**			
	K-108 PHASE VII, FOCAL POINT, LUDHIANA	30-03-2009	04-11-2023	3000
33	**AJAY INTERNATIONAL**			
	E-93 PHASE IV, FOCAL POINT, LUDHIANA, LUDHIANA	27-03-2009	02-11-2021	4000
34	**A.J. ENGINEERING WORKS**			
	F 51 PHASE V11 FOCAL POINT, LUDHIANA	17-05-2011	17-04-2023	4500
35	**A.J. EXPORT**			
	# 200/2, LABOUR COLONY, GILL ROAD, LUDHIANA, LUDHIANA	21-08-2018	20-06-2022	5000
36	**AJIT ENTERPRISES**			
	E-281, PH-4, FOCAL POINT, LUDHIANA	07-10-2007	16-09-2021	6000
37	**AKASH CYCLE PRODUCTS**			
	ST. NO.-10/5 CHET SINGH NAGAR, 3051 RADHASWAMI ROAD,	03-05-2016	18-04-2023	1000
38	**A.K ENTERPRISES DABA**			
	8-29-83/5/A/2/A STREET NO 8/6, BABA MUKAND SINGH NAGAR, DABA ROAD, LUDHIANA	15-01-2014	22-09-2021	4000
39	**AKSON INDUSTRIES P. LTD.**			
	HADBAST NO. 245, KHASRA NO. 1548/1095/1103, B-XXIX-II, NEAR LOTEY KANDA INDL. AREA-C, KANGANWAL, LUDHIANA	30-09-2023		15000
40	**A.L. ENTERPRISES**			
	Old Add.:- STREET NO. 3, GURU AMARDASS COLONY, NEW ADD: AMARPURA,DABA ROAD ,, BACKSIDE SHAMSHAN GHAAT GIASPURA, LUDHINANA 141003	25-10-2019	27-05-2023	5000
41	**AMA INDIA ENTERPRISES P. LTD.**			
	VILLAGE: BHAMA KALAN, P.O:UPPAL, KOHARA TO MACHIWARA ROAD, LUDHIANA-141112	22-05-2013	17-09-2021	90000
42	**AMAN ELECTROPLATING (PH-7)**			
	FOCAL POINT, PHASE-7, OPPOSITE CINTEX MILL, VILL.:- GOBINDGARH, LUDHIANA	05-04-2023		4000
43	**AMAN ENTERPRISES (F-340)**			
	F-340, PHASEVIII, MANGLI FOCAL POINT, LUDHIANA	11-06-2014	31-12-2023	8000
44	**AMAN ENTERPRISES (G.GARH)**			
	2885/A/251, VILL.:- GOBINDGARH, LUDHIANA	27-05-2023		5000
45	**AMAN ENTERPRISES (LOHARA)**			
	(Old)ATMA SINGH NAGAR, STREET NO.2, SUA ROAD, (NEW) JASPAL BANGER ROAD, KUNTI NAGAR LOHARA, LUDHIANA.-	22-01-2018	24-02-2023	3000
46	**AMAN STEEL INDUSTRIES**			
	H-NO-5688 ST:NO 18, NEW SHIMLA PURI, DABA ROAD, LUDHIANA	03-07-2008	23-06-2023	5000
47	**AMAN UDYOG**			
	B-XXIX, 542/9-B, INDUSTRIAL AREA C, DHANDARI KALAN,	14-11-2017	05-07-2022	10000
48	**AMARSON INDUSTRIES**			
	F-165, PHASE-8, FOCAL POINT,, LUDHIANA	03-04-2008	23-07-2022	4000
49	**AMAR UDYOG**			
	NEAR MITTAL DHARAM KANDA, LINK ROAD, ADJ. G.T. ROAD, DHANDARI KHURD, LUDHIANA	26-10-2018	19-04-2023	5000
50	**AMAR WHEEL PVT. LTD.**			
	C-194, PH-7, FOCAL POINT, LUDHIANA	27-09-2012	20-11-2021	500
51	**AMBER INDUSTRIAL EXPORTS**			
	BXXX-774,FOCAL POINT, SHERPUR, BYE-PASS, NEAR SPRING DALE SCHOOL, LUDHIANA	08-10-2013	21-02-2023	10000
52	**AMBIKA CYCLES**			
	E 273 PHASE IV A FOCAL POINT LUDHIANA, LUDHIANA	08-10-2010	22-06-2022	10000
53	**AMBIKA WHEELS PVT. LTD.**			
	HB-13, PHASE-6, FOCAL POINT,, LUDHIANA., PINCODE: 141010	08-07-2007	06-08-2020	16000
54	**AMCO INDUSTRIES**			
	VILLAGE:- KANECH, GURU GOBIND SINGH MARG, G.T. ROAD, SAHNEWAL-141120,, LUDHIANA	28-12-2013	23-06-2022	60000
55	**AMIT INDUSTRIES LUDHIANA**			
	NEW ADD.:-D-82 PHASE 5 FOCAL POINT, OLD ADD.:- #B-30-1743/B/1092, B-14,, BEHIND THAPAR ROLLING MILL, PHASE-7,	29-03-2011	17-06-2022	6000

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56	**AMRIT INDUSTRIES**			
	# 5, INDUSTRIAL AREA-C, HARA INDUSTRIAL ESTATE, SUA ROAD, LUDHIANA	08-02-2016		1000
57	**AMRIT INTERNATIONAL**			
	9636/1 KOT MANGAL SINGH, ST NO 18, LUDHIANA	15-04-2009	13-11-2023	4000
58	**ANAND BROTHERS**			
	K -326 PHASE V111 FOCAL POINT, LUDHIANA	04-12-2012	10-02-2023	8000
59	**ANAND ENTERPRISES**			
	DABA RAOD, ST. NO. 2-1/2, MUKAND SINGH NAGAR, LUDHIANA	11-07-2016	18-02-2020	10000
60	**ANAND INDUSTRIES(DHANDARI)**			
	1228/26/A, INDL. AREA-C, DHANDARI KALAN, LUDHIANA	09-01-2019	02-08-2022	5000
61	**ANAND METALS(DHANDARI)**			
	1228/26/2, INDL. AREA-C, LUDHIANA	11-01-2019	02-08-2022	5000
62	**ANAND STEELS (H)**			
	GIASPURA SUA ROAD,, LUDHIANA.-141003	16-08-2023		1500
63	**A.N.G. INDUSTRIES**			
	446/2B SHERPUR KHURD, LUDHIANA	13-10-2011	09-12-2022	4000
64	**ANMOL ENETRPRISES SUA ROAD**			
	PLOT NO 536/25/6/4, NDUSTRIAL AREA C SUA ROAD, LUDHIANA	17-10-2011	26-09-2022	6000
65	**ANMOL ENTERPRISES J.N**			
	H.N. 1759 STREET NO 26 JANTA NAGAR, LUDHIANA	26-12-2011		1500
66	**ANMOL INTERNATIONAL**			
	536-A DHANDARI KALAN SINGLA ROAD, LUDHIANA.141014	12-10-2010	22-05-2019	8000
67	**A.N.P. INDUSTRIES**			
	E-348/A, PHASE-6, FOCAL POINT, LUDHIANA	21-06-2018	10-11-2021	8000
68	**ANUBHAV INDUSTRIES**			
	OSWAL AGRO COMPLEX, STREET NO. 6, GIASPURA, G.T. ROAD, LUDHIANA, LUDHIANA	30-01-2014	08-02-2023	2800
69	**ANURADHA INDUSTRIES**			
	STREET NO. 7, BMS NAGAR, DABA ROAD, LUDHIANA	02-08-2016	27-06-2022	3000
70	**A- ONE ELECTRIC WOKS**			
	Street No. 18, Jiwan Nagar, Phse-8, Focal Point, LUDHIANA	04-11-2023		2000
71	**A-ONE ENTERPRISES(KHANNA)**			
	NEAR SOHAL ENGINEERING WORKS, D-40-41,FOCAL POINT, KHANNA-141401.	20-10-2020	30-09-2023	2000
72	**APEX ENTERPRISES**			
	1001/1/2A, INDUSTRIAL AREA-C, DHANDARI KALAN, LUDHIANA	28-07-2022		2000
73	**APPLE ENTRPRISES**			
	B-XXX-230/A SHERPUR, RANA GAS STREET, LUDHIANA	30-12-2017	18-04-2023	5000
74	**APPU INTERATIONAL (204)**			
	C,204,PH-VII,FOCAL POINT, LUDHIANA, LUDHIANA	25-08-2008	03-03-2023	10000
75	**A.R. ENTERPRISES F.P.**			
	44-B, R.P.LAND IND.ENCLAVE, ISHWAR COLONY,, DHANDARI KHURD, LUDHIANA 141010	04-05-2016	03-05-2022	20000
76	**A.R. ENTERPRISES (G.PURA)**			
	GIASPURA ROAD, G.T. ROAD, NEAR SATNAM DHARAM KANDA, LUDHIANA, LUDHIANA	30-01-2014	11-11-2022	3000
77	**ARK ENGINEERING PVT LTD**			
	E-497 PH-6 FOCAL PIONT, LUDHIANA	08-07-2008	31-07-2023	78000
78	**ARORA ENTERPRISES**			
	B-29/83/6K/2, HARGOBIND NAGAR,, STREET NO 7 INDL AREA C GIASPURA, LUDHIANA	02-04-2008	16-09-2021	8000
79	**ARORA INDUSTRIES BMS NAGAR**			
	8/8, BABA MUKAND SINGH NAGAR, NEAR JAIN COLONY, DABA ROAD, OPP. RAM DARBAR MANDIR, LUDHIANA	10-08-2016		5000
80	**ARORA IRON & STEEL ROLLING MILLS PVT. LTD.**			
	DHANDARI KHURD, NEAR:- PHASE-VIII, FOCAL POINT, LUDHIANA-	01-02-2022		2000
81	**ARORA SONS**			
	E-276,PH-4,FOCAL POINT,LDH, LUDHIANA	23-11-2008	19-10-2015	5000
82	**ARR ESS BIKES P LTD**			
	49/3-C/1, ST. NO. 1, KABIR NAGAR DABA ROAD, LUDHIAINA	13-10-2022		5000
83	**ARROW INDUSTRIES**			
	E-438, PHASE-6, FOCAL POINT, LUDHIAINA	12-10-2017	17-05-2022	16000
84	**ARSH INTERNATIONAL**			
	E-149, PHASE-5, FOCAL POINT, LUDHIANA	25-05-2023	30-09-2023	15000

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85	**ART INDUSTRY**			
	12, HARA INDUSTRIAL ESTATE, SUA ROAD, INDUSTRIAL AREA-C 141010, LUDHIANA	26-02-2016	18-12-2023	2000
86	**ARUN INDUSTRIAL CORPN**			
	B-XXI 11074, STREET NO. 8, PARTAP NAGAR, LUDHIANA.-141003	27-02-2014	24-07-2017	2000
87	**ARVIND FORGINGS**			
	24 B, TEXTILE COLONY, LUDHIANA, LUDHIANA	30-05-2013	06-10-2021	3000
88	**ARYAN INTERNATIONAL**			
	FOCAL POINT EXTENSION,, DHANDARI LKALAN, LUDHIANA	10-10-2018	06-10-2021	2000
89	**ARYAN OVERSEAS**			
	INDL. AREA-C, SUA ROAD, DHANDARI KALAN, NEAR SUKHMANI KANDA, KANGANWAL, LUDHIANA	04-11-2023		6000
90	**ASHISH INTERNATIONAL**			
	D-254, PHASE-6, FOCAL POINT, LUDHIANA, LUDHIANA	06-12-2013	29-06-2022	15000
91	**ASHMEET ENTERPRISES**			
	E-58, PHASE-4, FOCAL POINT, LUDHIANA	24-02-2023		4000
92	**ASHOKA AUTO BLACK WORKS (PHAGWARA)**			
	SHAHID JAGATRAM SOOND COLONY, HOSHIARPUR ROAD, PHAGWARA, PHAGWARA.-144401	14-02-2014	05-10-2021	2000
93	**ASHOKA INDUSTRIAL FASTNERS NEW**			
	B-XXIX JASPAL BANGAR ROAD, INDUSTRIAL AREA-C,, LUDHIANA	18-10-2022		3000
94	**ASHOK AUTO INDUSTRIES**			
	STREET NO. 7, MAHA SINGH NAGAR, DABA LOHARA ROAD, LUDHIANA, LUDHIANA	19-09-2017		5000
95	**ASHOK PLATING WORKS**			
	1788,ST.NO-12 DASMESH NAGAR, GILL ROAD, LUDHIANA,	16-08-2008	21-11-2023	4000
96	**ASIA CUTTING TOOLS & ALLIED INDS.**			
	E-106, PHASE-4, FOCAL POINT,, LUDHIANA	12-04-2008	16-06-2021	7500
97	**ASIA CYCLE INDUSTRIES 50,51,52**			
	D-50-51-52, PHASE-5, FOCAL POINT,, LUDHIANA	22-10-2008	23-06-2023	16000
98	**ASIAN ALLOYS**			
	848/9, INDUSTRIAL AREA "A", LUDHIANA	03-06-2019	01-07-2022	1000
99	**ASIAN BIKES (P) LTD.**			
	INDL AREA-C SUA ROAD, NEAR EASTMAN IMPEX DHANDARI KALAN, 9878047600, LUDHIANA	09-11-2010	28-02-2023	30000
100	**ASIAN CYCLE INDUSTRIES(939)**			
	939, FOCAL POINT ROAD SHERPUAR, LUDHIANA, LUDHIANA	02-08-2008	31-10-2022	5000
101	**A.S.INDUSTRIAL WORKS GILL ROAD**			
	1023, ST.NO,8, MURADPURA,, GILL ROAD, LUDHIANA	08-07-2007	23-11-2021	4000
102	**A.S. NANUWA FABRICATORS**			
	# 10956, ST. NO. 6, PARTAP NAGAR, LUDHIANA	28-10-2017	16-09-2021	3000
103	**ATHARVA METAL CRAFT PVT. LTD.**			
	VILLAGE : RANGIA,, 25TH MILESTONE, MALERKOTLA ROAD, NEAR ESS AAR PETROL PUMP, LUDHIANA-141118	02-01-2018	05-05-2023	3500
104	**ATHARV TECHNOLOGIES**			
	KABOOLPUR- MARDANPUR ROAD, GRAIN MARKET, VILL: MARDANPUR, TEH. RAJPURA 9216806513, PATIALA	26-02-2016	02-03-2023	10000
105	**ATOTECH INDIA PVT LTD**			
	PROPERTY NO BX 111 2581/1ZOOM BLDG, R.K. ROAD INDUSTRIAL AREA CHEEMA CHOWNK, LUDHIANA	16-11-2012	11-07-2022	500
106	**ATUL BIKES**			
	E-479, PHASE-6, FOCAL POINT, LUDHIANA	08-08-2019		1000
107	**ATUL FASTENERS**			
	OLD ADRESS: 78,IND AREA A, LUDHIANA-141003 NEW ADDRESS-VPO-NANDPUR, SUA ROAD,SAHNEWAL,LDH 141120	16-02-2016	31-07-2023	15000
108	**AUGUST INDUSTRIES PVT LTD**			
	VIL:GAUNSPUR,PO:NOORPUR BET, HAMBRA, LUDHIANA, 433/2B, RAM PARK BASANT RD CIVIL LINE, LUDHIANA	02-09-2011	21-05-2022	4000
109	**AURA AUTO FORGE P. LTD.**			
	E-355, PHASE-6, FOCAL POINT, LUDHIAINA	28-06-2022		1500
110	**AVINASH ENTERPRISES**			
	V.P.O. PADDI, DEHLON RAOD, SAHNEWAL, SAHNEWAL	23-05-2012	24-05-2019	4500
111	**AVIRAJ INTERNATIONAL**			
	STREET NO. 7, OSWAL AGRO COMPLEX, INDL. AREA-C, LUDHIANA	11-04-2018	18-09-2021	3000
112	**AVON BICYCLES COMPONENTS LTD.**			
	9 TO 11, INDUSTRIAL AREA-B, LUDHIANA, LUDHIANA	11-10-2013	06-10-2021	25000

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113	**AVON ISPAT AND POWER LTD.**			
	G.T. ROAD, DHANDARI KALAN, LUDHIANIA	12-01-2021		100000
114	**AVTAR GENUINE COLOUR**			
	1177 GALI NO.8 DASHMESH NAGAR, LUDHIANA	14-07-2012	14-06-2022	2000
115	**AVTAR INDUSTRIES (645/2)**			
	645, ST.NO.2, VISHKARMA PURI,, GILL ROAD, CYCLE MARKET,,	06-09-2007	25-09-2021	2250
116	**AVTAR INDUSTRIES (F.P)**			
	PLOT NO. 5, GOBINDGARH ROAD, B/SIDE KRISHNA CARGO, PH-7, FOCAL POINT, LUDHIANA	26-11-2015	26-10-2020	3500
117	**AWAL ENGINEERING CO.**			
	1743/A/1 DHANDARI KALAN, ADJOINING FLYOVER BRIDGE, FOCAL POINT SIDE, LUDHIANA	10-04-2017	30-06-2021	12500
118	**AWAL ENGINEERS**			
	153, INDUSTRIAL AREA-A, LUDHIANA, LUDHIANA	20-12-2013	24-04-2023	1000
119	**AWASTHI ELECTROPLATING WORKS**			
	OLD ADD. :- H.NO.12609,ST.NO.5,, NEW ADD. :- JASPAL BANGAR ROAD,, NEAR BALAJI KANDA, INDL. AREA-C, LUDHIANA	17-07-2007	23-06-2023	6000
120	**AWASTHI STEEL TRADERS**			
	Old Add.:- 11592 ST.NO.-1 GALI SANT, New Add.:- Singla Colony, Near Keshav Kanda,, Ludhiana, LUDHIANA	08-07-2007	05-10-2021	7500
121	**AYAAN ENTERPRISES**			
	# 56, ISHWAR COLONY, R.P. LAND ESTATE, DHANDARI KHURD,	19-03-2020	13-02-2023	6000
122	**AYAAN ENTERPRISES.UNIT 2**			
	Area-252 Sq. Yards, Abadi Durga Colony, Near Focal Point, Phase-7,, Dhandari Khurd, Ludhiana.	20-01-2021		4000
123	**AYUSH ENTERPRISES**			
	IS KANDA STREET, SINGLA COLONY,, JASPAL BANGAR ROAD, INDL. AREA-C, LUDHIANA, LUDHIANA	08-09-2022		5000
124	**AYUSH INTERNATIONAL**			
	117, LAKSHMAN NAGAR, MILLER GANJ, LUDHIANA, LUDHIANA	08-10-2013	20-09-2021	4000
125	**AZAD ENTERPRISES(E-204)**			
	E-204,PH-4,FOCAL POINT LUDHIANA, 141010	07-06-2022		4000
126	**AZAD ENTERPRISES(IND AREA B)**			
	#625, INDUSTRIAL AREA-B, MILLER GANJ,, LUDHIANA-141003	22-02-2022		1500
127	**BABU EXPORTS**			
	Old Add.:=SUA ROAD,, Hara Estate Industrial Area-C,, Kanganwal Road,, LUDHIANA	08-08-2016	18-02-2023	6000
128	**BAJAJ ENGINEERS INDIA (F.P)**			
	C-6 PHASE IV FOCAL POINT, LUDHIANA	18-08-2014	18-08-2021	20000
129	**BAJAJ SONS LTD**			
	C-68,PHASE-5,FOCAL POINT,LDH, LUDHIANA	23-10-2008	18-03-2023	5000
130	**BAJAJ SONS LTD. NEW (RO REJ.)**			
	PLOT NO. 92-93, PHASE-5, FOCAL POINT, LUDHIANA	27-06-2016	18-03-2023	35000
131	**BAJWA BOX FACTORY**			
	STREET NO 2 DABA ROAD, G.T ROAD, LUDHIANA	08-04-2014	16-11-2022	12000
132	**BALAJI ELECTROPLATING**			
	STREET NO. 1, BACKSIDE, KAMAL KARYANA STORE, SUA ROAD, GIASPURA, LUDHIANA	27-12-2016	21-01-2023	6000
133	**BALAJI ENTERPRISES (BMS NAGAR)**			
	STREET NO. 8/4, BABA MUKAND SINGH NAGAR, DABA ROAD,	04-11-2019		5000
134	**BALA JI INDUSTRIES**			
	STREET NO 3 MAAN SINGH NAGAR, G.T ROAD DABA ROAD, NEAR LOVELY KARYANA STORE, LUDHIANA	16-01-2014	11-03-2022	3500
135	**BALBIR PRODUCTS (INDIA)**			
	3621,STNO.4,CHET SINGH NAGAR, GILL ROAD,LDH, LDH	17-12-2007	06-08-2018	3000
136	**BALI TEST HOUSE P. LTD.**			
	STREET NO. 12, JEEWAN NAGAR,, FOCAL POINT, PHSE-V, LUDHIANA-141010	20-04-2017	25-04-2023	1000
137	**BALTOSH INDUSTRIES**			
	B-29, 512/14-B, SHANTI NAGAR. SUA ROAD, GIASPURA, INDL. AREA-C,, LUDHIANA	11-01-2023		2000
138	**BALWINDER SINGH AND CO.**			
	PLOT NO. 11, HARA INDL. AREA-C, SUA ROAD, GIASPURA,	20-02-2015	13-03-2021	10000
139	**B.A.M CYCLE INDUSTRIES**			
	797,NIRANKARI ST.NO.4,MILLER, GANJ, LUDHIANA	31-07-2007	11-10-2021	4000
140	**BANSAL ENGINEERING**			
	UBHEWAL ROAD, NEAR GAUDHAM, SANGRUR, Sangrur, Punjab,	28-02-2020	05-05-2023	1000

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141	**BANSAL INDUSTRIES C-27**			
	PLOT NO. C-27, PHASE-2, FOCAL POINT, LUDHIANA	28-10-2022	16-10-2023	5000
142	**BANSAL STEEL UDYOG D-129**			
	D-129, PHASE-5, FOCAL POINT, LUDHIANA	18-10-2022	18-01-2024	7500
143	**BANSAL TECHNOCRAFT**			
	D-49, PHASE-5, FOCAL POINT, LUDHIANA	08-07-2007	27-05-2022	6000
144	**BARITI IMPEX**			
	511, STREET NO.3, SHANTI NAGAR, SUA ROAD, BACKSIDE RALSON INDIA, GIASPURA, LUDHIANA	03-06-2023		4000
145	**BATHLA INDUSTRIES (F.P)**			
	K-359 PHASE V111 FOCAL POINT, LUDHIANA	08-07-2007	30-03-2023	2000
146	**BATHLA INDUSTRIES (L.N)**			
	181/02 LACHMAN NAGAR, MILERGANJ, LUDHIANA	31-03-2014	30-03-2023	2500
147	**BAUM FORGE**			
	B-53, PHASE-VII, FOCAL POINT, LUDHIANA-141010	14-07-2020	23-06-2023	50000
148	**BAWA INDUSTRIES (P) LTD.**			
	H.O. :- 11, INDUSTRIEAL AREA,, PHAGWARA.-144401	24-06-2019	12-02-2024	5000
149	**BAWA STEEL INDUSTRIES**			
	B XXX 2757 GAJA JAIN COLONY, LUDHIANA	19-02-2011	21-08-2018	1500
150	**B.C. ENTERPRISES**			
	PLOT NO. 1000, GURU RAM DASS ROAD, DHANDARI KALAN, G.T. ROAD, LUDHIANA	16-01-2019		4000
151	**B.D WIRE & ALLIED INDS**			
	D-105A, PHASE-5, FOCAL POINT, LUDHIANA	07-03-2014	16-08-2023	15000
152	**BEDICO AUTOMOTIVES**			
	D-239, A.B., PHASE-8, FOCAL POINT, LUDHIANA	06-05-2023		5000
153	**BEE DEE CYCLE INDUSTRIES**			
	D-106 FOCAL POINT, LUDHIANA	07-07-2012	01-06-2021	15000
154	**BEE ESS INDUSTRIES**			
	JASPAL BANGAR ROAD, NEAR OCTROI POST, LUDHIANA	09-06-2017	18-09-2021	7500
155	**BEE KAY UDYOG**			
	P.O. SATNAMPURA, PHAGWARA.-144401	06-08-2019	20-04-2023	1000
156	**BEESON INDUSTRIES**			
	9578.ST.NO.17, KOT MANGAL SINGH, LUDHIANA	08-07-2007	14-03-2022	8000
157	**BELGIUM CYCLE INDUSTRIES**			
	11151,ST.5, PARTAP NAGAR, LUDHIANA	08-07-2007	18-11-2021	2000
158	**BEWAN ENTERPRISES**			
	8361/1 STREET NO 2 GURPAL NAGAR, NEAR KOT MANGAL SINGH, LUDHIANA	16-01-2014	08-09-2021	3000
159	**BHAGAT INDUSTRIES**			
	BXXX PLOT NO-567, SHERPUR, LUDHIANA	24-02-2016	10-05-2022	2000
160	**BHANAMAL MUNSHI RAM**			
	LOHA BAZAAR,, OFF.:- MADERI ROAD, NEAR BABA WALIA, OPP. RAILWAY STATION, MALERKOTLA.-148023.	19-08-2015	12-02-2024	2000
161	**BHARAT INDUSTRIAL CORP**			
	D- 152 PHASE -IV A FOCAL POINT, LUDHIANA	24-10-2011	18-04-2023	8000
162	**BHARAT INTERNATIONAL**			
	Old Address :- C-27, PHASE-2 FOCAL POINT,, New Address :- C-26, Phase-2 Focal Point	16-06-2008	24-11-2021	3000
163	**BHARAT UDYOG (F.P.)**			
	E-138 PHASE IV FOCAL POINT, LUDHIANA	11-01-2012	22-03-2022	26000
164	**BHARTI HYDROFITT MANUF & ENGINEERS P LTD**			
	SINGLA CYCLE ROAD, NEAR, STEELMAN INDS DHANDRI KALAN,	10-03-2014	02-07-2021	2000
165	**BHARTI HYDROFITTMENT & ENGINEERS P LTD (IA-C)**			
	BXX1X,SINGLA CYCLE ROAD ,IND AREA C,DHANDARI, KALAN	09-06-2022	31-07-2023	25000
166	**BHARTI OVERSEAS**			
	B-29/12, NPC TRANSPORT LANE, SHERPUR CHOWK, G.T. ROAD,	26-04-2017	29-05-2020	2500
167	**BHARTI OVERSEAS (H)**			
	B-29/12, NPC TRANSPORT LANE SHERPUR CHOWK, G.T. ROAD,	31-12-2020		15000
168	**BHARTI TECHNOCRAT**			
	Old Add.: F-208 PH-8 FOCAL POINT, New Add.:- K-126, Phase-8, Focal Point, Ludhiana	02-11-2007	29-09-2021	11000
169	**BHATIA AUTO ENGINEERS**			

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	OLD:536/6/1 STATION ROAD DHANDARI, KALA LUDHIANA INDL AREA C, LUDHIANA, NEW:PLOT NO.50-A RUDRA COLONY, LOHARA ROAD DHANDARI KALAN, LUDHIANA	07-09-2010	27-11-2021	8500
170	**B.H. BROTHERS**			
	PLOT NO. B/29/536/7C,, SINGLE CYCLE ROAD,, IND. AREA-C, OPP. DHANDARI STATION, LUDHIANA	10-04-2015	20-08-2020	7000
171	**B.H. ENTERPRISES**			
	2385/4 ABDULA PUR BASTI, LUDHIANA	13-09-2012	30-09-2023	3000
172	**BHOGAL SALES CORPORATION**			
	1104/1, G.T. ROAD, DHANDARI KALAN, LUDHIANA, LUDHIANA	01-02-2016	02-03-2023	20000
173	**BHOGALS PVT. LTD.**			
	B-XXIX/1104, G.T. ROAD,, DHANDARI KALAN, LUDHIANA,	27-11-2014	10-01-2023	20000
174	**BHOLA PRODUCTS (INDIA) REGD.(F.P)**			
	F-304,PHAES-VIII,FOCAL POINT, MANGLI, LUDHIANA	17-09-2008	31-12-2023	16000
175	**BHOLA PRODUCTS (INDIA) REGD(J.N)**			
	H.NO.1553 ST.NO.-17, JANTA NAGAR, LUDHIANA	29-07-2007	31-12-2023	8000
176	**BHUPINDRA STEEL AND WIRE INDUSTRIES (H)**			
	PLOT NO. 10, MADHAV COLONY, SUA ROAD, INDUSTRIAL AREA-C,, KANGANWAL, LUDHIANA	28-02-2023		2000
177	**BINDER METAL WORKS**			
	VILL.:- NARANGSHAHPUR, GANDWAN ROAD, PHAGWARA-144 401., ROLEX FUEL PIPES P.S SATNAMPURA,HADIABAD, PHG.	17-02-2014	23-06-2023	4000
178	**BIRDI CYCLE INDUSTRIES(B-9)**			
	B-9, PHASE II FOCAL POINT, LUDHIANA	17-01-2011	12-08-2021	8000
179	**BIRDI ENGG. INDUSTRIES (470)**			
	E-470,PHASE VI FOCAL POINT, LUDHIANA	20-06-2007	01-10-2021	2000
180	**BIRDI INTERNATIONAL**			
	623,624-INDUSTRIAL AREA B LUDHIANA, LUDHIANA	27-12-2010	28-09-2021	25000
181	**BOPARAI ELECTRICALS AND ELECTRONICS**			
	VILLAGE:- GHUDANI KHURD, TEHSIL PAYAL, DISTT.:-	29-11-2021		21000
182	**B.P. MAHAVEER PLASTICS AND SCRAP CO.**			
	MAHADEV TEXTILE COLONY,, KAKA ROAD, TAJPUR ROAD,	01-02-2019		1500
183	**BRAHMVEER INDUSTRIES(FORMERLY KNOWN AS K.V.**			
	B-29-512/3-E, ST. NO. 1 SUA ROAD,, SHANTI NAGAR LUDHIANA	25-07-2022	06-09-2023	2000
184	**BRIJ CYCLE INDUSTRIES**			
	PLOT NO. 2055 STREET NO.33, JANTA NAGAR, LUDHIANA	04-02-2014	21-10-2021	4000
185	**BRIJ CYCLES**			
	VILLAGE PRITHVIPUR,, MACHIWARA ROAD PANJETA,, PANJETA, Ludhiana, Punjab,141126	03-06-2017	03-06-2023	10000
186	**B.R INDUSTRIES REGD.**			
	3239/ STREET NO 3 CHET SINGH GILL ROAD, GILL ROAD,	10-04-2009	06-10-2021	2000
187	**B.R.K. INDUSTRIES**			
	B-XXX/2185, E-641, GOBINDGARH, SUA ROAD, FOCAL POINT,	05-03-2018	02-07-2021	10000
188	**B.S. AUTO INDUSTRIES**			
	PLOT NO. 10373, ST. NO. 4,, JANTA NAGAR, BHAGWAN CHOWK,	08-07-2007	11-10-2021	6000
189	**B.S. BRINDRA INDUSTRIES**			
	H. NO. 1922, SEWAKPURA, MILLERGANJ, GILL ROAD, LUDHIANA	28-11-2018	21-10-2021	3000
190	**B.S BROS INDUSTRIES (REGD.)**			
	PLOT NUM 180, SINGLA ROAD, OPP. DHANDRI KALAN, RAILWAY STATION, INDL AREA C, LUDHIANA	26-02-2014	21-09-2019	3000
191	**B.S. ELECTROPLATING**			
	PLOT NO. B-29-01456, STREET NO. 7,, BABA MUKAND SINGH NAGAR, DABA ROAD, G.T. ROAD, LUDHAINA.-14003	05-02-2024		1500
192	**B.S. ENTERPRISES 126 R**			
	PLOT NO. 126 R,, INDUSTRIAL AREA-B, GILL ROAD, LUDHIANA	31-01-2015	22-09-2021	5000
193	**B.S. ENTERPRISES SUA ROAD**			
	OLD ADD.:- BABA MUKAND SINGH NAGAR, NEW ADD.:- ST. NO. 3, MADHAV NAGAR NR. UKMANI KANDA, DHANDARI KALAN,	12-02-2014	18-01-2024	1500
194	**B.S. INDUSTRIES**			
	H.N. 2684 STREET NO 1 CHET SINGH NAGAR, LUDHIANA.- 141003	19-12-2012	28-07-2018	3000
195	**B.S. INDUSTRIES (AMARDASS COLONY)**			
	STREET NO. 3, GURU AMARDASS COLONY, LUDHIANA	18-12-2023		3000
196	**B.S SPRAY PAINTING WORKS**			
	536/21/D DHANDRI KALAN, INDL AREA C SUA ROAD, LUDHIANA	05-02-2014	11-07-2023	3000
197	**BSW BIKES**			

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	SHIV SHAKTI INDUSTRIAL ESTATE, SAHNEWAL TO DEHLON ROAD, VILL: BHAGWANPURA LUDHIANA.- 141120	01-08-2018	20-09-2021	5000
198	**BTL INTERNATIONAL(SUA ROAD)**			
	SUA ROAD NEAR EASTMAN CHOWK., DHANDARI KALAN,	23-11-2020	30-03-2021	10000
199	**B.V.M. INCORPORATE**			
	D-347, PHASE-8,, FOCAL POINT, LUDHIANA-141010	22-04-2015	31-12-2022	10000
200	**B.V.S. INDUSTRIES**			
	E-530, PHASE-VI, FOCAL POINT, LUDHIANA, LUDHIANA	08-10-2013	09-08-2022	25000
201	**CAMPBELL INTERNATIONAL**			
	UNIT NO. 2, PLOT NO. 127, INDL. AREA - C, NEAR SUA ROAD, KANGANWAL, LUDHIANA	19-01-2010	29-06-2021	15000
202	**CAPITAL CYCLES PVT LTD**			
	HB 18 PHASE VI FOCAL POINT, LUDHIANA	21-02-2012	07-10-2021	4000
203	**CHADSONS INTERNATIONAL**			
	E-363, Phase-6, Focal Point, Ludhiana	17-02-2020	28-03-2023	5000
204	**CHAHAT INDUSTRIES (REGD.)**			
	B-29-157/3/92-A, STREET NO. 4, AMARDASS COLONY, B/SIDE JAIN COLONY, GIASPURA, LUDHIANA	13-09-2019	20-04-2023	6000
205	**Chanan Fasteners Pvt. Ltd.**			
	Plot No. E-8, Focal Point, Phagwara Road,, Hoshiarpur.146001	13-11-2023		4000
206	**CHARAN INDUSTRIES**			
	PLOT NO 261 STREET 7(1/2) HARGOBIND NAGAR, JAIN COLONY SUA ROAD, LUDHIANA	16-01-2014	23-09-2022	3000
207	**CHARU AUTO INDUSTRIES**			
	C-74,PHASE-5, FOCAL POINT, LUDHIANA	04-01-2008	22-11-2022	40000
208	**CHAUHAN INDUSTRIES**			
	B-XXIX, 944/16 F, IND. AREA-C,, NEAR AVM HIGH SCHOOL, DHANDARI KALAN, LUDHIANA	01-04-2015	03-07-2021	3000
209	**CHAWLA CYCLES (INDIA)**			
	B-606, ADJOINING POWER STATION, SINGLE CYCLE ROAD, DHANDARI KALAN, LUDHIANA	01-09-2017	23-06-2023	3000
210	**CHAWLA INDUSTRIES**			
	E-291, PHASE-IV, FOCAL POINT, LUDHIANA	30-11-2021		4000
211	**CHAWLA MECHANICAL WORKS**			
	1727, STREET NO. 12, DASHMESH NAGAR, GILL ROAD, LUDHIANA, LUDHIANA	05-12-2013	11-11-2021	4000
212	**CHG ELECTROPLATING**			
	F-263 PHASE 8,F.P LDH, LUDHIANA	08-07-2007	22-06-2022	20000
213	**CHHABRA INDUSTRIAL CORPON.**			
	HOUSE NO. 2120/65, HARGOBINDPURA, ISLAMGANJ, LUDHIANA	20-01-2015	05-05-2023	2500
214	**CHINAR ENTERPRISES**			
	# 511/5-2/54, SHANTI NAGAR, SUA ROAD, INDL. AREA-C,,	12-08-2019	16-01-2023	1500
215	**CITIZEN PRODUCT**			
	E-611, PHASE-7, FOCAL POINT 2671611, 9781700810 ok 6283189354, LUDHIANA	13-12-2013	26-11-2021	50000
216	**CLASSIC GEARS (INDIA)**			
	INDL AREA C OPP DHANDRI STATION, SINGLA CYCLE ROAD NEAR MALA, DHRAM KANDA, LUDHIANA	04-02-2014	01-06-2022	1000
217	**C.L. INDUSTRIES**			
	VILL.:- JASPAL BANGAR,, INDL. AREA-C,, NEAR SUNNY KHARAY KANDA, LUDHIANA	16-09-2016	23-06-2023	1000
218	**COLDMATIC FORGE PRIVATE LIMITED**			
	VILLAGE :- JANGPURA, MULLANPUR, LUDHIANA.-141101	17-06-2022	13-11-2023	50000
219	**COLDMATIC (INDIA)**			
	D-80, PHASE-5, FOCAL POINT, LUDHIANA.-141010	31-01-2017	05-06-2021	3900
220	**COLDRIP STEELS PVT LTD**			
	G.T. ROAD SIRHIND SIDE OPP. RIIMT, CAMPUS, MANDI GOBINDGARH, LUDHIANA-, 147301	28-04-2012	21-11-2023	6000
221	**CONCEPT FASTENRS**			
	OLD ADD.:- 1642, DEEP SINGH NAGAR, NEW ADD."- PLOT NO. 536/20, SINGLA CYCLE ROAD, INDL. AREA-C, SUA ROAD, DHANDARI KALAN, LUDHIANA	15-03-2017	16-12-2020	10000
222	**CONCEPT FIXINGS SYSTEMS**			
	INDL. AREA-C, STREET NO.2, NEAR B/SIDE EASTMAN CHOWK, DHANDARI KALAN, LUDHIANA	14-08-2017	16-01-2023	3000
223	**CONFO BIKES P LTD**			
	E-643,PH-VII,FOCAL POINT, LUDHIANA	23-10-2020	18-01-2023	3000
224	**COS CORROSION CONTROLS**			

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	K-176-177,PHASE-8, FOCAL POINT, LUDHIANA	22-01-2008	07-07-2021	10000
225	**C.R. AULUCK @ SONS PVT LTD**			
	426 INDUSTRIAL AREA A, LUDHIANA	27-02-2012	23-06-2023	10000
226	**CRUZE SYSTEM WINDOW**			
	NEAR BHAI LALO JI GURUDWARA SAHIB, VPO SARINH MALERKOTLA LUDHIANA. 141116	20-10-2022	23-10-2023	2000
227	**CRYSTAL AUTO INDUSTRIES**			
	MANSA DEVI ROAD, HADIABAD, PHAGWARA-144402	19-12-2013	16-09-2016	3000
228	**CSR FORGING PVT. LTD.**			
	C-44, FOCAL POINT, NABHA-147201, NABHA	30-05-2013	05-06-2019	2000
229	**CUTE CYCLE (P) LTD**			
	K-41-42 PHASE -7 FOCAL POINT, LUDHIANA	10-07-2007	04-08-2020	10000
230	**D.A. ELECTROPLATORS**			
	49-B INDUSTRIAL ESTATE, LUDHIANA	05-02-2011	04-12-2021	12000
231	**DAKSH FASTNERS**			
	SUA ROAD, BACK SIDE RAVI DHARAM KANDA, DHANDARI KALAN,	29-12-2015	31-08-2021	5000
232	**DALIP SINGH & SONS**			
	H.NO-1331,ST.NO-12/6, DAESMESH NAGAR GILL ROAD, LUDHIANA. LUDHIANA	19-08-2008	23-11-2021	3000
233	**DALJIT BROTHERS**			
	2598/1 SEWAKPURA KALSIAN STREET GALI NO 3 MILLER G, GANJ, LUDHIANA	20-06-2012	16-11-2021	5000
234	**DALJIT ENTERPRISES**			
	E-258 PHASE-8, FOCAL POINT, LUDHIANA.-141010	08-07-2007	11-06-2020	9500
235	**DALJIT INDUSTRIES (INDIA)**			
	E-87, PHASE-4, FOCAL POINT, LUDHIANA	19-07-2022		2500
236	**DALPAT FORGE(INDIA)**			
	E-277 PH,4 FOCAL POINT, LUDHIANA	06-08-2007	18-04-2023	7000
237	**DARSHAN SINGH AND BROS. REGD.**			
	HOUSE NO. 208, STREET NO.2, DASHMESH NAGAR. GILL ROAD, LUDHIANA. LUDHIANA	27-12-2013	24-04-2023	1500
238	**DARSHAN UDYOG**			
	C-223, PHASE-8, FOCAL POINT, LUDHIANA.-141010	04-08-2020		500
239	**DASHMESH ENGG. WORKS**			
	PLOT NO. 11138 ST. NO-6, PARTAP NAGAR,, B/S. SANGEET CINEMA. LUDHIANA-141003	06-02-2019		3000
240	**DASHMESH INDUSTRIAL CORP**			
	1715/4 ST.NO.14/1, SHIMLAPURI, LUDHIANA	08-07-2007	28-07-2016	20000
241	**DASHMESH INDUSTRIES**			
	PLOT NO.-10 JEET COLONY, ADJOINING F.P. PHASE-VIII, VILL: GOBINDGARH. LUDHIANA	08-01-2016	03-06-2023	5000
242	**DASHMESH UDYOG**			
	OLD ADD.:- 6423,ST.NO.1 NEW JANTA NAGAR, NEW ADD.:- 79G, BABA MUKAND SINGH NAGAR. STREET NO. 8/1. INDL. AREA-C.	08-07-2007	03-11-2022	8000
243	**DAVINDER CYCLE INDUSTRIES SUA ROAD**			
	B-XXIX 536/25/3/2 SUA ROAD, INDL AREA C GIASPURA,	07-08-2007	17-01-2023	3000
244	**DAVINDER ELECTROPLATING WORKS**			
	H.NO-970,ST.NO-6.5, DASHMESH NAGAR, GILL ROAD, LUDHIANA, LUDHIANA	26-08-2008	03-05-2023	3000
245	**DAVINDER INDUSTRIES KHANNA**			
	D-7, FOCAL POINT,, KHANNA- 141401, KHANNA	28-11-2013	26-05-2023	2000
246	**DAVINDER PLATING WORKS**			
	H.NO-1278,ST.NO-12/7, DAESMESH NAGAR GILL ROAD, LUDHIANA. LUDHIANA	19-08-2008	08-02-2023	5000
247	**DAWN MOTORS PVT. LTD.**			
	WORKS :- VILL.;- JANDIALI, CHD.ROAD, OFF. :- 16-D/279, STREET NO. 1.. NEW MOTI NAGAR. LUDHIANA	05-03-2018	18-08-2021	10000
248	**D.C. INTERNATIONAL**			
	F-205 PH,8 FOCAL POINT, LUDHIANA.-141010	13-07-2007	06-02-2023	37000
249	**D.D. INDUSTRIES**			
	#410, INDUSTRIAL AREA-A, LUDHIANA-141003	11-02-2022		5000
250	**DEEPAK ENTERPRISES G.PURA**			
	PLOT NO. - 512/16/1, ST. NO. 2, SHANTI NAGAR, GIASPURA, LUDHIANA-141016	27-05-2023		5000
251	**DEEPAK FASTENERS**			
	E-536 PHASE VI, FOCAL POINT, 3911111 - 1135 EXT. ACCO.,	26-03-2009	02-12-2023	12000
252	**DEEPAK FASTENERS LTD. NEW 553**			

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	553, PHASE-6 FOCAL POINT, LUDHIANIA- 141010	22-10-2020	02-12-2023	13000
253	**DEEP EXPORTS**			
	1688,SHERPUR FOCAL POINT, OPP.UPPER INDIA STEELS LTD,	31-07-2013	23-06-2023	5000
254	**DEEP INDUSTRIES**			
	Old Add.:- 2284/A, ST. NO. 1, FAUJI MOHALLA, New Add.:- Jaspal Bangar, Ins. Area-C,, Near Mahabeer Dharam Kanda, LUDHIANA	24-03-2010	27-08-2021	8000
255	**DEEPS TOOLS PVT LTD**			
	320,321,INDUSTRIEAL AREA-A, LUDHIANA.-141003, 2222523,	15-10-2008	06-11-2020	40000
256	**DEEPS TOOLS PVT. LTD. UNIT II**			
	VILL.:- WALIPUR KALAN, HAMBRAN, DISTT.:- LUDHIANA	19-07-2019	26-07-2022	20000
257	**DELTA GALVANIZERS.**			
	D-98, FOCAL POINT,, MANDI GOBINDGARH,147301	30-09-2023	18-01-2024	6000
258	**DELUX MECHANICAL PVT. LTD.**			
	VILL:TIBBA, NEAR SOMASAR GURUDWARA, SAHNEWAL TO DEHLON RD., LUDHIANA.-141120	05-12-2013	21-10-2021	5000
259	**DEOL CYCLE INDUSTRIES**			
	PHASE-6, NEAR I.C.D., FOCAL POINT,, LUDHIANA-141010, 2673324 5029053 5059053, LUDHIANA	16-09-2013	27-05-2022	25000
260	**DERBY INTERNATIONAL**			
	1066 8, KALSIAN STREET NO3, SEWAKPURA, LUDHIANA	28-11-2011	30-05-2022	6000
261	**DESIGN FUTURE EFFECTS INDUSTRIES PVT. LTD.**			
	E-30-31, FOCAL POINT,, PHAGWARA ROAD,, HOSHIARPUR.146001	24-08-2022		4000
262	**DEVANSHU INTERNATIONAL**			
	B-XXIX, 1250, G-2-D, JASPAL BANGAR ROAD,, INDUSTRIAL AREA-C,, LUDHIANA	08-08-2019	16-08-2023	1500
263	**DEV MEHANICAL WORKS**			
	1250/1 STREET NO 41 JANTA NAGAR, LUDHIANA	29-05-2010	21-10-2021	2000
264	**DEV STEEL INDUSTRIES**			
	B-2, FOCAL POINT 141401, KHANNA	18-07-2016	27-02-2023	8500
265	**DEWAN ENTERPRISES**			
	E-437, PHASE-6, FOCAL POINT, LUDHIANA	25-05-2019		2000
266	**DHALIWAL ELECTROPLATING**			
	B-XXIX, 157/40-C, GURU AMAR DASS COLONY, LUDHIANA,	16-01-2014	08-06-2022	3000
267	**DHALLSON CYCLES INDIA (P) LTD.**			
	C-191, PHASE-7, FOCAL POINT, LUDHIANA, LUDHIANA	28-01-2014	23-06-2023	20000
268	**DHAWAN ENTERPRISES**			
	3086-CHET SINGH NAGAR, ST. NO. 12.5, RADHA SWAMI ROAD, GILL ROAD, LUDHIANA, LUDHIANA	11-02-2014	10-11-2021	1000
269	**DHIMAN UDYOG**			
	BXXII-1028, STREETNO. 7, DASHMESH NAGAR, GILL ROAD,,	30-09-2023		3000
270	**DHINGRA SALES CORPORATION**			
	4 A DURGA COLONY ADJOINING PHASE V111 FOCAL POINT, BACK SIDE THAPER ROLING MILLS, LUDHIANA	01-02-2013	21-02-2023	4000
271	**DHINGRA SALES CORP UNIT III**			
	H. NO. 498/1, ST. NO. 1, NIRANKARI MOHALLA, MILLERGANJ, OVER:LOCK ROAD, LUDHIANA	21-04-2023		4000
272	**D.J.ENTERPRISES (FORMERLY KNOWN AS D.J.**			
	478 GOVINDPURA, MILLER GANJ, GILL ROAD, LUDHIANA	08-07-2007	22-09-2021	3000
273	**D.K FINISHING CENTRE**			
	163-B, INDUSTRIAL ESTATE,, LUDHIANA	01-04-2008	03-06-2021	3000
274	**D.K.T. AND CO.**			
	SUA ROAD, IND. AREA-C,, NEAR NANAKSAR DHARAM KANDA, OPP. FORMATIVE ENGG. PVT. LTD., LUDHIANA	21-10-2013	18-02-2023	2500
275	**D.L ENTERPRISES**			
	OLD ADD.:- PLOT NO-B-XXX-6976,NEW VISHIVKARMA, NEW ADD.:- B-30-1703 SHERPUR ROAD, LUDHIANA	11-06-2022	18-01-2024	5000
276	**D.M. STEEL UDYOG**			
	Old Add.:- B-45/C, PHASE-6, New Add.:- E-527, Focal Point, Phase-6, LUDHIANA	05-03-2018	07-04-2021	9000
277	**DOABA NICKEL WORKS**			
	71-R IND AREA B, 8837679709, LUDHIANA	26-06-2009	13-08-2022	3000
278	**D.P. KANSAL INDUSTRIES PVT. LTD.**			
	MOHALLA AMARPURI, DABA GIASPUR ROAD, ST.NO-2,, NEAR:- BABA DHARAM KANDA, LUDHIANA-	08-01-2022	08-01-2022	4000
279	**DREAM PRODUCTS**			
	ST NO 8 DABA ROAD, NR JAIN MANDIR, IND AREA C, LUDHIANA	27-03-2009	09-08-2017	2500
280	**D.S. AND SONS**			

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	B-21-224/7, INDUSTRIAL AREA-B, NEAR AVON CYCLE COMPONENTS UNIT NO. 1., DISTT.:- LUDHIANA	23-09-2022	12-02-2024	4500
281	**DURGA ENTERPRISES**			
	STREET NO. 7, NEAR SUNDAY MANDI, SUA ROAD, GIASPURA, LUDHIANA, LUDHIANA	05-02-2014	20-07-2021	3000
282	**DURO FORGING (P) LTD.**			
	D-239 PH-7 FOCAL POINT, LUDHIANA	02-11-2007	20-07-2021	17000
283	**DY IMPEX**			
	PLOT NO. E-552, PHASE-6,, FOCAL POINT, LUDHIANA	09-03-2023		2000
284	**DYNAMIC FORGE COMPONENTS**			
	E-551, PHASE-6, FOCAL POINT, LUDHIANA.	10-06-2020	16-08-2023	3000
285	**EAGLELINE FIXING AND FIXTURES P. LTD.**			
	B-XXX-2185/C-203/2A,, PHASE-7, FOCAL POINT, LUDHIANA	18-01-2024		3000
286	**EASTERN BICYCLE P. LTD.**			
	JB INDUSTRIAL ESTATE, OPPOSITE, KAPSON KANDA, JASPAL BANGAR ROAD., LUDHIAINA	13-12-2022	18-01-2024	15000
287	**EASTMAN EXPORTS (P) LTD.(NEW)**			
	V.P.O.- KADDON, TEHSIL PAYAL, DISTT.:- LUDHIANA, DORAHA	29-11-2018	23-10-2023	40000
288	**EASTMAN INDUSTRIES LTD**			
	C-88 PHASE-V FOCAL POINT, LUDHIANA PINCODE-141010	17-03-2011	30-09-2023	145000
289	**EASTSTAR INDUSTRIES**			
	14 AND 16 AJNOUD INDUSTRIAL ESTATE, SIDHWAN CNAL ROAD, VILLAGE AJNOUD, LUDHIANA.141421	15-02-2022		5000
290	**EKAM ENGINEERING**			
	BEHIND FOCAL POINT, PHAGWARA ROAD, NEAR:- JAGDISH OLD MOTOR GODOWN, HOSHIARPUR.146001	27-06-2020	21-04-2023	2000
291	**ELLORA SAFETY PIN INDUSTRIES**			
	218 INDUSTRIAL, AREA-A, LUDHIANA	08-07-2007	13-07-2021	30200
292	**EMM ESS INTERNATIONAL**			
	2708,ST NO 3, CHET SINGH NAGAR, RADHA SWAMI ROAD,	21-05-2012	21-09-2022	5500
293	**EMSON GEARS LIMITED**			
	G.T. ROAD, SAHNEWAL KHURD,, DISTT.:- LUDHIANA, 141120	24-09-2022		1500
294	**ENGINEERING STEEL INDUSTRIES**			
	E-70, FOCAL POINT, LUDHIANA, LUDHIANA	04-08-2018	09-02-2023	4500
295	**ENGINEERS TRIO**			
	K- 130 PH -8, FOCAL POINT, LUDHIANA	08-07-2007	17-11-2022	25000
296	**ESS BEE MECHANICAL WORKS**			
	H.NO.1471 -72,ST.NO.5, KIRPAL NAGAR, LUDHIANA	08-07-2007	30-05-2022	1000
297	**ESS ESS FORGING (BASANT CINEMA)**			
	PREMISES -11 INDUSTRIAL AREA -C GEN G.T. ROAD, MOHAN SINGH ROAD NEAR BASANT CINEMA P.O. JUGIANA, LUDHIANA	18-12-2012	16-10-2023	9000
298	**ESS ESS FORGING (KANGANWAL)**			
	IND AREA -C KANGANWAL LDH, P.O: JUGIANA, LDH-141017,	18-06-2008	16-10-2023	9000
299	**ESS ESS INDUSTRIES**			
	KANGANWAL JASPAL BANGAR ROAD, INDL AREA C,	01-04-2014	03-01-2024	35000
300	**ESS ESS MALIK INDUSTRIES**			
	B-29-1016/1-B/1-A, GURU NANAK COLONY, INDL. AREA-C,, B/SIDE- SURJIT CINEMA, LUDHIANA	10-10-2017	22-10-2021	3000
301	**ESS ESS WHEELS (INDIA)**			
	IND AREA-C KANGANWAL LDH, LUDHIANA	18-06-2008	18-01-2024	8000
302	**ESS KAY SCAFF INDUSTRIES**			
	GENERAL MOHAN SINGH ROAD, INDUSTRIAL AREA-C,, P.O.	22-12-2020		2000
303	**ESS WAY INDUSTRIES**			
	379, CHIMNY COMPLEX, CHIMNY, ROAD, SHIMLAPURI,, LUDHIANA	01-02-2008	21-04-2023	7500
304	**EVEREST ENGG. CORP.**			
	D-105, PHASE-4, FOCAL POINT, LUDHIANA	01-12-2021	26-07-2022	4000
305	**EVERSHINE STATIONERY INDUSTRIE**			
	53-B INDUSTRIEAL ESTATE, LUDHIANA	08-07-2007	01-05-2023	2500
306	**EXCELLENT FORGE PVT LTD.**			
	B-54 PHASE VII FOCAL POINT, 9855481725, 9814099120,	22-02-2010	14-06-2021	45000
307	**EXCELLENT POLY PRODUCTS P. LTD.**			
	E-698, PHASE-8, FOCAL POINT, LUDHIANA	18-01-2024		5000
308	**EYUG AUTOMOBILE PVT. LTD.**			
	PLOT NO- 11 FOCAL POINT TANDA TEH, DASUYA, DISTT. HOSIARPUR, 144204	10-04-2023		250

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309	**FALCON GARDEN TOOLS PVT LTD**			
	MALERKOTLA ROAD ALAMGHIR, GALI NO 5 JANTA NAGAR GILL ROAD, 9646464774, LUDHIANA	03-10-2011	25-11-2022	10000
310	**FAME EXPORTS**			
	HADBAST NO. 254,, VPO PADDI, NEAR SAMRAT DHARAM KANDA, SAHNEWAL - DEHLON ROAD, LUDHIANA.141206	17-06-2022	30-09-2023	10000
311	**FASTEN ELECTROPLATING**			
	OLD ADD.60/35 243B MANN NAGAR STREET NO 4 DABA ROAD, NEW ADD.:- NEAR BABA DHARAM KANDA , GIASPURA, DABA	06-12-2011	30-05-2022	14000
312	**FASTWAY BICYCLES**			
	INDUSTRIAL AREA-C, DHANDARI KALAN,, LUDHIANA-141016	21-12-2021		8000
313	**FECTUM GLOBAL INDUSTRIES**			
	OPPOSITE INDIAN OIL PETROL PUMP, ADJOINING DAKHAN BY PASS,, MALERKOTLA ROAD, DEHLON, LUDHIANA.141118	24-04-2023		3000
314	**FERRO FABS INDUSTRIES**			
	B-XXX-2185/A-172/8,, ADJOINING PHASE-7, FOCAL POINT,	18-12-2023		2000
315	**FEW ENGINEERING P. LTD.**			
	SUA ROAD, NEAR PHASE-7, ADJOINING VILL.:- GOBINDGARH,	27-09-2016	20-04-2023	3500
316	**FINE ELECTROPLATERS**			
	E-28, INDUSTRIAL FOCAL POINT, PHAGWARA ROAD, 146001, HOSHIARPUR	28-04-2014	02-02-2023	10000
317	**FIRE STONE METAL (P) LTD.**			
	VILLAGE:- GARHI TARKHANA, NEAR MACHHIWARA, DISTT.:- LUDHIANA. 141115	23-09-2022		2000
318	**FITEX INDUSTRIES LTD.**			
	B-29/1060 IND AREA C, OPP TURBO TOOLS, DHANDARI KALAN 8567804061, LUDHIANA	09-05-2012	21-04-2023	12000
319	**FIT RIGHT EXPORTS PVT.LTD.(179)**			
	E-179, PH- IV, FOCAL POINT, ;LUDHIANA	19-05-2016	23-03-2023	8000
320	**FLYING STAG BIKES (P)LTD**			
	F-102,PH.7, FOCAL POINT, LUDHIANA	10-07-2007	07-12-2022	45000
321	**FMI LIMITED**			
	G.T. ROAD, DORAHA-141421, LUDHIANA-141421	25-03-2022	03-01-2024	5000
322	**FOREX FASTNERS (P) LTD**			
	VILLAGE- DHAROUR ,DEHLON ROAD SAHNEWAL, OFF.:- # 16, SUPER CYCLE MARKET, GILL ROAD,LUDHIANA-3, 9646423567,	11-11-2010	31-03-2023	5000
323	**FORGE FASTNERS(INDIA)**			
	PLOT-241,SUA ROAD,DHANDARI KALAN,, LUDHIANA	09-10-2020		5000
324	**FORGE WELL**			
	E 375A FOCAL POINT PHASE V1, LUDHIANA	17-08-2011	05-07-2021	20000
325	**FRANK BROTHERS AND COMPANY**			
	12315/1, PARTAP NAGAR, STREET NO. 1, B/SIDE SANGEET CINEMA, LUDHIANA	23-07-2016	20-01-2023	4500
326	**FRONTIER INDUSTRIAL CORPORATION(G.T. ROAD PAHWA)**			
	C-167, PHASE-5,, FOCAL POINT, LUDHIANA	13-08-2012	08-10-2021	4000
327	**GAGAN ENTERPRISES (HAMBRAN)**			
	MAIN ROAD, HAMBRAN TO MULLANPUR, NEAR HONDA PLYWOOD FACTORY, LUDHIANA.141110	14-12-2017	16-08-2023	3000
328	**GAGAN ENTERPRISES PATIALA**			
	20B, 1 AND 2 B,, INDUSTRIAL ESTATE, SIRHIND ROAD 147001, PATIALA, MOB:NO 98726-70411	23-12-2016	26-04-2023	1000
329	**GAGAN PRODUCTS (INDIA)**			
	STREET NO. 4G, SHANTI NAGAR, SUA ROAD, GIASPURA,	31-01-2014	17-01-2022	4000
330	**GALAXY BIKES**			
	PLOT NO. 1228/26/10, INDUSTRIAL AREA-C,, DHANDARI KALAN,	13-06-2017	31-01-2022	5000
331	**GAMBHIR CYCLE INDUSTRIES (71)**			
	OLD ADDRESS :- 71-R INDL AREA B, NEW ADDRESS SUA ROAD, INDL. AREA-C,, NEAR LONGMAN INDUSTRIES, DHANDARI KALAN,	26-06-2009	21-04-2023	6000
332	**GAMBHIR IMPEX NEW**			
	PLOT NO. 29, RUDRA ENCLAVE LOHARA ROAD, INDL. AREA C, SUA ROAD, LUDHIANA	20-02-2015	23-06-2023	15000
333	**GANESH EXPOTRADE(P) LTD UNIT-II**			
	D-200, PHASE-VI, FOCAL POINT, LUDHIANA-141010, LUDHIANA	05-05-2013	21-04-2023	10000
334	**GANPATH ELECTROPLATERS (BOMBAY)**			
	PLOT.NO,10,DURGA COLONY, BEHIND THAPER MILL, LUDHIANA,	06-08-2008	05-12-2019	10000
335	**GANPATH ELECTROPLATERS (BOMBAY) UNIT-II**			
	B-47, NEAR MARSHAL DHARAM KANDA, PHASE-7, FOCAL POINT,	05-12-2019		10000
336	**GANPATI FASTENERS PVT LTD**			

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	E-384-A PH-6 FOCAL PIONT, LDH, LUDHIANA, E_MAIL ID:EXPORTS@GANPATIFASTENER.COM	04-07-2008	17-11-2020	20000
337	**GANPATI INDUSTRIES**			
	VILL:- DUGRI, NEAR:- VALLABH INDS, TIBBA BRIDGE,, SAHNEWAL LUDHIANA-, OLD:-89/2B/A STRRET NO. 3,DABA ROAD NEAR BUSHAN KANDA	26-06-2014	23-06-2023	2500
338	**GANPATI SALES**			
	INSIDE GANPATI ESTATES, SAHNEWAL DELHON ROAD,, OPPOSITE POWER HOUSE, VILL.:- TIBBA, LUDHIANA, 141120	11-04-2023		3000
339	**GANPATI WIRES**			
	30/2185/A/151/30, GOBINDGARH ROAD, PHASE-7, FOCAL POINT, LUDHIANA	04-04-2023		8000
340	**GARG FASTENERS**			
	ST.NO.5 BHAGAT SINGH, COLONY SHERPUR, LUDHIANA	16-06-2011	30-09-2023	5000
341	**GARG OVERSEAS**			
	IST FLOOR, PF-46 PREMIER COMPLEX, VILL.:- NICHI MANGLI, CHANDIGARH ROAD,, LUDHIANA-141123	18-01-2024		3000
342	**GARG SALES CORP**			
	Old Add.:- F-190, PHASE-VIII, New Address. :- JEET COLONY, NEAR MANISH FORGING, ADJOINING PHASE-7,, FOCAL POIN.	28-11-2008	12-06-2021	1500
343	**GAURAV INDUSTRIAL CORP.**			
	F-100 PH,7 FOCAL POINT, LUDHIANA	10-07-2007	21-04-2023	15000
344	**GAVRI SALES (INDIA)**			
	OFF. 758, SHOP NO. 4, BEDI MARKET, MURADPURA, MILLERGANJ, LUDHIANA, WORKS 1325 AZAAD NAGAR, LUDHIANA	05-12-2013	11-08-2021	5000
345	**GAYATARI CYCLE INDUSTRIES**			
	PLOT NO 60/249 61/01 STREET NO 1, DABA GIASPURA ROAD,	03-03-2012	29-11-2021	5000
346	**G.C. JAIN ENGINEERING WORKS**			
	PLOT NO. 98, BLOCK-XXIX, ST. NO. 1,, IND. AREA-C, BABA MUKAND SINGH NAGAR,, DABA ROAD, LUDHIANA, LUDHIANA	10-02-2014	11-07-2023	3000
347	**G.D.M.INDUSTRIES**			
	B-29/1706 STREET NO 10C SHIMLAPURI, SIMLAPURI, LUDHIANA	05-08-2008	31-05-2022	3200
348	**G.D.R INTERNATIONAL**			
	Old Add.:- 1690, STREET NO. 39, New Add.:- Kanganwal Road, Indl. Area-C,, Jaspal Bangar Road, Ludhiana	25-02-2014	30-08-2021	2000
349	**GEE DEE FORGING**			
	ST.NO-2,OSWAL AGRO IND COMPLEX, G.T.ROAD, LDH, LUDHIANA	15-09-2008	14-06-2019	6000
350	**GEE GEE INTERNATIONAL**			
	PLOT NO. 9-10, STREET NO. R-2, PREMIER COMPLEX,, NICHI MANGLI, CHANDIGARH ROAD, LUDHIANA	27-07-2018		3500
351	**GEE KAY INDUSTRIES**			
	E-738,PH-8,FOCAL POINT, LUDHIANA, 9914877738, LUDHIANA	01-09-2008	03-06-2023	4000
352	**GEMCO ENGINEERS 76-R**			
	76-R INDUSTRIEAL AREA-B, BHAGWAN CHOWK, LUDHIANA	08-07-2007	14-07-2018	6000
353	**GEMCO INDUSRIES CORPN**			
	83-R,INDL AREA-B, LDH, LUDHIANA	11-11-2008	27-10-2021	6000
354	**GEMKO THERMO MECHANIKS PVT LTD**			
	B-20 FOCAL POINT, PHASE-2, LUDHIANA	27-09-2011	24-02-2022	6000
355	**GENERAL METAL INDUSTRIES**			
	E-312,PHASE 4 A F.P., INDUSTRIAL ESTATE, LUDHIANA.141010	11-07-2007	11-09-2023	15000
356	**G.G. CYCLE INDUSTRIES**			
	OPP. POLICE CHOWKI,, CAMPA COLA LINE, G,T, ROAD,, DHANDARI KALAN, LUDHIANA	26-10-2017	20-04-2023	3000
357	**GHAI AUTO BLACK**			
	10302 STEEET NO 3 BHAGWAN CHOWNK, JANTA NAGAR,	10-01-2012	18-11-2021	4000
358	**GHAISON INTERNATIONAL**			
	C-236 PHASE-8, FOCAL POINT, LUDHIANA	02-12-2008	28-02-2023	24000
359	**GILL INDUSTRIES**			
	STREET NO. 4,, GURU AMAR DASS COLONY, GIASPURA, LUDHIANA	23-02-2017		3000
360	**GILL INTERNATIONAL**			
	35-A/4 SUA ROAD, NEAR EASTMAN CHOWK, LUDHIANA	19-09-2016	21-04-2023	5000
361	**GITA INDUSTRIAL CORP**			
	B-XXX -1690 (738/1A), OPP.UPPER INDIA STEEL, LUDHIANA	06-03-2013	16-08-2023	15000
362	**G.K.G INDS**			
	D-135,PH-5 FOCAL POINT, LUDHIANA	30-09-2007	24-04-2023	10000
363	**G.K. PLATING**			
	# 81, B-29, STREET NO. 8/4, BABA MUKAND SINGH NAGAR, DABA ROAD, G.T. ROAD, LUDHIANA.	03-06-2019		5000

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364	**G.K. TRADERS**			
	ST. NO.7, HARGOBIND NAGAR,, NEAR HERO C.R.DIVISION,	21-04-2010	21-04-2023	22000
365	**GLOBAL INDUSTRIES**			
	E-330, Phase-4, Focal Point, Ludhiana	11-07-2023		4000
366	**GLOBE INTERNATIONAL**			
	OLD ADDRESS :-813, NEW ADD.:- 101-R, INDUSTRIAL AREA-B, MILLERGANJ, LUDHIANA	24-08-2015	12-08-2022	1500
367	**GLOSSY ENTERPRISES**			
	B-29/27/2910/70/1, MAHADEV NAGAR, NEAR GYAN SCHOOL, GIASPURA, LUDHIANA	23-10-2023		1000
368	**G.M. INDUSTRIES 745 M.GANJ**			
	745, NIRANKARI STREET NO. 4, MILLERGANJ, LUDHIANA,	31-01-2014	29-10-2021	4000
369	**G.M INDUSTRIES (BHAGWAN CHWK)**			
	PLOT.NO.-10205,ST.NO.-7,BHAGWAN, CHOWNK,JANTA NAGAR.,	03-08-2012	18-08-2022	2500
370	**G.N. INTERNATIONAL**			
	PLOT NO. 20, ST. NO. 3, INDUSTRIAL AREA, UCO BANK ROAD, VILLAGE :- JUGIANA, LUDHIANA	06-02-2016	17-03-2020	5000
371	**G.N.N. INDUSTRIES**			
	363/1, RANJIT NAGAR, NEAR WATER TANK, SHERPUR, LUDHIANA	22-04-2016	06-09-2023	3000
372	**GOBIND ENTERPRISES**			
	Old Add.:- ST NO. 8, Bms Nagar, New Add.:- Guru Amardass Colony, Opp. Khurl Industries, Indl. Area-C, Giaspura, LUDHIANA	16-01-2014	25-08-2023	5000
373	**GOEL & GOEL INTERNATIONAL**			
	B-29,PHASE-V, FOCAL POINT, LUDHIANA, LUDHIANA	11-01-2014	27-01-2023	15000
374	**GOGIA ENTERPRISES**			
	E-464-465, PHASE-6, FOCAL POINT, LUDHIANA, LUDHIANA	21-01-2014	22-05-2020	1000
375	**GOGIA SALES CORPORATION**			
	STREET NO. 9, 630/100, JANTA NAGAR, LUDHIANA, LUDHIANA	22-01-2014	16-03-2023	3000
376	**GOGZ INDUSTRIES P. LTD.**			
	HB-9, PHASE-6, FOCAL POINT, LUDHIANA-141010	23-06-2023		4000
377	**GOODGOOD MANUFACTURERS**			
	SUA ROAD, MAKKAR COLONY,, NEAR EASTMAN IMPEX, IND. AREA-C, OPP. JAGDEV INDUSTRIES., LUDHIANA	21-02-2014	07-05-2022	15000
378	**GOPAL ENTERPRISES (SUA ROAD)**			
	OLD:-OPP. BEST HOTEL, NEAR SUNDAY MANDI, GIASPURA, NEW:- INDUSTRIAL AREA-C, JASPAL BANGAR,, KANGANWAL ROAD, NEAR:- BALAJI KANDA, LUDHIANA	06-02-2014	29-01-2022	4000
379	**GOPAL INDUSTRIES F.P**			
	E-474 PH-6 FOCAL POINT, LUDHIANA	02-11-2007	21-04-2023	11000
380	**GOPAL STEEL PRODUCTS(D.N)**			
	H.NO 1414, DASHMESH NAGAR, ST NO 12, LUDHIANA	10-04-2009	24-07-2018	2000
381	**G.R.D. ENTERPRISES**			
	4B-16B-0B, KHATA NO. 60/62, VILLAGE DUGRI, TEHSIL PAYAL, LUDHIANA, 141421	09-09-2023		25
382	**GREAT GEARS PVT LTD**			
	B-M, PHASE II FOCAL POINT, LUDHIANA	01-03-2014	23-11-2021	6000
383	**G.S. AND SONS**			
	STREET NO. 12, FACTORY NO. 1758, DASHMESH NAGAR GILL ROAD, LUDHIANA	11-01-2014	21-07-2018	1000
384	**G.S AUTO BLACK**			
	7149 B 30 OPP E-314, PHASE-4 FOCAL POINT, LUDHIANA	07-02-2012	25-05-2022	10000
385	**G.S. AUTO INTERNATIONAL**			
	G.S ESTATE G.T. ROAD, LUDHIANA	10-02-2012	06-04-2021	30000
386	**G.S. ENTERPRISES**			
	2409 JANTA NAGAR, BACKSIDE ATI ST.NO.9, LUDHIANA	31-07-2012	13-07-2018	6000
387	**G.S.FASTNERS**			
	1241/A/18, BACKSIDE HINDUSTAN TYRE, INDL AREA C, UA ROAD, LUDHIANA	07-07-2011	27-10-2021	4000
388	**G.S.INDUSTRIES (F.P)**			
	K-125 PH,8 FOCAL POINT, LUDHIANA	06-08-2007	30-09-2023	7000
389	**G.S. LOTEY INDUSTRIES**			
	PLOT NO. 1196, G.T. ROAD, NEAR BUS STAND, DHANDARI KALAN, DHANDARI KALAN, LUDHIANA	05-08-2017	23-06-2023	2500
390	**G.S. RADIATORS LTD.**			
	G.S. ESTATE, P.O. BOX # 714, G.T. ROAD,, LUDHIANA	22-06-2020		7000
391	**G.S. TOOLS**			
	1155 STREET NO. 7, DASHMESH NAGAR, LUDHIANA	08-11-2013	23-06-2023	3000

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392	**GUJRANWALA CYCLE IND. UNIT 2**			
	K-350 PHASE-8, FOCAL POINT, LUDHIANA, LUDHIANA	05-12-2013	31-01-2023	8000
393	**GUJRANWALA CYCLE INDUSTRIES**			
	39-R INDUSTRIAL AREA B, 9814037242, LUDHIANA	08-07-2007	31-01-2023	8000
394	**GULATI INDUSTRIAL CORPN**			
	OLD ADD.:- 714, INDUSTRIAL AREA B, NEW ADD.:- D-242, PHASE 7, FOCAL POINT, LUDHIANA	18-01-2014	03-06-2023	4000
395	**GUPTA BIKE PVT LTD**			
	C-166A PHASE 5NEAR SHAKTI, DHARMKANDA FOCAL POINT,	21-02-2011	28-07-2020	10000
396	**GUPTA BIKES PVT. LTD. (HB-5)**			
	HB-5, FOCAL POINT, PHASE-6, LUDHIANA.	17-07-2019	17-03-2023	2000
397	**GUPTA CAST AND FORGE**			
	D-100,PH-5,FOCAL POINT LUDHIANA	09-06-2022		2500
398	**GUPTA CONDUIT ACCESSORIES**			
	PLOT NO. 61/2, BLOCK XXIX, MANN NAGAR, STREET NO. 1, DABA ROAD, LUDHIANA	25-01-2018		7000
399	**GUPTA STEEL INDUSTRIES**			
	189/10-E ST NO.3 DABA ROAD, G.T. ROAD,, NEAR:- SHERPUR CHOWK, LUDHIANA-	01-02-2022	18-12-2023	1500
400	**GURCHARAN TEXSPARE**			
	ST. NO. 1, NEW RAM NAGAR, SUA ROAD, LUDHIANA	05-08-2017	30-09-2023	3000
401	**GURDIP CYCLE INDUSTRIES(DHANDARI)**			
	STATION ROAD,DHANDARI, KALAN G.T.ROAD, LUDHIANA	30-07-2007	18-01-2014	10000
402	**GURDIP CYCLE INDUSTRIES (F.P.)**			
	E-111-112 FOCAL POINT, 9915477711, 7527064804, LUDHIANA	08-07-2007	31-08-2019	10000
403	**GURMEET ENTERPRISES**			
	Old Add.:-E -158 FOCAL POINT PHASE 4, New Add.:- C-64-A, Phase-2, Focal Point, Ludhiana	03-04-2010	27-08-2022	8000
404	**GURPREET INDUSTRIES**			
	JASPAL BANGAR ROAD, NEAR SATYAM KANDA, INDL. AREA-C, DHANDARI, LUDHIANA	30-08-2018	15-11-2021	3000
405	**GURSEWAK ENGG WORKS**			
	H.NO-1332,ST.NO-12/6, DAESMESH NAGAR GILL ROAD, LUDHIANA, LUDHIANA	19-08-2008	08-09-2022	1500
406	**GURU ARJAN MECHANICAL WORKS**			
	OLD ADD.:- B 37/2410 ST. NO 13, S K S NAGAR, NEW ADD.:- V.P.O. JASPAL BANGAR, HARNAMPURA ROAD, LUDHIANA	14-12-2011	28-11-2022	3500
407	**GURUCHARAN STEELS**			
	19, HARJEE INDUSTRIAL COLONY, VILLAGE DUGRI, TEHSIL PAYAL, DISTT.:- LUDHIANA.141021	29-11-2021		2500
408	**GURU HARI KIRPA ENTERPRISES**			
	511, STREET NO. 3,, SHANTI NAGAR, SUA ROAD, GIASPURA,	05-08-2017	14-04-2022	7000
409	**GURU KIRPA INDUSTRIES (DABA)**			
	OLD ADDRESS ST -NO. 5, INDL. AREA-C, B.M.S. NAGAR, DABA ROAD., NEW ADDRESS-B-XXIX-157B,ST-2,AMARDASS COLONY,	16-04-2015	24-11-2020	3000
410	**GURU KIRPA INDUSTRY SUA ROAD**			
	SHANTI NAGAR, SUA ROAD, GIASPURA LUDHIANA.- 141016,	06-02-2014	01-12-2020	3000
411	**GURU KRIPA ENTERPRISES (D-82)**			
	D-82A, PHASE-5,, FOCAL POINT, LUDHIANA	26-07-2022	18-01-2024	7000
412	**GURU METAL WORKS**			
	23, LONGOWAL COLONY, DHANDARI KALAN, SURJEET PALACE ROAD, LUDHIANA	17-05-2019	11-07-2023	1000
413	**GURU NANAK ENTERPRISES**			
	D-20, PHASE- 5 FOCAL POINT,, LUDHIANA	17-11-2008	24-04-2023	14000
414	**GURU NANAK ENTERPRISES (J.N.)**			
	# 2537, ST. NO.4, JANTA NAGAR, GILL ROAD, LUDHIANA.	25-08-2023		1200
415	**GURU NANAK INDUSTRIES (F.P.)**			
	A13-E, PHASE-6, FOCAL POINT, DHANDARI KALAN,, NEAR:- PARAMOUNT AGRIPARTS, LUDHIANA-141010	01-12-2021		8000
416	**GURU NANAK INDUSTRIES S.PURI**			
	#4357/1, Street No.2 Shimlapuri Road., Near:-Gill Road, LUDHIANA-141003	09-02-2022		1000
417	**GURU NANAK NICKEL WORKS**			
	127-C INDUSTRIAL ESTATE I, NDUSTRIEAL PARTAP CHOWK, OVERLOCK, LUDHIANA	08-07-2007	10-11-2021	10000
418	**GURU RAM DASS INDUSTRIES**			
	STREET NO.8, NEAR JAIN COLONY, DABA ROAD, LUDHIANA,	11-05-2017		4000
419	**HAMIDI EXPORTS**			

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	E-406, PHASE-6, FOCAL POINT, DHANDARI KALAN, LUDHIANA	21-02-2015	18-09-2021	30000
420	**HANDA BROTHERS**			
	NABHA ROAD, QUILA REHMATGARH, MALERKOTLA. 148023	22-08-2019	03-06-2023	1500
421	**HANSA METALLICS LTD.**			
	VILLAGE :- LALRU, AMBALA CHANDIGARH ROAD, TEHSIL :- DERABASSI. 140501	11-01-2021		100000
422	**HANS RAJ AUTO BLACK**			
	JASPAL BANGAR ROAD,, NEAR JASPAL DHARAM KANDA,, MAHADEV NAGR. LOHARA. LUDHIANA	16-08-2023		3000
423	**HAPPY ELECTROPLATING WORKS**			
	534/2 NIRMAL MARKET, OSWAL STREET GILL ROAD, LUDHIANA	08-07-2007	14-02-2022	7000
424	**HAPPY ENGINEERS**			
	INDUSTRIAL AREA-C, SINGLA CYCLE ROAD, DHANDRI KALAN,	16-01-2014	02-03-2022	3000
425	**HARCHARAN INDUSTRIES**			
	E-289, PHASE-IV-A, FOCAL POINT, LUDHIANA, LUDHIANA	20-12-2013	01-11-2021	7500
426	**HARD CROME**			
	738,INDUSTRIAL AREA-B, NEAR EVERY COMPUTER KANDA,	17-07-2007	11-04-2019	1200
427	**HAR INTERNATIONAL**			
	# 205/A/1, STREET NO. 1, SURJIT NAGAR, GIASPURA, LUDHIANA	23-06-2023		4000
428	**HARIOM AUTO BLACK**			
	STREET NO. 8/4, JAIN COLONY, BABA MUKAND SINGH NAGAR, DABA ROAD. LUDHIANA	28-02-2017	09-07-2020	1500
429	**HARI OM ENTERPRISES**			
	B-29-1250/C/5/A/7 JASPAL BANGAR, LUDHIANA	03-01-2024		4000
430	**HARMAN UDYOG**			
	E-34 FOCAL POINT, PHASE-4, 141010, LUDHIANA	16-03-2009	31-07-2021	2000
431	**HARMILAP ENTERPRISES**			
	ST. NO. 8,, BBA MUKAND SINGH NAGAR, DABA ROAD, LUDHIANA	09-09-2016	02-03-2022	6000
432	**HARNEK INDUSTRIES**			
	536/28/2/3, INDUSTRIAL AREA-C,, SUA ROAD, DHANDARI KALAN, LUDHIANA-141010	19-09-2019	01-09-2020	3000
433	**HARYANA FASTENERS**			
	174, KAILASH NAGAR, NEAR CANCER HOSPITAL, LUDHIANA	03-06-2023		500
434	**HEATO CYCLES (P) LTD.**			
	UCO BANK ROAD,, JUGIANA, LUDHIANA	19-08-2022		5000
435	**HEATO PLUS SYSTEM**			
	HC-23 B, PHASE-6, FOCAL POINT, LUDHIANA	01-08-2016	06-09-2023	8000
436	**HEMKUNT INDUSTRIES**			
	H.NO.2007/1 ST.NO.16, DURI LINE DASHMESH NAGAR, LUDHIANA	08-07-2007	23-06-2018	3000
437	**HIANKEN BIKES**			
	BXXX 511/2185 NEAR PHASE VI, GOBINDGARH, LUDHIANA, Gamil.Id: Hiankenind@yahoo.Com	31-03-2014	30-09-2023	2000
438	**HIGH TENSIL PRODUCT PVT LTD**			
	2175 BASTIBDULAPUR, 6283950790, 7503241000, LUDHIANA	01-10-2012	01-03-2022	20000
439	**HIGHWAY STEEL AND METALS P LTD**			
	B-56, Phase-8, Focal Point, Ludhiana	21-11-2023		2000
440	**HIMALAYA ENETERPRISES**			
	ST. NO.2, NEW DURGA COLONY, PHASE-7 (EXTN.),, FOCAL POINT LUDHIANA-141010. LUDHIANA	17-09-2011	16-08-2023	3000
441	**HIMAT INTERNATIONAL**			
	536/21-D/9/6, SUA ROAD, NEAR EASTMAN CHOWK, IND. AREA-C, LUDHIANA. LUDHIANA	11-01-2014	23-11-2021	3000
442	**HIM PARAS INDUSTRIES**			
	B-29-536/21E, STATION ROAD, INDUSTRIAL AREA-C, LUDHIANA	27-04-2019	03-06-2023	2000
443	**HIND METAL AND ALLIES INDS.**			
	25, B.F. INDUSTRIAL ESTATE, BATALA.143505	04-10-2022		800
444	**HINDON METAFORMS PVT. LTD.**			
	C-182, PHASE-6, FOCAL POINT, LUDHIANA, LUDHIANA	13-04-2015	08-12-2021	50000
445	**HINDUSTAN MANUFACTURE CORPORATION**			
	OLD OSWAL STREET.NR., NIRMAL MARKET GILL ROAD, LUDHIANA.	08-07-2007	23-10-2023	5000
446	**HINDUSTAN STEEL & FASTNERS**			
	OLD ADDRESS 483, NEW ADD.:- 10568, STREET NO. 6, PARTAP NAGAR, INDL. AREA-B., LUDHIANA	28-02-2014	30-09-2023	2000
447	**HI-TECH HALFTONE CO.**			
	#1549/1, ST. NO. 17, JANTA NAGAR, NEAR SHIV SHAKTI MANDIR,, GILL ROAD. LUDHIANA	30-09-2023		1000

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448	**HONEY AGRICULTURE WORKS**			
	B-XXIX-536/35-E/20A, ZONE-C, INDUSTRIAL AREA-C, SUA ROAD, LUDHIANA	09-12-2015	04-06-2022	1000
449	**H.R. IMPEX PVT. LTD.**			
	INDUSTRIAL AREA - C, SUA ROAD DHADARI KALAN, LUDHIANA,	26-11-2009	30-09-2023	32000
450	**H.S. METALS (INDIA)**			
	STREET NO.1, BABA MUKAND SINGH NAGAR, DABA ROAD,	12-02-2014	15-03-2023	1500
451	**HSN FASTENERS PVT LTD**			
	H.B. 245, INDL. AREA-C, NEAR TEXLA PLASTIC, KANGANWAL ROAD, LUDHIANA	11-09-2023		25000
452	**HSN FASTENERS PVT LTD HCL**			
	HB. 245, INDL. AREA-C, NEAR TEXLA PLASTIC, KANGANWAL ROAD, LUDHIANA	11-09-2023		7500
453	**H.V. INDUSTRIES**			
	E-357,, PHASE-6, FOCAL POINT, LUDHIANA, LUDHIANA	30-12-2013	08-12-2021	2000
454	**I.B. MECHANICAL WORKS**			
	OLD ADDRESS :-1179 AZAAD NAGAR, NEW ADDRESS NEAR RAJ CASTING, SARPANCH COLONY, JASPAL BANGAR ROAD, LUDHIANA	30-01-2014	11-07-2023	2500
455	**IDEA FASTENERS PRIVATE LIMITED**			
	PLOT NO. 86 TO 89, MCNO. B-XXIX-536/12-C/4-A, NEAR AVERY DHARAM KANDA, S.C. ROAD, DHANDARI KALAN, INDL. AREA-C.,	31-12-2022		10000
456	**IMPERIAL BOLTS AND FASTENERS**			
	522/2, INDUSTRIAL AREA-C,, G.T. ROAD, GIASPURA, LUDHIANA	25-07-2022	01-04-2023	2500
457	**INDIAN BYCYCLES**			
	536/25B/1/1 INDL AREA C, SUA ROAD, LUDHIANA	03-02-2014	23-09-2020	7000
458	**INDIAN METAL FABRICATORS**			
	C-121, PHASE-V, FOCAL POINT, LUDHIANA	30-04-2013	20-11-2021	2000
459	**INDIAN METAL LABELS**			
	SAHNEWAL -DEHLON ROAD, VILLAGE-TIBBA,, NEAR VERKA CHOWK, LUDHIANA	21-03-2014	13-07-2022	4000
460	**INDRA HEAT TREATMENT CENTRE**			
	#87 B, INDUSTRIAL ESTATE, LUDHIANA	23-02-2017	16-11-2021	5000
461	**INTERNATIONAL CYCLE GEARS**			
	B-50,, PHASE-7, FOCAL POINT, LUDHIANA	25-11-2017	05-05-2023	500
462	**ISHAR ENGRAVING PROCESS**			
	B-XXIX, 83/60/1, OSWAL AGRO COMPLEX, STREET NO. 7, B/SIDE HERO CYCLES,, IND. AREA-C, LUDHIANA, LUDHIANA	04-02-2014	18-08-2017	1000
463	**ISHITA INDUSTRIES**			
	270/1, NICHI MANGLI, LUDHIANA	10-02-2018	14-02-2023	5000
464	**ISHWAR INDUSTRIES**			
	C-200, PHASE-7, FOCAL POINT,, LUDHIANA	20-06-2008	13-08-2022	8500
465	**JAGAN NATH INDUSTRIES**			
	R-7, PREMIER INDUSTRIAL COMPLEX,, NICHI MANGLI, CHANDIGARH ROAD, LUDHIANA	04-11-2023		3000
466	**JAGRAON CYCLE INDUSTRIES**			
	D-115 PHASE-5 FOCAL POINT, LUDHIANA	30-01-2009	23-06-2023	20000
467	**JAI BHOLE STEEL TUBES PVT. LTD.**			
	VILLAGE JUGIANA, G.T. ROAD,, LUDHIANA	23-10-2023		5000
468	**JAI GHATI ENTERPRISES**			
	536/34B OPP. TIMCO CUTTER, SUA ROAD, GIASPURA, LUDHIANA	10-09-2011	23-06-2023	5000
469	**JAI LUXMI ENTERPRISES**			
	PLOR NO. 23, K.S. COLONY, NICHI MANGLI, NEAR PHASE-VII, FOCAL POINT, LUDHIANA.	23-12-2020		4000
470	**JAIN MANUFACTURING CO.**			
	PLOT NO.840,IND.AREA A, LUDHIANA	02-09-2007	30-09-2023	187500
471	**JAI SHIV INDUSTRIES**			
	STREETNO 7 H.NO 83/6M/1C, HARGOBIND NAGAR, DABA ROAD,	16-01-2014	20-01-2022	4000
472	**JAMAL INDUSTRIES**			
	697, INDUSTRIAL AREA-B, GILL CHOWK,, NEAR:- WATER TANK, LUDHIANA-141003.	09-12-2021		3000
473	**JAP ENTERPRISES**			
	P.NO.-13167, ST.NO-1, VISHVKARMA COLONY, LINK ROAD,	05-05-2016	14-08-2021	4000
474	**JARNAIL HYDRAULICS**			
	PLOT NO.-1250/G/6/1, LOHARA, JASPAL BANGER ROAD, B/S-MANN COMPUTER KANDA, LUDHIANA	06-04-2016		2000
475	**JASBIR ELECTROPLATING INDS.**			
	6218.ST NO.1 NEW JANTA NAGAR, LUDHIANA.-141003	08-07-2007	24-04-2023	3000

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476	**JASBIR INDUSTRIES (KHANNA)**			
	D-4, FOCAL POINT,, KHANNA, DIST:- LUDHIANA-141 401.,	17-10-2012	22-03-2023	10000
477	**Jaskiran Product P Ltd. (Prev. Known As Jaskiran Udyog)**			
	Sua Road, Near Sukhamani Kanda, Indl. Area-C, G.T. Road, Dhandari Kalan, Ludhiana	17-04-2023		5500
478	**JASVIR IMPEX**			
	SAHNEWAL-DEHLON ROAD, VILL.:- BHAGWANPURA, INDL. AREA LUDHIANA.141114	11-04-2017	08-05-2018	15000
479	**JASWAL CYCLE PVT. LTD.**			
	C-100 PH.5, FOCAL POINT, LUDHIANA	08-07-2007	17-01-2023	2300
480	**JAY DEE STEELS (INDIA)**			
	P.NO.-2634 S.NO- 1, JANTA NAGAR, GILL ROAD, LUDHIANA	18-05-2016	23-06-2023	2000
481	**JAY KAY INDUSTRIES**			
	E-348-A PHASE 6, FOCAL POINT, LUDHIANA	30-07-2009	10-11-2021	5000
482	**JAYSONS INDUSTRIAL CORP.**			
	E-531, PHASE-6, FOCAL POINT, LUDHIANA.-14010	20-12-2018		3000
483	**J.B. INDUSTRIES REGD.**			
	B-XXIX, 90/7, STREET NO. 4, DABA ROAD, G.T. ROAD, LUDHIANA-141003, LUDHIANA	21-01-2014	30-11-2021	5000
484	**J.B.KAPOOR ELECTROPLATING WORKS**			
	OLD 1041 NEW NO 1739, ST NO 8, MURADPURA MILLERGANJ,	18-07-2008	30-09-2023	2000
485	**J.B. METAL WORKS**			
	B-XXIX, 90/7 B, STREET NO. 4, G.T. ROAD, DABA ROAD,, LUDHIANA, LUDHIANA	05-12-2013	24-04-2023	8000
486	**J.D. FASTENERS**			
	NEW ADD.:- INDL. AREA-C, JASPAL BANGAR RAOD, NEAR JASPAL KANDA, LUDHIAINA	12-10-2016	20-11-2021	10000
487	**J.D.M ENTERPRISES**			
	OLD ADD.:- BACKSIDE P.S.E.B GIASPURA, NEW ADD.:- JASPAL BANGER ROAD,, BACKSIDE RAVI KANDA, LUDHIANA	03-02-2014	05-01-2021	3000
488	**JDS INDUSTRIAL CORPN.(D-37)**			
	D-37, FOCAL POINT, NABHA.-147201	18-01-2024		2000
489	**JDS INDUSTRIAL CORPORATION (D-16 TO 20)**			
	D-16 to 20, FOCAL POINT,, NABHA.-147201 (PB.)	23-10-2023	18-01-2024	3500
490	**JINDAL AGENCIES**			
	60 S.C.F. VEER COLONY, NEAR HOTEL AMSUN PRIDE, AMRIK SINGH ROAD, BHATINDA-151001., COR.ADD. 337,ganpati enclave bathinda, BATHINDA 151001	10-09-2013	28-04-2023	600
491	**JINDAL FINE INDUSTRIES**			
	OPP-DHANDHARI RLY,STAION,, G.T ROAD, LUDHIANA, LUDHIANA	23-08-2008	23-10-2023	75000
492	**JIWAN UDYOG**			
	TRB HOUSE DHANDARI KALAN, G.T ROAD, LUDHIANA	31-03-2009	28-04-2022	16000
493	**J.J. PRODUCTS**			
	B-XXI, 423/7, JAIMAL ROAD,, JANTA NAGAR, LUDHIANA.-141003	05-12-2013	29-10-2018	7500
494	**J.K. ENTERPRISES**			
	B-XXIX-1228/10/A, MITTAL KANDA ROAD, DHANDARI KALAN,	05-08-2017	12-03-2021	7000
495	**J.K. INDUSTRIAL CORPN.**			
	PLOT NO. 7, ADJOINING PHASE-7, NICHI MANGLI, LUDHIANA,	30-09-2013	10-11-2021	2500
496	**J.K. INDUSTRIES (AJNOD)**			
	VILLAGE :- AJNOD, TEHSIL PAYAL, LUDHIANA.141421	23-04-2019		2000
497	**J.K.INDUSTRIES (F.P.)**			
	K-364,PH-8 FOCAL POINT NEAR MANGLI, LUDHIANA	08-08-2007	03-06-2023	3750
498	**J.K. INDUSTRIES(GILL RD)**			
	H.NO.3239,ST. NO.-3,CHET SINGH, NAGAR, GILL ROAD,	08-07-2007	21-12-2021	3000
499	**J.K. INDUSTRIES (S.R.)**			
	15, HARA INDUSTRIAL ESTATE, INDUSTRIAL AREA-C, SUA ROAD, LUDHIANA-141014	09-08-2017	13-07-2022	3000
500	**J.K. INTERNATIONAL**			
	E-367, PHASE-6, FOCAL POINT, LUDHIANA	27-10-2017	03-06-2023	20000
501	**J.M.D. IMPEX**			
	Old Add.:- 536/21/0/3, New Address, E-394,F.P,PH-6, NEAR GANPATI CHOWK, LUDHIANA	18-10-2016	21-10-2020	7000
502	**J.N. ENGINEERING WORKS**			
	35-A/3, DHANDARI KALAN, SUA ROAD, NEAR EASTMAN CHOWK, INDL. AREA-C, LUDHIANA, LUDHIANA	30-01-2014	12-07-2021	2000
503	**J.N. INDUSTRIES LUDHIANA**			
	B-XXIX, 87/3/1, STREET NO. 7, DABA ROAD, G.T. ROAD,	21-01-2014	31-01-2023	6000

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504	**JOGENDRA ENTERPRISES**			
	BLOCK-29, INDUSTRIAL AREA-C,, NEAR EASTMAN CHOWK, DHANDARI---- LUDHIANA.	21-07-2022		4000
505	**JOGINDER SINGH TEJVINDER SINGH(BIG VEN)**			
	STATION ROAD, DHANDARI KALAN, 9876340583, LUDHIANA	01-03-2008	15-11-2022	90000
506	**JOLLY IMPEX**			
	JAIN COLONY, MOTI NAGAR, LUDHIANA.-141010	28-11-2017		3000
507	**JOLLY STAPLE CRAFT (P)LTD**			
	OLD ADD.:- 827 BAB GAJJA JAIN COLONY MOTI NAGAR, NEW ADD.:- PLOT NO. 261/1, OPPO. GURUDWARA, SHERPUR KHURD.	29-07-2007	05-01-2022	12000
508	**J.P. INDUSTRIES**			
	ST. NO. 2, BMS NAGAR, DABA ROAD. G.T. ROAD,, LUDHIANA	11-02-2022		1000
509	**J.R.B. STRIPS (P) LTD.**			
	WORKS :- INDLUSTRIAL AREA-C, SUA ROAD, DHANDARI KALAN,	15-05-2019	06-10-2021	6000
510	**J.R.S. INDUSTRIES**			
	PREMIER INDUSTRIAL COMPLEX, STNO LEFT 3 NICHI MANGALI, NEAR AARTI INTERNATIONAL CHD ROAD, LUDHIANA	04-08-2011	01-07-2021	5000
511	**J.S. ELECTROPLATORS**			
	B-XXIX 536/21-D/6/5A, DHANDARI KALAN, LUDHIANA, LUDHIANA	14-12-2016		5000
512	**J.S. ENTERPRISES**			
	H.NO.10372/1, ST.NO.4, BHAGWAN CHOWK, JANTA NAGAR,	08-07-2007	21-02-2023	5000
513	**J.S INDUSTRIES**			
	D-91 PHASE-5 FOCAL POINT, LUDHIANA	08-04-2013	19-04-2022	9000
514	**J.S. LAB**			
	PLOT NO. B-XXX-200, KAILASH NAGAR, SHERPUR, LUDHIANA	29-11-2021		2000
515	**JSW STEEL COATED PRODUCTS LTD.**			
	VILL.:- BEPROR, SHAMBOO, GURUDWARA ROAD, G.T. ROAD,	12-02-2024		300000
516	**J.V.G ENTERPRISES**			
	AMARPURI IND AREA C, ST NO 2 GIASPURA, LUDHIANA	27-03-2009	23-11-2021	7500
517	**J.V.R. ENTERPRISES**			
	INDUSTRIAL AREA-C, DHANDARI KALAN, LUDHIANA	24-12-2019		12000
518	**JYOTI ENTERPRISES**			
	NEAR BABA DHARAM KANDA, AMAR PURI DHABA ROAD, 9888852815, LUDHIANA	16-01-2014	04-09-2017	5000
519	**KAHLON INTERNATIONAL**			
	C-26 FOCAL POINT, LUDHIANA	25-04-2017	25-04-2023	3000
520	**KALKA ENTERPRISES**			
	ST. NO. 1, NEAR JAIN COLONY,, GURU AMARDASS COLONY, DABA ROAD., LUDHIANA	01-09-2023		2000
521	**KALRA ELECTROPLATING WORKS LXM NAGAR**			
	AHLUWALIA STREET, LACHMANA NAGAR, LUDHIANA	09-10-2013	16-11-2021	4000
522	**KALSI AND SONS**			
	458/6B/A, NEAR KAMAL KANDA, STREET NO. 2, GIASPURA, LUDHIANA, LUDHIANA	07-02-2014	23-09-2022	4000
523	**KALSI METALS (INDIA)**			
	11058/1 STREET NO 8, PARTAP NAGAR, LUDHIANA	31-01-2014	03-06-2023	3000
524	**KALSISONS (INDIA)**			
	7827/A, ST. NO. 9, GURU ANGAD DEV ROAD, B/SIDE A.T.I. , NEW JANTA NAGAR, LUDHIANA-141003, LUDHIANA	19-02-2018		1000
525	**KAMAL CED SOLUTIONS LLP.**			
	C-167-A, PHASE-5, FOCAL POINT, LUDHIANA	08-02-2023		5000
526	**KAMAL CYCLE & EXPORTS**			
	SUA ROAD, INDL AREA C, NEAR EASTMAN IMPEX CHOWNK, PLOT NUM 45 Rudra Enclave Near Eastman Impex, LUDHIANA	21-03-2014	26-07-2022	2000
527	**KAMAL ELECTROPLATING WORKS,Ldh**			
	ST.NO.6 RANJIT NAGAR, BACKSIDE ATI, LUDHIANA	08-07-2007	23-06-2023	4000
528	**KANDA BROTHERS**			
	PLOT NO. 1693, ST. NO. 2, NEAR, UPPER INDIA STEEL, FOCAL POINT, LUDHIANA	15-03-2008	14-04-2021	7500
529	**KANDA ELECTROPLATORS**			
	PLOT.NO.1085,ST.NO-2, HIMATPURA, KALSIAYA, LUDHIANA	08-07-2007	06-06-2022	6000
530	**KANDA INDUSTRIES**			
	F-197, PHASE-8, FOCAL POINT, LUDHIANA	22-08-2018	16-10-2023	4500
531	**KANIKA FASTENERS (P) LTD**			
	C-70, PHASE-3, FOCAL POINT, LUDHIANA	20-03-2023		10000
532	**KANIN INDUSTRIES P. LTD.**			

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	2ND K.M. MILE STONE, G.T. ROAD, RAJGARH,, DORAHA, DISTT. LUDHIANA.-141421	01-10-2021	18-12-2023	145000
533	**KANSAL ENTERPRISES (DABA)**			
	STREET NO. 2,, DABA ROAD, G.T. ROAD, 9814051777, LUDHIANA	17-02-2014	27-01-2023	2000
534	**KANSAL INDUSTRIES ST. NO. 2**			
	ST.NO.2 DABA ROAD, LUDHIANA	08-07-2007	03-02-2023	15000
535	**KAPOOR ELECTROPLATERS (J.N)**			
	B-XXI/7847 ST NO.8, NEW JANTA NAGAR BACK A.T.I GURU ANGGAT ROAD, LUDHIANA	08-07-2007	23-06-2023	25000
536	**KAPOOR ENGINEERS COMP**			
	PLOT NO- XXIX-83/6 STREET NO 8/6, BABA MUKAND SINGH NAGAR, LUDHIANA	16-01-2014	10-04-2023	4000
537	**KAPOOR INDUSTRY**			
	E-100, PHASE-4, FOCAL POINT, LUDHIANA	25-02-2021	21-04-2023	6000
538	**KAPOOR TRADER (PH-8)**			
	K-249 PHASE 8, FOCAL POINT, LUDHIANA	07-07-2009	16-10-2021	4000
539	**KAPOOR TRADERS 187**			
	187 LACHMAN NAGAR, MILLER GANJ, LUDHIANA	31-03-2009	29-11-2021	5000
540	**KAPSON INDIA**			
	POT NO. 1250/D-27,, JASPAL BANGAR ROAD, INDUSTRIAL AREA-C, LUDHIANA:141010	27-07-2015	23-06-2023	25000
541	**KAPSON INDUSTRIES**			
	406 INDUSTRIEAL AREA-A, LUDHIANA	08-07-2007	21-02-2022	4000
542	**KARAMSAR INDUSTRIES**			
	2410 ST NO.9,JANTA NAGAR, LUDHIANA	08-01-2009	17-09-2015	4000
543	**KARANVEER ENGINEERS**			
	OSWAL ROAD, G.T. ROAD, DORAHA, DISTRICT- LUDHIANA.,	30-10-2019	09-01-2023	40000
544	**KARTAR AGRO INDUSTRIES PVT. LTD.**			
	AMLOH ROAD, VILLAGE :- BHADSON, DISTT. PATIALA. 147202	20-02-2020		2500
545	**KARTAR SAHAI INDL. CORP.**			
	580 INDUSTRIAL AREA B, LUDHIANA	21-11-2011	30-06-2021	5000
546	**KASHISH IMPEX INDIA**			
	OLD:-B-29, 157/9G/67B, S.NO-13.5, HARGOBIND NAGAR, NEW:-GANPATI ESTATE, SAHNEWAL, DEHLON ROAD,, VILLAGE:-DHAROD NEAR:- POWER GRID LDH	18-05-2016	27-12-2021	3000
547	**KAY EM KAY INTERNATIONAL PVT. LTD.**			
	VILLAGE JASPAL BANGAR, KANGANWAL ROAD, 2512622,	30-10-2013	17-04-2023	3000
548	**KAY HI TECH ENGG. PVT LTD**			
	B XXIX 2345/2- C/7, UCO BANK STREET G.T ROAD, VPO JUGIANA, LUDHIANA	28-05-2009	17-08-2022	10000
549	**KAYSONS CYCLES**			
	E-310, PHASE IV-A, FOCAL POINT, LUDHIANA	08-05-2014	02-02-2023	10000
550	**K.D. CYCLES**			
	E-443, PHASE-6, FOCAL POINT, DHANDARI KALAN, LUDHIANA	28-07-2015	23-06-2020	2000
551	**K.D. ENTERPRISES**			
	#511/5-Z118/2, SHANTI NAGAR, GIASPURA, SUA ROAD,	20-10-2022	23-06-2023	5000
552	**K.D. INDUSTRIES**			
	B-29, 1016/7,, INDUSTRIAL AREA-C, DHANDARI KALAN,	22-08-2017	17-06-2022	2500
553	**KEAA INTERNATIONAL**			
	VILL BHAGWAN PURA DEHLON ROAD, LUDHIANA	11-07-2012	11-01-2023	70000
554	**KEMY OVERSEAS**			
	P.NO-12, GURDEV INDL. ESTATE, SAHNEWAL,, DEHLON ROAD, VILL. PADDI, LUDHIANA. Email.Id:Kemyoverseas@yahoo.in	10-03-2016	06-10-2021	15000
555	**KEPI CYCLE INDUSTRIES**			
	PLOT NO. 150-152, SINGLE CYCLE ROAD, AICTTA MARKET, DHANDARI KALAN, LUDHIANA-141010. Gmail.Id:	22-01-2014	26-05-2023	2000
556	**K.G. INDUSTRIES**			
	STREET NO. 8/4, BABA MUKAND SINGH NAGAR, DABA ROAD, G.T. ROAD, LUDHIANA	28-12-2016		4000
557	**K.G.N. INDUSTRIES**			
	INDL. AREA-C, SHANTI NAGAR,, BACKSIDE KAMAL KARYANA STORE, GIASPURA, LUDHIANA.141000	22-08-2022	16-08-2023	5000
558	**KHALSA AUTO BLACK WORKS**			
	PLAHI GATE, NEAR TUTTIA WALA GURUDWARA, PHHAGWARA 144401, PHAGWARA	24-10-2018	30-10-2021	4000
559	**KHANNA BROTHERS**			
	B-XXI 11414,ST NO 1, PARTAP NAGAR, LUDHIANA	08-07-2007	11-08-2021	3000

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560	**KHANNA INDUSTRIES**			
	SUA ROAD, ATAM SINGH NAGAR, NEAR SHANTI NAGAR, ST. NO. 2, LUDHIANA, LUDHIANA	31-01-2014	21-08-2017	6000
561	**K.H SONS**			
	ST NO 8 DABA ROAD G.T ROAD, NEAR JAIN MANDIR, IND AREA C, LUDHIANA	27-03-2009	13-11-2023	2200
562	**KHURANA AUTO BLACK**			
	1345-ST NO 12/5 DASHMESH NAGAR, LUDHIANA	11-07-2012	16-08-2023	3000
563	**KHURANA INDUSTRIES**			
	PLOT NO. 536, JASPAL BANGAR ROAD, INSIDE SATYAM KANDA,	20-12-2018	10-08-2019	5000
564	**KHURL SALES CORP**			
	83/6-K2-B/4,BABA MUKAND SINGH NAGAR, ST.8/8,DABA ROAD	20-10-2020		3000
565	**KHUSHAL INDUSTRIES**			
	B-XXX-940/4,, SHERPUR, LUDHIANA, LUDHIANA	04-02-2014	24-02-2022	1500
566	**KIDAR NATH NARINDER PAL**			
	ADJ. E-347, PHASE-4, FOCAL POINT, LUDHIANA	06-01-2022		5000
567	**K.I INTERNATIONAL INDIA**			
	PLOT NO. 7226/1, STRET NO 19, NEW JANTA NAGAR, EAST DABA ROAD, LUDHIANA	06-09-2014	29-09-2017	3000
568	**KIMTON INDUSTRIAL CORPORATION**			
	1694, CORPORATION COLONY, FOCAL POINT, NEAR UPPER INDIA STEL, SHERPUR, LUDHIANA	22-11-2022		5000
569	**KING EXPORTS C-141**			
	C-141 PH-5 FOCAL POINT, 8557025818, LUDHIANA	02-11-2007	15-04-2023	50000
570	**KING EXPORTS C-142**			
	C-142 PH-5 FOCAL POINT, 8284800279, 9815776424, LUDHIANA	27-09-2007	15-04-2023	65000
571	**KING EXPORTS D-127**			
	D-127 PH-5 FOCAL POINT, 7696637163, LUDHIANA	27-09-2007	15-04-2023	50000
572	**KING EXPORTS (SAHNEWAL)**			
	PLOT NO-1, SAHNEWAL,, LUDHIANA.-141120	29-11-2021		5000
573	**KIN GLOBAL**			
	K-298-299, PHASE-8, FOCAL POINT, MANGLI SIDE, LUDHIANA-	29-01-2014	07-07-2022	10000
574	**KING METAL INDUSTRIES**			
	C-141, PHASE-5, FOCAL POINT, LUDHIANA	15-09-2022		50000
575	**KIRAN ENTERPRISES**			
	NEAR NEW COURT COMPLEX, SANGRUR ROAD, DHURI.148024	27-07-2018	29-07-2021	1000
576	**KIRPAL SINGH SAGOO AND SONS**			
	G.T. ROAD, CHACHOKI, PHAGWARA.144401	20-09-2018	01-05-2023	2000
577	**KISCON INDUSTRIES**			
	99-D FOCAL POINT PHASE-5, LUDHIANA	08-04-2013	19-04-2022	12000
578	**K.K. ENTERPRISES (S.PURI)**			
	1900/9, TADI ROAD,, NEW SHIMLAPURI, LUDHIANA, LUDHIANA	10-01-2014	23-06-2023	1500
579	**K.K. ENTERPRISES (SUA ROAD)**			
	B-29-536-35E/1B/1D, ST.NO. 3, INDUSTRIAL AREA-C,, NEAR:- FASTMAN CHOWK, SUA ROAD, LUDHIANA	20-12-2021		5000
580	**K.K. INTERNATIONAL**			
	PLOT NO. 50, DABA ROAD, LUDHIANA	20-02-2019	23-06-2023	4000
581	**K.K. MALHOTRA INDUSTRIES**			
	F-245 PH-8 F.P NEW, K-126 PH-8 OLD, LUDHIANA	14-03-2011	21-11-2019	7000
582	**K.K.R FASTNERS**			
	B-*XXXIX, 536/35-D/8E,, INDL. AREA-C, JASPAL BANGAR ROAD,	09-08-2019	23-06-2023	4000
583	**K.K. STEELS PRODUCTS**			
	K-91, PHASE-7, FOCAL POINT, LUDHIANA	24-11-2017	05-05-2023	6000
584	**KOHINOOR ALLOYS PVT. LTD.**			
	E-548,, PHASE-6, FOCAL POINT, LUDHIANA	03-09-2016	08-09-2022	5500
585	**KOHINOOR CYCLES (P) LTD. (D-206)**			
	D-206, PHASE-6, FOCAL POINT, LUDHIANA	01-06-2018	06-04-2023	10000
586	**KOHINOOR CYCLES PVT. LTD.**			
	E-375-E, PHASE-6, FOCAL POINT, LUDHIANA, LUDHIANA	06-12-2013	06-04-2023	10000
587	**KOMAL METAL WORKS - 582**			
	E-5821 PHASE-7, FOCAL POINT, LUDHIANA	08-07-2007	27-06-2019	10000
588	**K.P.M. ENTERPRISES**			
	(OLD) 536/26 SHANTI NAGAR, SINGLE CYCLE ROAD, INDUSTRIAL AREA -C, LUDHIANA, (NEW) IND AREA-C , KANGALWAL,, NEAR JASPAL BANGAR ROAD, LUDHIANA	04-01-2016	22-06-2022	3000

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589	**KRANTI INDUSTRIES**			
	13, BULARA COLONY, VILL.:- GOBINDGARH, LUDHIANA, LUDHIANA	07-08-2018		4000
590	**K.R. ENGG. WORKS**			
	INDL. AREA-C, SUA ROAD, NEAR EASTMAN IMPEX CHOWK,, DHANDARI KALAN., LUDHIANA	04-12-2015	23-06-2023	4000
591	**KRISHNA ENTERPRISES**			
	PLOT NO. 2, OSWAL AGRO INDL. COMPLEX, BEHIND SADHU DHARAM KANDA, G.T. ROAD, LUDHIANA	01-08-2016	09-06-2020	5000
592	**KRISHNA ENTERPRISES (IA-C)**			
	INDUSTRIOAL AREA-C, JASPAL BANGAR ROAD, BACKSIDE DEMALTA FACTORY, LUDHIANA	27-06-2019	23-06-2023	8000
593	**KRISHNA HALFTONE CO.**			
	D-28, PHASE-5, FOCAL POINT, LUDHIANA, LUDHIANA	25-01-2014	02-08-2017	2000
594	**KRISHNA INDUSTRIES F.P.**			
	PLOT NO 28 BHAGWAN MAHAVIR, INDUSTRIAL COMPLEX F.P.,	16-09-2008	20-04-2023	4000
595	**KRISHNA INDUSTRIES ST. NO. 3**			
	OLD ADD.:- H.NO. 157/B/57 ST. NO. 3, NEW ADD.:- BACK SIDE AVON CYCLE, SUA ROAD,, NEAR GIASPURA CHOWK, LUDHIANA	01-02-2017	13-03-2021	6000
596	**KRISHNA WIRE INDUSTRIES**			
	#1250/C/D, JASPAL BANGAR, INDL. AREA-C, NEAR MANN KANDA, LUDHIANA	19-09-2023		1500
597	**KRITIKA WIRES**			
	8, B- FRIENDS INDUSTRIAL ESTATE,, OPP. AARTI STEEL, Focal Point, LUDHIANA	26-06-2019	23-06-2023	3000
598	**K.SHARMA & SONS**			
	709,Industrial Area B,, LUDHIANA, LUDHIANA 141003	08-07-2007	26-04-2023	5000
599	**K.S. IMPEX**			
	D-207, PHASE-6, FOCAL POINT, LUDHIANA	20-03-2017	21-04-2023	5000
600	**K.S. INDUSTRIES**			
	E-306 PHASE-IV A, FOCAL POINT, LUDHIANA, LUDHIANA	15-06-2013	05-10-2021	2000
601	**K.S. MATHAROO & SONS**			
	2489, STREET NO. 3,, JANTA NAGAR, LUDHIANA, LUDHIANA	31-01-2014	23-06-2023	1000
602	**KULAR CYCLE INDUSTRIES**			
	75-R, INDUSTRIAL AREA-B, NR. GILL, ROAD.LUDHIANA.-141003	28-02-2008	30-11-2021	8000
603	**KULAR RIMS (INDIA)**			
	C-24, PHASE-5, FOCAL POINT,, LUDHIANA.-141010	26-03-2008	08-08-2017	20000
604	**KULWANT ENTERPRISES**			
	# 2421 ST. NO.-8, NEAR GURUNANAK SCHOOL, JANTA NAGAR,	18-02-2016	15-01-2019	2000
605	**KUMAR UDYOG (E-211)**			
	E-211 PH.-4, FOCAL POINT, LUDHIANA	08-07-2007	29-10-2021	10000
606	**KUMAR ZINC**			
	OLD ADD.:- #625, PADAM COMPLEX, NEW ADD.:- 94-R, INDUSTRIAL AREA-B,, PARTAP CHOWK, LUDHIANA	16-11-2022	06-09-2023	3000
607	**KUNDAN LAL AND SONS (F.P.)**			
	E-632-633, PHASE-7, FOCAL POINT, LUDHIANA	03-06-2023		1000
608	**KUNDAN LAL AND SONS (G.PURA)**			
	GROUND FLOOR, 149/3E, STREET NO..4,, OPPOSITE PSEN, GIASPURA, LUDHIANA	03-06-2023		1000
609	**KWALITY FORGE**			
	VILLAGE :- KANGANWAL, P.O. JUGIANA, LUDHIANA, LUDHIANA	19-05-2018	04-10-2022	18000
610	**K.W. ENGINEERING WORKS**			
	B-11, PHASE-2, FOCAL POINT,, LUDHIANA	15-10-2015	26-04-2023	80000
611	**LAJ COLOR LEAF (P) LTD.**			
	B-XXIX-1060/4 A,, SURJIT CINEMA ROAD, DHANDARI KALAN,	19-06-2017	28-02-2023	10000
612	**LAJ EXPORT**			
	C-199, PHASE VII, FOCAL, POINT, LUDHIANA.-141010	26-08-2010	26-06-2019	50000
613	**LAKSHMI ENTERPRISES**			
	1066/18, SEWAKPURA , GALI NO. 3, 1921, KALSIAN STREET, GILL ROAD, LUDHIANA, LUDHIANA	05-12-2013	01-05-2023	3000
614	**LAKSHMI INDUSTRIAL CORP**			
	H.O.:- GURU KIRPA COLONY, INDL. AREA-C, JASPAL BANGAR, LUDHIANA, LUDHIANA	01-09-2008	23-06-2023	4500
615	**LAKSHMI UDYOG**			
	RANA GAS LANE, SHERPUR KHURD, LUDHIANA, LUDHIANA	08-02-2016	06-09-2023	4000
616	**LAKSHMI UDYOG HCL**			
	RANA GAS LANE, SHERPUR KHURD, LUDHIANIA	10-12-2021		3000

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617	**LCF OVERSEAS (UNIT-II)**			
	VILLAGE :- BHAGWANPURA, DEHLON ROAD, SAHNEWAL, LUDHIANA,141120	20-12-2021		10000
618	**LEADER AUTO INDUSTRIES**			
	8/2 A, BABA MUKAND SINGH NAGAR, DABA ROAD, LUDHIANA,	10-11-2017	07-04-2023	2000
619	**LEELA INDUSTRIES**			
	PLOT NO. 1228/15A/5/2, BLOCK 29, DHANDARI KALAN, LUDHIANA	18-01-2024		2000
620	**L.K. INTERNATIONAL**			
	ST. NO. 17, PLOT A61/26, JEEWAN NAGAR, FOCAL POINT,	03-08-2018	14-10-2021	4000
621	**LOTUS CYCLES (P) LTD.**			
	SUA ROAD, INDL. AREA-C, NEAR RAVI DHARAM KANDA, LUDHIANA	30-11-2018	23-06-2023	4000
622	**LUCKY ENGINEERS**			
	C-192, PHASE-VI, LUDHIANA	27-05-2013	28-04-2023	30000
623	**LUCKY FORGINGS**			
	E-192, PHAE-4,, FOCAL POINT, LUDHIANA	09-08-2023		8000
624	**LUDHIANA METAL FINISHER**			
	STREET NO.2, NEW RAM NAGAR, LOHARA ROAD, LUDHIANA	07-12-2021		5000
625	**LUMANI SYSTEMS**			
	VILLAGE:-SAYIAN, NEAR:- STAR FORCE, MALERKOTLA ROAD, DEHLON, LUHDIANA-141016, Off:-F 18,19,20, Surya Arcade, National Rd, Ghumar Mandi, Ludhiana 141016	02-03-2022	23-06-2023	12500
626	**LUXMI ELECTROPLATING (BENGALI ZINC)**			
	# 10889, STREET NO. 9, PARTAP NAGAR, LUDHIANA	19-06-2017	09-04-2018	4000
627	**LUXMI ELECTROPLATING UNIT 2 (Old G.PURA) Now F.P.**			
	Old Add.:- ST. NO. 6, GURU AMARDASS COLONY, New Add.:- E-177, PHASE-IV, FOCAL POINT, LUDHIANA, LUDHIANA	16-07-2018	01-02-2021	6000
628	**LUXMI HARD CHROME**			
	# 102 B, INDUSTRIAL ESTATE,, LUDHIANA	25-05-2019	10-09-2022	2000
629	**LUXMI ZINC PLATING(NEW)**			
	ST. NO. 1, GREEN HARI KRISHAN NAGAR, NEAR ST. PATRIC SCHOOL, 33 FT. ROAD, GIASPURA	16-08-2023		2000
630	**MAA BHAWANI ENTERPRISES**			
	B-29-536/21/D, STREET NO. 6/5B, CAMPA COLA LANE, DHANDARI KALAN, LUDHIANA	30-09-2023		2000
631	**MACGRIP INDUSTRIES**			
	185, AKTA MARKET ROAD, DHANDARI KALAN, OPP. DHANDARI RAILWAY STATION, LUDHIANA	04-01-2019	01-10-2022	3000
632	**MADHAV KRG LIMITED**			
	VILLAGE.:- AKALGARH, AMLOH -BHADSON, ROAD, NEAR TOLL PLAZA, DISTT. PATIALA, 147203	11-09-2023		100000
633	**MADHAV UDYOG (P) LTD.**			
	TALWARA ROAD, SIRHIND SIDE, MANDI GOBINDGARH, 147301	28-01-2019	17-03-2023	30000
634	**MAGMA BIKES**			
	H.B.10, HOSIERY COMPLEX, PHASE-6, FOCAL POINT, LUDHIANA, LUDHIANA	29-01-2014	16-10-2023	6000
635	**MAGNA CORE**			
	C-39, PHASE-2, FOCAL POINT, LUDHIANA	17-02-2020	27-05-2023	10000
636	**MAHAJAN BROTHERS**			
	GURU GOBIND SINGH NAGAR,INDUSTRIAL AREA-C, JASPAL BANGER ROAD, NEAR SATYAM KANDA,, DHANDARI KALAN,	09-07-2020		3000
637	**MAHAJAN STEELS**			
	NEW ADDRESS, E-645,, PHASE-7, FOCAL POINT, (OLD C-160-P-5), LUDHIANA	13-09-2007	18-05-2020	5000
638	**MAHAJAN STEEL & WIRE INDUSTRIES**			
	RAMPUR ROAD, NEAR:- RAILWAY CROSSING, TEHSIL:-PAYAL, DORAHA, LUDHIANA-141418	26-11-2021		3000
639	**MAHAKALI STEEL INDUSTRIES**			
	PLOT NO. B29/536/35B/1/3, SUA ROAD, GIASPURA, DHANDARI KALAN, LUDHIANA	23-08-2017	23-06-2023	1000
640	**MAHARAJA INTERNATIONAL**			
	B-XXIX-536/26/3 SUA ROAD, DHANDARI KALAN NEAR NANAKSAR KANDA, LUDHIANA	08-07-2007	07-02-2020	25000
641	**MAHARAJA INTERNATIONAL UNIT III**			
	B-29, 536/31A/2,, SUA ROAD,, DHANDARI KALAN, LUDHIANA	31-08-2016	07-02-2020	10000
642	**Mahavir Engineering Works**			
	# Bxxi-797, Backside Pahwa Hospital, Indl. Area-B,, Ludhiaina	06-02-2020		1000
643	**MAHAVIR UDYOG**			
	OLD ADD. :- # 4-R, INDL AREA B, NEW ADD. :- #B-29, 536/21-D/8A, DHANDARI KALAN, INDUSTRIAL AREA-C, LUDHIANA	11-08-2014	23-06-2023	7500

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644	**M.A. INTERNATIONAL**			
	Office-D81 Focal Point, RAJPURA TOWN, 140401	03-01-2018	27-04-2023	2000
645	**MAKHAN SEWING MECHINE CO.**			
	BXXII -1050 DASHMESH NAGAR ST NO.8 GILL ROAD LUH, LUDHIANA, LUDHIANA	18-11-2008	18-10-2021	3500
646	**MAKKAR TRADING CO.**			
	1858, STREET NO.-3, SEWAKPURA, KALSIAN STREET, MILLERGANJ, LUDHIANA	22-01-2016	24-08-2018	2500
647	**MALCAST ENGG**			
	E-202,PHAES-IV,FOCAL POINT, DHANDARI KALAN, LUDHIANA	18-09-2008	14-07-2021	4000
648	**MALHOTRA BRIGHT ZINC PLATERS**			
	737, PARTAP NAGAR, LUDHIANA, LUDHIANA	30-09-2013	12-03-2018	2000
649	**MALHOTRA ENGG. WORKS**			
	PLOT NO 11188/1 NEW STREET NO 5,PARTAP NAGAR, LUDHIANA	08-07-2007	21-01-2023	3000
650	**MANISH ENGINEERS**			
	2185, FOCAL POINT EXTENTION, NEAR DEVGAN COMPUTER KANDA, NEAR PHASE-VII, DHANDARI KHURD, LUDHIANA	11-01-2019	23-06-2023	2000
651	**MANJIT ELECTROPLATING WORKS**			
	680/1 GOBINDPURA MARKET MILLER GANJ, GILL ROAD, LUDHIANA	08-07-2007	16-08-2023	3000
652	**MANJULA HEAT PROCESSORS A UNIT OF PIONEER NUTS & B**			
	13-B,FRIEND INDUSTRIALESTATE, LUDHIANA	02-11-2007	05-04-2023	25000
653	**MANKOO UDYOG**			
	1441/1, GOBIND NAGAR, FEROZPUR ROAD, LDH-141001.,	19-12-2008	13-06-2018	1500
654	**MANMEET INDUSTRIES**			
	1710 ST.NO.8, MURADPURA GILL ROAD, LUDHIANA	08-07-2007	16-10-2023	4000
655	**MANOJ FORGING**			
	H.C. :- 62, PHASE 6, FOCAL POINT, LUDHIANA	26-08-2022		5000
656	**MANPOWER INDIA**			
	PLOT NO. 47, ROAD NO.4,, SAHNEWAL DEHLON ROAD, VILLAGE:-TIBBA, GANPATI INDL. ESTATE, SAHNEWAL	02-12-2023		500
657	**MANSAROVAR FORGING (P) LTD.**			
	INDL AREA 'C' SUA ROAD, KANGANWAL LUDHIANA, LUDHIANA	11-04-2011	21-04-2023	17500
658	**MANSAROVAR FORGING (P) LTD.NEW**			
	Indl. Area-C, Sua Road, Kanganwal, Ludhiana	15-06-2020	16-08-2023	3500
659	**MARIP SCAFFOLDING EXPORTS**			
	BABA PEER BALI ROAD,, MANGARH, V.P.O. LAKHOWAL,, KOHARA-MACHIWARA ROAD, LUDHIANA, 141112	26-05-2023		4000
660	**MARSHAL FORGINGS**			
	E-640, PHASE-7, FOCAL POINT,, LUDHIANA	23-05-2008	20-07-2022	6000
661	**MARUTI NANDAN KRUPA UDYOG**			
	KAKA ROAD OPP CENTRAL JAIL, TAJPUR ROAD, 9216182295 7889295704, LUDHIANA	26-03-2012	03-05-2021	25000
662	**MARWAHA INDUSTRIES**			
	10995/A, STREET NO. 9, PARTAP NAGAR, LUDHIANA, LUDHIANA	30-01-2014	03-05-2023	4000
663	**MASCO CYCLE INDUSTRIES**			
	743-746 INDUSTRIAL AREA-B, LUDHIANA	29-06-2010	03-06-2023	12000
664	**MATHAROO ENTERPRISES**			
	1718/5 STREET NO 14 NEAR KWALITY CHOWNK SHIMLAPURI,	23-09-2011	10-04-2021	4000
665	**MATHAROO UDYOG(INDIA)**			
	131-R,INDUSTRIEAL AREA-B,LDH, LUDHIANA	22-10-2008	05-05-2023	3500
666	**MATHARU AGRO INDUSTRIES**			
	MODEL TOWN, NR:- CALCUTTA MILL, MANDI GOBINDGARH-	26-05-2015		4000
667	**M.B. EXPORTS LIMITED**			
	KAIND CANAL BRIDGE, VILL: KAIND,, P.O.: SARIH, NEAR DEHLON, 141118, LUDHIANA-MALERKOTLA ROAD., LUDHIANA	04-03-2011	23-07-2021	20000
668	**M.B. MACHINERY CORPON. (REGD.)**			
	NEAR VALLABH TEXTILE,, VILL.:- BHAGWANPURA, DEHLON-SAHNEWAL ROAD, LUDHIANA.-141114	18-08-2015	05-12-2023	5000
669	**MEERA INDUSTRIES**			
	B-34 TEXTILE COLONY, INDL, AREA-A, 9256819422, LUDHIANA	08-07-2007	22-05-2020	12000
670	**MEET ENTERPRISES**			
	512/10 GALI NO 2 SHANTI NAGAR GIASPURA, SUA ROAD,	16-01-2014	11-11-2021	10000
671	**MEHRU ENGINEERS**			
	B-40/111, FOCAL POINT, PHASE-5, LUDHIANA	18-01-2024		4000
672	**MEHTA AUTOMOTIVE PVT. LTD.**			

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	VILLAGE KANGANWAL P.O., JUGIANA, IND. AREA-C, 9216622787, LUDHIANA	01-08-2011	18-01-2024	180000
673	**MEHTA FASTNERS**			
	OLD ADD:-ST. NO.-2 DABA GIASPURA ROAD, NEW ADD.:- NEAR PANESAR KANDA, B/SIDE AVON CYCLE, SUA RAOD, LUDHIANA	08-01-2016	03-06-2023	10000
674	**MERCURY CYCLE INDUSTRIES**			
	E-544, PHASE-6, FOCAL POINT, LUDHIANA, LUDHIANA	18-12-2013	16-07-2021	1000
675	**MERCURY CYCLE INDUSTRIES (HCL)**			
	E-544, PHASE-6, FOCAL POINT, LUDHIANA	22-09-2022	23-06-2023	5000
676	**MERIT INDUSTRIES**			
	PLOT NO. 1221/1, B-1, ZONE-C,, INDL. AREA, BEHIND KRISHNA AUTO, G.T. ROAD, DHANDARI KALAN, LUDHIANA	28-07-2015	23-06-2023	1000
677	**METAL & PLASTIC PVT LTD**			
	D-33, PHASE-5, FOCAL POINT,, LUDHINA.-141010	17-04-2008	17-01-2019	15000
678	**METRIX AUTO COMP. P. LTD.**			
	49/3-F, INDL. PHASE, KABIR NAGAR, STREET NO. 1, G.T. ROAD, DABA ROAD, LUDHIANA	04-08-2021		3500
679	**M.G.ENTERPRISES**			
	Old Add.:- 1973, STREET NO.35, New Add.:- 1996/1, Street No. 33, Janta Nagar, LUDHIANA.141003	25-02-2014	30-09-2023	2000
680	**MICRO COATERS**			
	F-144 AND F-135,, PHASE-8, FOCAL POINT, LUDHIANA	25-02-2016	08-07-2022	10000
681	**MICRO COATERS UNIT -2**			
	BUDHEWAL ROAD, NOBLE ESTATE, KOHARA, LUDHIANA	02-05-2023		5000
682	**MICRO INDUSTRIES (REGD.)**			
	MADHAV NAGAR, GALI NO.1, NEAR SUKHMANI KANDA, DHANDARI KALAN SUA ROAD,, LUDHIANA	16-10-2023		9000
683	**MIGLANI WIRE INDUSTRIES**			
	E-575, PHASE VII FOCAL POINT, LUDHIANA-141010, LUDHIANA	13-01-2014	11-07-2023	2000
684	**MIGLANI WIRE INDUSTRIES HCL**			
	E-575, PHASE-7, FOCAL POINT, LUDHIANA.141010	20-06-2022		6000
685	**MIRA INDUSTRIAL CORPORATION**			
	ADJOINING TO BALWINDRA TOOLS, NEAR EASTMAN CHOWNK, DHANDARI KALAN LUDHIANA, LUDHIANA	02-03-2016	28-07-2020	5000
686	**MITRA PRECISE FORGE (P) LTD**			
	IST FLOOR 548 INDUSTRIAL AREA-B, WORKS VILLAGE KANGANWAL, LUDHIANA	09-11-2010	23-06-2023	7500
687	**MITTAL TECH.**			
	C-116,PHASE-5, FOCAL POINT, LUDHIANA	30-05-2019		5000
688	**MITTER FASTNERS**			
	PLOT NO.218, WARD NO.13, G.T.ROAD,, V.P.O.: DORAHA, TEHPAYAL, DISTT:- LUDHIANA- 142121,, LUDHIANA	17-01-2012	11-07-2023	300000
689	**M.K. AUTO BLACK**			
	11356, STREET NO. 3, PARTAP NAGAR, LUDHIANA, LUDHIANA	05-12-2013	10-11-2021	7500
690	**M.K. ENTERPRISES. (PREV. M.K.ELECTROPLATING WORKS-**			
	PLOT NO.9685,ST.NO-7, BHAGWAN, CHOWK, JANTA NAGAR, LUDHIANA.141010	23-01-2008	16-10-2023	3000
691	**M.K INDUSTRIAL CORPN**			
	512/21, SHANTI NAGAR, SUA ROAD, GIASPURA, LUDHIANA	16-01-2014	21-06-2022	7000
692	**M.K. INDUSTRIES (PARTAP NAGAR)**			
	# 11060/1, STREET NO. 8, PARTAP NAGAR,, DHOLEWAL,	23-07-2019		2000
693	**M.K. SPRING INDUSTRIES**			
	H:NO 246 ST.NO 19 SAHIB ZADA FATEH SINGH NAGAR NEW, SHIMLAPURI, LUDHIANA.-141003	06-12-2011	23-02-2021	6000
694	**M.M FORGING**			
	B-65PHASE-8 FOCAL POINT, LUDHIANA.-141010	06-09-2007	16-07-2019	10000
695	**M.M. INTERNATIONAL**			
	1250/C/2A/1, KANGANWAL, ROAD, LUDHIANA.- 141120	11-09-2023		1000
696	**M.M UDYOG**			
	OLD ADD>:- E-533, Phase-6, Focal Point Ludhiana.141010, NEW ADD:- E-644, PHASE VII FOCAL, POINT LUDHIANA.-141010	17-12-2020	31-07-2023	2500
697	**MODERN AGRO INDUSTRIES**			
	OLD ADD.:-DABA LOHARA ROAD, ST. NO. 6,, NEW ADD.:- IND. AREA-C, EXTENTION, JASPAL BANGAR ROAD, LUDHIANA	14-10-2013	23-06-2023	3000
698	**MODERN ENTERPRISES**			
	Indl. Area-C, Jaspal Bangar - Kanganwal Road,, Ludhiana	16-08-2023		10000
699	**MOHINDERA ELECTROPLATING WORKS .**			
	9983/4 STREET NO 6 BACKSIDE ATI COLLEGE, LUDHIANA	07-02-2012	28-09-2015	2500

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700	**MOHIT INDUSTRIES (PLOT NO-2)**			
	PLOT NO. 2, DURGA COLONY, ADJOINING PHASE-7, FOCAL POINT, LUDHIANA	31-12-2023		5000
701	**MOHIT INTERNATIONAL**			
	536/12B, INDL. AREA-C, STATION ROAD, DHANDARI KALAN,	18-07-2022		1000
702	**MOMSTAR BIKES**			
	MADHO NAGAR, SUA ROAD,, INDL. AREA-C, RAVI KANDA STREET, DHANDARI KALAN, LUDHIANA	27-05-2023		6000
703	**MONGA STRIPS LIMITED**			
	VILLAGE NEELON KALAN, CHANDIGARH ROAD, LUDHIANA, REGD. OFF. SCO-1-A.816, INDUSTRIAL AREA-B., PARTAP CHOWK,	07-10-2019	03-02-2023	3000
704	**MOON LIGHT AUTOMAT PVT. LTD.**			
	C-177-178, PHASE-5, FOCAL POINT, LUDHIANA.-141010	10-10-2017		30000
705	**MOON LIGHT AUTO PVT LTD (C-102, F.P)**			
	C-102/105,PHASE-V, FOCAL POINT,, LUDHIANA-141010.	28-11-2008	29-01-2022	20000
706	**MOON LIGHT TOOLS PVT LTD**			
	VILL:-JASPALON,, G.T ROAD, DORAHA-141421., 9878642656, LUDHIANA.141421	22-11-2011	20-02-2023	60000
707	**MOTI ELECTROPLATING**			
	NEW:-INDL. AREA-C, SUA ROAD, DHANDARI KALAN,, OPP:-KESHAV KANDA STREET, JASPAL BANGAR ROAD., OLD:-2622, ST NO.13-1/2 DASHMESH NAGAR, LDH. LUDHIANA-	13-07-2011	25-04-2023	3000
708	**M.P. INDUSTRIES**			
	589, GOVINDPURA, GILL ROAD,, MILLERGANJ, LUDHIANA	07-11-2013	16-08-2023	3000
709	**M.P. IRON ENTERPRISES**			
	SUA ROAD, DHANDARI KALAN, LUDHIANA	02-01-2021		18000
710	**M.S. AUTO INDUSTRIES**			
	3426/3, STREET NO. 3, HIRA NAGAR, OPPOSITE, TRANSPORT NAGAR, LUDHIANA, LUDHINA	18-12-2013	02-05-2023	3000
711	**M.S.BHOGAL N SONS**			
	732-INDUSTRIAL AREA-B, LUDHIANA	21-01-2008	01-02-2023	20000
712	**M.S. ENTERPRISES**			
	PLOT NO. -1, JASPAL BANGAR, GURU GOBIND SINGH COLONY, DHANDARI KALAN, LUDHIANA	15-11-2018	11-11-2021	8000
713	**M.T MECHANICAL WORKS**			
	D-75, PH-5 FOCAL POINT, LUDHIANA	27-09-2007	02-05-2023	6000
714	**MUKAT TRADERS**			
	12 ,BHARAT NAGAR EXTENTION, BUS STAND, LUDHIANA-141001., LUDHIANA	08-07-2007	27-05-2023	10000
715	**MUKESH INDUSTRIES(INDIA)**			
	OPP. FOCAL POINT EXT., SUA ROAD ,, LUDHIANA	15-01-2014	03-08-2019	14000
716	**MUNDDEY PRODUCTS (INDIA)**			
	GILL ROAD JANTA NAGAR BEHIND J.P. CYCLES, NEAR ATI,	08-07-2007	02-05-2023	2000
717	**MUNISH INDUSTRIES**			
	E-617 PH-VII FOCIAL PIONT, LUDHIANA	24-06-2007	19-01-2023	1000
718	**NACHHATAR ELECTROPLATING WORKS-UNIT I (363)**			
	363 DASHMESH NAGAR GILL ROAD, LUDHIANA.141003	08-07-2007	16-10-2023	4000
719	**NACHHATAR ELECTROPLATING WORKS-UNIT II(843)**			
	PLOT NO. 843, STREET NO. 5/4, LINK ROAD, DASHMESH NAGAR, LUDHIANA.-141003	05-12-2013	16-10-2023	4000
720	**NACHHATAR ELECTROPLATING WORKS-UNIT III (676)**			
	ST. 5/4, PLOT NO. 676, DASHMESH NAGAR, LUDHIANA.-141003	27-08-2018	16-10-2023	2000
721	**NAGINDER INDUSTRIES**			
	F-281, PHASE 8, FOCAL POINT, NEECHI MANGLI, LUDHIANA,	30-09-2013	30-09-2023	3000
722	**NAGINDER INDUSTRIES 2**			
	B-XXX-5354, B-1, NICHI MANGLI, B/SIDE AVON ISPAT, FOCAL POINT, LUDHIANA	23-08-2016	30-09-2023	5000
723	**NAINCY ENTERPRISES**			
	PLOT NO. K-88, PHASE-VII, FOCAL POINT, LUDHIANA	08-02-2021		3000
724	**NAMDHARI INDL TRADER(P)LTD**			
	VILLAGE-LATON,CHD ROAD, LUDHIANA, LUDHIANA	13-08-2008	20-02-2023	60000
725	**NAMDHARI INDL. TRADERS (P) LTD. UNIT II**			
	VILL.:- LATON, CHANDIGARH TOAD, LUDHIANA	09-03-2018	20-02-2023	15000
726	**NANO TECH CHEMICAL BROTHERS (P) LTD.**			
	VILLAGE:- MANGARH, CHANDIGARH ROAD,, P.O. KOHARA, LUDHIANA.141112	21-09-2022		3000
727	**NARAYAN WIRE INDUSTRIES**			

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	VISHAL NAGAR, PHASE-8, FOCAL POINT, LUDHIANA	18-04-2019	27-05-2023	5000
728	**NARESH CYCLE INDUSTRY**			
	#1244/1, SHIV COLONY, KANGALWAL, ROAD, Ludhiana, Punjab,	23-06-2023	23-10-2023	6000
729	**NARESH ENGINEERING**			
	PLOT NO. 21, VILLAGE :- GOBINDGARH, ADJOINING PHASE-7, FOCAL POINT, LUDHIANA	19-11-2016	23-06-2022	2000
730	**NARESH INDUSTRIES**			
	STREET NO. 2, SHANTI NAGAR, SUA ROAD, LUDHIANA, LUDHIANA	08-03-2018		3000
731	**NATIONAL INDUSTRIES**			
	E-128 PHASE 4, FOCAL POINT, LUDHIANA	26-03-2009	04-11-2023	70000
732	**NATIONAL INDUSTRIES UNIT 3**			
	PLOT NO. 127, INDL. AREA-C, NEAR SUA ROAD, KANGANWAL,,	23-05-2018	12-11-2021	30000
733	**NAV BHARAT INDUSTRIES**			
	E-77,PHASE-IV, FOCAL POINT, LUDHIANA	06-09-2013		2000
734	**NAVEEN WIRES**			
	359, INDUSTRIAL AREA-A, LUDHIANA	10-08-2020	01-11-2022	3500
735	**NAVIN UDYOG**			
	261, NEW RAM NAGAR, GIASPURA, LUDHIANA	23-10-2023		3000
736	**NAVYUG ELECTRO APPLIANCES (REGD.)**			
	28-29, INDUSTRIAL DEVELOPMENT COLONY, JALANDHAR ROAD,, 146001, HOSHIARPUR	26-05-2017	07-07-2021	2400
737	**NAVYUG NAMDHARI ECO DRIVE P. LTD.**			
	PLOT NO. C-186-A, PHASE-6, FOCAL POINT, LUDHIANA	28-02-2023		85000
738	**NAVYUG NAMDHARI ENT. (190)**			
	D-190, PHASE-6, FOCAL POINT, 8194809420, LUDHIANA	08-04-2016	08-06-2022	30000
739	**NAVYUG NAMDHARI ENTERPRISES 114**			
	D-114, PHASE ,V FOCAL POINT, LUDHIAN .141010, LUDHIANA	08-04-2016	01-09-2023	20000
740	**NAYMO INTERNATIONAL PVT LTD**			
	Thakur Colony, Vill.:- Bhairopn Munna, Chandigarh Road, Kohara, Ludhiana.141112	02-04-2023	21-11-2023	30000
741	**N.C.S. INDUSTRY CORPON.**			
	PLOT NO. 79 STREET NO. 2, KAILASH NAGAR, SHERPUR, LUDHIANA, LUDHIANA	20-01-2014	08-07-2022	1500
742	**NEELKANTH INTERNATIONAL**			
	NEAR OCTROI POST, JASPAL BANGAR ROAD, LUDHIANA	22-05-2019	14-06-2022	2000
743	**NEELKANTH PEICISION INDUSTRIES**			
	PLOT NO. 2185, NEAR AUJI COLONY, VILL.:- GOBINDGARH,	02-12-2022		2000
744	**NEELKANTH STRIPS PVT. LTD. NEW**			
	OPPO. PWD REST HOUSE, G.T. ROAD, SIRHIND, DISTT.:- FATEHGARH SAHIB, 140406	25-08-2023		12000
745	**NEERAJ CYCLE INDUSTRIES**			
	119, LAXMAN NAGAR, MILLER GANJ, LUDHIANA, LUDHIANA	08-10-2013	16-10-2023	5000
746	**NEHA FINISHING CENTRE**			
	13012 ST NI 14 VISHVKARMA COLONY, BACKSIDE SANGEET CINEMA, LUDHIANA	28-12-2011	21-01-2023	3000
747	**NEW M.G. INDUSTRIES**			
	GURU AMAR DASS COLONY, DABA ROAD, LUDHIANA, LUDHIANA	11-02-2014	24-11-2017	8000
748	**NEW M.K. ENTERPRISES**			
	DABA ROAD, NEAR JAIN COLONY, LUDHIANA	16-01-2014	18-09-2019	10000
749	**NEW MODERN STEEL INDUSTRIES(INDIA)**			
	D-141, PH-5, FOCAL POINT, LUDHIANA	31-10-2007	06-02-2023	40000
750	**NEW NATIONAL MACHINERY WORKS**			
	1229/43 NEAR PADAM MOTORS, DHANDARI KHURD, LUDHIANA	28-03-2016	16-03-2020	4000
751	**NEW PUNJAB NICKEL WORKS**			
	STREET NO. 7, HARGOBIND NAGAR, NEAR JAIN COLONY, DABA ROAD,, LUDHIANA	19-07-2022		3000
752	**NEW RAHUL ENTERPRISES**			
	NEW ADDRESS :- PLOT NO. 1172/1, IND. AREA-B, NEAR SANT RAM SETHI CHOWK, LUDHIANA	05-12-2013	01-06-2022	2000
753	**NEW R.K. ENTERPRISES SUA ROAD**			
	B-XXIX, 458/6B/21A, ST. NO. 2, GIASPURA, SUA ROAD, LUDHIANA, LUDHIANA	30-01-2014	15-09-2022	5000
754	**NEW STAR INDUSTRIES**			
	BUDHEWAL SUGAR MILL ROAD JANDALI, LUDHIANA.141112	04-10-2012	13-05-2023	5000
755	**NEW SWAN AUTO COMP. (P) LTD 214**			

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	C-214 FOCAL POINT PH 8 LDH, 8360583738 BALRAJ JI, 8837758985, LUDHIANA	08-07-2007	01-10-2015	80000
756	**NEW SWAN ENTERPRISES (F.P.)(205)**			
	F-205 PHASE 8, FOCAL POINT, 9779410213, LUDHIANA	17-10-2009	07-07-2021	175000
757	**NEW SWAN ENTERPRISES UNIT-VI**			
	C-213 PHASE-VIII, FOCAL POINT, 9878400916, LUDHIANA	24-02-2016	07-07-2021	208000
758	**NEW SWAN MULTITECH LIMITED**			
	VILL.:- RAIYAN,, KOHARA MACHHIWARA ROAD, P.O. HEERAN, 141112, LUDHIANA	19-09-2015	13-03-2023	8000
759	**NEXO INFRA**			
	C-16-17, PHASE-5, FOCAL POINT, LUDHIANA	22-01-2021	01-05-2023	10000
760	**N H WHEELS PRIVATE LIMITED**			
	C-239, PHASE-8, FOCAL POINT, LUDHIANA	11-04-2023		10000
761	**NICKS AUTO IND PVT LTD**			
	E-320-21 PH-4 FOCAL POINT, LUDHIANA 141010, LUDHIANA	08-07-2007	27-05-2023	50000
762	**NICKS (INDIA) TOOLS**			
	E-188, PHASE-4, FOCAL POINT, LUDHIANA, LUDHIANA	30-12-2013	18-05-2023	5000
763	**NICKS INDIA TOOLS UNIT II KHAKAT (PREV. RO REJECT)**			
	INDUSTRIAL AREA, SUA ROAD, VILL.- KHAKAT, P.O.-NANDPUR, G.T.ROAD, LUDHIANA	02-04-2016	15-05-2023	10000
764	**NIKITA UDYOG C-11,12**			
	C-11-12, INDUSTRIAL FOCAL POINT, NABHA	23-10-2023		5000
765	**NIRMAL PROCESSING (SHANTI NAGAR)**			
	477/3E SHANTI NAGAR, INDL. AREA-C, GIASPURA, LUDHIANA	30-08-2016	23-06-2023	5000
766	**NISHANT STEEL INDS. 257**			
	E-257, PHASE-IV, FOCAL POINT, LUDHIANA	22-12-2009	13-06-2022	7500
767	**NISHANT STEEL INDUSTRIES 272 UNIT 2**			
	E-272, PHASE-4, FOCAL POINT, LUDHIANA	21-07-2017	28-04-2022	10000
768	**NISHANT STEEL INDUSTRIES (D-49)**			
	D-49, PHASE-5, FOCAL POINT, LUDHIANA	02-06-2018	23-06-2023	6000
769	**NITIN AUTO INDUSTRIES**			
	PLOT NO 5 SANT LONGEWAL, NEAR SURJIT PALACE , NEAR TURBO TOOLS, LUDHIANA	13-02-2009	14-06-2021	5500
770	**NITISH CYCLE INDUSTRIES**			
	OLD ADD.:- E-527,PHAES-VI,FOCAL POINT, NEW ADD.:- B-45-C, PHASE-6, FOCAL POINT, LUDHIANA	09-09-2008	07-04-2021	12000
771	**N.K. KALSI ENGG. WORKS UNIT 2**			
	1149, ST. NO. 6, INBDL. AREA - B, PARTAP NAGAR, LUDHIANA	06-02-2019	02-11-2022	1000
772	**N.K. TRADING CO.**			
	OLD ADD - XXIX, 536/35E/4E, NEW ADDRESS :- B-XXIX-536/35-E/23/7-B, INDUSTRIAL AREA-C, SUA ROAD, JASPAL BANGAR, NEAR MAHAVEER KANDA, LUDHIANA	23-04-2019	06-09-2023	3500
773	**N N ENTERPRISES**			
	1650-C, NEAR KWALITY CHOWK,, NEW SHIMLAPURI, LUDHIANA, LUDHIANA	10-01-2014	28-05-2021	6000
774	**NOTAY ENTERPRISES**			
	MAAN KANDA STREET, JASPAL BANGAR ROAD, B-29,NEAR HINDUSTAN STEEL, LUDHIANA	16-08-2023		4000
775	**N.S. INDUSTRIES**			
	66-R, INDUSTRIAL AREA-B, LUDHIANA	23-06-2023		2500
776	**N.S. PRODUCT INDIA**			
	16R INDL AREA B, LUDHIANA	04-06-2010	10-04-2023	2500
777	**NUOVO FASTENINGS PVT. LTD.**			
	D-325, PHASE-8, FOCAL POINT, LUDHIANA	21-10-2019	23-06-2023	5000
778	**OM ENTERPRISES**			
	OLD ADD.:- SHANTI NAGAR, STREET NO.2,, NEW ADERESS:- NEW AVTAR COLONY, INDL. AREA-C,, NEAR G.K. KHARA DHARAM KANDA LOHARA ROAD, DHANDARI KALAN, LUDHIANA	01-07-2016	23-11-2022	4000
779	**OM ENTERPRISES (DABA ROAD)**			
	STREET NO. 4, GURU AMAR DASS COLONY, DABA ROAD,	05-12-2019	23-06-2023	3000
780	**OM ENTERPRISES (SAHNEWAL)**			
	BACKSIDE KRISHNA MANDIR, NEW MODEL TOWN, SAHNEWAL, LUDHIANA.,141002	06-11-2019	10-04-2023	8000
781	**OM INDUSTRIES (DABA ROAD)**			
	STREET NO. #11/2, KABIR NAGAR, DABA ROAD, LUDHIANA,	17-01-2014	16-08-2023	5000
782	**OM INDUSTRIES F.P. UNIT-II**			
	F-288, PHASE-8, FOCAL POINT, LUDHIANA	01-03-2019	01-06-2022	30000

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783	**OM NAMAH SHIVAI INDUSTRIES**			
	99-B, INDUSTRIAL ESTATE,, LUDHIANA	26-03-2008	23-06-2023	5000
784	**OM SAI INDUSTRIES**			
	OLD ADD. :-PLOT NO. 1226/8, MITTAL KANDA WALI GALI, NEW ADD. :- JASPAL BANGAR ROAD, IND. AREA-C, NEAR ASHA KANDA, RINKU PROP. DLR. WALI GALI, LUDHIANA	30-04-2022	23-06-2023	4000
785	**OM STEEL INDUSTRIES**			
	BXXIX-536/21-3,INDL.,AREA-C, SINGLA CYCLE ROAD, LUDHIANA, LUDHIANA	12-09-2008	23-06-2023	50000
786	**OSCAR METAL CRAFT PVT LTD**			
	VILLAGE: KOT SEKHON, DORAHA, POSTAL: 1904, ST. 36, JANTA NGR., GILL ROAD, LUDHIANA-141003, LUDHIANA	17-01-2014	27-05-2022	8000
787	**OSHO TOOLS PVT. LTD.**			
	VILL.:- JANDIALI, CHANDIGARH ROAD,, LUDHIANA	29-06-2022		25000
788	**OUTLIER ENGINEERS**			
	G.T. ROAD,, DHANDARI KALAN, LUDHIANA	11-08-2017	12-05-2022	7000
789	**PAANAV FASTNERS**			
	PLOT NO. 19, ADJOINING PHASE-7, NICHI MANGLI, FOCAL POINT,, NEAR KHAZAN KANTA, LUDHIANA	30-11-2017	21-04-2023	5000
790	**PANDAY TRADING CO.**			
	83/7B/1A BABA MUKUND SINGH NAGAR DABA ROAD, VILLAGE DABA, LUDHIANA	08-07-2007	09-10-2021	15000
791	**PANDEY ELECTROPLATING (SUA ROAD)**			
	NEAR KAMAL KARYANA STORE, SHANTI NAGAR, SUA ROAD,	08-11-2019	21-11-2023	4000
792	**PANESAR BROTHER (INDIA)**			
	S NO 14, DABA ROAD, SHIMLAPURI, LUDHIANA	02-03-2009	09-01-2023	3000
793	**PANKAJ ENTERPRISES**			
	OLD:-106R ,IND. AREA-B, SUA ROAD, SHANTI NAGAR, NEW:- 165-R, INDS.AREA-B, GILL ROAD, LUDHIANA	07-07-2017	25-02-2022	2000
794	**PANKAJ INTERNATIONAL (DUGRI)**			
	PLOT NO. 169 DUGRI VILLAGE SIDHWANA CANAL ROAD,, OPP:-HARTEX RUBBER, LUDHIANA-141421	29-11-2021		30000
795	**PANKAJ STEELS**			
	1228/27A IND AREA -C, DHANDARI KALAN, LUDHIANA	14-12-2015	18-11-2019	6000
796	**PARAM INTERNATIONAL**			
	B-XXIX-945/A-3, LONGOWAL COLONY,, INDL. AREA-C,, NEAR LOTAY DHARAM KANDA, JASPAL BANGAR, LUDHIANA-141014	23-06-2023		2000
797	**PARAMOUNT IMPEX (202)**			
	D-202,203 PH,6 FOCAL, POINT(UNIT-1), 9814098326, LUDHIANA	10-07-2007	26-12-2022	25000
798	**PARAMTECH INDUSTRIES**			
	F-131B, PHASE VIII, FOCAL POINT, LUDHIANA	05-07-2014	11-09-2023	9000
799	**PARASHAR AUTO INDUSTRIES (REGD.)**			
	DR. B.R. AMBEDKAR INDUSTRIAL AREA,, CHAK HAKIM,	22-02-2022		2000
800	**PARKASH ELECTROPLATING WORKS**			
	ST NO -9 H.NO 2067, ARJUN NAGAR, RADHA SWAMI ROAD,	06-03-2009	29-06-2022	4000
801	**PARKASH PRODUCTS INDIA**			
	708, NIRANKARI STREET NO. 4,, MILLER GANJ, LUDHIANA	10-09-2018	23-10-2023	2500
802	**PARMILA INDUSTRIES**			
	2185/A, S.P. COLONY, ASHOK KANDA ROAD,, NEAR MATA GUJRI SCHOOL, VILL.:- GOBINDGARH, LUDHIANA	05-12-2023		2000
803	**PARROT ENGG. WORKS**			
	D-90, PHASE-5, FOCAL POINT, LUDHIANA	17-04-2018	18-05-2023	15000
804	**PARROT INDUSTRIAL CORPORATION**			
	D-38 PH,5 FOCAL POINT, LUDHIANA	17-07-2007	28-11-2019	30000
805	**PARTAP BIKES**			
	V.P.O.JUGIANA UCO BANK ROAD, LUDHIANA	26-11-2011	10-07-2018	10000
806	**PARTAP CYCLE INDS.**			
	SEWAKPURA KASIAN ST.NO.3, GIIL ROAD, LUDHIANA	08-07-2007	17-05-2022	2500
807	**PARTAP ENGINEERS (JUGIANA)**			
	G.T. ROAD, JUGIANA, LUDHIANA	09-02-2017		4000
808	**PARTAP MACHINE TOOOLS (REGD.)**			
	14535 ST. NO. 9, BHAGWAN NAGAR, G.T. ROAD, LUDHIANA,	30-01-2014	28-02-2023	2000
809	**PARVIN SEWING MACHINE WORKS (REGD.)**			
	SUA ROAD, MANSAROVER FORGINGS, KANGANWAL, LUDHIANA	11-09-2023		1000
810	**PATHAK CYCLE INDUSTRIES**			
	E-303, PHASE-4, FOCAL POINT, LUDHIANA	12-04-2018		5000

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811	**PATIALA COATEC NEW**			
	FACTORY AREA, NEAR INDUSTRIAL GOL CHAKKAR, PATIALA.-	31-12-2023		1000
812	**PAWAN CYCLE INDS.(REGD)**			
	F-257, PHASE-8, FOCAL POINT, LUDHIANA	08-07-2007	05-12-2018	16000
813	**PAYAL INDUSTRIES**			
	NEW ADD.- GURMEET NAGAR, NEAR RAM MANDIR, ST NO. 1/4 GAISPURA, LUDHIANA.	06-02-2014	22-02-2024	2500
814	**PEAK STAR CYCLE INDUSTRIES (H)**			
	B-29. 536/35E/23/7, ADJOINING MAHAVEER KANDA, JASPAL BANGAR ROAD, LUDHIANA	25-08-2023		2500
815	**PERFECT FORGINGS**			
	OPP DHANDARI RAILWAY STATION DHANDARI KALAN, LUDHIANA	16-01-2008	30-09-2022	50000
816	**PERFECT INC.**			
	SUA ROAD, DHANDARI KALAN, LUDHIANA	21-02-2018	06-03-2021	10000
817	**PERFECT INDUSTRIES PATIALA (New)**			
	C-133, FOCAL POINT, PATIALA.147001	16-08-2023		2000
818	**PERFECT INTERNATIONAL**			
	PLOT NO-536/26A/4 STATION ROAD, DHANDRI KALAN, LUDHIANA	16-01-2014	21-11-2023	3000
819	**PERFECT METTCAST PVT. LIMITED**			
	HAMBRAN MULLANPUR ROAD,, HAMBRAN, LUDHIANA.141110	24-01-2019	19-01-2023	4000
820	**PEX TOOLS**			
	157/3/22, ST. NO. 4, GURU AMAR DASS COLONY, GIASPURA,	18-01-2018		3000
821	**PINEWOOD INDUSTRIAL CORPON.**			
	PLOT NO. 22, DURGA COLONY, DHANDARI KHURD, LUDHIANA	24-04-2018	09-02-2023	2000
822	**PIONEER NUTS& BOLTS (P) LTD.**			
	13-B MANJULA LABORATORY DIVN FRIENDS, INDUSTRIAL ESTATE, LUDHIANA	18-05-2010	20-03-2023	25000
823	**PLATEWELL INDUSTRIES**			
	NEW ADDRESS- E-100,PH-IV,F.P LUDHIANA, OLD ADD.- 33,LONGOWAL COLONY, IND-AREA - C, DHANDARI KALAN.	12-10-2015	25-12-2020	6000
824	**P.L. ENTERPRISES**			
	PLOT NO. 157/42/5, GURU AMARDASS COLONY, STREET NO.2, GIASPURA, LUDHIANA	11-07-2023		2500
825	**POOJA ENTERPRISES (DABA ROAD)**			
	157/42, STREET NO 2 GURU AMARDASS, COLONY NEAR DABA ROAD, LUDHIANA	16-01-2014	21-12-2021	3000
826	**POOJA ENTERPRISES ST-1**			
	OLD ADDRESS :- AMARPURI, NEW ADD:- STREET NO. 1, NEAR RUDRA ENCLAVE, HARPAL NAGAR, LOHARA, LUDHIANA	31-01-2014	23-10-2023	3000
827	**POOJA ENTERPRISES (SUA ROAD)**			
	STREET NO. 5, SHANTI NAGAR, SUA ROAD, GIASPURA, LUDHIANA, LUDHANA	27-01-2014	26-12-2020	5000
828	**POOJA ENTERPRISES UNIT NO. 2**			
	1250/G/10/1/C/P-- KANGANWAL ROAD,, NEAR SHRI BALAJI KANDA, JASPAL BANGAR., INDL. AREA-C., LUDHIANA	03-06-2023		10000
829	**POOJA INDUSTRIES ST. NO. 1**			
	#497, NIRANKARI STREET NO. 1, MILLER GANJ, LUDHIANA	06-01-2023		3000
830	**POONAM ELECTROPLATING**			
	60/249/49,ST NO-2 AMARPURI, DABA ROAD GAISPURA INDL AREA, C LUDHIANA, 141003	18-12-2023		3000
831	**PRABHU KIRPA CYCLE IND.**			
	536/2, STREET NO. 2,, TAGORE COLONY. SINGLE CYCLE ROAD,, DHANDARI KALAN, LUDHIANA	20-01-2014	29-03-2017	3500
832	**PRATAP INDUSTRIES**			
	TAJPUR ROAD, BABA JIWAN SINGH NAGAR, NEAR CENTRAL JAIL, VILLAGE :- KULLIANWAL, LUDHIANA141003	01-09-2023		2000
833	**PRECISION INDUSTRIAL FASTENERS**			
	HARA INDUSTRIAL ESTATE, NEAR OM KANDA, SUA ROAD, INDL. AREA-C, LUDHIANA	30-07-2015	22-02-2024	35000
834	**PRECISION INDUSTRIAL FASTENERS (UNIT-II)**			
	NEAR PSPCL GRID, GANPATI ESTATE, STREET NO. 2, SAHNEWAL - DEHLON ROAD, SAHNEWAL, DISTT.:- LUDHIANA	28-05-2019	22-02-2024	75000
835	**PRECISION PRODUCTS**			
	E-318 PH,4A FOCAL POINT, 9915043959, LUDHIANA	12-08-2007	26-10-2021	12000
836	**PREETI ZINC**			
	102-B, INDUSTRIAL ESTATE,, LUDHIANA	01-04-2008	04-02-2020	4000
837	**PRIMA AUTOMOTIVE PVT. LTD.**			
	INDL. AREA-C, SUA ROAD, DHANDARI KALAN., LUDHIANA-141010	03-08-2016	22-12-2021	5000
838	**PRIMA CYCLES (P) LTD.**			

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	B-XXIX, 49/1, IND. PHASE,, G.T. ROAD, DABA ROAD, LUDHIANA	12-12-2013	09-11-2022	7500
839	**PRINCE INDUSTRIES**			
	D- 32 FOCAL POINT PHASE-V, LUDHIANA	20-10-2011	23-06-2023	3000
840	**PRINCE INTERNATIONAL (E-754)**			
	E-754 PH-8, FOCAL POINT, MANGLI, LUDHIANA	24-04-2016	23-06-2023	24000
841	**PRINCE STEEL INDUSTRIES**			
	D-81 PHASE V FOCAL POINT, LUDHIANA-141010	24-03-2014	06-09-2023	2000
842	**PRITHVI ENTERPRISES**			
	511, ST. NO. 3, SHANTI NAGAR, SUA ROAD, LUDHIANA, LUDHIANA	22-01-2014	16-02-2023	4000
843	**PRIYA INDUSTRIES. (E-533)**			
	E-533, PHASE-6,, FOCAL POINT, LUDHIANA-141010, LUDHIANA	24-04-2015	16-07-2021	2000
844	**PRIYA INDUSTRIES. (E-534)**			
	E-534, PHASE-6, FOCAL POINT, LUDHIANA	24-07-2017	30-09-2023	4000
845	**PROGRESSIVE FOUNDRY WORKS**			
	SUA ROAD, OPP. DURGA MANDIR, GIASPURA, LUDHIANA	22-06-2018	27-03-2023	9000
846	**PROMINENT EXPORTS INTERNATIONAL**			
	KANGANWAL ROAD, JASPAL BANGAR, LUDHIANA	17-06-2014	05-11-2022	3000
847	**PROMINENT FORGINGS PVT. LTD.**			
	PROMINENT HOUSE, KANGANWAL, ROAD, JASPAL BANGAR, LUDHIANA. LUDHIANA	04-02-2014	18-10-2022	3000
848	**P.S. AUTO FINISHING CENTRE**			
	PLOT NO. 12280, PARTAP NAGAR, STREET NO. 1,	31-01-2014	10-07-2020	2500
849	**PTS INDUSCO**			
	B-XXIX,524/4,SHANTI NAGAR,GIASPURA INDL, AREA-C, LUDHIANA 141014. LUDHIANA	08-07-2007		7500
850	**PUBLIC CYCLE WORKS**			
	C-63, PHASE-5, FOCAL POINT, 9464136400, LUDHIANA	03-03-2008	02-03-2023	13000
851	**PUNEET CYCLE INDUSTRIES**			
	E-369, PHASE-6, FOCAL POINT, LUDHIANA	11-06-2020		500
852	**PUNEET EXPORTS**			
	SEWAK PURA, KALSIAN STREET, LUDHIANA	21-10-2013	30-05-2022	3000
853	**PUNJAB METALS FINISHING CENTRE**			
	BABA MUKAND SINGH NAGAR, ST NO. 09 DABA ROAD, LUDHIANA	22-07-2014	23-06-2023	5000
854	**PUNJAB POLLUTION CONTROL BOARD**			
	AIR AND WATER LABORATORY, E-648, PHASE-5, FOCAL POINT 141010. LUDHIANA		04-03-2022	2000
855	**RAASS INDUSTRIAL PRIVATE LIMITED**			
	Village Jaspalon, Tehsil Khanna, Dist.:- Ludhiana -141421	07-07-2022	31-07-2023	20000
856	**R. ABHILASH INDUSTRIES**			
	PLOT NO. 0079/0002 ST. NO. 2, S.P. COLONY, NEAR MATA GUJRI SCHOOL, GOBINDGARH, JIGIANA, LUDHIANA	21-09-2022		3000
857	**RACHNA FASTNERS UNIT II**			
	101-104, VILLAGE DOBURJI, SAHNEWAL, DISTT.:- LUDHIANA,	01-09-2015	26-06-2020	30000
858	**RADHA KRISHNA INDUSTRY**			
	758, IND. AREA-B, OPP. SANGEET CINEMA, OLD NAME RADHA KRISHNA INDUSTRIES. LUDHIANA	06-02-2016	09-04-2021	2000
859	**RADHA SHARDA INDUSTRIES**			
	OLD ADDRESS :- E-255, PHASE-4 A, NEW ADDRESS-B-30-1743/B/1092,DURGA COLONY, LUDHIANA	29-06-2017	16-10-2023	5000
860	**RADIANT COMPONENTS (P) LTD.**			
	SUA ROAD, NEAR RAVI KANDA,, DHANDARI KALAN, INDL. AREA-C,, LUDHIANA	28-05-2019		5000
861	**RAGHAV CYCLE INDUSTRIES**			
	OPP. STADIUM, GIASPURA, LUDHIANA	25-07-2016	23-06-2023	2500
862	**RAHUL ENTERPRISES 65-R (DABA)**			
	#65-R, INDUSTRIAL AREA-B., LUDHIANA	10-04-2009	04-12-2019	3000
863	**RAHUL ENTERPRISES DHANDARY**			
	SINGLE CYCLE ROAD,, INDL. AREA - C,, DHANDARI KALAN,	01-10-2008	31-07-2023	4000
864	**RAHUL ENTERPRISES (G.PURA)**			
	STREET NO. 3,, GURU AMARDASS COLONY, GIASPURA, LUDHIANA	20-04-2017	27-02-2023	2000
865	**RAHUL INDUSTRIES (SUA ROAD)**			
	NEW ADD.B-29,AVTAR COLONY,IND AREA C,DHANDARI KALAN, OLD ADDRESS :- NEAR PANESAR DHARAM KANDA	27-12-2016	25-01-2023	1500
866	**RAI AUTO INDUSTRIES**			
	B-XXIX-536/35-D/2-C/1, J.V.R. STREET, NEAR EASTMAN CHOWK, INDL. AREA-C, SUA ROAD, LUDHIANA	04-06-2018	12-09-2022	5000

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867	**RAJAN AGRO INDUSTRIES**			
	E-520, PHASE-6, FOCAL POINT, LUDHIANA	18-08-2017	22-06-2022	1500
868	**RAJAT ENTERPRISES**			
	# B-XXIX-511/5-Z/52A/4, SHANTI NAGAR, GIASPURA, LUDHIANA	30-11-2016	30-12-2022	4000
869	**RAJ CYCLE COMPANY**			
	B-29-11, ADJOINING T.R. BICYCLE, KANGANWAL ROAD, INDUSTRIAL AREA-C, LUDHIANA-141014	06-10-2022		10000
870	**RAJEEV METAL(P) LTD**			
	C-13 PH-1 FOCAL POINT, LUDHIANA	08-07-2007	06-01-2023	10000
871	**RAJ ELECTROPLATING**			
	GALI NO 5 KIRPAL NAGAR, LUDHIANA.-141007	10-04-2009	07-02-2017	2000
872	**RAJ ENTERPRISES**			
	PLOT NO. 82, PHASE-7, FOCAL POINT, LUDHIANA	11-07-2023		2000
873	**RAJESH TRADING COMPANY**			
	120/121, AHLUWALIA STREET LAXMAN NAGAR, MILLER GANJ, LUDHIANA, LUDHIANA	08-10-2013	20-09-2021	4000
874	**RAJESHWARI FASTNERS P. LTD.**			
	NEAR MOUNT INTERNATIONAL SCHOOL, SIDHWAN CANAL EXPRESSWAY, VILLAGE :- DUGRI, RAJGARH ESTATE, SAHNEWAL,	30-09-2023		3000
875	**RAJINDERA BROTHERS**			
	2127 GALI NO 7, ARJUN NAGAR, RADHASWAMI ROAD, LUDHIANA	10-04-2009	11-07-2022	4000
876	**RAJINDERA ENGINEERS**			
	C-113 PH,5, FOCAL POINT, LUDHIANA	18-07-2007	18-02-2023	6000
877	**RAJIV INDUSTRIES**			
	54-B, INDUSTRIAL ESTATE,, LUDHIANA	25-06-2008	17-03-2023	2000
878	**RAJNANDANI ELECTROPLATING**			
	KAMAL KARYANA STORE, STREET NO.2,, SHANTI NAGAR,	01-10-2019	18-12-2023	3000
879	**RAJNEESH TIWARI AND ASSOCIATES**			
	A-15, PHASE-7, FOCAL POINT, LUDHIANA	21-07-2022		25000
880	**RAJNISH INDUSTRIES**			
	B-29/945/C-1/1/2. DHANDARI KALAN, INDUSTRIAL AREA-C, LUDHIANA-141014	30-11-2021		3000
881	**RAKA CYCLE INDUSTRIES (REGD)**			
	536/14 STATION ROAD OPP. DHANDARI RAILWAY STATION,	17-11-2012	15-11-2019	12000
882	**RAKESH BHARTI INDUSTRIES**			
	E-380, PHASE-6, FOCAL POINT, LUDHIANA	13-10-2017	25-07-2022	16000
883	**RAKESH UDYOG**			
	D-145 FOCAL POINT PH 04, LUDHIANA	31-05-2012	14-06-2021	3000
884	**RAMA NICKEL PLATING INDIA**			
	140 INDL AREA A OPP, ST NO.10 JANAK PURI, LUDHIANA	30-07-2010	23-06-2023	12200
885	**RAMAN INDUSTRIES (GILL ROAD)**			
	STREET NO. 12, DASHMESH NAGAR, GILL ROAD, LUDHIANA.,	07-11-2013	10-05-2021	4000
886	**RAMAN INDUSTRIES (J.N.)**			
	ST. NO. 4, PLOT NO. 3561/1A,, GURU NANAK MARKET, NEW JANTA NAGAR, NEAR ITTAN WALA CHOWK, LUDHIANA, LUDHIANA	05-12-2013	25-08-2023	2000
887	**RAMA UDYOG**			
	Old Add.:- 618 KALSIAN NAGAR ST NO.1, Sherpur Road, New Add.:- Street No. 8/4, Plot No. 80/15/2, Baba Mukand Singh	17-01-2008	06-05-2021	8000
888	**RAM ENTERPRISES**			
	ST NO 2 SURJEET NAGAR, GIASPURA, LUDHIANA	10-04-2009	14-04-2022	2000
889	**RAM JIWAN HARDCROME**			
	625, PADAM COMPLEX, INDUSTRIAL AREA-B, MILLER GANJ,	10-12-2021		1000
890	**RAMOUS CYCLE (INDIA)**			
	91-93 INDUSTRIAL AREA-A EXTN, LUDHIANA	30-05-2013	05-11-2022	5000
891	**RAMOUS ENGINEERS**			
	93 -B,IND AREA A,EXTN,LUDHIANA, PUNJAB	30-11-2021		5000
892	**Ramous Industrial Corporation**			
	57-58 B, Industrial Area-A, Extension, Ludhiana	30-11-2021		5000
893	**RANA INDUSTRIES**			
	1057/12, ST. NO 9 MURAD PURA, NEAR KALSIAN STREET,,	16-01-2014	16-10-2023	2000
894	**RANBIR CYCLE & SEWING MACHINE INDUSTRIES**			
	731, INDUSTRIAL AREA-B, OPP. AVON, CYCLE, LUDHIANA	04-06-2008	11-11-2021	3000
895	**RANEW UDYOG**			
	850 INDS AREA-A, LUDHIANA	14-07-2007	28-02-2023	15000

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896	**RATRA INDUSTRIES (REGD)**			
	OLD ADD.:- 2220-A, FAUJI MOHALLA, NEW ADD.:- 555/579,NEAR SUKHMANIDHARAM KANDA, SUA ROAD, INDUSTRIAL AREA-C,, LUDHIANA.141014	20-02-2010	25-08-2023	11000
897	**RATRA UDYOG**			
	NEW KARTAR NAGAR, NEAR DANA MANDI, GILL ROAD LUDHIANA, LUDHIANA	21-01-2014	06-09-2023	5000
898	**RAVI METAL PRODUCTS**			
	POT NO. 1, PAHARUWAL ROAD, VILL.:- PAHARUWAL, BACKSIDE BUDHEWAL SUGAR MILL, CHANDIGARH ROAD, LUDHIANA.-141112	14-07-2022		3000
899	**RAVINDRA ALLOY INDUSTRIES**			
	ST. NO. 3, INDUSTRIAL AREA-C,, JASPAL BANGAR ROAD, BEHIND EASTMAN IMPEX, LUDHIANA	16-08-2023		7000
900	**R.B. INDUSTRIES**			
	C-161, PHASE-V, FOCAL POINT., LUDHIANA-141010	28-12-2012	31-01-2022	40000
901	**RCJ AUTO FORGE PVT LTD**			
	E756 757 PHASE VII FOCAL POINT, 2673021, LUDHIANA	20-08-2011	02-12-2023	25000
902	**R.D. ZINC**			
	1939, PREET NAGAR, SEWAK PURA, STREET NO. 3, LINK ROAD,	03-07-2017	23-06-2023	4000
903	**RELEX INDUSTRIES**			
	32-B RUDHRA INDUSTRIAL ENCLAVE, INDS AREA -C EASTMAN CHOWK, LUDHIANA	03-10-2018		1500
904	**REMAX FASTENER INDUSTRIES**			
	MITTAL DHARAM KANDA LANE, G.T ROAD DHANDARI KALAN, LUDHIANA.141014	29-07-2007	31-07-2023	6000
905	**REMAX INDIA**			
	62-D PH.5 FOCAL POINT, LUDHIANA, 141010	23-10-2008	23-08-2021	7000
906	**Remexo Fasteners**			
	K-188, Focal Point, Phase-8, Ludhiana	05-01-2022		4000
907	**Resilient Brakes Private Limited**			
	Plot No. 4 & 5, Texla Vision, G.T. Road, Village Pawa, Ludhiana	18-12-2023		15000
908	**REX INDUSTRIAL CORP.**			
	B-XXX 230/1 SHERPUR, NEAR RANA GAS SERVICE, LUDHIANA	18-03-2009	16-03-2023	10000
909	**R.G.INDUSTRIES**			
	ST NO. 21/2, BACK SIDE OSWAL AGRO DABA, ROAD, LUDHIANA	08-07-2007	23-06-2023	20000
910	**RGM ENTERPRISES**			
	PLOT NO. 511/6, STREET NO. 2, SHANTI NAGAR, IND. AREA-C,, GIASPURA, LUDHIANA, LUDHIANA	30-01-2014	30-09-2023	5000
911	**R.H. INDUSTRIES**			
	MEDOVI ROAD, OPPOSITE RAILWAY STATION, MALERKOTLA 148023, MALERKOTLA	17-11-2014		2000
912	**RIDER BIKES (P) LTD**			
	VILL:-PAWA, G.T ROAD,, NEAR:- TEXLA T V, LUDIANA-141120., MR. KATOCH ACCOUNTS, LUDHIANA	26-07-2012	16-10-2023	20000
913	**R.I. ENTERPRISES**			
	GURU AMARDASS COLONY,, PLOT NO. 157/3/160/A/1, OPP. GURUDWARA SAHIB, STREET NO. 5, P.S. WOOD SALES, GIASPURA-	31-12-2023		5000
914	**RIO INDUSTRIES**			
	Old Add.:- E-348-A, PHASE-6, New Add.:- B-30, Jeet Colony, Shad Colony,, Vill.:- Gobindgarh, Ludhiana	14-09-2018	23-10-2023	5000
915	**RISHIRAJ MECHANICAL WORKS**			
	D-40, PHASE-5, FOCAL POINT, LUDHIANA.141010	01-05-2019	18-12-2023	2000
916	**RITE SET UNIVERSAL**			
	E-364, PH-6 FOCAL POINT, LUDHIANA	02-11-2007	16-08-2023	2500
917	**R.J ENTERPRISES**			
	PLOT NO-100B,INDUSTRIAL ESTATE, LUDHIANA	22-10-2020		5000
918	**R.K. CYCLE COMPANY**			
	124, LAXMAN NAGAR, MILLER GANJ, LUDHIANA, LUDHIANA	08-10-2013	05-10-2021	4000
919	**R.K. ELECTROPLATING WORKS(338)**			
	338 MOONGHPHALI MANDI, MILLER GANJ GILL ROAD, LUDHIANA	08-07-2007	17-01-2023	3500
920	**R.K. ENGINEERING WORKS DHOLEWAL**			
	13256 Link Road, Dolewal Chowk, LUDHIANA	13-10-2011	07-10-2021	3500
921	**R.K. ENGINEERING WORKS (J.N)3349**			
	3349 STREET NO 4 NEW JANTA NAGAR, LUDHIANA	21-11-2011	21-06-2018	5000
922	**R.K. ENTERPRISES(736)**			
	Old Add.:- 736,INDL AREA-B NEAR SATHI KANDA, New Add.:- Sua Road, Near Eastman Chowk, Mata Mandi, LUDHIANA	15-09-2008	05-10-2021	6000
923	**R.K. ENTERPRISES (SUA ROAD)**			

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	STREET NO. 7, HARGOBIND NAAR,, SUA ROAD, GIASPURA,	29-05-2023		10000
924	**R.K. INDUSTRIES (BMS)**			
	ST. NO. 8/4, PLOT NO. B-XXIX 80/9A/1, BABA MUKAND SINGH NAGAR, DABA ROAD, LUDHIANA	21-07-2022		3000
925	**R.K. KAPOOR CYCLE INDS.**			
	944/1/16G, MAKKAR COLONY,, IND. AREA-C, DHANDARI KALAN, LUDHIANA, LUDHIANA	25-01-2014	27-02-2023	2000
926	**R.K. STEEL (INDIA)**			
	OLD ADD.:- CANAL ROAD, OLD ADD 2 .:- 2634, NEAR QUALITY DHARAM KANDA, NEW ADD.:- B/29/536/35E/39, MAKKAR COLONY, DHANDARI KALAN, BACK SIDE RAVI SUA ROAD	16-07-2015	05-02-2024	2000
927	**R.K. WIRE PRODUCTS**			
	536/35-E/4A, INDUSTRIAL AREA-C,, SUA ROAD, LUDHIAINA.	30-05-2019	23-06-2023	10000
928	**R.M.A. INDUSTRIES**			
	PLOT NO. -B-XXX2185/A148/10, STREET NO. 3, S.P. COLONY,, VILL.:- GOBINDGARH, LUDHIANA	09-07-2019	18-02-2023	4000
929	**RMI TOOLS**			
	INDUSTRIAL AREA-C, 59/2, GURU RAM DASS ROAD, DHANDARI KALAN, LUDHIANA	23-06-2023		5000
930	**R.N. GUPTA & CO. LTD. UNIT II**			
	UNIT II, G.T. ROAD, DORAHA, VILLAGE DORAHA,, PAYAL, DISTT. LUDHIANA-141421	23-02-2015	09-12-2021	90000
931	**R.N. IMPEX PVT. LTD.**			
	E-491-492, PHASE-6, FOCAL POINT, LUDHIANA	02-06-2020		1500
932	**ROBIN INDUSTRIES**			
	K.S. ESTATE, NEAR PHASE-7,, FOCAL POINT, LUDHIANA	10-10-2013		4000
933	**ROCKEY INDUSTRIES**			
	1438 ST NO.31 JANTA NAGAR, LUDHIANA	08-07-2007	23-06-2023	6000
934	**ROCKMAN INDUSTRIES LTD.**			
	MANGLI DIVISION, PHASE-8, FOCAL POINT, LUDHIANA, LUDHIANA	10-07-2015	14-03-2023	6500
935	**ROLEX METALS (P) LTD.**			
	LAKHOWAL ROAD, KOHARA, DISTT.:- LUDHIANA	10-08-2020	19-09-2023	50000
936	**ROOP FINISHING CENTRE**			
	64-R,, INDUSTRIAL AREA-B,, LUDHIANA, LUDHIANA	12-02-2014	23-06-2023	2000
937	**ROSE BIKES**			
	107 R INDUSTRIAL AREA B, LUDHIANA	13-08-2010	23-06-2023	3000
938	**ROSHAN IMPEX(P) LTD**			
	P.NO.-31 S.NO-3, OSWAL AGRO COMPLEX, G.T. ROAD, LUDHIANA	15-05-2010	01-10-2022	10000
939	**ROTER INTERNATIONAL (F.P)**			
	D-188 PHASE VI, FOCAL POINT, LUDHIANA	26-08-2014	30-09-2023	10000
940	**ROTER INTERNATIONAL (SUA ROAD)**			
	SUA ROAD INDL AREA C, DHANDRI KALAN, LUDHIANA	28-01-2014	30-09-2023	5000
941	**ROTHMAN CYCLE PVT LTD**			
	B-32,PHAES-V,FOCAL POINT, LUDHIANA, LUDHIANA	10-09-2008	31-01-2023	10000
942	**ROYAL INDUSTRIES (MANGLI)**			
	21, K.S. ESTATE NICHI MANGLI, PHASE 8 FOCAL POINT, LUDHIANA	16-12-2009	28-04-2021	4000
943	**R.P. ENTERPRISES**			
	B-XXIX-458/2-L/4/5A,, MAKKAR COLONY, SUA ROAD, GIASPURA,	14-07-2018	13-07-2021	4000
944	**R.R. ENTERPRISES 162 INDL ESTATE**			
	162 - B INDUSTRIAL ESTATE, LUDHIANA	08-07-2007	24-04-2023	10000
945	**R.R. INDUSTRIES (113 C)**			
	113-C INDL ESTATE, LUDHIANA	08-07-2007	07-12-2022	8000
946	**R.R. INDUSTRIES (TAJPUR ROAD)**			
	KAKKA ROAD, OPPO. CENTRAL JAIL, TAJPUR ROAD, NAHAVIR COLONY, BACKSIDE OF MAKKAR MILL, LUDHIANA	09-12-2017	16-08-2023	10000
947	**R.S. ENTERPRISES (P.N)**			
	PLOT NO 11112, STREET NO 7, PARTAP NAGAR NEAR BASANT PARK, LUDHIANA	30-01-2014	16-09-2021	5000
948	**R.S INDUSTRIES (NIRANKARI 726)**			
	726,NIRANKARI MOHALLA STREET NO-4 ,, OPP. INDL ESTATE, LUDHIANA.-141003	21-10-2008	25-04-2023	2000
949	**R.S. INDUSTRIES S.C.ROAD**			
	158 AICCTA MARKET SINGLE CYCLE ROAD, DHANDARI KALAN, LUDHIANA-141003	02-11-2011	07-02-2022	20000
950	**R.S. TRADERS (J.N)**			
	OFFICE:- PLOT 6254/2, ST-5, NEW JANTA NAGAR,, NEAR ATI, GILL ~~ROD~~, LUDHIANA, WORK:- 6284/2, NEW JANTA NGR, ST-8, PAPU	16-12-2021		3000

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951	**R.S ZINC**			
	NEW ADD. 730/8 MURADPURA, BACK SIDE NEW CYCLE MARKT, MILLERGANJ, 89/7A/2 ST NO-5, JAIN COLONY, DABA, LUDHIANA	21-08-2008	05-05-2023	1500
952	**RUDRYANSH ENGINEERS**			
	PLOT NO. BXXIX/50/1/D/3, OSWAL SUAR ROAD,, DHABA ROAD, HARGOBIND NAGAR, LUDHIANA	01-12-2021	23-12-2022	3000
953	**SAANVI ENTERPRISES**			
	B-29/2, B/SIDE:-MAAN KANDA,, JASPAL BANGAR ROAD,	18-12-2021		5000
954	**SABHARWAL CYCLE INDUSTRIES**			
	B XV 356 MOONGPHALI MANDI, MILLER GANJ, LUDHIANA.141003	08-07-2007	06-09-2023	9000
955	**SABHARWAL ENTERPRISES**			
	E-415A PHASE-6, FOCAL POINT, LUDHIANA	08-07-2007	20-07-2018	8000
956	**SACHDEVA ELECTROPLATERS**			
	199-B INDL,ESTATE, LUDHIANA	08-07-2007	27-07-2021	5000
957	**SACHDEVA METAL INDUSTRIES**			
	23, INDL AREA, PHAGWARA-144401, PHAGWARA	07-04-2014	23-06-2023	2000
958	**SADASHIV CASTINGS PVT. LTD.**			
	VILLAGE:- MUBARIKPUR, PANDWALA ROAD, DERABASSI, DISTT.:- MOHALI.-140201	28-06-2021		10000
959	**S.A. ENTERPRISES**			
	2581/10,, R.K. ROAD, INDUSTRIAL AREA(OLD ADDRESS), NEW ADDRESS-E-672 A,PH-8,FOCAL POINT, LUDHIANA	27-09-2016	20-10-2022	2000
960	**SAGE ENTERPRISES**			
	PLOT NO. 722, NEAR PREET COAL DEPOT, SHERPUR KALAN,	22-06-2022		3000
961	**SAGGU BROTHERS**			
	1794/1 , STREET NO. 22, JAIMAL ROAD, JANTA NAGAR, LUDHIANA	31-01-2014	23-06-2023	1000
962	**SAHIBA INDUSTRIES**			
	K-143 PH,8 FOCAL POINT, LUDHIANA	17-07-2007	04-08-2022	10000
963	**SAHIB ELECTROPLATING WORKS**			
	B-29/149/1, STREET NO.3 OPP. P.S.E.B, GIASPURA, LUDHIANA-	16-01-2014	25-01-2022	4000
964	**SAHIB ENTERPRISES**			
	STREET NO. 7, PARTAP NAGAR, PLOT NO. 1044, LUDHIANA,	30-01-2014	13-10-2021	3000
965	**SAHIL BROTHERS(Restarted)**			
	H. NO. 1795, STREET NO. 22, JAIMAL ROAD, GILL ROAD LUDHIANA.-141116	23-12-2014	16-08-2023	2000
966	**SAHIL ENTERPRISES**			
	116-C INDL ESTATE,LDH, LUDHIANA	04-09-2008	12-05-2021	4500
967	**SAHIL INDS. (INDIA)**			
	F-38 PH-7 FOCAL POINT, 9780020070, LUDHINA	08-07-2007	28-11-2022	13000
968	**SAI ENTERPRISES E-58**			
	E-58, PHASE-4, FOCAL POINT, LUDHIANA	11-06-2022		5000
969	**SAIMBHI CYCLE & AUTO INDS.(E-672A)**			
	E-672 A PHASE 8 FOCAL POINT, LUDHIANA.-141010	28-03-2008	02-06-2018	6000
970	**SAIMBHI CYCLE & AUTO INDS. UNIT NO.2**			
	C-223, PHASE-8, FOCAL POINT,, LUDHIANA.-141010	17-03-2008	14-10-2020	65000
971	**SAINI BROS. MECHANICAL WORKS**			
	F-25, FOCAL POINT, 146001, HOSHIARPUR	03-10-2015	11-05-2023	2500
972	**SAINI ENTERPRISES**			
	#2458, STREET NO. 3, SEWAKPURA,, KALSIAN STREET, LUDHIANA	05-12-2013	28-06-2022	3000
973	**SAINI INDUSTRIES S.ROAD**			
	OLD ADD.:-# 536/25, C.I. IND.AREA-C,, NEW ADD.:- ST. NO. 5, SHANTI NAGAR, SUA ROAD,, LUDHIANA	04-02-2014	15-03-2021	4500
974	**SAINI PLATING & HARDENING SOLUTIONS**			
	Old Address :-E-39-2, FOCAL POINT,, New Address:- Ganpati Industrial Estate,, Sahnewal - Dehlon Road, Village:- Dharour,	27-09-2017	31-12-2019	2000
975	**SAKSHI ENTERPRISES**			
	Old Add.:- 157/3-160/A/1, STREET NO. 5, New Add.:- Street No. 3, Amarpuri Nr. Welfare Schoo, Near Guemeet Nagar, Giaspura,	14-12-2016	04-06-2021	5000
976	**SALIL WIRES**			
	D-36, FOCAL POINT, NABHA.-147201	18-01-2024		1000
977	**SALUJA ALLOYS**			
	INDL. ESTATE, TIBBA ROAD, CANAL ROAD, DUGRI, LUDHIANA	30-07-2015	27-02-2023	6000
978	**SALVO INDUSTRIES**			
	3564/01 HIRA NAGAR, OPP. TRANSPORT NAGAR, G.T ROAD,	14-10-2014	27-03-2019	1000
979	**SANDEEP ENTERPRISES**			

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	STREET NO. 8/2, DABA ROAD,, NEAR JAIN COLONY, LUDHIANA	06-02-2010	30-12-2022	7000
980	**SANDEEP STEEL TRADERS**			
	SUA ROAD, NEAR SUKHMANI KANDA, KANGANWAL, LUDHIANA	04-11-2023		6000
981	**SANGAM STEEL WIRE**			
	SUA ROAD, OPP. SUKHMANI DHARAM KANDA, DHANDARI KALAN, LUDHAINA	21-11-2023		1500
982	**SANGAT CYCLE INDUSTRIES**			
	C-148, PHASE-V, FOCAL POINT, LUDHIANA, LUDHIANA	18-07-2013	23-09-2013	15000
983	**SANGEETA TOOLS (P)LTD**			
	BEHIND CAMPACOLA FACT,, DHANDARI KALAN, LUDHIANA	08-07-2007	27-02-2023	100000
984	**SANJEEV INDUSTRIES**			
	B-30, FAUJI COLONY, VILL.:- GOBINDGARH, IND. AREA, LUDHIANA	18-08-2014	02-08-2017	4000
985	**SANT FORGING INDUSTRIES**			
	STREET NO. 13, PLOT NO. 2648, DASHMESH NAGAR,, GILL ROAD, LUDHIANA, LUDHIANA	05-12-2013	10-09-2021	3000
986	**SANT INDUSTRIES (14-R , IAB)**			
	14-R,INDUSTRIAL AREA-B,, BACK SIDE,AVON CYCLE, LUDHIANA,	29-08-2008	08-06-2022	5000
987	**SANT RUBBER INDIA**			
	82-C, PHASE-5, FOCAL POINT, LUDHIANA.-141010	03-09-2016	23-10-2023	4000
988	**SANYO (INDIA)**			
	OLD ADD.10085/1, ST. NO. 9,JANTA NAGAR, FROM28/08/17 NEW ADD.:- B/SIDE RAVI KANDA, NEAR EASTMAN CHOWK, SUA ROAD.	22-01-2014	16-05-2022	2000
989	**SARAH ENTERPRISES**			
	Near Railway Stations,Malerkotla, pincode: 148023	05-10-2020		2000
990	**SARJEEVAN INTERNATIONAL**			
	536/31/1, SUA ROAD, OPP:- DURGA MANDIR,, INDUSTRIAL AREA-C, DHANDARI KALAN, LUDHIANA-	23-12-2021		2000
991	**SARLA FOUNDRY & ENGG. WORKS**			
	KAKKARWAL BRIDGE, DHURI-148024, DISTT.:- SANGRUR, DHURI	27-04-2015	23-02-2021	2000
992	**SAROOPSONS INDUSTRIES LTD**			
	C-62, FOCAL POINT, LUDHIANA.-141010	05-07-2014	19-11-2019	1500
993	**SARPANCH INDUSTRIES CORPN**			
	SUA ROAD INDUSTRIAL AREA C DHANDARI KALAN, LUDHIANA.141010, 9876089376	22-11-2012	11-09-2023	25000
994	**SARVODYA ENTERPRISES**			
	F-35 PHASE-7 FOCAL POINT, LUDHIANA	06-09-2007	09-12-2022	30000
995	**SATYA INDUSTRIES PVT. LTD.**			
	A-11 FOCAL POINT, PHASE-5, LUDHIANA, LUDHIANA	15-07-2015	16-01-2023	4000
996	**SATYAM AUTO COMPONENTS LTD.**			
	VILL:-MANGARH, OPP. JASBIR OIL CO., KOHARA, MACHIWARA ROAD, KOHARA, DIST.:- LUDHIANA-141 112., LUDHIANA	09-05-2013	23-06-2023	100000
997	**SATYAM CYCLES PVT LTD**			
	E-570,PH-VI,FOCAL POINT, LUDHIANA, LUDHIANA	30-06-2008	29-08-2017	5000
998	**SATYAM INDUSTRIES**			
	PLOT NO. 8-B, FRIENDS INDUSTRIAL ESTATE,, SHERPUR,	11-07-2023		2000
999	**SAWAN INDIA OVERSEAS**			
	D-191,PHASE-6, FOCAL POINT, LUDHIANA	08-07-2007	30-09-2023	60000
1000	**S.D. MECHANICAL WORKS**			
	2400, ST.NO.13, SHAHED KARNAIL SINGH NAGAR, BACKSIDE MERAO GILL ROAD, LUDHIANA	14-12-2011	16-10-2023	3000
1001	**S.D.STEELS**			
	B-XXIII, 2105, H-4, TEXTILE COLONY, INDL. AREA-A,, LUDHIANA	14-08-2019	18-10-2022	4000
1002	**SEEHRA BROTHERS**			
	INDUSTRIAL AREA-C, NEW AVTAR COLONY, OPPO. G.K. KHAREY KANDA, DHANDARI KALAN, LUDHIANA	25-08-2023		4000
1003	**SEHGAL FORGINGS**			
	BUDHEWAL ROAD,, VILLAGE :- JANDIALI, CHANDIGARH ROAD,	09-01-2015	14-08-2021	10000
1004	**SEHGAL PLASTIC WORKS**			
	C-67 PH-3 FOCAL POINT, LUDHIANA	02-11-2007	14-08-2021	7500
1005	**SEKHON FORGE (INDIA)**			
	FOCAL POINT, D-295, , PHASE-8, FOCLA POINT, NEAR DAINIK JGRAN, CHANDIGARH ROAD,, LUDHIANA	28-02-2023		1000
1006	**SELF ENTERPRISES**			
	B-XXIX, 60/249/43, STREET NO. 2, AMARPURI, DABA-GIASPURA ROAD, LUDHIANA	24-04-2019		1500
1007	**SETH INDL. CORP**			

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	B -28 FOCAL POINT, 80 INDL ESTATE NEAR METRO TYRE, 9872007055, LUDHIANA	08-07-2007	31-08-2022	70000
1008	**SETH STEELS**			
	E-198,199, PHASE-IV, FOCAL POINT, LUDHIANA-141010	10-08-2020	24-05-2022	1000
1009	**SEVEN SKY COMPONENTS**			
	JASPAL BANGAR ROAD, NEAR MAAN COMPUTER DHARAM KANDA,	14-10-2022		1500
1010	**SEWAK COATERS**			
	D-55, FOCAL POINT, PHASE-5, LUDHIANA	18-01-2024		120000
1011	**SEWAK FORGINGS**			
	D65,66 PH-5FOCAL POINT, LUDHIANA	10-10-2007	16-08-2023	25000
1012	**SHADE SYSTEM**			
	HC-23C, PHASE VI, FOCAL POINT, LUDHIANA	24-06-2014	07-12-2021	4000
1013	**SHAHID SPRAY PAINT**			
	JAISWAL COMPLEX,, NEAR BALA JI DYEING, TAJPUR ROAD,	16-11-2015	30-03-2023	3000
1014	**SHAKTI INDUSTRIES**			
	F-313 314FOCAL POINT PHASE VIII, LUDHIANA	23-06-2012	25-07-2020	4000
1015	**SHANKAR UDYOG**			
	10558,ST.NO-9,PARTAP NAGAR, LUDHIANA	24-10-2008	27-05-2023	7000
1016	**SHARDA INDUSTRIES**			
	SHANTI NAGAR, SUA ROAD, DHANDARI KALAN, LUDHIANA	02-12-2023		3000
1017	**SHARMA UDYOG**			
	INDUSTRIAL AREA-C, SINGLA COLONY, NEAR KESHAV KANDA, JASPAL BANGAR ROAD, LUDHIANA	18-01-2024		4000
1018	**SHASHI AUTO FORGING**			
	SANT LONGOWAL COLONY, ARRE WALI GALI, NEAR S.S. LOTEY, KANDA, DHANDARI KALAN, LUDHIANA	05-12-2016	17-06-2021	2000
1019	**SHAYAM INDUSTRIES**			
	E-357, PHASE-6, FOCAL POINT, LUDHIANA	20-08-2022		5000
1020	**SHINE INTERNATIONAL**			
	2185/A-173/1,VILLAGE GOBINDGARH, NEAR ASHOK KANDA	15-06-2022	16-05-2023	6000
1021	**Shine Productions**			
	H.B. -21, Phase-6,, Focal Point, Ludhiana.	03-02-2020		15000
1022	**SHIVA ENTERPRISES**			
	11580,PARTAP NAGAR SANT LANGOWAL STREET, STREET NO.1,	30-09-2011	31-12-2021	3000
1023	**SHIVAI INDUSTRIES**			
	K-248 PH.8 FOCAL POINT, LUDHIANA	08-07-2007	21-06-2022	6000
1024	**SHIVA INDUSTRIES**			
	B-XXX-30/15, STRET NO. 1, GURU GOBIND SINGH NAGAR, DABA ROAD, LUDHIANA	30-08-2022		1000
1025	**SHIVAM AUTO INDUSTRIES**			
	NEAR NANAKSAR DHARAM KANDA, SUA ROAD DHANDRI KALAN,	24-07-2014	08-02-2023	5000
1026	**SHIVAM ENTERPRISES**			
	K-26, PHASE -V11 FOCAL POINT, LUDHIANA	05-12-2008	09-02-2023	2000
1027	**SHIVAM INDUSTRY**			
	A- 1, FOCAL POINT,, NABHA - 147 201., NABHA	04-03-2013	26-02-2021	2000
1028	**SHIVAM PROCESSORS**			
	E-348 PHASE VI FOCAL POINT, LUDHIANA	05-02-2013	13-03-2018	5000
1029	**SHIVANSH ENTERPRISES**			
	INDUSTRIAL AREA -C, SUA ROAD, SUA ROAD, NEAR DURGA MATA MONDIR, OPP. PATROL PUMP, LUDHIANA	13-12-2007	31-01-2023	2000
1030	**SHIV FORGINGS**			
	95-B, INDUSTRIAL AREA A EXTN, LUDHIANA, LUDHIANA	24-07-2013	18-11-2019	15000
1031	**SHIVOHAM INTERNATIONAL**			
	1250/C/K/L, JASPAL BANGAR ROAD, INDUSTRIAL AREA-C, NEAR GARCHA DHARAM KANDA, LUDHIANA	03-01-2024		8000
1032	**SHIV OM TRADING CO.**			
	JEEVAN NAGAR, ST. NO. 18,, FOCAL POINT, LUDHIANA	29-01-2019	11-07-2022	7500
1033	**SHIV SHAKTI ENGG. WORKS**			
	E-707-708, PHASE-VIII, FOCAL POINT, LUDHIANA, LUDHIANA	05-12-2013	27-05-2023	25000
1034	**SHIV SHAKTI ENTERPRISES**			
	NEAR KAMAL KARYANA STORE, BEHIND RALSON TYRE, SUA ROAD, GIASPURA, LUDHIANA	03-09-2016	03-07-2021	3000
1035	**SHIV SHAKTI EXPORTS**			
	F-346 PHASE -5,FOCAL POINT LDH, LUDHIANA	27-07-2013	21-03-2022	5000
1036	**SHIV SHAKTI IMPEX**			

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	Maan Kanda Wali Gali, KABIR COLONY, VILL:- JASPAL BANGAR, LUDHIANA-141122	02-02-2022		2500
1037	**SHIV SHAKTI POWDER COATING**			
	XXIX 511/6/1,-M SHANTI NAGAR, SUA ROAD, GIASPURA, DHANDARI KALAN, LUDHIANA	16-10-2023		1000
1038	**SHIV STEEL INDUSTRIES**			
	DHANDARI LOHARA ROAD, OPP ROAD SINGLA PROPERTY DEALER INDL AREA-C, LUDHIANA	08-03-2010	19-09-2018	11000
1039	**SHREE BAJRANG HARD CHROME**			
	18 B, INDL. ESTATE, LUDHIANA, 85-R, INDUSTRIAL AREA-B, LUDHIANA. NAME CHGD. NEW BAJRANG, LUDHIANA	06-01-2014	13-07-2019	2500
1040	**SHREE BALA JI ENTERPRISES G.PURA**			
	B-29, 511/1N/1B, SHANTI NAGAR, GIASPURA INDUSTRIAL AREA-C., LUDHIANA	11-07-2023		4000
1041	**SHREE BALAJI INDUSTRIES(Dhandari)**			
	PLOT NO 37 ISHWAR COLONY, DHANDARI KHURD, LUDHIANA,	22-10-2018	27-05-2022	7500
1042	**SHREE BALAJI INDUSTRIES GOBINDGRH**			
	VILLAGE-GOBINDGARH, GANESH NAGAR,NEAR.PH-VII,FOCAL POINT, LUDHIANA, LUDHIANA	07-11-2008	19-05-2022	4000
1043	**SHREE ENTERPRISES**			
	STREET NO. 4, ADARSH COLONY,, GIASPURA, LUDHIANA	21-10-2019		3000
1044	**SHREE JI UDYOG**			
	E-423 PHASE-6, FOCAL POINT, 9872980680, LUDHIANA	08-07-2007	23-06-2023	10000
1045	**SHREE KRISHNA ENTERPRISES**			
	OLD ADDRESS.:- B-29/536-25/4, SUA ROAD, NEW ADDRESS :- JASPAL BANGAR ROAD, INDL. AREA-C, NEAR NBALAJI KANDA.	26-04-2017	23-07-2019	8000
1046	**SHREE KRISHNA ISPAT UDYOG**			
	AMLOH ROAD, BEHIND V.D. KANDA, MANDI GOBINDGARH-147301	30-11-2021		3000
1047	**SHREE LUXMI FASTENERS**			
	NEW ADDRESS :- VILLAGE ARAICH,, G.T. ROAD,, DORAHA.141421	18-01-2010	07-12-2022	5000
1048	**SHREE RADHA INDUSTRIES**			
	PLOT NO. 132/38, STREET NO. 3/6, HARGOBIND NAGAR, NEAR MAHADEV HOSPITAL, GIASPURA, LUDHIANA	18-01-2024		5000
1049	**SHRI BALAJI ENTERPRISES (F.P.)**			
	TINY SHED NO. 6, PHASE-6, FOCAL POINT, LUDHIANA.-141010	16-10-2023		4000
1050	**SHRI BALAJI INTERNATIONAL(SHERPUR)**			
	8-B,INDL ESTATE FRIENDS COLONY SHARPUR, OPP AARTI STEEL F.P., LUDHIANA	07-11-2008	11-07-2023	5000
1051	**SHRI CHINTPURNI STEEL AND WIRE**			
	SUA ROAD, DHANDARI KALAN, SUNDER FORGING LANE,	02-12-2023		2000
1052	**SHRI GANESH INDUSTRIES MLKTL.**			
	INDUSTRIAL ESTATE, OPP. ARIHANT SPINNING MILLS, MALERKOTLA 148023, MALERKOTLA	01-02-2016	08-04-2022	2000
1053	**SHRI GOYAM INDUSTRIES**			
	FOCAL POINT EXTENSION, DHANDARI KHURD, LUDHIANA	07-08-2020		1000
1054	**SHRI JAI DURGA INDUSTRIES**			
	KOTHE RAMSAR, BAJAKHANA ROAD, BARNALA.148101	29-11-2021		2000
1055	**SHRI MAHAVIR INDUSTRIES**			
	E-700, PHASE-8, FOCAL POINT, LUDHIANA	26-07-2022		5000
1056	**SHRI RAM INTERNATIONAL**			
	OLD ADDRESS :-757, NIRANKARI ST. NO. 6, NEW ADRESS :- 241/A, INDL. AREA-C., DHANDARI KALAN, EASTMAN CHOWK.	11-07-2015	06-06-2023	5000
1057	**SHRI RAM UDYOG**			
	H. 55, ISHWAR COLONY, R.P. INDUSTRIAL ESTATE, DHANDARI KALAN, LUDHIANA.	04-11-2019	09-12-2022	4000
1058	**SHRI SHYAM STEEL AND WIRE INDUSTRIES.**			
	Near Harbans Cold Storage, Village:- Tooran, Amloh Road, Mandi Gobindgarh.-147301	13-11-2023		1500
1059	**SHRI S.N INDUSTRIES**			
	MAHADEV NAGAR, ST.NO.1, OPP:- G.K. KHAREY KANDA, NEAR:- GIAN VIDYA MANDIR SCHOOL, MAIN LOAHARA ROAD., LUDHIANA-	30-11-2021		4000
1060	**SHYAM PUSHP ENGINEERS**			
	PLOT NO. 11, R.P. INDL. ESTATE, ISHWAR COLONY, GOBINDGARH-SUAROAD, LUDHIANA	21-01-2015	23-06-2023	6500
1061	**SIDANA INDUSTRIES (SUA ROAD)**			
	B-XXIX, 476/7, A/1, SUA ROAD, GALI NO. 3, GIASPURA, LUDHIANA, LUDHIANA	25-01-2014	19-07-2022	5000
1062	**SIDANA WIRES**			
	GIASPURA, SUA ROAD, G.T.ROAD,, OPP.AASHIRWAD DHARAM KANDA, Ludhiana-141003	03-12-2021		6000

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1063	**SIDH TOOLS LIMITED**			
	P.O HEERA VILLAGE PANGLIA, NEAR KOHARA, LUDHIANA	06-09-2007	12-04-2021	4200
1064	**S.I. INTERNATIONAL**			
	OLD ADD.:-E-194 PHASE-4, NEW ADD.:- 42, LAKHOWAL INDUSTRIAL AREA,, KOHARA-LAKHOWAL ROAD, VILLAGE:- MEHLON KOHARA LUDHIANA	08-07-2007	24-03-2023	6000
1065	**SIMRAN AUTO BLACK**			
	H.N. 15250 STREET NO 8 GURU ARJUN DEV NAGAR, NEAR MILTARY CAMP, LUDHIANA	05-09-2012	07-11-2022	3000
1066	**SIMRAN ENGINEERS**			
	1066/4B-XVI, SEWAKPURA, LUDHIANA	08-07-2007	06-02-2023	3000
1067	**SIMRAN POWDER COATING**			
	1486, STREET NO. 8, DASHMESH NAGAR, LUDHIANA, LUDHIANA	31-01-2014	14-02-2018	3000
1068	**SIMRAN POWDER COATING UNIT 2**			
	# 993, ST. NO. 7, DASHMESH NAGAR, GILL ROAD LUDHIANA.-	10-02-2014	12-02-2024	2000
1069	**SINGH ALUMINIUM AND POWDER COATERS**			
	VILLAGE :- JAMALPUR, RAJLA ROAD, SAMANA-147101 DISTT.:- PATIALA. 147101	14-05-2019		1000
1070	**SINGHANIA INTERNATIONAL LTD**			
	C-25,PHASE-1, FOCALPOINT, DHANDARI KALAN, 9356681418,	06-08-2013	23-11-2021	6000
1071	**SINGLA STRIPS & TUBES (P)LTD**			
	D-39 PH 5,FOCAL POINT, LUDHIANA	06-09-2007	29-10-2021	15000
1072	**SITAL METAL INDUSTRIES**			
	D-138A, PHASE-5, FOCAL POINT, LUDHIANA	18-03-2008	03-06-2019	5000
1073	**S.J.K. INDUSTRIES**			
	ST. NO. 2, S.P. COLONY, VILL.:- GOBINDGARH,, P.O. JUGIANA, BACKSIDE SENTEX FACTORY, FOCAL POINT, LUDHIANA	19-09-2022		4000
1074	**S.K. AGGARWAL & CO.**			
	OLD ADDRESS :-103, AICTTA MARKET,, NEW ADD.:- INDUSTRIAL AREA-C, NR. PSPCL SUB STATION, KANGANWAL, LUDHIANA-	11-01-2014	07-06-2021	50000
1075	**S.K. BIKES PVT LTD (D-233)**			
	D 233 234 235 PHASE VII, FOCAL POINT, 7837140044 DINEET JI 9417936422, LUDHIANA	20-10-2011	30-09-2023	70000
1076	**S.K. BIKES PVT. LTD. UNIT II**			
	Old Add.:- INDUSTRIAL AREA -C, New Add.:- E-432, Phase-6, Focal Point, Ludhiana	04-03-2016	23-10-2023	20000
1077	**S.K. BIKES UNIT-3**			
	PLOT NO. C-83, PHASE-5, DHANDARI KALAN, FOCAL POINT,	15-07-2020	30-09-2023	80000
1078	**S.K. BROTHERS**			
	PLOT NO.149/4-A ST. NO.3, GIASPURA , NR.STATE BANK, LUDHIANA, LUDHIANA	08-07-2007	24-11-2021	5000
1079	**S.K. CHOPRA**			
	512/9A, SHANTI NAGAR, ATI ROAD, LUDHIANA	28-11-2017	02-03-2023	1500
1080	**S.K CYCLE INDUSTRIES**			
	E-750,PHASE-8,FOCAL POINT, MANGLI,LUDHIANA.-141003	01-12-2021	31-12-2023	18000
1081	**S.K. ENTERPRISES (DABA)**			
	OSWAL AGRO COMPLEX, IND AREA-C, DABA ROAD, LUDHIANA	16-01-2014	31-08-2017	6000
1082	**S.K. ENTERPRISES PHAGWARA**			
	G.T. ROAD, METHAN, NEAR DOABA SPUN PIPE, PHAGWARA-144401., PHAGWARA	22-01-2014	18-03-2020	2000
1083	**S.K. INTERNATIONAL**			
	B-XXIX-536/35-B/1A/A, MAKKAR COLONY, INDUSTRIAL AREA -C, SUA ROAD, LUDHIANA	03-11-2015	04-06-2022	3000
1084	**S.K.MECHANICAL WORKS G.PURA**			
	SHANTI NAGAR, GIASPURA, NEAR AVON CYCLE, IND. AREA-C,, LUDHIANA, LUDHIANA	31-01-2014	03-08-2017	5000
1085	**S.K. MECHNICAL WORKS (E-210)**			
	E-210 PH.-4 FOCAL POINT, LUDHIANA	08-07-2007	29-10-2021	10000
1086	**SKS ECO WHEELS PVT. LTD.**			
	PLOT NO. 249, VILLAGE KANGANWAL, JASPAL BANGAR ROAD,	25-08-2023		20000
1087	**SKYCON INDUSTRIES**			
	JASPAL BANGAR ROAD, NEAR CHUNGI, INDL. AREA-C, LUDHIANA	04-10-2016	11-07-2019	2500
1088	**SKYWAY FORGE**			
	V.P.O.:- JUGIANA, G.T. ROAD, LUDHIANA	08-08-2017	23-06-2023	2000
1089	**S.M. INDUSTRIES**			
	OLD ADD. 836- INDL AREA -A , LDH, NEW ADD., B/28/536-35/E, INDUSTRIAL AREA C EXTENSTION,, JASPAL BANGAR BACKSIDE MANN KANDA LDH	06-04-2010	21-02-2023	5000

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1090	**S.N. BROTHERS**			
	A-13F,, FOCAL POINT, PHASE-6, LUDHIANA	16-04-2018	06-04-2022	8000
1091	**S.N. ENTERPRISES (HCL)**			
	B-XXX-2185/FPE/13, FOCAL POINT EXTENSION, PHASE-7,	22-11-2022		10000
1092	**S.N. INDUSTRIES**			
	OPPOSITE :- BIRDI KANDA, KANGANWAL, LUDHIANA	04-08-2020	06-09-2023	8000
1093	**SNV INFOTECH**			
	NEAR RAMGARH ROAD, 863/6, ACTORY AREA- B-6-A-1, G.T. ROAD, DORAHA, LUDHIANA.141427	17-06-2022	11-07-2023	2000
1094	**SOHAM ENTERPRISES**			
	OLD:-#458/2L/1C,ST NO 3GIASPURA, SUA ROAD., NEW:-536/35D/8A/2B/10, INDL.AREA-C, DHANDARI KALAN, JASPAL BANGAR, LUDHIANA	25-10-2018	13-07-2021	2000
1095	**SOKHI AUTO INDUSTRIES**			
	497 INDUSTRIAL AREA B, LUDHINA	21-06-2011	19-10-2021	1000
1096	**SOKHI INDUSTRIES P. NAGAR**			
	H. NO. 11063, STREET NO. 8, PARTAP NAGAR, LUDHIANA,	30-01-2014		2000
1097	**SOMANU INDUSTRIES**			
	B-XX1-14536, STREET NO. 9, BHAGWAN NAGAR, G.T. ROAD, NEAR MEFA NEEDLES, LUDHIANA	12-08-2016	30-07-2019	2000
1098	**SOND BROTHERS**			
	476/6-A, ST. NO. 3, BACK SIDE AVON CYCLE, SUA ROAD, SHANTI NAGAR, INDL. AREA-C,, GIASPURA, LUDHIANA.	04-11-2019		2000
1099	**SONI INDUSTRIES (GILL ROAD)**			
	PLOT NO. 792,, INDUSTRIAL AREA-B, GILL ROAD,, LUDHIANA	18-10-2013	22-06-2020	2000
1100	**SONU ELECTROPLATING WORKS**			
	F-259 PHASE-VIII FOCAL POINT, LUDHIANA	15-07-2007	19-06-2017	3600
1101	**SONU ENGG WORKS**			
	54-55,NIRMAL MARKET LDH GILL ROAD, LUDHIANA	22-09-2008	12-03-2014	7000
1102	**SOOD INDUSTRIES**			
	# MAIN SUA ROAD,, OPPO. :- SINGLA PETROL PUMP, INDUSTRIAL AREA-C, LUDHIANA	08-07-2007	03-06-2022	15000
1103	**SOURAV ENTERPRISES**			
	PLOT NO. 89/3D/1, STREET NO. 5, BMS NAGAR, DABA RAOD, G.T. ROAD,, LUDHIANA	03-08-2016	16-02-2017	3000
1104	**SOUVENIER INTERNATIONAL 147**			
	BXXXI-147, GIASPURA ROAD, OPP., PSPCL, 9814323324,	17-12-2010	12-04-2022	25000
1105	**SOVEREIGN INDUSTRIES.**			
	Old Add.:- 168-B INDUSTRIAL ESTATE, New Add.:- Plot No. B-29/536/21, Indl. Area-C, Dhandari, Ludhiana	06-09-2007	18-12-2023	10000
1106	**SOVIK AUTOS PVT. LTD.**			
	G.T. ROAD, DHANDARI KHURD,, LUDHIANA.	01-09-2023		25000
1107	**S.P.INDUSTRIES**			
	507/1 NEAR PSEB OFFICE, GIASPURA, LUDHIANA	19-05-2011	13-11-2023	3000
1108	**SPUTNIK SWITCHGEARS P. LTD.**			
	G.T. ROAD, GORAYA 144409, DISTT. LUDHIANA, GORAYA	01-02-2016	30-09-2023	2000
1109	**S.R. ENGINEERING WORKS (F.P.)**			
	PLOT NO. 8, JEET COLONY, NEAR K.S. ESTATE, ADJ. PH-7,, VILL. GOBINDGARH, LUDHIANA	17-05-2017	11-11-2022	1000
1110	**S.R. INDUSTRIES**			
	ST. NO. 3 PLOT NO. 30/34 A, GURU GOBIND SINGH NAGAR, B/SIDE APOLLO HOSPITAL DABA ROAD, LUDHIANA	22-02-2014	19-06-2020	4000
1111	**SRI TOOLS INDUSTRIES PVT. LTD.**			
	E-183-184-185 PHASE-4, FOCAL POINT, LUDHIANA	14-12-2022		25000
1112	**S.R. KHANNA & SONS**			
	138-C, INDUSTRIAL ESTATE,, LUDHIANA	21-04-2008	21-07-2015	4000
1113	**S R PRESS COMPONENTS**			
	Vill.:- Malipur, Tehsil Payal, Doraha, District Ludhiana.141421	11-09-2021		7000
1114	**S.R. STEEL AND WIRE (H)**			
	BEHIND BUDHEWAL SUGAR MILL, VILL. PAHARUWAL, CHANDIGARH ROAD, LUDHIANA.141112	04-03-2023		5000
1115	**S.S. BIRDI ENTERPRISES**			
	ST. NO. 7, HARGOBIND NAGAR,, OSWAL COMPLEX, NEAR HERO CYCLES (CR DIV),, LUDHIANA	10-02-2010	26-12-2019	5500
1116	**S.S. ENTERPRISES (NEW)**			
	OLD ADD.:- GURU AMARDAS NAGAR, ST. NO. 3, NEW ADD:-MADHAV NAGAR, OPP. KHAIREY KANDA, LOHARA ROAD, EASTMAN CHOWK, INDL. AREA-C, LUDHIANA	23-12-2015	09-12-2021	6000

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1117	**S.S. ENTERPRISES (SHANTI NGR)**			
	ST. NO. 2, SHANTI NAGAR, GIASPURA B/SIDE RALSON TYRES, LUDHIANA, LUDHIANA	16-01-2014	01-06-2021	4000
1118	**S.S. FINISHING INDUSTRIES**			
	1250/G/26/1, GURU NANAK INDL. ESTATE, NEAR MANN KANDA, JASPAL BANGAR, LUDHIANA	31-01-2014	16-11-2020	10000
1119	**S.S. INDUSTRIAL WORKS SUA ROAD**			
	ST. NO. 1, SHANTI NAGAR, BACKSIDE AVON CYCLE LTD.,, SUA ROAD, IND. AREA-C, LUDHIANA, LUDHIANA	10-12-2013	25-08-2023	5000
1120	**S.S. INDUSTRIES (F.P)**			
	NEW.ADD. PLOT NO.14B,39,R.P LAND,, FOCAL POINT, ISHWAR COLONY, DHANDARI, KHURD, LUDHIANA ,141010	23-01-2015	19-09-2023	3000
1121	**S.S. INDUSTRIES (H)**			
	JASPAL BANGAR ROAD,, NEAR MANN KANDA, INDL. AREA-C,,	16-08-2023		2500
1122	**S.S.K. CYCLE INDUSTRIES**			
	H. NO. 5594, GALI NO. 22,, HARGOBIND SINGH DABA ROAD, NEAR SHIMLA PURI, LUDHIANA	02-11-2023		1600
1123	**S.S.MALHOTRA INDUSTRIES**			
	K-274, PHASE-8, MANGLI, FOCAL POINT, LUDHIANA	14-12-2016	27-05-2023	15000
1124	**S.S. PRODUCTS OF INDIA**			
	VILL.-GILL, MALERKOTLA ROAD, NEAR: JK RESORTS,LUDHIANA-141116, LUDHIANA	10-09-2013	03-05-2022	30000
1125	**S.S. SINGLA AND SONS**			
	INDUSTRIAL AREA-C, SUA ROAD, NEAR MANSAROVER CHOWK, KANGANWAL, LUDHIANA-141017	19-07-2022		2500
1126	**S.S & SONS**			
	602-1-B STREET NO. 1, GARCHA COLONY, CAMPA COLA ROAD, DHANDARI KALAN, OLD ADDRESS :- 12298/1 RAMNAGR,	13-07-2012	17-11-2022	3000
1127	**STAR INDUSTRIES IND AREA**			
	JASPAL BANGAR ROAD,, INDUSTRIAL AREA-C, EXTENTION, NEAR MANN KANDA, GIASPURA, LUDHIANA	23-10-2023		3000
1128	**STATIC CONTROL SYSTEMS PVT. LTD.**			
	D-236, FOCAL POINT,, PHASE-7, LUDHIANA	19-07-2017	23-10-2023	1000
1129	**S.T. BIKES**			
	UCO BANK ROAD, VILLAGE AND P.O. JUGIANA, LUDHIANA	23-12-2017		10000
1130	**STEEL CRAFT(INDIA)**			
	E-11 PH-4 FOCAL POINT, LUDHIANA	08-07-2007	27-05-2023	10000
1131	**STEEL STRIPS WHEELS LTD.**			
	VILL.:- LEHLI, SOMALHERI, NH-22,, 21 K.M. FROM AMBALA, P.O. DAPPAR, , DISTT.:- MOHALI, 140055	20-08-2019	23-03-2023	120000
1132	**STELU INDUSTRIES**			
	D-218, PHASE-VII, FOCAL POINT., LUDHIANA-141010	16-12-2021	18-08-2023	2000
1133	**STERLING CED COATERS**			
	PLOT NO., 137, G.T. ROAD, OPPOSITE GOYAL HYUNDAI, JUGIANA, LUDHIANA	19-09-2023		5000
1134	**STRUT SUPPORT SYSTEMS**			
	JASPAL BANGAR ROAD, JASPAL KANDA, INDL. AREA-C, DHANDARI KALAN, LUDHIANA	15-09-2018		4000
1135	**SUBHASH AND SONS F.P.**			
	B-30, NICHI MANGLI, PHASE-7, JEET COLONY, FOCAL POINT,	29-05-2017	28-01-2021	10000
1136	**SUBHASH ELECTRO PLATING**			
	PLOT NO. E-357, PHASE-6, FOCAL POINT,, LUDHIANA	23-06-2023		1000
1137	**SULTAN CYCLES**			
	B-XXIX- 536/26-A-1, SINGLA CYCLE ROAD, DHANDARI KALAN,	24-06-2017	17-05-2021	5000
1138	**SUMIT ENTERPRISES (DHANDARI)**			
	B-29-1011/1E, GURU NANAK COLONY, NEAR SURJIT CINEMA,, DHANDARI KALAN, LUDHIANA	18-11-2017	09-06-2022	2500
1139	**SUMIT ENTERPRISES (IA-B)**			
	497 INDUSTRIAL AREA B, LUDHIANA	11-04-2009	15-06-2020	6000
1140	**SUMIT ENTERPRISES (IND. AREA - A)**			
	86-B, INDUSTRIAL AREA-A EXTENSION, LUDHIANA	21-12-2018	23-06-2023	5000
1141	**SUMMAN CYCLE INDUSTRIES(G.TROAD)**			
	DHANDARI KALAN G.T. ROAD OPP G.S. AUTO, 9815757326,	10-09-2012	11-01-2023	15000
1142	**SUNDER SHAM CYCLES (F.P) (241)**			
	D-241 PH-7 FOCAL POINT, LDH,.9814500678, LUDHIANA	09-07-2008	31-03-2023	36000
1143	**SUNMAC INTERNATIONAL**			
	C-101,PH-5,FOCAL POINT,, LUDHIANA, LUDHIANA	04-09-2008	23-07-2019	10000
1144	**SUNNY ENTERPRISES**			

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	AHATA NARAIN DASS, MILLERGANJ LDH, LUDHIANA	24-09-2008	31-01-2023	3000
1145	**SUNRAX STEEL STRIPS & TUBES**			
	OSWAL COMPLEX, G.T. ROAD., JUGIANA, LUDHIANA-141017	26-11-2021		60000
1146	**SUNSHINE INDUSTRIES**			
	3866/1, NEW JANTA NAGAR, ST. NO. 3, DABA-GILL ROAD, LUDHIANA-141003. LUDHIANA	11-12-2015	04-07-2018	3000
1147	**SUNSHINE INTERNATIONAL**			
	D-348 PH-8 FOCAL PIONT, 9872884445, LUDHIANA	23-05-2012	02-12-2020	8000
1148	**SUPER CHEMICALS (INDIA)**			
	G.T. ROAD, DABA ROAD, LUDHIANA, LUDHIANA	12-12-2013	02-02-2023	4000
1149	**SUPERIOR AUTOS**			
	E-705, PHASE-VIII, FOCAL POINT, LUDHIANA-141010	06-07-2020	23-01-2023	15000
1150	**Super Star Industries**			
	858, Nirankari Street No. 5, Miller Ganj, Ludhiana	06-06-2019		1500
1151	**SUPER STEEL INDUSTRIES**			
	SHANTI NAGAR, IND. AREA-C,, SUA ROAD, GIASPURA, LUDHIANBA. LUDHIANA	25-01-2014	09-02-2023	2500
1152	**Super Tractor Industries Pvt Ltd**			
	P.O. GILL, GILL ROAD, NEAR GNE COLLEGE, LUDHIANA, LUDHIANA	14-08-2015	11-05-2022	10000
1153	**SURAJ COMPONETS PVT LTD**			
	C -107 PHASE -5 FOCAL POINT, LUDHIANA, 9779913995 8146671998. LUDHIANA	08-01-2013	26-10-2018	20000
1154	**SURAJ CYCLE PVT. LTD.**			
	A-3 FOCAL POINT, LUDHIANA	10-12-2010	23-06-2023	20000
1155	**SURAJ HINGES PVT. LTD.**			
	18 INDUSTRIAL ESTATE, BACKSIDE PSEB, RAJPURA 140401, RAJPURA TOWN	23-09-2015	30-01-2023	5000
1156	**SURFACE FINISHERS AND PROCESSORS (UNIT RALSON)**			
	SINGLE CYCLE ROAD, OPP. DHANDARI RAILWAY STATION,	15-11-2018	02-03-2022	8000
1157	**SURINDRA CYCLE (P) LTD**			
	C-195, PH-7 FOCAL POINT, 9855588890, LUDHIANA	02-11-2007	01-07-2022	35000
1158	**SURINDRA SADDELS**			
	Old Address-K-85, Phase-7, Focal Ppoint, Ludhiana New Address K-33 Ph-7 Focal Point Ludhiana	05-12-2007	26-07-2021	6000
1159	**SURINDRA STEELS F.P.**			
	FOCAL POINT EXTN., NEAR PHASE-7,, DHANDARI KHURD,, LUDHIANA-141010	30-01-2014	06-09-2023	5000
1160	**SURJIT MECHANICAL WORKS**			
	2750 CHET SINGH NAGAR STREET NO4 RADHA SWAMI ROAD,	18-10-2011	19-09-2023	6000
1161	**SURYA POWERTECH & GEARS PVT. LTD.**			
	FOCAL POINT EXTENSION, NEAR PHASE-8, DHANDARI KHURD,	26-06-2017	09-01-2023	2500
1162	**SUSHIL INDUSTRIES**			
	VILLAGE KANECH, G.T. ROAD, SAHNEWAL, LUDHIANA.141024	11-07-2023		10000
1163	**SWAMI FOUNDARY AND MECH. WORKS**			
	G.T. ROAD,, VILL.:- ALOUR 141401, BEHIND JAGDAMBEY COMPUTER KANDA. KHANNA	22-11-2016		2000
1164	**SWARAN AUTO INDUSTRIES**			
	E-278 AND 279, PHASE-4A, FOCAL POINT, LUDHIANA	09-01-2018	22-01-2021	7000
1165	**SWARN AMRIT WIRE**			
	NEAR BARKAR KANDA WALI GALI, B-29-944/2/I/R, DHANDARI KALAN., INDUSTRIAL AREA-C., LUDHIANA.	11-07-2023		3000
1166	**SWARN INDUSTERIES(6-R)**			
	6-R INDUSTRIL AREA-B NEAR SHAN SEWING MACHION, LUDHIANA. LUDHIANA	25-06-2008	16-02-2023	5000
1167	**SWARN SINGH & SONS**			
	OLD ADD.:- F-37 PHASE-7 FOCAL POINT LUDHIANA, NEW ADD. :- RAMGARH ROAD, NEAR HP GAS GODOWN, LUDHIANA.141123	25-06-2008	23-08-2022	2000
1168	**SWARUP MECHANICAL WORKS**			
	BXXX KAILASH NAGAR SHERPUR BYE PASS, LUDHIANA	27-12-2011	25-02-2022	16500
1169	**SWASTIK ELECTROPLATING**			
	SHIWALIK UDYOG, B-42, PHASE-6,, FOCAL POINT, LUDHIANA	14-10-2022	18-12-2023	4000
1170	**SWATI INDUSTRIES D-97**			
	PLOT NO. D-97, PHASE-5, FOCAL POINT, LUDHIANA	21-01-2022	16-10-2023	10000
1171	**SWATI INDUSTRIES UNIT (IV) D-71A**			
	D- 71 A PHASE 5 FOCAL POINT, LUDHIANA	12-05-2012	17-02-2020	20000
1172	**SWAYAM ENTERPRISES**			

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	9-B, R.P. ESTATE, PREM NAGAR, DHANDARI TO LOHARA ROAD, LUDHIANA. LDHIANA	19-06-2018	29-03-2023	3000
1173	**SYNERGY INDIA**			
	B-34- INDUSTRIAL ESTATE, 9592279500, LUDHIANA	20-03-2017	30-06-2021	10000
1174	**SYSTEC INTERNATIONAL**			
	D-34 PH 5 FOCAL POINT., LUDHIANA	29-07-2010	16-10-2023	130000
1175	**TAJAKA INCORPORATION**			
	PLOT NO. # 2, C-1,, JASPAL BANGAR ROAD, KANGANWAL, IND. AREA-C,. LUDHIANA	28-01-2014	21-06-2022	2500
1176	**TAJINDERA ENTERPRISES NEW**			
	NEW ADD.:- SHANTI NAGAR, B/SIDE, AVON CYCLE, GIASPURA, LUDHIANA. LUDHIANA	10-10-2018	12-08-2021	2000
1177	**TAJ INTERNATIONAL**			
	BLOCK-C, B/SIDE G.N.E. COLLEGE, ISHER NAGAR,, LUDHIANA-141001. LUDHIANA	07-09-2015	12-12-2022	1000
1178	**TAJ MACHINE TOOLS**			
	716, INDUSTRIAL AREA-B,, LUDHIANA, LUDHIANA	23-01-2014	31-07-2023	6000
1179	**TAJ SEWING MACHINE COMPANY**			
	PLOT NO. D-123-124-125, PHASE-5, FOCAL POINT, LUDHIANA	12-12-2017	29-03-2023	2000
1180	**TAMRON CAMS**			
	E 763 PHASEV1 FOCAL POINT, LUDHIANA	23-03-2011	19-07-2019	3000
1181	**T.C FINISHING CENTRE**			
	STREET NO.1 SHANTI NAGAR,, IND AREA-C SUA ROAD GIASPURA, LUDHIANA	18-01-2014	01-07-2022	5000
1182	**TECH AUTO PVT LTD**			
	C-37, PHASE-II, FOCAL POINT, LUDHIANA	23-04-2014	11-11-2022	5000
1183	**TECH CHEM**			
	K-363, PHASE-8, FOCAL POINT, LUDHIANA	05-02-2024		2000
1184	**TECHNO CROME INDIA UNIT-II**			
	1226/6-B/13 BACKSIDE KRISHNA AUTO, DHANDRI, G.T ROAD,	31-07-2014	23-06-2023	5000
1185	**TECHNOMECH IMPEX**			
	PREMIER INDUSTRIAL COMPLEX, NICHI MANGLI, CHANDIGARH ROAD. LUDHIANA	03-06-2023		10000
1186	**Tech Tube Enterprises (Prev. Technico)**			
	2nd Mile Stone G.T. Road, Doraha, Ludhiana.141421	05-04-2023		145000
1187	**TEJ ENTERPRISES**			
	716, INDUSTRIAL AREA-B, LUDHIANA	17-01-2022		3000
1188	**TEX SPARES (INDIA)**			
	A-35, TEXTILE COLONY,, INDUSTRIAL AREA-A,, LUDHIANA,	08-08-2015	15-06-2021	2000
1189	**THE BOMBAY METAL WORKS (P) LTD.**			
	703, INDUSTRIAL AREA-A,, LUDHIANA	14-06-2008	12-02-2022	50000
1190	**THE MALERKOTLA ELECTROPLATERS ASSOCIATION**			
	NABHA ROAD, MALERKOTLA, 148023	09-03-2020	30-01-2023	140000
1191	**Thread Rod Exports (India)**			
	E-317, Phase-Iv A, Focal Point, Ludhiana	26-02-2021		2000
1192	**THUKRAL INDUSTRIES**			
	414, HARKRISHANPURA , MILERGANJ, LUDHIANA	03-02-2014	11-11-2021	2000
1193	**TINA ZINC INDUSTRIES**			
	OLD ADDRESS :- H. NO. 1765, ST. NO. 8, NEW ADDRESS :- 625, INDUSTRIEAL AREA-B. LUDHIANA	14-01-2014	22-03-2018	2000
1194	**TISCO INDUSTRIES**			
	P-16.17,OSWAL AGRO INDUSTRIES, COMPLEX,ST.NO-2.1/2,DABA ROAD, NEAR P.S KANDA.LDH. LUDHIANA	15-09-2008	16-06-2022	6000
1195	**TIWARI INDS**			
	6-R INDUSTRIAL AREA B, LUDHIANA, LUDHIANA	04-09-2009	23-06-2023	5000
1196	**TRBEX IMPEX PVT. LTD.**			
	B-XXIX-945/C-2, INDUSTRIAL AREA-C,, KANGANWAL, SUA ROAD,, LUDHIANA	13-02-2020	27-05-2023	5000
1197	**T.R. BOLT HOUSE**			
	B-29-2, NEAR RAVI KANDA, SUA ROAD GIASPURA, LUDHIANA	18-01-2024		2000
1198	**T.R. INDUSTRIES**			
	B-29-2, MAHALUXMI KANDA WALI GALI, JASPAL BANGAR,	18-01-2024		2000
1199	**TRIVENI ENTERPRISES**			
	536/43-N/20P/1R, ZONE-C, MAHADEV NAGAR, DHANDARI KALAN, LUDHIANA	21-07-2022		4000
1200	**T.S. ENTERPRISES**			

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	GOVT. SCHOOL ROAD,, JASPAL BANGAR, LUDHIANA	11-07-2023		2000
1201	**TUBE INVESTMENT OF INDIA LTD.**			
	A-16-17, INDUSTRIAL AREA, FOCAL POINT, PHASE-6, MOHALI,	20-12-2020	20-12-2020	51000
1202	**TUBE INVESTMENT OF INDIA LTD. RAJPURA**			
	VILLAGE :- SANDHARSI, TEHSIL RAJPURA, DISTRICT :- PATIALA,	15-01-2021	24-05-2023	30000
1203	**TURBO COATINGS**			
	5023/5, STREET NO. 6, NEAR QUALITY CHOWK, SHIMLAPURI,	03-12-2016	19-09-2023	2000
1204	**TURBO COATINGS (UNIT-II)**			
	BACK SIDE BALWINDER TOOLS,, NEAR EASTMAN CHOWK, SUA ROAD,, LUDHIANA	23-10-2023		2000
1205	**TURBO CORPORATION INDIA**			
	STREET NO. 1, TAREA ESTATE, NEAR MINI ROCK GARDEN, GIASPURA, LUDHIANA	09-09-2016	02-12-2023	1500
1206	**TURBO INDUSTRIES PVT. LTD.**			
	SURJIT CINEMA ROAD, INDUSTRIAL AREA-C, DHANDARI KALAN,	02-01-2021	13-11-2023	50000
1207	**TURBO TOOLS PVT. LTD.**			
	D-172-173-175, PHASE-6, FOCAL POINT, LUDHIANA	02-01-2021		16000
1208	**TUSHAR ENGINEERS (C-185)**			
	C-185, PHASE-6, FOCAL POINT, LUDHIANA	28-08-2019	18-01-2024	18000
1209	**TUSHAR ENGINEERS (E-266)**			
	E-266 E PHASE-IVA, FOCAL POINT,, LUDHIANA-141010	15-11-2007	17-01-2022	20000
1210	**TUSHAR ENGINEERS (RAJPURA)**			
	VILLAGE:- SANDHARSI, TEHSIL,, RAJPURA DISTT. PATIALA.140417	16-10-2023		30000
1211	**TVA STAR STEEL PVT. LTD.**			
	VILLAGE :- TALWARA, G.T. ROAD GOBINDGARH	11-11-2021		200000
1212	**UBHI ALUMINIUM**			
	PLOT NO. 57/R, IND. AREA-B, GILL ROAD, LUDHIANA	27-07-2017	17-06-2022	1000
1213	**UBHI PRODUCTS INDIA**			
	3621/A STREET NO 4 CHET SINGH NAGAR GILL ROAD LUDH,	30-07-2012	20-01-2023	8000
1214	**UDAY COLOUR AND CHEMICALS P. LTD.**			
	JASPAL BANGAR ROAD, INDUSTRIAL AREA-C, LUDHIANA	30-11-2021		1500
1215	**UDHERA FASTENERS LTD**			
	BUDHEWAL SUGAR MILL ROAD, VPO JANDIALI, 9501023716,	08-10-2009	28-06-2022	10000
1216	**UDHERA MECHANICAL WORKS**			
	D-87 AND 88 PHASE-5, FOCAL POINT, LUDHIANA	19-12-2016	24-10-2020	20000
1217	**UJJALA PRODUCTS**			
	Old Address :- SINGLA COLONY, INDUSTRIAL ARE-C, New Add.:- Mann Kanda Street, Indl. Area-C, Jaspal Bangar Road,, Ludhiana	16-10-2013	13-11-2023	2500
1218	**UMA INDUSTRIES**			
	STREET NO. 1, SHANTI NAGAR, BACKSIDEOF RALSON, GIASPURA, LUDHIANA	01-12-2017	17-12-2020	3000
1219	**UNISHED ENTERPRISES**			
	STREET NO.9 ,, BABA MUKAND SINGH NAGAR, DABA ROAD,	04-05-2017	11-09-2020	5000
1220	**UNITED ELECTROPLATERS (114)**			
	E-114 PH-4 FOCAL PIONT, LDH, LUDHIANA	08-07-2007	01-03-2023	50000
1221	**UNITED MARATHON ENGINEERS (P) LTD. D-128**			
	D-128, PHASE-5, FOCAL POINT, LUDHIANA	26-11-2021		35000
1222	**UNITED MARATHON ENGINEERS (P) LTD. UNIT-2**			
	D-349, PHASE-8, FOCAL POINT, LUDHIANA	28-11-2016	16-08-2023	75000
1223	**UNITED MARATHON ENGINEERS (P) LTD UNIT-2. (HCL)**			
	D-349, PHASE-8, FOCAL POINT LUDHIANA.	23-10-2020	23-06-2023	20000
1224	**UNITED POWDER COATING INDUSTRY**			
	E-762, PHASE-7, FOCAL POINT, LUDHIANA, LUDHIANA	16-01-2014	23-06-2023	4000
1225	**UNIVERSAL INDUSTRIES**			
	E-661 PH-8 FOCAL POINT, LUDHIANA	04-12-2007	18-01-2023	3000
1226	**UNIX SWITCHGEARS PVT. LTD.**			
	E-444, PHASE-6, FOCAL POINT, LUDHIANA	18-08-2022		2500
1227	**USHA AUTO BLACK AND ZINC**			
	GURU GOBIND SINGH, CLT. DOSTI KARYANA WALI GALI, JASPAL BANGAR, LUDHIANA	11-09-2023		2000
1228	**USHA ELECTRO PLATER**			
	STREET NO. 2, G.T.B. NAGAR, GIASPURA, LUDHIANA	14-01-2019	27-01-2023	2000
1229	**USHA MANUFACTURING CO.**			
	619, INDUSTRIAL AREA-B,, NEAR RAM AVERY KANDA, LUDHIANA	08-03-2017	18-07-2020	2000

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1230	**VAISHNO INDUSTRIES**			
	4357/1, STREET NO. 2,, SHIMLAPURI ROAD, NEAR GILL ROAD,	08-10-2013	16-03-2023	5000
1231	**VANI FASTENER MANUFACTURERS**			
	INDUSTRIAL AREA-C, KANGANWAL, NEAR CAMBLE INDS.,	23-06-2023		2000
1232	**VANSER METALLICS HCL**			
	VILLAGE BEHRA, GULAB GARH ROAD,, DERABASSI, DISTT.:-MOHALI. 140502	09-08-2023		12000
1233	**VANSHIKA TENT INDUSTRIES**			
	B-XXIX(29), 536/35 D-7/9/1A, STREET NO. 3, DHANDARI KALAN, IND. AREA -C,, LUDHIANA	18-06-2016	12-04-2021	8000
1234	**VARINDER POLISH WORKS**			
	1539/19, ST. NO. 0, FAUZI COLONY, SHERPUR, FOCAL POINT,	04-02-2014	19-07-2018	2000
1235	**VARUN ADVANCE CASTINGS**			
	B-XXX, BACKSIDE PEE VEE IMPEX, KACHA SUA ROAD, VILL:-GOBINDGARH, LUDHIANA	20-12-2021		2000
1236	**VARUN AUTO INDUSTRIES**			
	E-525, PHASE-6, FOCAL POINT,, LUDHIANA	25-04-2008	04-06-2019	6500
1237	**VARUN MALLEABLES**			
	E-68, PHASE-7, FOCAL POINT, LUDHIANA	16-06-2008	24-10-2018	5000
1238	**VAXISH ELECTROPLATING**			
	E-296, FOCAL POINT, PHASE-4, LUDHIANA	06-12-2016	17-12-2020	5000
1239	**VEENA INDUSTRIES**			
	BHAGOUR ROAD, VILLAGE:- RASULLDA, 141401, KHANNA	03-11-2016	05-05-2023	4000
1240	**VELBOND INDUSTRIES LLP**			
	# 536/20-D, SINGLA CYCLE ROAD, DHANDARI KHURD, LUDHIANA	18-10-2018		4000
1241	**VENEET ELECTROPLATERS S.R.**			
	536/32C, MAKKAR COLONY, SUA ROAD OPP. KHARAY KANDA,	06-08-2013	25-03-2022	5000
1242	**VENUS INDL. CORPORATION**			
	424-INDUSTRIAL AREA-A, 9216852800, 9914447366 INDER SINGH, LUDHIANA	09-07-2007	12-04-2022	25000
1243	**VERMA ENTERPRISES**			
	B-XXIX-511/5-2/18/2, INDL. AREA-C, STREET NO. 2, SHANTI NAGAR, SUA ROAD, GIASPURA, LUDHIANA.-141003	13-07-2017	02-12-2023	4000
1244	**VERMA METALS**			
	PLOT NO. B-XXIX-249/60/61/2,, ST. NO. 1, DABA, GIASPURA ROAD,, AMARPURI, LUDHIANA, LUDHIANA	15-09-2008	10-08-2016	15000
1245	**VIDYA RIMS**			
	C-149/1, PHASE-5, FOCAL POINT, LUDHIANA	10-04-2009	30-05-2022	10000
1246	**VIJAY ELECTROPLATING**			
	10432, ST NO.1 BHAGWAN CHOWK, JANTA NAGAR, LUDHIANA	05-12-2007	06-09-2023	6250
1247	**VIJAY NICKEL WORKS**			
	38-R INDUSTRIAL AREA-B, LUDHIANA	08-07-2007	11-07-2022	11000
1248	**VIKAS ENTERPRISES**			
	34-B, RUDRA ENCLAVE, LOHARA ROAD, GIASPURA, INDL. ARE -C,, LUDHIANA	21-08-2018	28-08-2021	4000
1249	**VIKAS FORGING**			
	E-371, PHASE VI, FOCAL POINT, LUDHIANA	01-07-2014	15-10-2020	4000
1250	**VIKAS INDUSTRIES (IA-C)**			
	B-29/536/25-1A- SUA ROAD, GIASPURA, INDUSTRIAL AREA-C, NEAR NANAKSAR KANDA, LUDHIANA	05-02-2024		3000
1251	**VIKAS MANUFACTURING WORKS S.R.**			
	INDL. AREA-C, JASPAL BANGAR, SINGLA COLONY, STREET NO. 5,	20-09-2016	13-02-2021	4000
1252	**VIKESH PLATING WORKS**			
	OLD:-H.NO. 157/8/A, ST.NO.3, GURU AMAR DASS COLONY, NEW:-STREET NO.2, AMARPURI, MOHALLA GIASPURA, LUDHIANA	11-09-2015	11-08-2020	3000
1253	**VINAYAK INTERNATIONAL**			
	V.P.O. :- Kaddon, Tehsil Payal, Ludhiana	12-02-2020	23-10-2023	6000
1254	**VINAYAK METALS**			
	GURU GOBIND SINGH COLONY, DHANDARI KALAN, NEAR SATYAM KANDA, LUDHIANA	31-12-2023		1000
1255	**VINEET INDUSTRIES**			
	F-315, PHASE VIII FOCAL POINT, LUDHIANA	18-01-2014	21-04-2023	4000
1256	**VINOD ELECTROPLATERS**			
	1087/4A, GALI NO. 2,, GILL CHOWK, HIMMATPURA, KALSIAN STREET, LUDHIANA	30-07-2012	16-02-2023	2000
1257	**VINOD ENTERPRISES**			
	ST. NO. 4, GURU AMAR DASS COLONY, GIASPURA, LUDHIANA	04-12-2017		3000

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1258	**VIRENDERA CYCLE INDUSTRIES**			
	STREET NO. 3,, GURU AMARDASS COLONY, NEAR DABA LOHARA ROAD, LUDHIANA	26-05-2018	29-09-2021	4000
1259	**VISHAL CYCLE PVT. LTD.**			
	544/2 GURU RAM DAS ROAD, DHANDARI KALAN, LUDHIANA	27-03-2009	10-07-2019	56000
1260	**VISHAL UDYOG PVT.LTD. -113**			
	E-113,PHASE-IV, FOCAL POINT, LUDHIANA, LUDHIANA	08-10-2013	10-07-2019	5500
1261	**VISHAL UDYOG PVT.LTD.-544**			
	544/2, GURU RAM DASS ROAD, DHANDARI KALAN, LUDHIANA	08-10-2013	10-07-2019	15000
1262	**VISHIVKARMA BIKES**			
	C-127 PHASE-8 FOCAL POINT,, LUDHIANA-141010. 9876704676, 8709499201	05-08-2010	26-11-2021	62000
1263	**VISHIVKARMA INDS.(P) LTD.(J.N)**			
	2497,JANTA NAGAR,GILL RD., 141116, 9814088318, LUDHIANA	03-02-2008	13-11-2023	24000
1264	**VISHIVKARMA WHEELS**			
	E-671-A, PHASE-8, FOCAL POINT, LUDHIANA, LUDHIANA	24-05-2018	19-05-2021	6000
1265	**VISHNU INDUSTRIES**			
	F-4, PHASE-7, FOCAL POINT, LUDHIANA.	06-06-2020	23-06-2023	15000
1266	**VISHNU WIRES**			
	E-580, PHASE-7,, FOCAL POINT, LUDHIANA	18-02-2016	21-06-2022	4000
1267	**VISION MULTIMETALS P LTD**			
	OPP. PLOT NO. C-202-203, PHASE-7 FOCAL POINT, LUDHIANA	22-11-2022		6000
1268	**Vivaan International**			
	E-348A, PHASE-6, FOCAL POINT, LUDHIANA	18-01-2024		1000
1269	**V.K. AND SONS**			
	83/7A/1-A, ST. NO.- 8/2A, BABA MUKAND SINGH NAGAR, DABA ROAD, LUDHIANA	01-08-2017	09-05-2022	5000
1270	**V.KAY PROCESSORS**			
	OLD ADD.:- E-436, NEW ADD.:- K-206, PHASE-8, FOCAL POINT,	26-05-2017	25-07-2022	4000
1271	**V.K. ELECTROPLATING**			
	OLD:-27 FUTTA ROAD, NEAR DURGA COLONY, DHANDARI KHURD, NEW:- GUPTA COLONY, ST. NO. 2, PHASE-VII, SUA ROAD,	28-07-2018	18-12-2023	8000
1272	**V.K.WIRES & METAL INDUSTRIES**			
	B-36,INDUSTRIEL ESTATE, LUDHIANA, 4619800, LUDHIANA	28-08-2008	07-05-2022	6000
1273	**VOLTAN INDUSTRIES**			
	D-9 TEXTILE COLONY, LUDHIANA	08-07-2007	23-04-2021	11000
1274	**V.P. ENTERPRISES**			
	PLOT NO. 23, VILLAGE GOBINDGARH, NEAR:- PHASE-VII, FOCAL POINT., LUDHIANA.-141003	07-07-2020		6000
1275	**V.S. AUTO INDUSTRIES**			
	9-11-R- INDUSTRIAL AREA- B JANTA NAGAR P.O., JANTA NAGAR P.O., LUDHIANA	10-07-2010	18-11-2022	30000
1276	**WADHAWAN INDUSTRIES**			
	724/4 MURADPURA MILLER GANJ, LUDHIANA	10-06-2008	20-09-2022	2000
1277	**WALIA INDUSTRIES**			
	B-XXIX, 536/21, SUA ROAD, DHANDARI KALAN, LUDHIANA	19-09-2023		1500
1278	**WALSACH INDUSTRIES PVT. LTD.**			
	OLD ADD.:- PLOT NO. 722, SHERPUR KALAN, NEW ADD.:- F-15, FOCAL POINT, PHASE-7, LUDHIANA	31-10-2019	26-03-2021	6000
1279	**WARRIOR METAL WORKS**			
	E-233.PH-4A,FOCAL POINT, LUDHIANA, LUDHIANA	24-07-2008	01-05-2018	5000
1280	**WASAN ENGINEERING CORPN.**			
	C-97, PHASE-V, FOCAL POINT,, LUDHIANA-141010	27-12-2010	17-01-2022	35000
1281	**WELKIN INTERNATIONAL**			
	JASPAL BANAR ROAD, IND. AREA-C, LUDHIANA	17-03-2017	22-02-2023	4000
1282	**WHITE BRIGHT INDUSTRIES**			
	232/ NIRANKARI STREET NO. 2, G.T. ROAD, MILLERGANJ,	31-07-2015		1500
1283	**WHITE HAWK PLATING**			
	OLD ADD. :- 56-R INDL,AREA-B, NEW ADD. :- KANGANWAL CHOWK, JASPAL BANGAR ROAD., INDUSTRIAL AREA-C., LUDHIANA	08-07-2007	23-06-2023	3000
1284	**WILLIUM INDUSTRIES (REGD)**			
	2708/01 STREET NO 3, CHET SINGH, NAGAR RADHA SWAMI ROAD, GILL ROAD, LUDHIANA	08-07-2007	30-09-2023	2000
1285	**WILL POWER CYCLE INDIA**			
	536/15 INDUSTRIAL AREA C DHANDARI KALAN, LUDHIANA	07-02-2012	15-11-2019	27500
1286	**WOODNEST FURNISHERS**			

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	BEHIND FOCAL POINT, PHAGWARA ROAD, HOSHIARPUR, 146001	28-06-2022		4000
1287	**YASH INDUSTRIES**			
	E-436, PHASE-6, FOCAL POINT, LUDHIANA	23-03-2019		3000
1288	**YERIK HYDRAULICS PVT. LTD.**			
	VILLAGE.:- RAJGARH, RAJGARH ROAD, DORAHA, DORAHA, LUDHIANA141421	01-09-2023		25000
1289	**YERIK INTERNATIONAL PVT. LTD.**			
	VILL:- RAJ GARH, G.T. ROAD,, DORAHA, LUDHIANA-141421	20-12-2021		20000
1290	**YOGI ENTERPRISES**			
	Old Add.:- 1994 ABDULLAPUR BASTI, New Add.:- B-29, 536/43K/1D/A, JASPAL BANGAR, INDL. AREA-C, NEAR SHREE	05-12-2013	17-05-2021	15000
1291	**ZENITH CYCLES**			
	E-5, PHASE-5, FOCAL POINT, LUDHIANA.141010	23-06-2023		7000

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List of agreements of Amritsar as on 11.03.2024

S No.	NAME	Dt. Of agrmnt	Dt. Of rnwl	COMMITTMENT
1	**A.D.S WIRE PRODUCTS**			
	E-79, NEW FOCAL POINT, MEHTA, ROAD AMRITSAR, AMRITSAR	07-01-2019	03-06-2023	2000
2	**AKAL SAHAI**			
	A-2, 364, FOCAL POINT, AMRITSAR, AMRITSAR	08-06-2016	30-12-2022	1500
3	**A.K. MACHINE TOOLS**			
	PLOT NO. 289, FOCAL POINT, AMRITSAR-143001	06-12-2014	29-06-2020	2000
4	**A.K. Zinc House**			
	Plot No. 650, East Mohan Nagar, Amritsar	06-10-2021		1000
5	**APEX STEEL INDUSTRIES**			
	BHARAT NAGAR, MAQBOOLPURA CHOWK, AMRITSAR-143001	29-11-2021		2000
6	**A.R. MECHANICAL WORKS**			
	104-105, INDERJEET COLONY, GOKAL KA BAGH, AMRITSAR	12-07-2019	30-01-2023	1500
7	**ARORA HARDWARE AND TEXTILE INDS.**			
	E-108, NEW FOCAL POINT, MEHTA ROAD, AMRITSAR	23-01-2020	30-01-2023	2000
8	**BHARAT CHEMICALS**			
	371, FOCAL POINT, Amritsar	19-09-2022		2000
9	**B.N.S. SOKHI HARD CHROME AND ELECTROPLATING**			
	PLOT NO. E-173 NEW FOCAL POINT, MEHTA ROAD, AMRITSAR	16-08-2023		1200
10	**CHAND ENGINEERING**			
	7 K. MILE STONE, VILLAGE BAL KALAN,MAJITHA RD,ASR,143001, KOTHI-1, BASANT NGR, INSIDE GHALAMALA CHWK.MAJITHA, AMRITSAR	25-04-2013	09-07-2021	30000
11	**DASHMESH ELECTROPLATERS**			
	48, BABA DEEP SINGH COLONY, RAMSAR ROAD,AMRITSAR,143001, AMRITSAR	09-08-2013	29-03-2023	2000
12	**EMPIRE MACHINERY CORP.**			
	196, FOCAL POINT, AMRITASR,143001, AMRITSAR	16-05-2013	02-12-2023	3500
13	**FREEDOM INDUSTRIES LTD**			
	435, FOCAL POINT, MEHTA ROAD, AMRITSAR,143001, AMRITSAR	04-03-2013	30-01-2023	10000
14	**GANESH ENTERPRISES**			
	302, EAST MOHAN NAGAR, AMRITSAR,143001, AMRITSAR	19-05-2013	30-01-2023	1200
15	**GANPATI ENTERPRISES**			
	GALI THEKE WALI,BHARAT NAGAR, G.T. ROAD, AMRITSAR,143001, AMRITSAR	31-10-2013	30-01-2023	2000
16	**GOLDEN INDUSTRIES Restarted**			
	GALI BARDANA WALI, TARAN TARAN ROAD, AMRITSAR	22-04-2022		1500
17	**G.S. KARA**			
	P.NO.-11, GALI NO-1, NEAR DERA BHURI WALA, AMRITSAR	02-05-2016	05-12-2019	800
18	**GURU NANAK GOLD PLATING**			
	H. NO. 107, SANT MISHRA SINGH COLONY,, T.T. ROAD,, AMRITSAR	30-09-2023		700
19	**GURU TEXTILE PLATERS**			
	305, EAST MOHAN NAGAR, AMRITSAR,143001, AMRITSAR	20-05-2013	30-01-2023	2000
20	**HARINDER NICKLE HOUSE**			
	NEW ADDRESS:- Plot No. 15, Guru Teg Bahadur, Old Focal Point, Old Add.:- 111, Focal Point, AMRITSAR	09-08-2013	30-01-2023	2000
21	**ISHMEET POLISH INDUSTRY**			
	426-A, FOCAL POINT, MEHTA ROAD, AMRITSAR	23-09-2021		2000
22	**JAISWAL INDUSTTRIES**			
	E-98, NEW FOCAL POINT, MEHTA ROAD, AMRITSAR	29-01-2020	31-01-2023	10000
23	**JAYCEE STRIPS AND FASTNERS (P) LTD.**			
	Works :- 386, FOCAL POINT, AMRITSAR, Postal Address :- C/O Jaycee Motors Corporation, Oppo. Guru Harkrishan Public School, Model Town, G T Road, Amritsar	25-05-2020	30-01-2023	8000
24	**KISHOR NICKLE WORKS**			
	301, KAULSAR MARKET, NEAR SULTANWIND GATE, AMRITSAR, AMRITSAR	20-10-2016	31-01-2023	1500
25	**K.K. ENTERPRISES**			
	263, FOCAL POINT,AMRITSAR,143001, AMRITSAR	09-05-2013	03-02-2023	5000

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26	**K.N.S. INDUSTRIES**			
	163, INDUSTRIAL FOCAL POINT, AMRITSAR	18-11-2022		2000
27	**K.S. INDUSTRIES**			
	14, NEW KAPOOR NAGAR, SULTAN WIND ROAD,AMRITSAR,143001, AMRITSAR	23-05-2013	30-01-2023	1600
28	**LAKSHMI ENGG.WORKS**			
	PLOT NO. 302,, EAST MOHAN NAGAR,AMRITSAR,143001, AMRITSAR	08-05-2013	30-03-2016	800
29	**MADAAN ENTERPRISES**			
	BHARAT NAGAR, G.T. ROAD,AMRITSAR,143001, AMRITSAR, AMRITSAR	31-10-2013	30-01-2023	2000
30	**MAHAJAN SALES CORPORATION**			
	282, EAST MOHAN NAGAR, AMRITSAR	01-03-2016	05-12-2019	1500
31	**MAKHAN SINGH AND CO.**			
	375- NEW KOT ATMA RAM, SULTANWIND ROAD, OLD CHUNGI, NEAR GURUDWARA TOOT SAIHB, AMRITSAR	04-05-2016	30-01-2023	1000
32	**MALHOTRA BROTHERS**			
	222, FOCAL POINT, MEHTA ROAD, AMRITSAR-143001	01-09-2020	18-01-2024	2000
33	**MARSHALL BROTHERS**			
	108-FOCAL POINT, MEHTA ROAD,AMRITSAR,143001, AMRITSAR	13-08-2013	30-01-2023	2000
34	**MOHIT ENTERPRISES**			
	# 411, GTB NAGAR, OLD FOCAL POINT, AMRITSAR	31-10-2019	30-01-2023	2000
35	**NEW SANDEEP POLISH CENTER**			
	426-A, FOCAL POINT, NEAR NANO BIOTECH FACTORY, MEHTA ROAD, AMRITSAR	20-01-2017	30-01-2023	4000
36	**NEW SUPER ZINC PLATERS**			
	96- NEW JAWAHAR NAGAR, MEHTA ROAD, AMRITSAR-143001., AMRITSAR	21-10-2014	29-06-2020	4000
37	**NICKLE HOUSE**			
	A-338, AMRIK SINGH COLONY, EAST MOHAN NAGAR,AMRITSAR,143001, AMRITSAR	08-05-2013	19-07-2022	2000
38	**NIRANKAR ELECTROPLATING**			
	459, KOT ATMA RAM, SULTANWIND ROAD, AMRITSAR	16-11-2018		2000
39	**NOBLE INDUSTRIES**			
	310, EAST MOHAN NAGAR, AMRITSAR,143001, AMRITSAR	23-05-2013	30-01-2023	2000
40	**N.S. STEEL INDUSTRIES**			
	NEAR DERA SANT BABA BHURI WALA, TARAN TARAN ROAD, AMRITSAR	30-04-2016	05-12-2019	2000
41	**PADAM STEEL INDUSTRIES**			
	46, GOKAL DA BAGH,, 100 FT. ROAD, AMRITSAR - 143 001., AMRITSAR - 143 001., AMRITSAR	20-05-2013	23-04-2019	600
42	**PARBHAT ENTERPRISES**			
	#118, FOCAL POINT,MEHTA ROAD,, AMRITSAR - 143 001.	08-05-2013	30-01-2023	1000
43	**RAJ CYCLES INDIA PVT. LTD. CLOSED**			
	159, FOCAL POINT, AMRITSAR - 143 001., AMRITSAR-143001, AMRITSAR	25-04-2013	30-01-2023	7500
44	**RAVI ENGINEERS PVT. LTD.**			
	179-183, INDUSTRIAL AREA, FOCAL POINT, AMRITSAR	30-01-2023		2000
45	**RAVI ENGINEERS UNIT I & UNIT II NAME CHANGED**			
	426-C, INDUSTRIAL AREA,, FOCAL POINT, AMRITSAR - 143 001., AMRITSAR - 143 001., AMRITSAR	08-05-2013	24-07-2018	2000
46	**R.K. STEEL INDUSTRIES**			
	#15, FOCAL POINT,, MEHTA ROAD, AMRITSAR - 143 001., AMRITSAR - 143 001., AMRITSAR	13-05-2013	30-01-2023	5000
47	**ROYAL ALUMINIUM CO.**			
	D-81, NEW FOCAL POINT, MEHTA ROAD, AMRITSAR	06-02-2019	03-10-2020	2000
48	**R.P. POLISH WORKS**			
	3-B, DABURJI ROAD, SULTANWIND, AMRITSAR	22-09-2022		4000
49	**R.S ENTERPRISES**			
	C-46, NEW FOCAL POINT, MEHTA ROAD, AMRITSAR	08-02-2021		1500
50	**SANDIP POLISH**			
	#426 (A), ADJOINING FOCAL POINT,, MEHTA ROAD, AMRITSAR - 143 001., AMRITSAR - 143 001., AMRITSAR	18-05-2013	29-03-2023	2000
51	**S.D. MECHANICAL WORKS (REGD)**			
	236, EAST MOHAN NAGAR, INDUSTRIAL AREA, AMRITSAR	02-05-2016	30-01-2023	2000

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52	**SHARMA NICKLE**			
	# PLOTNO. 91, EAST MOHAN NAGAR,, 100 FT ROAD, AMRITSAR - 143 001., AMRITSAR - 143 001., AMRITSAR	14-10-2013	27-03-2023	1500
53	**SHINDA ZINC WALA**			
	127, EAST MOHAN NAGAR,, AMRITSAR - 143 001., AMRITSAR - 143 001., AMRITSAR	09-05-2013	30-01-2023	4000
54	**SHINE ELECTROPLATING**			
	425-A, GURU TEGH BAHADUR NAGAR,, FOCAL POINT,, AMRITSAR	31-10-2019		2000
55	**SHREE BALAJI ZINC**			
	# 309 , EAST MOHAN NAGAR,, AMRITSAR - 143 001., AMRITSAR - 143 001., AMRITSAR	31-10-2013	30-01-2023	2000
56	**Shri Ram Electroplating**			
	Old Address :- 349 FOCAL POINT, New Adress :- 55, Sant Avenue,Feldam Nagar, G.T. Road, Amritsar	12-05-2016	11-01-2020	2500
57	**SINGH ELECTROPLATING, ASR1**			
	Old Address :- 197, EAST MOHAN NAGAR,, New Address :- Plot No. 41, Gokal Ka Bagh, AMRITSAR - 143 001.	25-02-2014	19-07-2022	2000
58	**SOKHI ELECTROPLATING NAME CHANGED TO B.N.S. SOKHI**			
	OLD ADD.:- HOUSE NO. 53, FRIENDS COLONY, E-173, NEW FOCAL POINT, MEHTA ROAD, AMRITSAR	19-02-2015	03-06-2023	1200
59	**S.S.S. STEEL INDUSTRIES**			
	110, GALI NO.-2, SHAHEED UDAM SINGH NAGAR, TARAN TAARAN ROAD, AMRITSAR	04-05-2016	26-09-2016	2000
60	**SUNNY ELECTROPLATING**			
	364/B2, GURU TEGH BAHADUR NAGAR, FOCAL PPOINT, AMRITSAR	31-10-2019	30-01-2023	2000
61	**SUNRISE ELECTROPLATING**			
	30, SUDERSHAN NAGAR, 100 FEET ROAD, AMRITSAR - 143 001., AMRITSAR - 143 001., AMRITSAR	31-10-2013	30-01-2023	2000
62	**WISDOM INDUSTRIES**			
	136- FOCAL POINT, AMRITSAR - 143 001., AMRITSAR	24-05-2013	30-01-2023	800

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List of agreements of Jalandhar as on 11.03.2024

S No.	NAME	Dt. Of agrmnt	Dt. Of rnwl	COMMITTMENT
1	**3.S. CORPORATION**			
	GAZIPUR RAJA GARDEN, JALANDHAR, JALANDHAR	04-06-2013	06-12-2022	2000
2	**AAR ESS ENTERPRISES**			
	198,, GLOBE COLONY, INDUSTRIAL AREA, JALANDHAR	28-06-2016	30-01-2023	3000
3	**ABROL ENGG. CO. (P) LTD.-II**			
	VILL.:- NANGAL NARAINGARH, KAPURTHALA NAKODAR ROAD, KAPURTHALA	02-02-2021	31-07-2023	5000
4	**ABROL ENGG. CO. PVT. LTD.**			
	P.O. BOX NO. 2, ABROL HOUSE, INDUSTRIAL AREA, KAPURTHALA	09-02-2016	31-07-2023	1000
5	**ACME FORGING**			
	A 14 FOCAL POINT, JALANDHAR	12-09-2011	15-06-2020	55000
6	**Acme Forgings Unit-2**			
	Sham Nagar, Opposite DRP METAL, JALANDHAR	29-12-2018	28-11-2022	30000
7	**ACTIVE TOOLS PVT. LTD.**			
	5-9, NEW UDYOG NAGAR, FAZILPUR, RANDHAWA MASANDAN ROAD, JALANDHAR	16-02-2017	20-12-2022	10000
8	**ADVANCE TOOLS & FORGINGS**			
	VPO :- RAIPUR RASOOLPUR,, PATHANKOT ROAD, JALANDHAR	12-09-2019	27-05-2023	25000
9	**AGGARWAL INDUSTRIES**			
	M-18, INDUSTRIAL AREA, JALANDHAR	11-07-2014	04-02-2023	3500
10	**AJAY INDUSTRIES**			
	BEHIND INDUSTRIAL ESTATE, PATHANKOT BYE PASS CHOWNK, JALANDHAR	23-07-2011	23-07-2016	39000
11	**AJIT MANUFACTURING CO.**			
	OLD ADD. :-E-68, INDL. AREA, NEW ADD. :- PLOT NO. 59, NEW INDUSTRIAL AREA, CANAL ROAD, BEHIND BABA RULIA SHAH, JALANDHAR	05-11-2013	23-06-2023	2500
12	**A.K. METALS**			
	37-A, SAINI COLONY, NEW FOCAL POINT, JLANDHAR	20-11-2019	27-02-2023	2000
13	**ALFA VALVES**			
	S 194 A INDUSTRIAL AREA, JALANDHAR	12-08-2011	15-02-2023	3000
14	**AMAR METAL INDUSTRIES**			
	NEW COLONY TANDA ROAD, JALANDHAR	22-12-2011	21-12-2022	2500
15	**ANANT TOOLS PVT. LTD. A-1 F.P., JLD1**			
	A-1, FOCAL POINT, JALANDHAR-144004, JALANDHAR CITY	14-11-2014		3000
16	**ANANT TOOLS(UNIT -11) F.P.**			
	B-5 FOCAL POINT, JALANDHAR	29-08-2011	30-05-2019	1000
17	**ANIL PLATING**			
	DADA COLONY, JALANDHAR	05-03-2023		2000
18	**APEX ELECTRICALS**			
	E-18, INDUSTRIAL AREA, JALANDHAR, JALANDHAR	08-12-2013	16-11-2019	8000
19	**AQUA SANITATION**			
	193, DADA COLONY, OPPOSITE INDIAN OIL PUMP, INDUSTRIAL AREA,, JALANDHAR	23-10-2023		2000
20	**A.R. ELECTROPLATING**			
	38 DILBAGH NAGAR EXTN, SHIV PURI ROAD BASTI DANISH MANDIR, JALANDHAR	23-07-2011	15-02-2023	10000
21	**ARNEJA METAL WORKS**			
	E -16 INDUSTRIAL AREA, +, JALANDHAR	02-11-2011	16-08-2023	3000
22	**A.R. TRADERS**			
	241/2 HARGOBIND NAGAR BYE PASS, JALANDHAR	22-09-2011	18-04-2023	8000
23	**ASHISH INDUSTRIES**			
	BASTI SHEIKH, JALANDHAR	17-10-2011	06-01-2023	2000
24	**ASIA EXPORTERS**			
	RANDHAWA MASANHA ROAD, GAHIPUR, JLD-144004, JALANDHAR	31-07-2013	22-11-2022	5000
25	**ASIA INDUSTRIES**			
	STREET NO. 9, UDYOG NAGAR, RANDHAWA MASANDA, JALANDHAR CITY	20-12-2017	11-01-2023	2000
26	**A.S INDUSTRIES**			
	GOKUL NAGAR, NEAR KALI MATA MANDIR, JALANDHAR	15-04-2014	17-02-2023	2000
27	**ATUL STEEL INDUSTRIES**			

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	F 21 FOCAL POINT EXTN, JALANDHAR	26-08-2011	11-07-2023	2000
28	**Automech Tools**			
	Sangal Sohal Road, Behind Leather Complex, Jalandhar	03-02-2020	27-05-2023	5000
29	**AVLIN SOLUTIONS**			
	ADJOINING METRO KANDA, NEAR FCI GODOWN,, DHOGRI ROAD, JALANDHAR-144012	25-02-2022		2000
30	**AXEL INDUSTRIES**			
	31, DADA COLONY, INDUSTRIAL AREA, JALANDHAR	13-09-2017	06-12-2022	2000
31	**BABA INDUSTRIES INDL COMPLEX**			
	WARYAVA INDL COMPLEX, SANGAT SOHAL, JALANDHAR	08-08-2014	31-07-2023	2000
32	**BABA INDUSTRY**			
	GADAIPUR, GALI NO. 4,, NEAR PLYWOOD FACTORY, JALANDHAR	31-12-2023		2000
33	**BALA JI INDUSTRIES**			
	PLOTNO 58 RAJA GARDEN V.P.O, GODAIPUR, JALANDHAR	06-03-2012	18-09-2018	3500
34	**BAWEJA ENGINEERING WORKS**			
	BASTI SHEIKH, JALANDHAR	17-10-2011	31-01-2023	5000
35	**BAWEJA INDUSTRIES**			
	OPP. JALANDHAR KING COLONY, KAPURTHALA ROAD, JALANDHAR, JALANDHAR	09-11-2015	27-05-2023	5000
36	**BEE ESS AQUA SYSTEM**			
	GOKAL NAGAR SODAL ROAD, JALANDHAR	07-10-2011	14-09-2018	5000
37	**BEE GEE ENTERPRISES**			
	G.T. ROAD, BYE-PASS, JALANDHAR	17-11-2018	31-01-2023	2000
38	**BEST ONE TOOLS PVT. LTD.**			
	NEW LEATHER COMPLEX,, VILL.:- SANGAL SHAL, WARYAM COMPLEX, JALANDHAR, JALANDHAR	24-02-2015	16-08-2023	20000
39	**Bhagwati Home Appliances**			
	Auzla Road, Near Choice Bread Factory, Kapurthala	18-01-2024		3000
40	**BHARAT METAL WORKS**			
	HOSHIARPUR ROAD, JALANDHAR	23-07-2011	10-02-2023	3000
41	**BHARDWAJ $ SONS**			
	SODAL ROAD, OPP. RAILWAY LINE, JALANDHAR	17-10-2011	10-11-2021	4000
42	**B.R. INDUSTRIES, JLD1**			
	GALI NO. 4, NEAR RAJA GARDEN, GADAIPUR, LUDHIANA	21-12-2016	22-07-2021	2000
43	**BROADWAY OVERSEAS LTD**			
	G-1 SURANUSSI, A-12 FOCAL POINT, JALANDHAR	17-11-2011	18-03-2022	126000
44	**B.T.C. DOMESTIC APPLIANCES P. LTD.**			
	D-171, FOCAL POINT EXTENTION, JALANDHAR-144004	23-07-2011	19-03-2018	1000
45	**BUBBLE OVERSEAS**			
	D 122/139 FOCAL POINT, 208 J.P. NAGAR NEAR ADARSH NAGAR GURDAWRA, JALANDHAR	02-03-2012	22-01-2020	7000
46	**BULKHOUSE EXIM LIMITED**			
	03, JANDU SINGH INDUSTRIAL COMPLEX III, VILLAGE DHOGRI,, JALANDHAR	16-10-2023		2000
47	**CHADHA INDUSTRIES (J1)**			
	RAJA GARDEN GADAIPUR,, OPP JOSAN CEMENT STORE, JALANDHAR, JALANDHAR	04-09-2018	01-03-2023	3000
48	**CHAWLA SPORTS**			
	NEW COLONY, AMAN NAGAR, JALANDHAR, JALANDHAR	05-02-2016	25-11-2022	2000
49	**CHHINMASTIKA TRADELINES**			
	24, GLOBE COLONY, SODAL ROAD, JALANDHAR	18-07-2017	27-05-2023	2000
50	**CHOWDHERY COMAPNY**			
	1049 KUMAR STREET INDUSTRIAL AREA, JALANDHAR	23-07-2011	31-01-2023	4000
51	**CRYSTAL INDUSTRIES**			
	NEW UDYOG NAGAR, RANDHAWA MASANDA ROAD, JALANDHAR	19-05-2017	06-09-2023	3000
52	**DATTA INDUSTRIES**			
	4 DADA COLONY, GALI NO. 2, INDUSTRIAL AREA, JALANDHAR	02-12-2011	18-01-2024	2000
53	**DECENT SPORTS INDUSTRIES**			
	MASTER GURBANTA SINGH NAGAR, NEAR NEEL KAMAL TYRES, BASTI MITHU, JALANDHAR	02-12-2022		2000
54	**DEE ESS INDUSTRIES**			
	C-20 AND 21, FOCAL POINT, JALANDHAR	26-10-2019	01-09-2023	1000
55	**DEEPAK INDUSTRIES (J1)**			

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	36A SAINI COLONY AMRITSER BYE PASS, ROAD, JALANDHAR	30-07-2011	16-08-2023	2000
56	**DELITE CASTING INDUSTRIES**			
	OLD ADD.:- ADJOINING FOCAL POINT EXTENTION, NEW ADD.:- UDYOG NAGAR, RANDHAWA MASANDA, CIRCLE ROAD, VILLAGE GADAIPUR, JALANDHAR	31-08-2017	07-11-2022	3000
57	**DELITE INDUSTRIES**			
	RAJA GARDEN, B/s:- Chinar Forging,, GADAIPUR, JALANDHAR-144004.	09-05-2022		3000
58	**DHAWAN METALS PVT LTD**			
	E-84 FOCAL POINT EXTN, JALANDHAR	17-01-2012	06-01-2023	4000
59	**D.K ELECTROPLATING**			
	DADA COLONY, INDUSTRIAL AREA, NEAR SHOP GIRDHARA SINGH	25-08-2014	14-04-2023	2000
60	**D.M. DOLLY COMPANY**			
	9/206 INDUSTRIAL AREA, JALANDHAR	23-07-2011	25-11-2022	7000
61	**DOOR CARE INDUSTRIES**			
	68-69, SUNDER VIHAR, WARYANA INDUSTRIAL COMPLEX, NEAR LEATHER COMPLEX, JALANDHAR	07-07-2015	06-09-2023	2000
62	**D.R.P. ENGINEERING WORKS**			
	SHAM NAGAR,, B/SIDE TRANSPORT NAGAR, JALANDHAR	12-06-2017	06-01-2023	3500
63	**D.S. INDUSTRIES**			
	SODAL ROAD,, INDL AREA, JALANDHAR	02-12-2023		1800
64	**D.S. METAL FINISHING**			
	TOBRI MOHALLA SHAH SIKENER ROAD, JALANDHAR	10-08-2011	06-12-2022	8000
65	**EMM CEE CEE SPORTS AGENCIES PVT LTD**			
	PLOT NO390 LEATHER COMPLEX JALANDHAR, SODAL ROAD, PIN NO. 144004. JALANDHAR	26-10-2012	27-05-2023	25000
66	**Ess Ess Kay Engg Co (P) Ltd**			
	Factory Area ,Kapurthala	18-06-2019	01-03-2023	8000
67	**ESS PEE ENTERPRISES UNIT -2**			
	A-14/1 FOCAL POINT, JALANDHAR	12-11-2018		4000
68	**ESS PEE INDUSTRIAL CORPORATION**			
	C-55 SPORTS & SURGICAL COMPLEX, KAPURTHLA ROAD, Jalndhar	30-07-2011	27-05-2023	45000
69	**EURO FORGE**			
	WARYANA COMPLEX INDUSTRIAL JALANDHAR, JALANDHAR	18-01-2013	13-03-2023	25000
70	**FINE PRODUCTS (INDIA)**			
	PLOT NO. 104-105, WARYANA INDUSTRIAL COMPLEX, KAPURTHALA ROAD, JALANDHAR	02-12-2023		1000
71	**FITWELL SPORTS INDUSTRIES**			
	NEAR DUSHEHRA GROUND, BASTI SHEIKH, JALANDHAR	18-11-2016	31-07-2023	2000
72	**FRIENDS NICKLE POLISH**			
	DADA COLONY, INDUSTRIAL AREA, P[LOT NO. 6, GALI NO. 1, JALANDHAR	16-09-2023		1000
73	**GAGAN ELECTROPLATING**			
	CHOTA SAIPUR SAINI COLONY, INDL. AREA, JALANDHAR	29-08-2011	03-04-2023	3000
74	**GAGAN INDUSTRIES**			
	OLD ADD .U.V. RUBBER INDUSTRIES OPP R.K. DHABER, NEW ADDRESS VILLAGE NAHAL, P.O. BASTI GUJAN, JALANDHAR	05-01-2013	26-06-2019	16000
75	**GAGAN UDYOG PVT LTD**			
	E9/10 INDUSTRIAL AREA, JALANDHAR	23-07-2011	23-06-2023	14000
76	**GARG CHEMICAL INDUSTRIES PVT. LTD.**			
	PLOT NO. 26-A, JANDU SINGHA, INDUSTRIAL COMPLEX-2, KAGNIWAL ROAD, VILLAGE JANDU SINGHA, JALANDHAR CITY	23-08-2022	16-08-2023	1500
77	**GAUTAM STEEL INDUSTRIES**			
	SODAL ROAD INDUSTRIAL AREA, BACKSIDE SODAL MANDIR, JALANDHAR	23-07-2011	06-12-2022	4000
78	**GDPA FASTNERS UNIT II**			
	DHOGRI ROAD, NEAR RAILWAY GODWAY, JALANDHAR	18-08-2011	02-06-2022	18000
79	**GECO ELECTRICAL CORP.**			
	191 DADA COLONY, INDL AREA, CONVERTED GECO ELECTRICAL, JALANDHAR	29-08-2011	31-07-2023	3200
80	**GEETA ELECTROPLATING WORKS**			
	BULANDPUR NEAR PULI, JALANDHAR	05-08-2014		1000
81	**GNA GEARS LIMITED**			

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	VILLAGE:- MEHTIANA, DISTT.:- HOSHIARPUR	22-08-2022		4000
82	**G.N.R. MANUFACTURING CO.**			
	STREET NO. 5,, UDYOG NAGAR, GADAIPUR, JALANDHAR	09-11-2015		2000
83	**GORIA INDUSTRIES**			
	GODHIPUR, NEAR BULANDPUR ROAD, BACKSIDE AMAR COACH, JALANDHAR CITY	24-04-2012		3000
84	**GRD TOOLS**			
	MBD ROAD, INDUSTRIAL POINT, GADAIPUR, JALANDHAR, JALANDHAR	15-05-2015	30-01-2023	2000
85	**G.R. INDUSTRIES**			
	S 21 INDUSTRIAL AREA, JALANDHAR	24-09-2011	16-08-2023	4000
86	**GRIPWEELL FORGING & TOOLS**			
	E 35 INDUSTRIAL AREA, JALANDHAR	01-08-2011	11-07-2023	3000
87	**GRIPWELL TOOL INDUSTRIES**			
	C 104 FOCAL POINT EXTN, JALANDHAR, ADTNL.PLACE-RANDHAWA MASANDA,VILL-GADAIP, RANDHAWA MASANDA, VILL :- GADAIPUR, JALANDHAR	30-08-2011	15-02-2023	40000
88	**GROVER AQUA CONTROLS**			
	S-151 INDUSTRIAL AREA, JALANDHAR	21-04-2012	10-06-2020	2000
89	**GURCHARAN DASS JAGYASHU UDYOG**			
	JAGYASHU ESTATE PREET NAGAR, JALANDHAR	23-07-2011		12000
90	**GURCHARAN METAL WORK PVT LTD**			
	B-46, INDUSTRIAL ESTATE, JALANDHAR-144 012, 9464971304, JALANDHAR	23-07-2011	22-08-2019	4000
91	**GURCHARAN METAL WORKS (REGD)**			
	A-37 INDUSTRIAL ESTATE, JALANDHAR-144 012, JALANDHAR	22-11-2011		6000
92	**GURCHARN EXPORTS INDIA**			
	B38/A INL ESTATE, JALANDHAR	30-07-2011		5000
93	**GURU NANAK INDUSTRIES**			
	715 BASTI BAWA KHEL RAJA GARDEN, KAPURTHLA ROAD, JALANDHAR	07-09-2011	17-11-2021	1000
94	**HAMCO ISPAT LTD**			
	RAOWALI INDUSTRIAL ZONE, PATHANKOT ROAD, JALANDHAR	23-07-2011	23-06-2023	26000
95	**HAPPY STEEL INDUSTRY**			
	C-36,, FOCAL POINT EXTENTION, JALANDHAR	20-12-2016	27-05-2023	2000
96	**Hb Global**			
	Dhogri Industrial Park, Pathankot Road, Jalandhar-144025	29-10-2021		4000
97	**HB INDUSTRIES**			
	OPP. TRANSPORT NAGAR, BULANDPUR ROAD, BYE-PASS, JALANDHAR, JALANDHAR	06-02-2019	27-05-2023	2000
98	**HIND ENGINEERING WORKS REGD.**			
	POST BOX. NO. 421, PIN NO-144004, HIND ROAD, INDUSTRIAL AREA, JALANDHAR	22-10-2013	21-12-2022	2000
99	**HIND INTERNATIONAL**			
	C-87/1, FOCAL POINT (EXTN.), JALANDHAR	16-03-2019	17-02-2023	2000
100	**HIND PUMP**			
	C-87, FOCAL POINT, JALANDHAR, JALANDHAR	15-02-2014	31-01-2023	3000
101	**H.R. INDUSTRIES**			
	C-107-108, FOCAL POINT EXTENSION, JALANDHAR-144004, JALANDHAR	09-05-2015	20-12-2022	50000
102	**H.R. INDUSTRIES (A-22)**			
	A-22, FOCAL POINT EXTENSION, JALANDHAR	21-01-2022		90000
103	**H.R. INTERNATIONAL**			
	MODEL HOUSE ROAD, BASTI SHEIKH, JALANDHAR-144002, JALNADHAR	22-09-2011	11-07-2023	50000
104	**H.S. KUMAR ELECTROPLATING**			
	13 M.R. BUILDING BACKSIDE KALI MATA MANDIR SODAL, ROAD INDUSTRIAL AREA, JALANDHR	23-07-2011	20-10-2022	3000
105	**H.S. PAUL ELECTROPLATING**			
	PLOT NO 4A WARIYANA COMPLEX, BLOCK 1, JALANDHAR	23-07-2011	02-06-2023	6000
106	**IBIBO METAL MASTER PVT. LTD.**			
	# 1-12, DADA COLONY, INDUSTRIEAL AREA, JALANDHAR	13-04-2019		15000
107	**I.J. TOOLS & CASTING PVT. LTD.**			
	64-65,AMAN NAGAR,G.T ROAD,BY GARDEN NEAR BYE PASS, JALANDHAR-144 004, JALANDHAR	29-08-2011	12-01-2023	5200
108	**INDER INDUSTRIES**			

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	A-5, SPORTS AND SURGIAL COMPLEX, JALANDHAR	16-11-2019		3000
109	**I.S.C.P.**			
	DADA COLONY, PLOT NO. 8, INDUSTRIAL AREA, JALANDHAR	31-12-2023		2000
110	**ISHWAR INDUSTRIES**			
	M-31-32, IND. AREA,, NEAR BSNL OFFICE, JALANDHAR, JALANDHAR	18-07-2017	21-07-2018	2000
111	**JAI MAA INDUSTRIES**			
	BASTI DANISH MANDAN, RAJA GARDEN, JALANDHAR	22-09-2011	31-01-2023	3000
112	**JAINCO VALVES (P) LTD.**			
	D-181, FOCAL POINT, JALANDHAR	10-07-2018	06-01-2023	4000
113	**JAINENDRA ENGG WORKS**			
	E-5L INDL AREA JALANDHAR, JALANDHAR	23-05-2012	11-01-2023	4000
114	**JAIN SONS SALES CORPORATION**			
	GODAIPUR NEAR PAULTARY FARM, JALANDHAR	19-09-2011	10-05-2019	4000
115	**JALOTA TOOLS MFG. COMPANY**			
	102/1, WARYANA INDUSTRIAL COMPLEX, JALANDHAR	05-02-2024		2000
116	**JASSAL METAL INDUSTRIES**			
	248 DADA COLONY, JALANDHAR	02-11-2011	03-01-2017	4000
117	**JEET AQUA CONTROLS**			
	C-23, FOCAL POINT, JALANDHAR	30-07-2011	20-04-2023	15000
118	**JET KING SANITATIONS**			
	NEW INDUSTRIAL COLONY AMAN NAGAR, JALANDHAR	27-09-2011		3000
119	**J.H. ELECTROPLATING**			
	16/3 INDUSTRIAL ESTATE EXTN., B/SIDE HOTEL RANVIR CLASSIC, JALANDHAR	23-07-2011	12-02-2020	5500
120	**JINDAL VALVES PVT. LTD.**			
	S-229-30, INDUSTRIAL AREA., JALANDHAR CITY-, JALANDHAR CITY	11-05-2015	31-07-2019	2000
121	**J.L. ENTERPRISES**			
	OLD ADD.:-SODAL NAGAR SODAL ROAD, NEW ADD.:- NEW UDYOG NAGAR, FAZIALPUR, RANDHAWA MASANDAN ROAD, JALANDHAR	23-07-2011	28-11-2020	8000
122	**JMD FAUNA**			
	5 DSWARN NAGAR HOSHIARPUR ROAD, JALANDHAR CITY	26-04-2012		3000
123	**J.R. ELECTROPLATING**			
	34 BASTI NAN, JALANDHAR	23-07-2011	27-05-2023	5000
124	**JUNEJA FORGINGS**			
	VILLAGE WARIYANA KAPURTHLA ROAD, JALANDHAR	23-07-2011	31-01-2023	100000
125	**KAKKAR STEELS**			
	ADJOINING OF KRB FACTORY, VILLAGE:- BULANDPUR, JLD-144003, JALANDHAR	28-09-2013	05-09-2019	2500
126	**KALSI PUMPS PRIVATE LIMITED**			
	B-6, SPORTS& SURGICAL GOODS COMPLEX, KAPURTHLA ROAD, JALANDHAR	08-09-2011	04-06-2022	3000
127	**KAPIL ELECTROPLATING**			
	C 355 SUBASH NAGAR INDUSTIAL, AREA, JALANDHAR	23-07-2011	26-07-2019	7500
128	**KAPOOR INDUSTRIES**			
	OLD HOSHIARPUR ROAD, BACKSIDE P.S. Gardew, Jalandhar	25-02-2020		4000
129	**KAPSONS INDUSTRIES PVT. LTD.**			
	G.T. ROAD, SURANUSSI (UNIT NO.1), JALANDHAR-144027	04-05-2023		2000
130	**KARAN SPORTS**			
	WX 41 BASTI NAU JALANDHAR, JALANDHAR	26-09-2012	06-01-2023	2000
131	**KARTAR VALVES AND FAUCETS**			
	VILLAGE WARIYANA, KAPURTHALA ROAD, NEAR JUNEJA COMPLEX, JALANDHAR	10-10-2016	25-02-2020	20000
132	**KASTEK INDIA**			
	D 118 FOCAL POINT EXTN, JALANDHAR	29-08-2011	27-02-2020	2500
133	**Katyal and Company**			
	C-8, Focal Point, Jalandhar	17-08-2019	06-01-2023	3000
134	**KAYSON INTERNATIONAL**			
	C- 42 FOCAL POINT EXTN, JALANDHAR	23-09-2011	02-12-2022	8000
135	**KENT MALLEABLES P LTD**			
	B-8 FOCAL POINT EXT, JALANDHAR-4 (PB)	05-06-2019	21-12-2022	3000
136	**K.M.V. EXPORTS**			

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	RANDHAWA MASAINDEN ROAD, GODIAPUR, JALANDHAR, JALANDHAR	04-06-2013	03-01-2024	8000
137	**KROME DISPENSE PRIVATE LIMITED**			
	OLD ADD.:-D-74, FOCAL POINT, EXTENTION, NEW ADD. VILLAGE DHOGRI, RAIPUR, RASULPUR, PATHANKOT ROAD, JALANDHAR	05-06-2017	19-04-2022	10000
138	**KUSHAL RUBBER INDUSTRIES**			
	BASTI BAWAKHEL, KAPURTHALA ROAD, JALANDHAR	15-12-2018	22-12-2022	2000
139	**KWALITY CASTING PRODUCTS**			
	RAJA GARDEN, NEAR:- WATER TANK, GADAIPUR, JALANDHAR-144004	21-03-2022		2000
140	**LAKSHMI METAL WORKS**			
	C-24-A,, FOCAL POINT, JALANDHAR, JALANDHAR	08-07-2016	27-07-2019	1500
141	**L.C. ELECTROPLATING**			
	859 UTTAM NAGAR MODEL HOUSE ROAD, BASTI SHEIKH, JALANDHAAR	23-07-2011	01-10-2020	5000
142	**L.R. ELECTROPLATING**			
	33 UTTAM NAGAR MODEL HOUSE, ROAD BASTI SHEIKH, JALANDHAR	23-07-2011	01-03-2023	4000
143	**MAA AMBICA INDUSTRIES ASHOK VIHAR**			
	ASHOK VIHAR, AMRITSAR BYE PASS, NEAR VILLAGE JINDA, BACKSIDE MILK PLANT, JALANDHAR CITY	12-10-2013	01-05-2023	1000
144	**MALHOTRA INDUSTRIES**			
	73, INDUSTRIAL ESTATE EXTENTION, JALANDHAR	26-08-2017		2000
145	**MECH CHOICE TOOLS**			
	V.P.O-DUGRI, JALANDHAR, 144025	01-02-2021		25000
146	**MEERA INTERNATIONAL**			
	14, AMAN NAGAR, OPP. LAL PAKODEWALA, JALANDHAR	18-06-2014		3000
147	**MEER EXPORTS**			
	PLOT NO. 44-45, BACKSIDE INDUSTRIEAL ESTATE, JALANDHAR	08-04-2019		3000
148	**METAL JUNCTION**			
	OLD ADD :-E-35, FOCAL POINT EXTN, NEW ADD.;- D-172, FOCAL POINT, OPP. UTTAM HINDU NEWSPAPER, JALANDHAR	01-08-2014	17-10-2020	10000
149	**MEX SWITCHGEARS PVT LTD**			
	MEX ESTATE 9TH.K.M ,PATHANKOT, ROAD, JALANDHAR	06-08-2013	02-08-2021	5000
150	**MIGMA INDUSTRIES**			
	58 GADAIPUR,, BACKSIDE, FOCAL POINT, JALANDHAR	08-09-2011	27-12-2022	2500
151	**Modern Home Appliances Pvt. Ltd.**			
	Opposite Choice Bread Factory, Auzla Road, Kapurthala	18-01-2024		2500
152	**NATIONAL FITNESS INDIA**			
	72,MAHINDRA COLONY,BASTI DANISH MANDAN, JALANDHAR	18-01-2022		2000
153	**NATIONAL SWITCHGEARS**			
	133, MODEL HOUSE, JALANDHAR, JALANDHAR	04-10-2016	24-04-2023	4000
154	**NATIONAL SWITCHGEARS II**			
	MODEL HOUSE, JALANDHAR, JALANDHAR	06-02-2019	24-04-2023	4000
155	**NATRAJ STEEL (INDIA)**			
	INSIDE KALI MATA MANDIR SAIPUR ROAD, JALANDHAR	16-09-2011	14-09-2018	4000
156	**NAYYAR ENGG WORKS M4 IND AREA**			
	M-A INDUSTRIAL AREA, JALANDHAR	04-08-2011		12000
157	**N.B. ENGG. WORKS**			
	A-36, INDUSTRIAL ESTATE, JALANDHAR	07-03-2016	18-12-2019	2000
158	**NEERA POLYMERS**			
	SHAH SIKANDER ROAD, OPP.:- KHALSA ENGG. WORKS, INDL. AREA, JALANDHAR.	18-10-2019		3000
159	**NETA ENGINEERING WORKS (PVT.) LTD.**			
	G.T. ROAD, PATHANKOT BYE-PASS, JALANDHAR	31-12-2016	02-05-2023	2500
160	**NEW LIFE INDUSTRIES**			
	MODEL HOUSE ROAD BASTI, SHEIKH, JALANDHAR	05-09-2011	14-06-2019	4500
161	**NMC VALVES**			
	C 1 FOCAL POINT, JALANDHAR	30-08-2011	02-06-2023	6000
162	**NORTHPOLE INDUSTRIES**			
	HOSHIARPIR ROAD BYE PASS JALANDHAR CITY, JALANDHAR	04-04-2012	13-07-2022	5000
163	**NUTAN MALLEABLES**			

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	C-6, INDUSTRIAL FOCAL POINT, JALANDHAR, JALANDHAR	26-02-2015	22-06-2020	2000
164	**N.V.R. FORGING**			
	10 WARAYANA INDUSTRIAL COMPLEX, LEATHER COMPLEX ROAD, JALANDHAR	10-08-2011	16-10-2023	8000
165	**OAY KAY FORGING PVT LTD**			
	B 26 FOCAL POINT, 9914133696, JALANDHAR	23-09-2011	02-09-2021	7500
166	**OLEEGA INDUSTRIES PVT. LTD.**			
	13-A, GALI NO. 3, DADA COLONY, JALANDHAR	28-03-2018	06-12-2022	2000
167	**Padmawati Mfg. Co.**			
	68, Sangal Sohal, Near Waryana Complex, Jalandhar	07-07-2022		4000
168	**PARAG METALS FORMERLY (PARAG ENTERPRISES)**			
	INDUSTRIAL AREA, 60, DADA COLONY,, JALANDHAR, Jalandhar, Punjab, 144004, JALANDHAR, JALANDHAR	26-02-2015	06-12-2022	2000
169	**PARDEEP TRADING AND MFG. COMPANY**			
	15 SAINI COLONY,CHOTA SAIPUR, INDUSTRIAL AREA, JALANDHAR-4, JALANDHAR CITY	18-09-2018		2000
170	**PEE GEE INDUSTRY**			
	PLOT NO 48 AMAR GARDEN, JALANDHAR	23-07-2011	04-08-2016	5200
171	**PENSLA STEELS PVT. LTD.**			
	E 7 INDUSTRIAL AREA, JALANDHAR	23-08-2011	11-07-2023	3000
172	**P.J.R TRADING COMPANY**			
	E-59,FOCAL POINT EXTN., JALANDHAR	02-07-2013	06-03-2023	2000
173	**P.K. ELECTROPLATING**			
	C 365 SUBASH NAGAR INDUSTRIAL, AREA, JALANDHAR	23-07-2011	18-03-2020	7500
174	**P.K. INDUSTRIES**			
	OLD ADD. :-S 174 INDUSTRIAL AREA, NEW ADD. :- O-8, INDUSTRIAL AREA, JALANDHAR	23-07-2011	04-11-2023	3000
175	**POOJA ELECTROPLATING**			
	3728 TAGOR NAGAR BASTI SHIEKH, JALANDHAR	23-07-2011	13-01-2023	2000
176	**PREM EXTRUSIONS PVT. LTD.**			
	A, SHAHEED BABU LABH SINGH NAGAR, NEAR CANAL, JALANDHAR	19-12-2016		5000
177	**PRINCE INDUSTRIES**			
	DUGRI POST OFFICE NURPUR, JALANDHAR	09-09-2011	08-12-2021	3000
178	**PRITAM INDUSTRIES**			
	Link Road, Preet Vihar, Jalandhar	03-01-2024		2000
179	**PUNJAB POLLUTION CONTROL BOARD ZONAL LAB. JALANDHAR**			
	JALANDHAR	14-05-2019		2000
180	**RAJHANS INTERNATIONAL**			
	C-46, FOCAL POINT, JALANDHAR, JALANDHAR	12-02-2014	31-01-2022	2000
181	**RAJ METAL CO.**			
	100/A,NEW GOBIND NAGAR, NEAR GUJJA PEER, INDL AREA, JALANDHAR	22-07-2013	28-11-2020	2000
182	**RAMAN INDUSTRIES**			
	BRANCH 3708, TEJ MOHAN NAGAR, GALI NO.7, JALANDHAR	03-06-2023		2000
183	**RAM ELECTROPLATING**			
	SAINI COLONY, JALANDHAR, JALANDHAR	04-07-2013	19-04-2023	2000
184	**RATNAGIRI METAL WORKS**			
	PIN NO. 144008 PLOT NO. 54, STREET NO. 4, NEAR FOCAL POINT, RAJA GARDEN, GADAIPUR, JALANDHAR	11-10-2013	20-04-2023	1000
185	**RATTAN ENGG WORKS**			
	MBD COMPLEX ROAD BACK SIDE, FOCAL POINT GODHIPUR, JALANDHAR	03-04-2014	11-02-2020	2000
186	**RATTAN MANUFACTURING COMPANY**			
	M.B.D. COMPLEX ROAD, GADAIPUR, JALANDHAR, JALANDHAR	05-12-2014		2000
187	**R.K. INDUSTRIES**			
	NEAR GHAS MANDI CHOWNK BASTI SHEIKH, JALANDHAR	04-04-2012	16-01-2023	3500
188	**R.M. ELECTROPLATING WORK**			
	OPP WATER TANK BASTI DANISH MANDIR, RAJA GARDEN, JALANDHAR	23-07-2011	24-01-2023	3500
189	**R.M. METALS**			
	18, SODAL NAGAR, JALANDHAR	23-07-2011	18-07-2016	4000
190	**RMX INDUSTRIES PVT. LTD.**			

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	72,73, RMX INDUSTRIES, INDUSTRIAL, ESTATE EXTENSION, BEHIND INDUSTRIAL, ESTATE, JALANDHAR, Jalandhar, Punjab,, 144004	19-09-2023		30000
191	**R.N. C.P..PLATING**			
	CHOTTA SAIPUR ROAD NEAR SANGAN VEDIO HALL, JALANDHAR, JALANDHAR	21-09-2012	06-12-2022	2000
192	**R.N. WORKS**			
	GALI NO. 4,, NEAR RAJA GARDEN, GADAIPUR, JALANDHAR	27-12-2016	07-07-2021	3000
193	**R.S ENTERPRISES**			
	#32, GLOBE COLONY, SHASHI NAGAR, JALANDHAR	13-09-2014		2000
194	**R.S. INDUSTRIES (G.PUR)**			
	V.P.O. GADAIPUR, JALANDHAR	05-02-2024		2000
195	**R.S. PLATING WORKS**			
	39-A SODAL NAGAR, INDL AEA, JALANDHAR	08-09-2011		6000
196	**SAB AUTO ENGINEERING PVT LTD**			
	VILLAGE MUBARKPUR SHEKHEJ, HOSHIARPUR ROAD, JALANDHAR	16-05-2014	06-12-2022	5000
197	**SAHARA MARKETING**			
	4, DADA COLONY, INDUSTRIAL AREA, JALANDHAR.	03-07-2019	06-12-2022	2000
198	**SAHARA METALS**			
	D-125 FOCAL POINT EXTN, JALANDHAR, 3	12-09-2012	02-12-2022	2000
199	**SAI INDUSTRIES**			
	F-24 FOCL POINT EXT, JALANDHAR	09-07-2012	16-08-2023	2000
200	**SANIT (INDIA)**			
	C-40, FOCAL POINT, JALANDHAR	07-02-2018	12-01-2023	4000
201	**SATYAM ENTERPRISES**			
	200 GLOBE COLONY, INDUSTRIAL AREA, JALANDHAR	01-06-2023		2725
202	**S.DHEER AUTO INDUSTRIES**			
	C-75,SPORTS SURGICIAL COMPLEX, KAPURTHALA ROAD, JALANDHAR	30-07-2011	27-02-2020	4000
203	**SEPL INTERNATIONAL**			
	76, JAGYASU ESTATE, PREET NAGAR, SODAL ROAD, JALANDHAR	05-03-2016		10000
204	**S.G. TRADING CO.**			
	ADJ. FOCAL POINT EXTENSION, B/SIDE TRANSPORT NAGAR, JALANDHAR, JALANDHAR	30-04-2015	26-10-2019	2000
205	**SHIP SWITCH GEARS (INDIA)**			
	NO. 1, KARTAR FARM,, ADJOINING TO FOCAL POINT EXTN., GADAIPUR, JALANDHAR-144012, JALANDHAR	17-04-2015	31-01-2023	6000
206	**SHIVA TOOLS (INDIA)**			
	RAJA GARDEN NEAR WATER TANK, BASTI DANISH MANDAN, JALNDHAR	06-09-2011		4000
207	**SHIV SHANKAR TRADERS**			
	NEAR SANGAM VIDEO HALL, SAINI COLONY, 161 DADA COLONY INDUSTRIAL TOWN, JALANDHAR	02-12-2022		2000
208	**SHREE AMBIKA CASTING**			
	BACKSIDE J.M.P. SODAL ROAD PREET NAGAR, JALANDHAR	22-10-2011	11-07-2023	2000
209	**SHREE BALAJI WIRES**			
	DHOGRI ROAD, V.P.O. :- ALLAWALPUR, JALANDHAR	23-06-2023		30000
210	**SHREE KRISHAN LAL BHOLA & SONS**			
	DHOGRI ROAD, P.O. NURPUR,, NEAR PATHANKOT CHOWK,, JALANDHAR-144012, JALANDHAR	24-02-2014	22-06-2019	4000
211	**SHUBAM INTERNATIONAL**			
	BACK SIDE FOCAL POINT NEAR, TRANSPORT NAGAR, JALANDHAR	28-02-2014	21-12-2022	4000
212	**SHUBHAM HARD CHROME PREV. SHIVAM HARD CHROME**			
	SHAH SIKAND ROAD, JALANDHAR	02-11-2011	03-01-2024	1000
213	**SINGH MANIFACTURING COMPANY**			
	C -9 INDUSTRIAL ESTATE, JALANDHAR	15-09-2011	27-05-2023	4000
214	**S.K. ELECTROPLATING**			
	RANDHAWA MASANDA, GALI NO. 9, JALANDHAR, JALANDHAR	15-02-2014		2000
215	**S.K. TRADERS**			
	27 NEW GAUTAM NAGAR KOHINOOR, RUBBER STREET KPT ROAD, JALANDHAR	02-12-2011	01-08-2020	4000
216	**SMC SANITATIONS PVT LTD**			
	S 13 INDUSTRIAL AREA, JALANDHAR	30-07-2011	03-01-2023	3500
217	**S.N.C.P. PLATING**			

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	SAINI COLONY, NEAR:- SANGAM VIDEO HALL, CHHOTA SAIPUR ROAD, JALANDHAR	22-04-2013	31-12-2023	2000
218	**SONEX CERAMICS**			
	INDUSTRIAL ESTATE, EXTN, JALANDHAR	06-12-2011	27-05-2023	2000
219	**SPEEDEX CAST AND FORGE**			
	CHHOTA SAIPUR, SAINI COLONY, INDL. AREA, JALANDHAR-144004, JALANDHAR	08-04-2016	03-09-2019	2000
220	**S.R. ELECTROPLATING**			
	CHOTA SAIPUR B 058, JALANDHAR	23-07-2011	06-01-2023	3000
221	**S.R. MULTICAST & FORGE**			
	37, SANGO SOHAL, WARIANA INDL. COMPLEX, JALANDHAR	24-04-2017	06-01-2023	3000
222	**STANDARD MALEABLES PVT LTD**			
	C-65 FOCAL POINT EXTN, JALANDHAR	04-03-2013	03-02-2020	3000
223	**STEEL WORLD**			
	C-14 FOCAL POINT, JALANDHAR	02-11-2011	03-12-2021	2000
224	**STERLING CAST & FORGE**			
	PLOT NO. 7 SHIV PURI ROAD, JALANDHAR	30-08-2011	05-09-2016	15000
225	**SUPERTECH FORGINGS**			
	SAINI COLONY, NEAR GLOBE COLONY, INDUSTRIAL AREA,, JALANDHAR	23-03-2023		3000
226	**SUPREME TOOLS**			
	PREET NAGAR, SODAL ROAD, JALANDHAR	03-06-2023		2000
227	**SURINDERA TOOLS & FORGING**			
	C-47, FOCAL POINT EXTENTION, JALANDHAR	30-07-2011	03-04-2023	5000
228	**SURJIT SPORTS & GYMNASTIC WORKS**			
	SUNDR VIHAR,WARIANA COMPLEX,KAPURTHLA ROAD, JALANDHAR	01-03-2022		2000
229	**TALBRO INTERNATIONAL**			
	DHOGRI ROAD, P.O:- NURPUR, JALANDHAR-144004	03-02-2022		20000
230	**TECHNICA METALS**			
	239/2 HARGOBIND NAGAR SANT BRASS, JALANDHAR	17-11-2011	06-12-2022	8000
231	**THREE DIAMOND SPORTS**			
	OLD ADD.:-228, BASTI DANISHMANDA, NEW ADDRESS :- SANGAL SOHAL, WARIANA COMPLEX, JALANDHAR	27-08-2014	16-05-2018	1500
232	**TIRUPATI INDUSTRIES**			
	PLOT NO 31SANGAL SOHAL ROAD NEAR, LEATHER COMPLEX JALNDHAR CITY, JALANDHAR	18-09-2012	26-04-2023	3000
233	**Tool Wax Works**			
	1043, Dada Colony, Indl. Area, Post Box No. 406, Jalandhar City	11-10-2021	25-11-2022	2000
234	**TRADE M GLOBAL**			
	D-163, FOCAL POINT EXTENTION,, JALANDHAR	11-07-2023		6500
235	**T.S TRADERS**			
	KUTLUPUR VIILAGE NALAN DISTT, JALANDHAR	05-01-2012	31-01-2023	8000
236	**USHA METAL INDUSTRIES**			
	P.NO.24, VISHIVKARMA STREET, SAIPUR ROAD, JALANDHAR	21-09-2013	30-01-2023	5000
237	**VAISHNAV ENGG WORKS**			
	PATHAN KOT ROAD BYE PASS, JALANDHAR	17-10-2011	06-12-2022	5000
238	**VARINDERA TOOLS P. LTD**			
	VILLAGE WARIANA KAPURTHLA ROAD, JALANDHAR	23-07-2011	08-04-2023	52000
239	**VICTOR FORGING**			
	A 4 FOCAL POINT, JALANDHAR	23-07-2011	26-02-2023	150000
240	**VIJAYDEEP METAL WORKS**			
	179, SWARN PARK, SALEMPUR ROAD, GADAIPUR, JALANDHAR	28-03-2023		1000
241	**VIJAY ELECTROPLATING**			
	4-A, WARIYANA INDUSTRIAL COMPLEX, BLOCK-1,NEAR-SARGODHA SHUTTERING,, LEATHER COMPLEX ROAD., JALANDHAR	23-07-2011	05-03-2020	7000
242	**VIJAY ENGG WORKS**			
	B-18 FOCAL POINT EXTN, JALANDHAR	15-11-2012	06-01-2023	5000
243	**VIKAS INDUSTRIES**			
	E-75, FOCAL POINT EXTENSION, JALANDHAR	01-09-2023		1000
244	**VINOD ELECTROPLTING**			
	BACKSIDE SODAL MANDIR JAGYASHU ESTATE, JALANDHAR	23-08-2011		3000

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245	**VISHAL TOOLS & FORGINGS PVT LTD**			
	B-09 FOCAL POINT EXTN, JALANDHAR	29-08-2011	19-09-2020	70000
246	**VISHAL TOOLS & FORGINGS PVT. LTD. UNIT 2**			
	B-19, FOCAL POINT, JALANDHAR	23-09-2017	03-03-2023	5000
247	**VIVAN INDUSTRIES**			
	467, CHOTA SAIPUR, SAINI COLONY,, JALANDHAR	02-12-2023		2000
248	**VIVEK ENTERPRISES**			
	C-2 FOCAL POINT, JALANDHAR	16-09-2011	01-12-2021	1500
249	**VMA IMPEX LLP**			
	12-B, SAINI COLONY, INDUSTRIAL AEA, JALANDHAR	04-06-2018	02-09-2022	2000
250	**V.S METAL WORKS(JALANDHAR)**			
	HN.357,RATTAN NAGAR,GULABH DEVI, ROAD DURGA MANDIR JAL, JALANDHAR	20-07-2013	22-12-2022	2000

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List of agreements of Mohali as on 11.03.2024				
S No.	NAME	Dt. Of Agrmnt	Dt. Of Rnwl	COMMITTMENT
1	**AGS VISIONS PVT LTD**			
	#41, INDUSTRIAL AREA, BLOCK-A, KURANWALA, DERABASSI, MOHALI-140201	19-04-2022		60000
2	**BALAJI GRAVERS ENTERPRISES**			
	VILL:- SAIDPURA, BARWALA ROAD., DERA BASSI, DIST:- MOHALI (PB)	07-12-2021		2000
3	**EMPIRE FASTENERS**			
	VILL.:- GHOLUMAJRA, CHD.-AMBALA ROAD, DISTT.:- MOHALI, DERABASSI	17-03-2017		12000
4	**ESSEL BATH FITTINGS PVT. LTD.**			
	VILL.:- RAMPUR SAINIA, BARWALA ROAD, DERABASSI	16-09-2017	24-09-2021	62500
5	**EXPO FORGINGS PVT. LTD.**			
	VILL.:- RAMPUR SANIAN,, DERABASSI-BARWALA ROAD, DERABASSI, DERABASSI	14-04-2017	20-10-2021	2000
6	**GURADESH ENTERPRISES**			
	VILLAGE:- BHAGWANPURA, DEARABASSI-BARWALA ROAD, OPPO. PEER BABA DARGAH, DERABASSI	04-11-2023		8000
7	**K.R. SANITATIONS**			
	OLD ADD. D-68 PHASE-5 INDUSTRIAL AREA, NEW ADDRES D-55, PHASE 5 INDUSTRIAL AREA, MOHALI	12-09-2012	18-09-2021	10000
8	**MUBASA POWERS PVT. LTD.**			
	VILL.:- DAULAT PURA,, NEAR INDUSTRIAL FOCAL POINT, PATIALA	13-11-2023		1000
9	**N.L. ENGINEERS PVT LTD**			
	PLOT NO C-114 INDUSTRIAL AREA PHASE- V11, 9216111112, MOHALI	28-12-2012	22-10-2019	50000
10	**PUNJAB BIOTECHNOLOGY INCUBATOR**			
	S.C.O. 788, PHASE-5, S.A.S. NAGAR,, MOHALI, MOHALI	05-06-2017		100
11	**RAJ ENTERPRISES**			
	PLOT NO. 27, VILLAGE:- BHAGWAN PUR, BARWALA ROAD, DERABASSI (PB)	07-12-2021		3000
12	**S.T. ENTERPRISES**			
	PLOT NO. 178, INDUSTRIAL AREA, PHASE-9, MOHALI	04-11-2023		3000
13	**SYNERGY METALS PVT LTD**			
	C- 143 INDUSTRIAL AREA PHASE- VII, SAS NAGAR, MOHALI	04-12-2012	29-09-2021	15000
14	**T-MED TECHNOLOGIES PVT. LTD.**			
	PLOT NO. A-15, PHASE-6, INDUSTRIAL AREA, MOHALI	18-12-2023		200000
15	**V.S. STEELS**			
	VILL:- BHAGWANPUR, BARWALA ROAD,, DERABASSI, SAS NAGAR, PUNJAB-140507	07-12-2021		2000

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Ref. no. DC/CUPI/ENV/02 Date: 21/12/023

ETP AUDIT REPORT

(April 2022 – August 2023)

of

M/S J.B.R. TECHNOLOGIES LIMITED

(COMMON EFFLUENT TREATMENT PLANT)

D 260-261, PHASE-8, FOCAL POINT, LUDHIANA.

PREPARED BY -

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EXECUTIVE SUMMARY

M/s J.B.R. Technologies Limited, is the company handling the Common Effluent Treatment Plant, *CTO/NOC ID*- R-14-LDH-4694786, situated at D-260-261, Phase VIII, Focal Point, Ludhiana- Punjab. The construction of this plant took place before 2006 by Punjab Small Industries & Export Corporation Limited (PSIEC), Chandigarh. Later on, Ludhiana Effluent Treatment Society (LETS) was formed in the year 2006-07 and the management of CETP was handed over to LETS by the Government. Thereafter, the CETP was handed over to J.B.R. Technologies Limited through tender process on 25.06.2007. The plant is being operated by **Rajinder Singh** (Managing Director) & **Pradeep Singh** (Technical Director), J.B.R. Technologies Limited. The present capacity of this plant is to treat 500 KL/D of effluent, and is stretched across an area of around 5,000 square yards with a total no. of around 90 operational & skilled staff. Presently the plant is catering effluent of 1654 industries of electroplating mainly zinc, nickel, chrome plating, etc. of Punjab, India. For ease of handling, the industries that drains its waste to the CETP has been categorized into four zones namely- Ludhiana zone, Jalandhar zone, Amritsar zone and Mohali zone consisting of a total of 1286, 242, 58 and 11 numbers of industries respectively. Maximum effluent is drained by the Ludhiana zone which is clearly due to the higher number of industries in the zone, followed by Jalandhar, Mohali and Amritsar zone respectively. The industry was audited for the period April 2022 to August 2023 in respect of the effluent collected, effluent treat, chemicals used in treatment and disposal of hazardous waste and treated waste water. The data maintained by the industry was physically verified and all the data presented is based on the data maintained by the industry. The CETP is maintained neat and clean. Based on the monthly effluent collected for the audit period, it was observed that on average the effluent quantity treated ranged from 430 to 480 KL/D and was always less than 500 KL/D, i.e. less than the limit provided under consent to operate by PPCB. The quantity of chemicals used on monthly basis for the treatment of effluent was verified with the experimental value. Experiment using 10 litre of effluent on different days (5 samples) was performed using the chemicals SMBS, Lime and Polyelectrolyte to verify the amount of these chemicals required for treatment. It was observed that based on experiments, the amount of SMBS, Lime and Polyelectrolyte requirement for the treatment ranged from 0.620-0.780 Kg/KL, 6.330 – 6.900 Kg/KL and 2.30-2.50 g/KL. The monthly usage of these chemicals by the industry was noted and based on the monthly effluent treated, requirement of these chemicals per KL of effluent was calculated. It was observed that the actual values of the

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chemicals were in close proximity with the experimental values. This confirms that the accuracy of the record of chemicals maintained by the industry. Further, experimentally it was found that the amount of sludge generated per KL of effluent ranged from 0.370 TO 0.426 Kg/KL. The actual quantity of the sludge generated was also converted to per KL values and was observed that these were within the range of the experimental values. The details of the treated effluent and its utilisation has been incorporated in the report. The analytical test reports of the treated water reused for various activities were also screened. The copies of same are attached as annexure. It was observed that all the parameters like pH, TDS, cations and anions were well within the limits prescribed by the regulatory authorities in Punjab/India. The treated water is of good quality and can be reused for various industrial activities, construction and landscaping etc. A record of the reuse of water was also taken into account and it was observed that before January 2023, the treated water was supplied to the nearby industries through a dedicated pipe network. However, as per instructions of the PPCB, from January 2023 onwards the same is now being reused for plantation and gardening for NH95 from Samrala Chowk Ludhiana to Toll tax barrier Samrala (26 KM.), DC office Ludhiana, Vardhman Special Steels, Kay Jay Forging, Construction work, etc. The multifaceted usage of CETP-treated water underscores its vital role in fostering environmental sustainability, economic growth, and social well-being in the Ludhiana regions.

After going through all the above observations, personal inspections and examinations of all relevant factors, we are of the opinion that the CETP at D260-261, Phase-VIII, Focal Point, Ludhiana is working inline with the standard practices for the CETP ZLD system and is imparting the desired results. Overall the operation and treatment of the plant was found normal and satisfactory.

Observations:

- The ETP plant is being maintained and run in good conditions.
- During the visits, the plant was mostly neat and clean and always in working condition.
- The workers were observed to follow good health and hygiene practices and were wearing the protective equipment's.
- Earlier the water meter were not available at all required places but now the industry has installed the water meters at all required places.
- Records of the effluent treated, chemicals consumed, quantity of treated water and reuse etc. are mostly maintained. However, records of hazardous waste given to TSDF, Nimbua site is not maintained in the requisite forms.

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- The amount of chemicals used and sludge produced in actual is inline with the experimental results conducted by us. This depicts the accuracy of the data maintained.
- The quality of treated waste water is tested by NABL/Govt. Laboratory and the results are with in prescribed limits.
- The treated water is used in various industrial activities, construction and landscaping etc.

Recommendations:

Conducting thorough assessment of the CETP, Ludhiana unit, and observing the data of previous year, some recommendations for further improvement are-

- During enterence and some other places, there is crackes in the floor in the plant area, this all needs to be made pakka/ concrete or tiled floor for smooth running of vehicals and also to prevent leaching down of effluent in case of any spillage.
- The daily record of all water meters need to be maintained in the register.
- The quarterly and annual returns of the hazardous waste as per the Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016 need to be filed.
- The transportation tanks are required to be provided with measurement devices for accuracy of influent (in case the highly acidic media does not restrain the working of measuring devices).
- The spent HCL received at CETP from some industries which is used for enhancing acidic media to react with Sodium Meta Bi Sulphite is required to be recovered for conc. HCL and then it should be used whenever necessity arises. The residue received after recovery should be treated with the main stream of CETP.
- The testing laboratory within the plant need to be made more robust with latest good quality instruments. The instruments need to get calibrated regularly.
- Everytime before discharging treated waste water should be tested for basic physico-chemical parameters atleast pH, Conductivity, TDS, Colour etc. and a record of the same need to be maintanined.
- Emergency exit plans for the plant should be in place and the workers need to be trained about same.
- Implement sustainable practices such as solar power generation, and green infrastructure within the CETP.
- Robust maintenance schedule to keep the CETP equipment and infrastructure in good working condition.

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- Regular training to the CETP operators for safe and efficient operation and ensuring they are well-versed in the technologies and processes used.
- Continuous optimization of the treatment process to ensure efficient pollutant removal and resource recovery.

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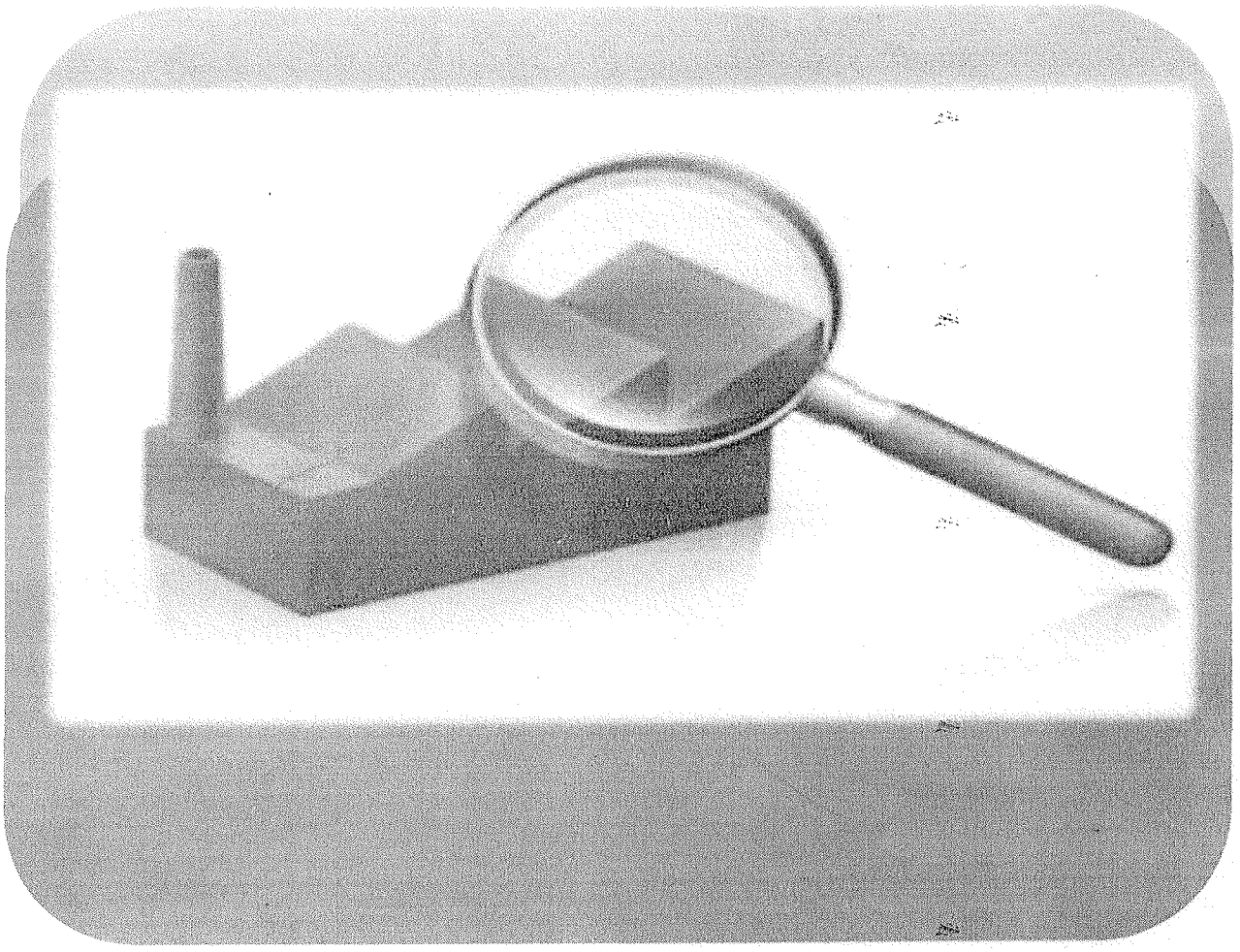

CHAPTER - 1

INTRODUCTION

1.1 INTRODUCTION:

A Combined Effluent Treatment Plant (CETP) is a centralized wastewater treatment facility that collects, treats, and discharges effluents from multiple industrial sources within a specific region or industrial estate. CETPs are instrumental in addressing the environmental challenges associated with industrial wastewater by offering a comprehensive solution to effectively manage and mitigate the pollution generated by a diverse range of industrial processes. These plants begin by collecting the effluents from various manufacturing units, ensuring that they do not harm the environment or public health. Upon collection, the effluents undergo a systematic treatment process that encompasses various treatment stages. Throughout this treatment journey, thorough monitoring and sampling are conducted to ensure compliance with stringent environmental standards. When the effluent meets the required quality criteria, it is safely discharged. Beyond its pivotal role in treating liquid effluents, CETPs also tackles the management of sludge, a byproduct of the treatment process that can undergo further treatment or be reused. Moreover, these plants contribute to economies of scale and cost-sharing among industries, enhancing efficiency and cost-effectiveness. Regulatory compliance and coordination among industries, local authorities, and environmental agencies are integral to the responsible operation of CETPs, ensuring that they fulfil their mission of preserving water resources and safeguarding the environment as well.

1.2 ABOUT THE PLANT:

Name of company and address of CETP

J.B.R. Technologies Limited, 2680, Jain Colony, Moti Nagar, Ludhiana;
CETP at D-260-261, Phase VIII, Focal Point, Ludhiana- Punjab.

Contact person

Mr. Rajinder Singh
Designation: Managing Director
Contact No: +91-9872531910
E mail: md@jbrtechnologies.org

Mr. Pardeep Singh
Designation: Director Technical
Contact No: +91-7837794144
E mail: directortechnical@jbrtechnologies.org

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Common Effluent Treatment Plant is situated at D-260-261, Phase VIII, Focal Point, Ludhiana which was basically a biological treatment plant. This plant was constructed before 2006 by Punjab Small Industries & Export Corporation Limited (PSIEC), Chandigarh. Initially, this plant was receiving mixed effluent containing dying effluent, sewage, electroplating effluent and other industrial liquid waste at one end. After treatment of the combined effluent, the treated water was discharged into the MC Sewer line at the other end. The pipe line conveyance system of the combined effluent was only available for the industries of Phase-8, Focal Point, Ludhiana. Whereas the electroplating industries of the rest Ludhiana were deprived of the treatment of their effluent because they were not connected with CETP through pipeline. After many meetings, with the state government, finally the electroplating Industries of Ludhiana formed Special Purpose Vehicle (SPV) to facilitate the electroplating and allied industries to treat their effluent at CETP. It is added that this CETP was exclusively meant for treatment of effluent of electroplating Industries of Phase-8 because the Phase-8 was only developed for shifting electroplating Industries of Ludhiana to Focal Point but later on the phase-8 was used for development of mixed industries. Finally, SPV under the name of Ludhiana Effluent Treatment Society (LETS) was formed in the year 2006-07 and the management of CETP was handed over to LETS by the Government. Thereafter, the CETP was handed over to JBR Technologies Limited through tender process and CETP was handed over to JBR on 25.06.2007. Thereafter, the plant which was initially a biological treatment plant was converted to CETP with Zero Liquid Discharge plant by the company in the year 2008-09. The present capacity of this plant is to treat 500 KLD of effluent. Total area occupied by CETP (plot area): Approx 5000 square yards and total no. of staff (including operational & skilled persons): 89 only. The details of the **Consent & Authorization:**

CTO/NOC ID: Consent to Operate for Air Certificate No. CTOA/Renewal/LDH4/2019/10762938 Valid up to 30.06.2024
Consent to Operate for Water Certificate No. CTOW/Renewal/LDH4/2023/21961217 Valid up to 31.12.2023 (renewal applied for);

Presently, this plant is treating the electroplating effluent mainly from zinc, nickle, chrome plating industries situated at Ludhiana, Jalandhar, Amritsar, Mohali and other towns of Punjab. A total of 1654 industries drains their effluent into CETP, Ludhiana for its treatment and disposal. Most of them belongs to the Electroplating, surface treatment and of allied type industries and supply nickel plating, chrome plating, zinc plating etc. effluents to the CETP and few of them belong to surface treatment by HCL and supply spent HCL to CETP. For ease

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of handling, entire industries that drains its waste to the CETP has been categorized into four zones namely- Ludhiana zone, Jalandhar zone, Amritsar zone and Mohali zone consisting of a total of 1286, 242, 58 and 11 numbers of industries respectively which are supplying electroplating effluent at CETP and about 57 industries supply spent HCL to CETP. A summarized table with above mentioned data along with the industry type is given below in **Table 1**.

Table 1.1: Overview of industries connected with CETP, Ludhiana.

Industrial area Zone	***Type of Industries***	***Number of industries***
Ludhiana	Electroplating, surface treatment and allied industries	1286
Jalandhar	Electroplating, surface treatment and allied industries	242
Amritsar	Electroplating, surface treatment and allied industries	58
Mohali	Electroplating, surface treatment and allied industries	11
Mix	Spent HCL	57
Total		**1654**

The effluent is lifted in closed tankers provided with online movement tracking system. On an average 100 to 150 rounds of tankers per day is noted. The capacity of the tankers varies form 1.5 m^3 to 20 m^3 depending upon the quantity of waste they have to carry out. A schematic representation/ process flowchart of the lifting of effluent from industry to its treatment location i.e. J.B.R. Technologies Ludhiana is shown in fig: 1.

The effluent is treated to convert it to the potable quality water which is reused for plantation and gardening for NH95 from Samrala Chowk Ludhiana to Toll tax barrier Samrala (26 KM.), DC office Ludhiana, Vardhman Special Steels, Kay Jay Forging, Construction work and other critical uses details of which are given in last section of the report.

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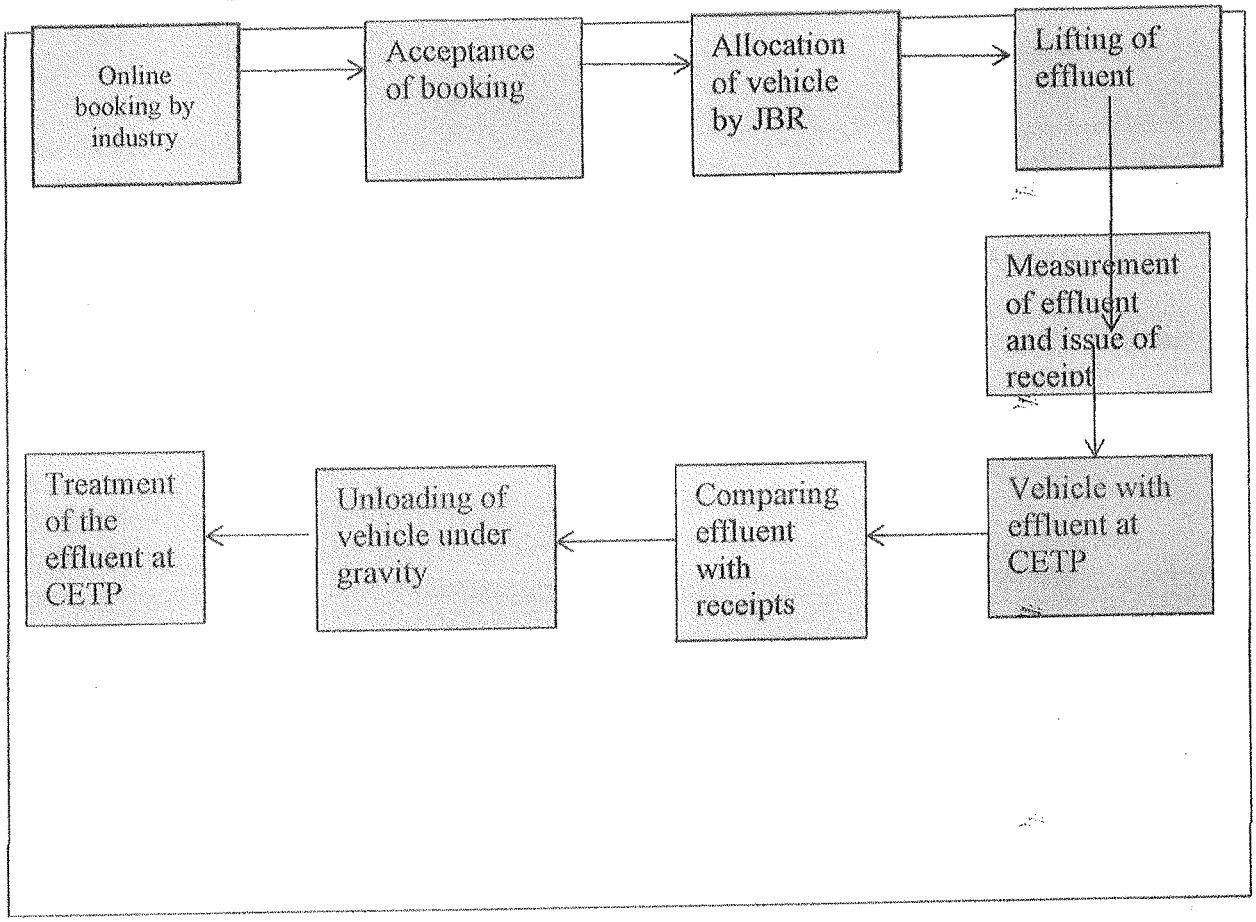
Figure-1.1: Flow diagram for lifting and transportation of effluent



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CHAPTER - 2

DESIGN and TREATMENT PROCESS

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2.1 ETP DESIGN:

The unit consists of two collection tanks of capacity 312.5 m^3 and 187 m^3; Two equalization tanks of capacity 1749 m^3; Six reaction tanks, 8 primary tube settlers, 6 secondary tube settlers, one clarifier, sludge drying bed, three RO system, etc. In addition, various components along with their respective number present in CETP and dimension and capacity in m^3 is enlisted below in **Table-2.1.**

Table 2.1: Details of components along with dimension in metre installed at CETP, Ludhiana for treatment of waste water.

Name of the component	Numbers	Dimension (in m)	Capacity (m^3)
Collection Tank 1	1	10M*6.25M*5.0M	312.5
Collection Tank 2	1	10.15M*4.3M*4.3M	187.67
Equalization Tank	2	13.4*15.18*4.3	1749.34
Reaction Tank	2	3.45*3.05*2.5	52.61
Reaction Tank	1	D=2.5, H=3.8	18.65
Reaction Tank	1	D=2.99, H=5.08	35.67
Reaction Tank	2	3.2M*3.2M*3M	61.44
Primary tube Settler	7	2.5*2.5*2.5 + 5KL cone	144.37
Primary tube settler	1	2.0*2.0*2.0 + 5 KL Cone	13.00
Secondary tube settler	6	2.18 * 2.15 * 2.13	59.9
Clarifier	1	Dia 10M, H 3.0 M	235.65
Sludge sump	1	5.99*4.97*3.65	108.66
Thickener	1	Dia. 7.5 M, H 5 M	220.92
R O System	2	12 membrane each	
R O System	1	24 membranes	
Sludge drying bed	1	7.66M*9.31M*0.50M	35.66
Sludge drying bed	1	6.39*9.31*0.50	29.75
Sludge drying bed	1	(7.65*4.32*0.50) + (5.25*5.61*0.50)	31.25
Sludge drying bed	1	6.5M*8.6M*0.8M	44.72
Sludge drying bed	1	10.5M*14.7M*0.5M (between clarifiers. Area calculated @ 75%)	57.87
Sludge Room	1	2.20*4.62*2.06	20.94
MEE	1	Three stages complete with condensers and heat exchangers	

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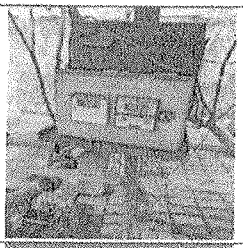
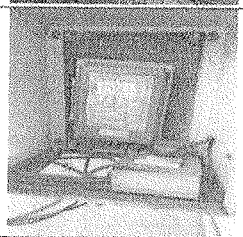
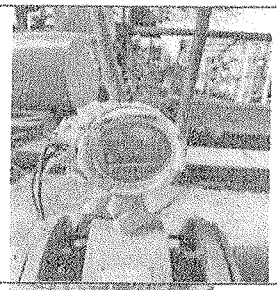
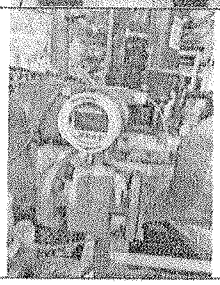
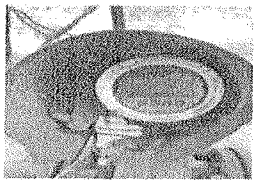
To monitor the quantity of effluent at various steps, maters are provided as detailed below:

Sr No.	Photographs of Meters	Position of Meter
1.		OCEMS for TDS & pH
2.		At collection tank
3.		After Tube settler before Clarifier
4.		At RO Feed
5.		At RO Reject
6.		RO Permeate

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2.2 TREATMENT PROCESS:

The effluent from electroplating industries situated in the jurisdiction area is collected and brought to CETP, Phase VIII, Focal Point, Ludhiana for treatment of the same. On a daily basis, the CETP receives a substantial volume of approximately 425-450 kilolitres (KL) of effluent from various industrial sources. This effluent is collected and initially discharged into a collection tank. From there, it is pumped to an equalization tank, where the initial homogenization of the effluent occurs, ensuring a consistent feed for subsequent treatment processes. Chemical treatment is a key step in the CETP's effluent purification process. In dedicated reaction tanks, specific chemicals, including sodium meta-bisulphite, lime, and poly electrolyte, are carefully dosed into the effluent. These chemicals play crucial roles in various aspects of the treatment process. Sodium meta-bisulphite is used for conversion of hexavalent chrome to trivalent chrome in acidic medium, lime helps in pH adjustment and conversion of all metals into normal salts which are settled down as precipitates as sludge, and poly electrolyte aids in coagulation and flocculation, facilitating the agglomeration and precipitation of impurities. The next phase involves the separation of precipitates from the treated effluent. Tube settlers are employed for this purpose, where the particles settle and form a sludge. This sludge is then efficiently separated from the bottom discharge pipe of the tube settlers. Meanwhile, the relatively clean water is further transported to a clarifier, where fine particles of sludge settle out. This stage ensures that the effluent is clarified to a high degree before proceeding to the subsequent treatment steps. To further enhance the quality of the treated water, it is made to pass through activated carbon filters and ion exchange units. Activated carbon filters are adept at removing organic compounds, residual chemicals, and other impurities, resulting in improved water quality. Ion exchange units are valuable in reducing the levels of specific ions, such as heavy metals or hardness ions, that may still be present in the treated water. One of the final steps in the CETP's extensive treatment process involves reverse osmosis (RO). The effluent, now significantly purified, passes through RO membranes via an MGF (Mixed Bed & Gravel Filter). RO is highly effective at removing dissolved solids, ions, and other remaining impurities from the water. This ensures that the water leaving the CETP is of a high standard and suitable for a wide range of applications. At the final stage, the reject water from the RO process is heated in a Multi-Effect Evaporator (MEE). The heat causes the water to vaporize, and these vapours are condensed to form condensate. This condensate can be collected and utilized in various processes, helping to minimize water wastage.

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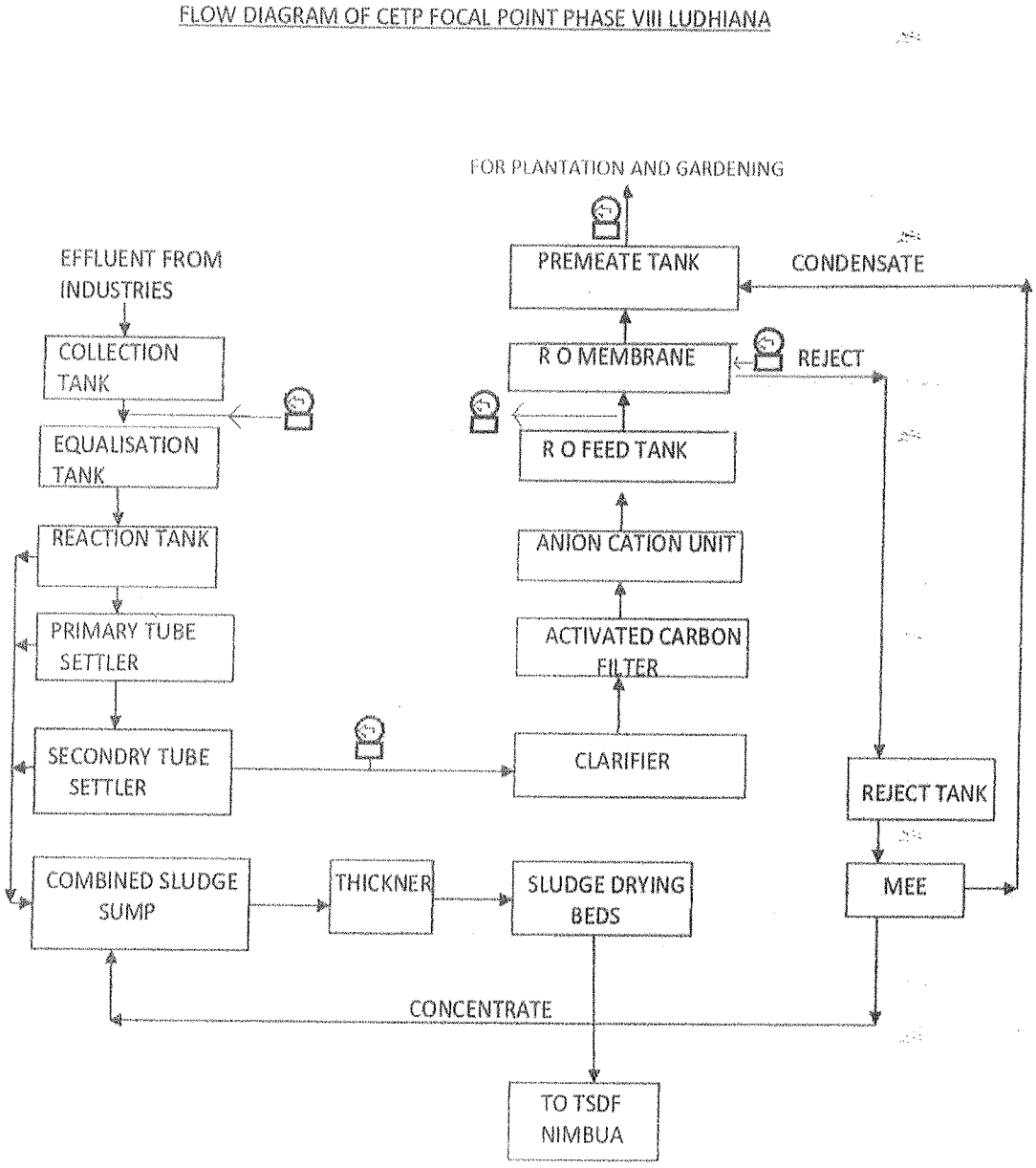
Figure: 2.1 Flow diagram of Effluent treatment Process



The above meters are linked to CPCB & PPCB portals. In addition to these meters OCEMS meters for pH & TDS have also been installed which are connected with the above portals.

The residue left at the bottom of the MEE is received as a concentrate. This concentrate, along with other sludge generated during the treatment process, is sent to a specialized disposal facility known as the Treatment, Storage, and Disposal Facility (TSDF) in Nimbua. The TSDF ensures that the residual waste is managed in an environmentally responsible manner, minimizing the environmental impact. In summary, the CETP's rigorous treatment process is

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designed to effectively and responsibly manage industrial effluents, ensuring that the discharged water meets stringent quality standards. This not only safeguards the local environment but also contributes to sustainable industrial practices and responsible water resource management in the surrounding region. A process flow chart describing the same is given in **Figure 2.1.**

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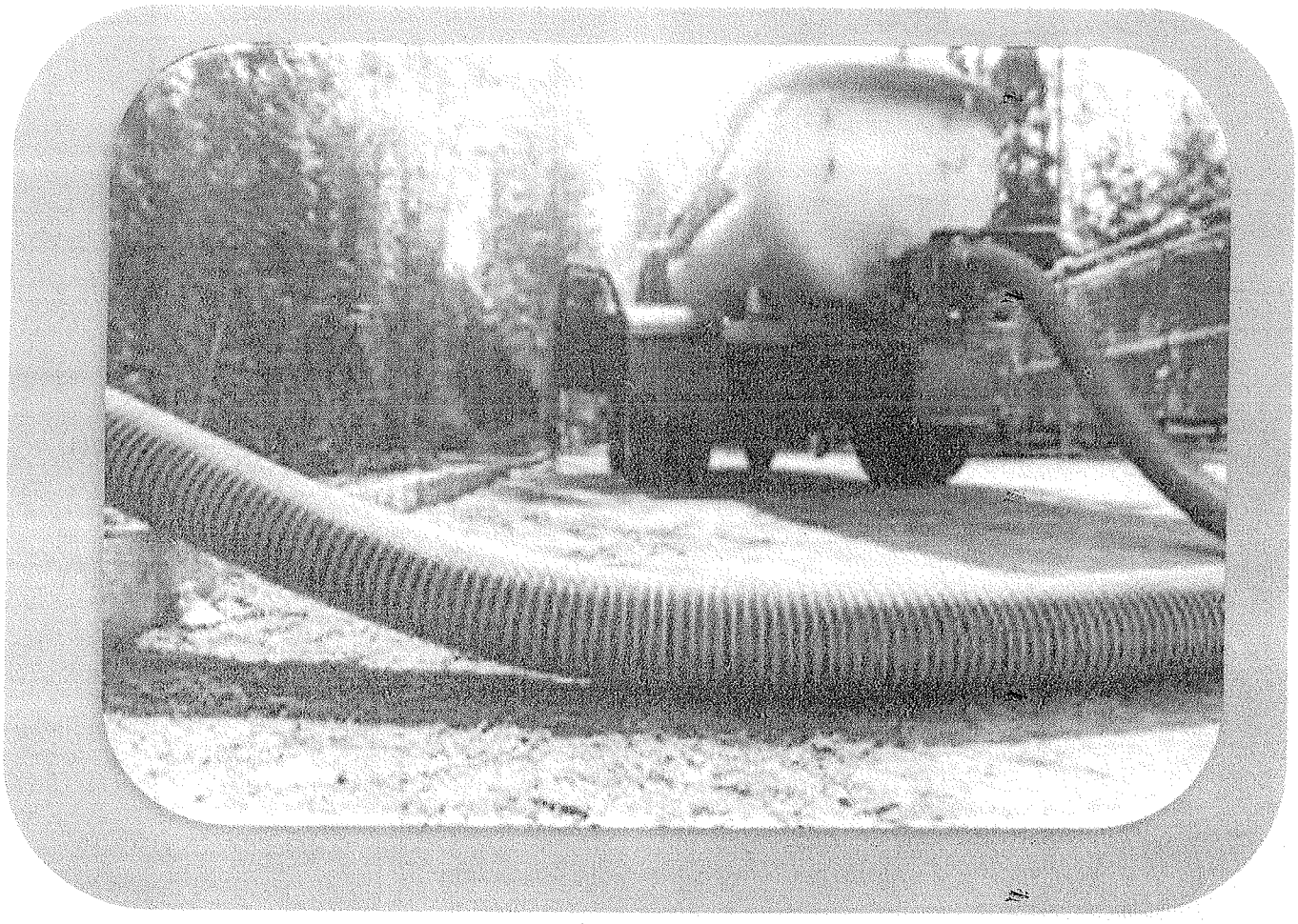

CHAPTER - 3

EFFLUENT LIFTING

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3.1 COLLECTION SYSTEM:

The JBR Technologies Ltd. is maintaning fleet of about 50 vehicles which are having acid proof tanks mounted on them or are having HPDE/Plastic tanks loaded in the vehicles. These vehicles are used for collection of effluent from various industries situated all over Punjab. These vehicles are of different capacities ranging from 1500 Ltrs to 20,000 Ltrs capacity. All the vehicles are provided with GPS system and are regualrly monitored at the plant office of JBR. The process of collection concludes as under:

1. That the industry make an online booking with JBR for lifting specific quantity of effluent available with the industry for treatment.
2. That JBR confirms the booking in online system and depute specific vehicle for lifting and transportation of the effluent from the industry to the CETP. While deputing the vehicle, capacity of vehicle is considered by taking into consideration other industries of the area which have already booked effluent and are enroute of the vehicle.
3. That the vehicle reaches the premises of the industry along with submersible pump and lowers it ino the collection pit of the industry and the plug is engaged with the electric power system of the industry and the effluent is drawn into the tank of the vehicle.
4. That after completiton of the lifting, the measurement of the lifted effluent is carried out with the help of measuring rod which is available with the vehicle. After measurement of the effluent lifted, a receipt is issued to the industries by online gadget which is available with the vehicle.
5. That the online receipt is displayed immediately in the system of the plant of JBR as well as in the system with PPCB. The user name and password have already been provided to the PPCB authorities.
6. That previously manual recepits were issue for each lift whereas from the current financial year the online receipt issue system was tested and after successful testing it was made applicable for lifting of effluent for all the vehicles. The copies of maping of GPS system of vehicles, copy of receipt of effluent lifted and the copies of few pages of online registration of each lift with coordinates and other details is attached herewith as Annexure 6.
7. That after lifting, the vehicle moves towards the CETP and the movement of the vehicle gets recorded in the GPS system. The user name and password of GPS system is also with PPCB.

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8. That the vehicle reaches the CETP plant and the effluent in the tank is again verified by the CETP representative with the receipts issued by the driver for the trip. On satisfaction of comparison of quantities carried by the vehicle with that mentioned in the slips, the vehicle is allowed to unload the effluent into the collection tank of CETP.
9. That after the collection tank the effluent passes through various processes and operations for final treatment of the same. Finally the treated effluent is made to pass through reverse osmosis system (R.O.) and permeate is received as the final treated water.

3.2 DETAILS OF EFFLUENT COLLECTED:

Given below is the zone wise monthly description of effluent collected from numerous industries from April 2022 to March 2023 in **Table 3.1**. Maximum effluent was observed to be generated by the Ludhiana zone which is due to the maximum number of industries in the zone, followed by Jalandhar, Mohali and Amritsar zone respectively.

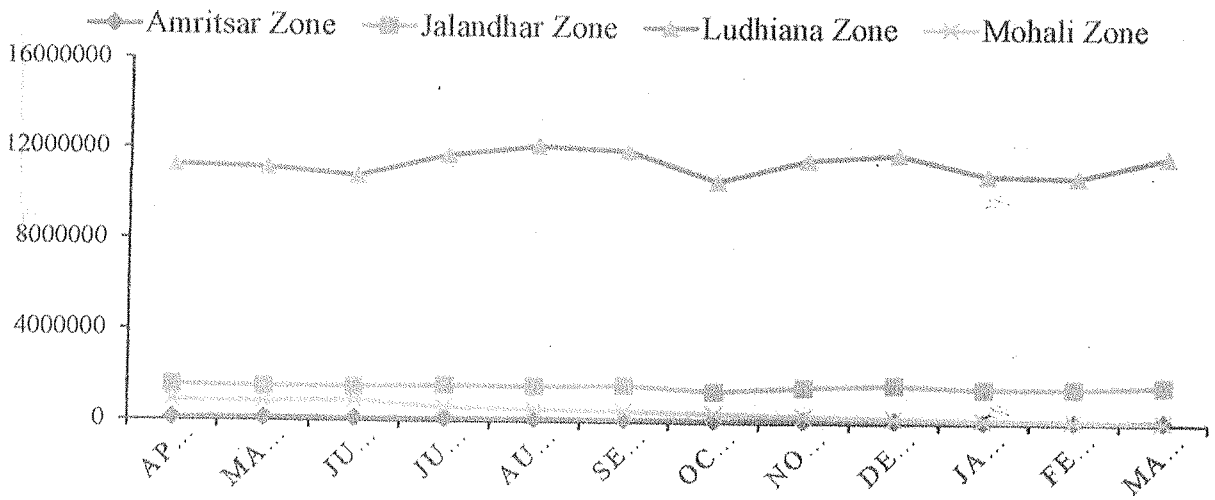

Figure 3.1: Effluent lifting data trend of Ludhiana, Amritsar, Jalandhar and Mohali zones for FY 2022-2023 at CETP, Ludhiana in L/month.

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Table 3.1: Month Wise Lifting Data From 1-Apr-22 To 31-Mar-23 of Amritsar Zone, Ludhiana zone, Jalandhar zone and Mohali zone respectively.

Month	Amritsar Zone	Jalandhar Zone	Ludhiana Zone	Mohali Zone	Total	Average/day
	KL/Month	KL/Month	KL/Month	KL/Month	KL/Month	KL/Day
APRIL - 2022	105.800	1549.430	11242.453	865.017	13762.7	459
MAY - 2022	112.700	1491.485	11135.389	820.372	13559.946	437
JUNE - 2022	970.00	1497.902	10786.885	896.906	14151.693	472
JULY - 2022	115.100	1582.251	11722.176	609.387	14028.914	452
AUGUST - 2022	125.700	1547.223	12135.562	547.333	14355.818	463
SEPTEMBER - 2022	110.700	1613.373	11968.451	492.634	14185.158	473
OCTOBER - 2022	980.00	1395.019	10632.889	405.372	13413.28	433
NOVEMBER - 2022	126.200	1561.978	11580.997	297.872	13567.047	452
DECEMBER - 2022	110.500	1683.715	11838.153	213.112	13845.48	447
JANUARY-2023	108.300	1517.625	10918.073	172.129	12716.127	410
FEBRUARY-2023	99.900	1541.084	10856.926	121.000	12618.91	451
MARCH - 2023	120.900	1674.302	11765.760	94.500	13655.462	440
APRIL - 2023	109.8	1571.934	11228.195	84.00	12993.929	433
MAY - 2023	121.4	1598.787	10191.255	65.5	11976.942	386
JUNE - 2023	100.1	1570.396	10889.491	66.5	12626.487	421
JULY - 2023	106.9	1662.163	10986.726	78.00	12833.789	414
AUGUST - 2023	106.4	1619.708	10768.497	99.5	12594.105	420

Table 3.1- is based on the data provided by M/S J.B.R. Technologies

Further, it was observed that the averge collection per month for the plant is nearly same throughout the year in Jalandhar, Mohali and Amritsar zone. There is little change/variation in collection in the Ludhiana zone. Based on the above details, it can be concluded that through out the year (based on daily average), the quantity of effluent for treatment was less than the 500 KL/D i.e. was less than the quantity allowed by PPCB as per the consent to operate.

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CHAPTER - 4

EFFLUENT TREATMENT AND MATERIAL BALANCE

4.1 CHEMICALS CONSUMPTION IN EFFLUENT TREATMENT:

The effluent received through tankers is drained in collection tank. From the collection tank the effluent is transferred to equalisation tank. In equalisation tank, the all of the water received is mixed to make the consistancy uniform. Further, as detailed in chapter 2, the effluent is treated chemically with Sodium metabisulfite (SMBS), Lime (H. Lime), and Polyelectrolyte (Poly) etc. Sodium metabisulfite, Lime, and Polyelectrolyte are indispensable components in the intricate and highly effective treatment processes carried out at Common Effluent Treatment Plants (CETP). The functions and significance of these chemicals are multifaceted, encompassing aspects such as pH adjustment, precipitation of metals, flocculation, and coagulation. Sodium metabisulfite, often referred to as sodium pyrosulfite, is a chemical compound primarily employed for change of chemical speciation of metals (eg. conversion of Cr^{+6} to Cr^{+3}), a crucial process in the treatment of industrial effluents especially containing hard chrome. Its role in conversion of Cr^{+6} to Cr^{+3} underscores its vital contribution to the CETP's mission of environmental protection and responsible industrial waste management. Lime, in various forms such as calcium hydroxide or quicklime, is another fundamental chemical employed in the CETP treatment process. One of its primary functions is to facilitate pH adjustment and formation of salt from the liquid metals. Industrial effluents often exhibit extreme pH levels, which can be detrimental to both the environment and the treatment process itself. Lime, with its alkaline properties, can effectively neutralize acidic or alkaline effluents, bringing them to a more neutral pH range. Maintaining the correct pH is essential for the success of subsequent treatment steps, as well as for preventing corrosion in the treatment infrastructure. Lime's role in pH adjustment and formation of metal salts is pivotal in ensuring the efficiency and integrity of the CETP operations. Polyelectrolyte, on the other hand, plays a significant role in the processes of flocculation and coagulation.

Hence, the amount of chemicals used for the treatment process during the 2022-2023 was taken and calculated it on monthly basis. The purpose was to check the actual consumption records provided by M/S J.B.R. Technologies in comparison with the experimental values. Experiment on spot was performed during our visits on different days randomly to check the requirements of the chemicals per KL of effluent. During the experimentation, 10 litre of effluent from equalisation tank was collected and treated with Sodium metabisulfite (SMBS), Lime (H. Lime), and Polyelectrolyte (Poly) in the same sequence as in the ETP. This experiment was performed 5 times during different days as it was informed to us that the consistency (composition) of the effluent varies widely as the effluent is collected from many different

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industries involved in different type of plating. With the treatment, the values of the chemicals used were calculated in KL. The treated effluent was filtered to separate the sludge. The sludge on the filter was dried and weighed to know the amount of sludge produced per KL on experimental basis. The same was also compared with the sludge actually generated per KL of effluent. The results of the same are in table 4.1. The amount of SMBS, Lime, Poly consumed from April 2022 - August 20231 is detailed in table 4.2 .

Table 4.1: The amount of chemicals consumed for treatment of effluent collected from equalisation tank of CETP, Ludhiana

Sample No.	SMBS (Kg/KL effluent)	LIME (Kg/KL effluent)	POLY (g/KL effluent)	Dry Sludge/KL effluent (Kg)
Sample - 1	0.690	6.870	2.45	3.60
Sample - 2	0.620	6.330	2.30	4.47
Sample - 3	0.694	6.800	2.30	4.25
Sample - 4	0.782	7.340	2.50	4.55
Sample - 5	0.680	6.780	2.40	4.38

Table 4.2: Description and amount of chemicals consumed for treatment of effluent at CETP, Ludhiana from April 2022 - August 2023.

MONTH	Effluent received (KL/Month)	SMBS/KG	H. LIME/KG	POLY/GRAM
APRIL - 2022	13762.7	9644	97428	30930
MAY - 2022	13559.946	9765	99469	31880
JUNE - 2022	14151.693	9536	96347	31150
JULY - 2022	14028.914	1238	102983	33900
AUGUST - 2022	14355.818	9899	100250	33250
SEPTEMBER - 2022	14185.158	9934	101005	33750
OCTOBER - 2022	13413.28	9176	92608	31050
NOVEMBER - 2022	13567.047	9920	99920	33850
DECEMBER - 2022	13845.48	9998	101298	34250
JANUARY- 20223	12716.127	9327	93902	32200
FEBRUARY- 2023	12618.91	9187	91722	30700
MARCH - 2023	13655.462	10292	102912	34850
APRIL - 2023	12993.929	9728	98324	32850
MAY - 2023	11976.942	8621	87440	29500
JUNE - 2023	12626.487	9122	90805	30775
JULY - 2023	12833.789	9319	94050	31850
AUGUST - 2023	12594.105	9156	92220	31400

Based on the above table, the quantity of Sodium metabisulfite (SMBS), Lime (H. Lime), and Polyelectrolyte (Poly) per KL of effluent was calculated as follow.

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Table 4.3: Description and amount of chemicals consumed/KL of effluent at CETP, Ludhiana from April 2022 - August 2023.

MONTH	Effluent Received (KL/Month)	SMBS (Kg/KL)	LIME (Kg/KL)	POLY(g/KL)
APRIL - 2022	13762.7	0.700	7.079	2.25
MAY - 2022	13559.946	0.720	7.33	2.35
JUNE - 2022	14151.693	0.674	6.80	2.20
JULY - 2022	14028.914	0.0882	7.34	2.41
AUGUST - 2022	14355.818	0.689	6.98	2.31
SEPTEMBER - 2022	14185.158	0.700	7.12	2.37
OCTOBER - 2022	13413.28	0.684	6.90	2.31
NOVEMBER - 2022	13567.047	0.731	7.36	2.49
DECEMBER - 2022	13845.48	0.722	7.31	2.47
JANUARY- 2023	12716.127	0.733	7.38	2.53
FEBRUARY- 2023	12618.91	0.728	7.26	2.43
MARCH - 2023	13655.462	0.753	7.53	2.55
APRIL - 2023	12993.929	0.748	7.56	2.52
MAY - 2023	11976.942	0.719	7.30	2.46
JUNE - 2023	12626.487	0.722	7.20	2.43
JULY - 2023	12833.789	0.726	7.33	2.48
AUGUST - 2023	12594.105	0.727	7.32	2.49

Sludge & permeate generated

Flocculation involves the aggregation of small particles into larger flocs, while coagulation focuses on the formation of larger, denser particles from suspended solids in the effluent. Polyelectrolyte, a polymer with electrically charged functional groups, is introduced into the effluent to promote the binding of particles and the formation of flocs. This process aids in the efficient removal of suspended solids, organic matter, and other impurities from the effluent, ultimately improving its quality. Polyelectrolyte's ability to enhance the settling and separation of solids is instrumental in achieving the desired level of purification at CETPs. The synergistic use of these chemicals in the treatment process at CETPs is critical for several reasons. Firstly, it ensures compliance with stringent environmental regulations and standards governing the discharge of industrial effluents. These regulations are put in place to safeguard the

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environment, protect aquatic ecosystems, and prevent harm to public health. Table 4.4 provides valuable insights into the quantity of sludge generated over specific periods, shedding light on the dynamic nature of this aspect of CETP operations. The data covers from April 2022 to August 2023, offering a comparative view of sludge production. This information is crucial in monitoring and optimizing the sludge management process to align with environmental regulations and the sustainable disposal of waste materials. Further, it was also noted that there is 2.5-5% difference in the quantity of effluent received and treated. This loss is accounted to evaporative losses from the collection and equalisation tanks. During summer it is more and less during winters.

Table 4.4: Amount of sludge generated month wise from April 2022 to August 2023 at CETP, Ludhiana.

MONTH	Effluent Received (KL/Month)	Effluent Treated (KL/Month)	Sludge generated (Kg/Month)	Sludge generated /KL effluent in Kg
APRIL - 2022	13762.7	13225	52900	4.00
MAY - 2022	13559.946	13720	54900	4.00
JUNE - 2022	14151.693	13090	52400	4.00
JULY - 2022	14028.914	14140	56600	4.00
AUGUST - 2022	14355.818	13545	54200	4.00
SEPTEMBER - 2022	14185.158	13680	54700	3.99
OCTOBER - 2022	13413.28	12620	50500	4.00
NOVEMBER - 2022	13567.047	13600	54400	4.00
DECEMBER - 2022	13845.48	13725	54900	4.00
JANUARY- 2023	12716.127	12215	48900	4.003
FEBRUARY- 2023	12618.91	12315	49300	4.003
MARCH - 2023	13655.462	13520	54100	4.00
APRIL - 2023	12993.929	13105	52400	3.98
MAY - 2023	11976.942	11880	47500	3.99
JUNE - 2023	12626.487	12390	49600	4.00
JULY - 2023	12833.789	12720	50900	4.00
AUGUST - 2023	12594.105	12475	49900	4.00

Based on the table 4.2, it was observed that the experimental values of the amount of SMBS, Lime and Polyelectrolyte requirement for the treatment ranged from 0.620-0.780 Kg/KL, 6.330 – 6.900 Kg/KL and 2.30-2.50 g/KL. Similarly from the table 4.3, the actual values of SMBS,

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Lime and Polyelectrolyte requirement for the treatment ranged from 0.670 – 0.750 Kg/KL, 6.8-7.5 Kg/KL and 2.3 to 2.6 g/KL. The experimental and actual results for the usage of chemicals are inline. Similarly, experimentally the amount of sludge generated per KL of effluent ranged from 0.370 TO 0.426 Kg/KL. The actual quantity of the sludge generated was nearly 4 Kg/KL It was observed that these were within the range of the experimental values.

4.2 SLUDGE DISPOSAL:

The liquid sludge is collected in sludge thickner through the sludge sump. The liquid sludge from all the equipments is centrally collected at sludge sump and from there it is pumped to sludge thickner. From sludge thickner the sludge is sent to sludge drying beds where the sludge is allowed to sun dry. The dry sludge is packed in bags and is sent to Nimbua Greenfield (Punjab) Limited through Re Sustainability Limited (formerly known as Ramky Enviro Engineers Limited). They issue the manifest for each lift of sludge.

Table 4.5: Amount of sludge disposed to TSDF site month wise from April 2022 to August 2023 at CETP, Ludhiana.

MONTH	Sludge generated (MT/Month)	Sludge disposed off in TSDF (MT/Month)
APRIL - 2022	52.9	19.875
MAY - 2022	54.9	44.905
JUNE - 2022	52.4	59.465
JULY - 2022	56.6	-
AUGUST - 2022	54.2	-
SEPTEMBER - 2022	54.7	-
OCTOBER - 2022	50.5	-
NOVEMBER - 2022	54.4	-
DECEMBER - 2022	54.9	-
JANUARY- 2023	48.9	-
FEBRUARY- 2023	49.3	-
MARCH - 2023	54.1	77.5
APRIL - 2023	52.4	-
MAY - 2023	47.5	85.935
JUNE - 2023	49.6	75.835
JULY - 2023	50.9	44.615
AUGUST - 2023	49.9	46.39
TOTAL	887.9	454.52

The sludge generated in the process is hazardous in nature. The M/S J.B.R. Technologies has MoU with the Treatment, Storage, and Disposal Facility (TSDF) located in Nimbua, near Dera

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bassi. The transportation of sludge to TSDF is facilitated through the use of tankers, ensuring safe and controlled handling. A record of the sludge sent to TSDF site was checked and details of the same is recorded in table 4.5.

It was informed to us that due to the process of change in constitution of Ramky Envirocare to Re-sustainability Solutions and due to some financial dispute between JBR and Ramky, the sludge was not lifted during July 2022 to January 2023. The physical sludge present at the CETP was verified which was observed as under:

Sr No.	Description of process/apparatus	Quantity of sludge in MT
1.	Sludge Sump	76.00
2.	Sludge Thickner	156.00
3.	Sludge Drying Bed Size 7.61x9.31	28.00
4.	Sludge Drying Bed Size 10.5x14.7	42.00
5.	Sludge Drying Bed Size 6.5x8.6	30.00
6.	Sludge Room	50.25
	Total	382.25

The above sludge is being regularly lifted by TSDF. JBR was instructed to clear the pending sludge at the earliest possible. Further, the quarterly and annual returns of the hazardous waste in requisite forms as per the Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016 are not need to be filed regularly.

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CHAPTER - 5

TREATED WASTE WATER AND ITS DISPOSAL

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5.1 GENERATION OF TREATED WATER

After chemical treatment and settling of the sludge, the water is collected in clarifier tank. The water from clarifier tank is further passed through the dual media filters and deionisation unit. The treated water is further filtered using reverse osmosis system. This advanced method effectively eliminates impurities and contaminants from water by forcing it through a semipermeable membrane. The membrane's design allows water molecules to pass through while blocking the majority of dissolved salts, minerals, and other impurities. The result is a stream of high-quality, purified water that meets stringent standards for various applications. An online Continuous Monitoring System (OCMS) as per PPCB regulations is installed here to monitor the various parameters. Further, testing of water is performed on daily basis in their own laboratory on daily basis before final discharge. Quarterly third party testing of the RO treated water is done in compliance with the PPCB guidelines and results of the third party analysis results are attached in Annexures. The reports of water analysis for the various quarters show that the quality of the treated water was within the limits prescribed by regulatory authorities.

Table 5.1: Quantity of treated waste Water generated before and after RO treatment along with loses during different months from April 2022 to August 2023

MONTH	Effluent Received (KL/Month)	Effluent Treated (KL/Month)	Permeate generated (KL/Month)
APRIL - 2022	13762.7	13225	10063
MAY - 2022	13559.946	13720	10346
JUNE - 2022	14151.693	13090	9823
JULY - 2022	14028.914	14140	10564
AUGUST - 2022	14355.818	13545	10218
SEPTEMBER - 2022	14185.158	13680	10272
OCTOBER - 2022	13413.28	12620	9507
NOVEMBER - 2022	13567.047	13600	10138
DECEMBER - 2022	13845.48	13725	10318
JANUARY- 2023	12716.127	12215	9121
FEBRUARY- 2023	12618.91	12315	9155
MARCH - 2023	13655.462	13520	9942
APRIL - 2023	12988.929	13105	9728
MAY - 2023	11976.942	11880	8786
JUNE - 2023	12624.487	12390	9165
JULY - 2023	12831.289	12720	9388
AUGUST - 2023	12594.105	12475	9214

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Table 5.1 provides detailed information on the RO permeate generated during specific periods, covering the years April 2022 to August 2023. This data allows for a comprehensive understanding of the trends and variations in RO permeate production, aiding in the optimization of water treatment processes at CETPs and ensuring a consistent supply of high-quality water for various beneficial uses.

DISPOSAL OF TREATED WASTE WATER

Treated water from the Common Effluent Treatment Plant (CETP) in the region serves a critical role in supporting sustainable development and environmental conservation across the CETP, vicinity. A substantial portion of this treated water is thoughtfully allocated for plantation along the NH-95 corridor, stretching from Samrala Chowk to the Toll Tax barrier in Samrala. This green initiative not only contributes to the beautification of the highway but also serves as a potent means to combat air pollution, improve the urban landscape, and foster biodiversity. Furthermore, the usage of treated water extends to another crucial domain: construction projects. A significant volume of treated water from the CETP is channelled to the Deputy Commissioner's (DC) office in Ludhiana, supporting the various construction activities in the area. This allocation not only reduces the burden on fresh groundwater resources but also aligns with sustainable development practices, promoting responsible water management. In addition, the treated water is also served to Several municipal parks in and around Ludhiana. As urban green spaces become increasingly important for recreation and environmental well-being, the use of treated water ensures that these parks remain lush and vibrant, providing a much-needed respite for residents. This dual-purpose approach of conservation and beautification enhances the quality of life for the local community while underscoring the importance of water recycling and reducing the strain on natural water sources. Moreover, it is employed in industrial processes, particularly in facilities that require water for non-potable functions such as cooling systems. This not only lowers the carbon footprint of these industries but also reduces the demand for fresh water, which is a precious and finite resource. The multifaceted usage of CETP-treated water underscores its vital role in fostering environmental sustainability, economic growth, and social well-being in the Samrala and Ludhiana regions.

Details of the disposal of treat water i.e. RO permeate are detailed in table 5.2 and 5.3 for the month April 2022 to December 2022 and January 2023 to August 2023 respectively.

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Table 5.2: Details of Effluent received, treated, RO permeate and disposal of treated water from April 2022 to December 2022

MONTH	EFFLUENT RECEIVED (KL)	EFFLUENT TREATED (KL)	R.O. PERMEATE THROUGH METER(KL)	R.O. PERMEATE SEND TO NEAR BY INDUSTRIES
Apr-22	13741.2	13225	10063	THE TREATED PERMEATE WAS BEING SENT TO THE INDUSTRIES DIRECTLY THROUGH PIPELINE FROM CETP. THE METER READING WAS COMPOSITE FOR ALL THE INDUSTRIES VIZ.. GEESUN DYING, DAVINDER SANDHU DYING, TRIVENI DYING AND RAMAL DYING
May-22	13552.046	13720	10346	
Jun-22	13222.693	13090	9823	
Jul-22	14027.414	14140	10564	
Aug-22	14352.818	13545	10218	
Sep-22	14169.958	13680	10272	
Oct-22	12502.88	12620	9507	
Nov-22	12867.047	13600	10138	
Dec-22	13845.48	13725	10318	
TOTAL	122281.536	121345	91249	

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Table 5.2: Details of Effluent received, treated, RO permeate and disposal of treated water from January 2023 to August 2023

					Detail of uses of (D) (KL)									Detail of uses (C) - (D)	
MONTH	EFFLUENT RECEIVED (KL) (A)	EFFLUENT TREATED (KL) (B)	R.O. PERMEATE SUPPLIED THROUGH OUTLET METER (KL) (C)	R.O. PERMEATE SUPPLIED FOR VARIOUS PURPOSES THROUGH VEHICLE (KL) (D)	SUPPLY TO N.H 95 (KL)	MCL (KL)	ROAD CONT. (KL)	CONSTRUCTION (KL)	SUPPLY TO VARDHMAN (KL)	SUPPLY TO KAY JAY FORGING(KL)	PPCB(KL)	BHULLAR DEVELOPER (KL)	H.A.C CONTRACTOR (KL)	COOLING TOWER(KL)	PLANTATION & GARDNING (KL)
Jan-23	12708.527	12215	9121	8389.5	5354.5	384	340	1125	587	599	0	0	0	526	224
Feb-23	12612.11	12315	9155	8280	5749	0	1074	450	99	908	0	0	0	630	275
Mar-23	13650.462	13520	9942	8853	6763	0	858	0	0	1232	0	0	0	816	290
Apr-23	12988.929	13105	9728	8860	6478.5	0	606	0	137	1611	27.5	0	0	624	260
May-23	11976.942	11880	8786	7508.5	5870.5	0	0	0	127	1508	0	0	0	893	370
Jun-23	12624.487	12390	9165	8234	7029	0	12	0	96.5	1096.5	0	0	0	670	280
Jul-23	12831.289	12720	9388	8361	8078.5	0	0	0	0	282.5	0	0	0	666	260
Aug-23	12594.105	12475	9214	8308	8131	28	0	0	0	149	0	0	0	679	250
TOTAL	140603.73	138540	102523	91673	73798	412	2890	1575	1046.5	11497.5	27.5	342	81.5	7807	3014

The permeate before January 2023 was supplied to the near by industries directly through pipeline from CETP. The meter reading was composite for all the industries viz.. Geesun Dying, Davinder Sandhu Dying, Triveni Dying and Ramal Dying as per following details:

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Material Balance

Material balance has been prepared on the basis of average quality of effluent in the equilization tank. It is added that the material balance sheet cannnot be prepared on the basis of individual industries because all the vehicles deployed for collection and transportation of effluent carry mixed effluent of different industries in single trip.

Material Balance

(Considering 1 KL = 1000 ltrs of effluent)

a. Effluent = 1000 ltrs
b. Natural Evaporation in all processes = 3% = 30 ltrs
c. Balance effluent = 970 ltrs
d. Sludge from Tube settlers and clarifier = 3% (2.5 + 0.5)
e. Balance effluent = 940.9 ltrs
f. Permeate from RO = 65% = 564.54 ltrs
g. RO Reject = 940.9 – 564.54 = 376.36 ltrs
h. Feed to MEE = 376.36 ltrs
i. MEE condensate = 40% = 150.54 ltrs
j. Loss of steam due to evaporation = 30% = 112.9 ltrs
k. MEE concentrate = 376.36 – 150.54 - 112.9 = 112.92 ltrs
l. Total permeate (f + i) = 564.54 + 150.54 = 715.08 ltrs
m. Treated water used for cooling tower = 10% = 71.5 ltrs
n. Treated water sent for gardening /plantation= 715.08 - 71.5 = 643.58 ltrs
o. Balance permeate = Nil
p. Sludge obtained after sun drying from drying beds = 0.375 - 0.425 % = 4.5 kg approx.

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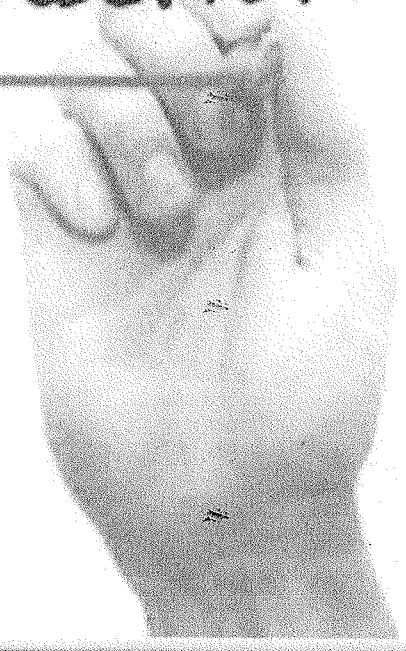
Recommendation



CHAPTER - 6

RECOMMENDATIONS

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OBSERVATIONS:

- The ETP plant is being maintained and run in good conditions.
- During the visits, the plant was mostly neat and clean and always in working condition.
- The workers were observed to follow good health and hygiene practices and were wearing the protective equipment's.
- Earlier the water meter were not available at all required places but now the industry has installed the water meters at all required places.
- Records of the effluent treated, chemicals consumed, quantity of treated water and reuse etc. are mostly maintained. However, records of hazardous waste given to TSDF, Nimbua site is not maintained in the requisite forms.
- The amount of chemicals used and sludge produced in actual is inline with the experimental results conducted by us. This depicts the accuracy of the data maintained.
- The quality of treated waste water is tested by NABL/Govt. Laboratory and the results are *with in prescribed limits.*
- The treated water is used in various industrial activities, construction and landscaping etc.

After going through all the above observations, personal inspections and examinations of all relevant factors, we are of the opinion that the CETP at D260-261, Phase-VIII, Focal Point, Ludhiana is working inline with the standard practices for the CETP ZLD system and is imparting the desired results. Overall the operation and treatment of the plant was found normal and satisfactory.

RECOMMENDATIONS:

Conducting thorough assessment of the CETP, Ludhiana unit, and observing the data of previous year, some recommendations for further improvement are-

- During enterence and some other places, there is crackes in the floor in the plant area, this all needs to be made pakka/ concrete or tiled floor for smooth running of vehicals and also to prevent leaching down of effluent in case of any spillage.
- The daily record of all water meters need to be maintained in the register.
- The quarterly and annual returns of the hazardous waste as per the Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016 need to be filed.
- The transportation tanks are required to be provided with measurement devices for accuracy of influent (in case the highly acidic media does not restrain the working of measuring devices).

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- The spent HCL received at CETP from some industries which is used for enhancing acidic media to react with Sodium Meta Bi Sulphite is required to be recovered for conc. HCL and then it should be used whenever necessity arises. The residue received after recovery should be treated with the main stream of CETP.
- The testing laboratory within the plant need to be made more robust with latest good quality instruments. The instruments need to get calibrated regularly.
- Everytime before discharging treated waste water should be tested for basic physico-chemical parameters atleast pH, Conductivity, TDS, Colour etc. and a record of the same need to be maintanined.
- Emergency exit plans for the plant should be in place and the workers need to be trained about same.
- Implement sustainable practices such as solar power generation, and green infrastructure within the CETP.
- Robust maintenance schedule to keep the CETP equipment and infrastructure in good working condition.
- Regular training to the CETP operators for safe and efficient operation and ensuring they are well-versed in the technologies and processes used.
- Continuous optimization of the treatment process to ensure efficient pollutant removal and resource recovery.

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Annexure-1

Centre for Environment and Food Technology Pvt. Ltd.

An ISO 9001: 2015, ISO 45001: 2018 (OHSAS); ISO/IEC 17025: 2017
NABL & IQAS Accredited, FSSAI and MoEF Recognised Testing Laboratory

TEST REPORT

Issued To : M/s JBR Technologies Limited,
D 260-261, Phase-8, Focal Point, Ludhiana, Punjab

Report No.	CEFT/2204/542	Report Date	12.04.2022
Your Ref. No.	Nil	Type of sample	Waste Water
Sample Code Given by Customer	Nil	Quantity	5 LITER Plastic Bottle + 1 Liter Glass Bottle
		Date of sampling	05.04.2022
Sampling Location	CETP	Date of sample receipt	06.04.2022
Sample Collected By	Lab Person	Sample I.D.	CEFT/GEN/2204/542
Sampling procedure	As per SOP	Date of test	06.04.2022- 12.04.2022

S. NO.	PARAMETERS	TEST RESULTS Inlet	TEST RESULTS Outlet	TEST METHODS
1	pH	1.2	7.26	IS 3025(Part-11): 2002
2	Total Suspended Solids, mg/L	92	BDL	IS 3025 (Part-17) : 1984
3	Total Dissolved Solid, mg/L	9316	348	IS 3025 (Part-16) : 1984
4	Bio-chemical Oxygen Demand at 27°C 3 days, mg/L	-	BDL	IS 3025 (Part-44): 2003
5	Chemical Oxygen Demand, mg/L	-	BDL	IS 3025 (part-58) : 2006
6	Ammonical Nitrogen (as N), mg/L	13.6	BDL	IS-3025 (Part-34): 1988
7	Nickel (as Ni), mg/L	58	BDL	IS 3025 (Part-54)
8	Hexavalent Chromium (as Cr), mg/L	25	BDL	IS 3025 (Part-52): 2003
9	Total Chromium (as Cr), mg/L	52	BDL	IS 3025 (Part-52): 2003
10	Sulphides (as s), mg/L	BDL	BDL	IS 3025 (Part-29)
11	Sulphates (as SO_4), mg/L	1165	36	IS 3025 (Part-24): 2003
12	Phosphates (as p), mg/L	157	BDL	IS 3025 (Part-31)
13	Oil & Grease, mg/L	37.2	BDL	IS 3025 (Part-39): 2003
14	Iron (as Fe) mg/l	589	BDL	IS 3025 (Part-53): 2003
15	Zinc (as Zn) mg/l	256	BDL	IS 3025 (Part-49): 1994
16	Lead (as Pb) mg/l	1.2	BDL	IS 3025 (Part-47): 1994
17	Cadmium (as Cd) mg/l	BDL	BDL	IS 3025 (Part-41).: 1992

Note: ND Denotes Not Detectable

Page No. 1/1

End of Report

Authorised Signatory

Note ; 1. The test results are related to the sample/ tested as received
2. The sample will be discarded after retention time of 7 days unless otherwise specified.
3. Any Discrepancy found in the test report may be communicated
4. This report shall not be reproduced, cannot be used as evidence in the court of law and should not be used in any advertising media without written permission of CEO, CEFT Pvt. Ltd.
5. The Court Jurisdiction will be Delhi
6. Customer complaint register is available at the laboratory

Regd. Address - Bldg. No. 12, 1st Floor, DLF Industrial Area, Moti Nagar, New Delhi - 110015 Ph.: +91-45012722
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An ISO 9001: 2015, ISO 45001: 2018 (OHSAS); ISO/IEC 17025: 2017
NABL & IQAS Accredited, FSSAI and MoEF Recognised Testing Laboratory

TEST REPORT

Issued To : M/s JBR Technologies Limited,
D 260-261, Phade-B, Focal Point, Ludhiana, Punjab

Report No.	CEFT|2207|268	Report Date	19.07.2022
Your Ref. No.	Nil	Type of sample	Waste Water
Sample Code Given by Customer	Nil	Quantity	5 LITER Plastic Bottle + 1 Liter Glass Bottle
		Date of sampling	11.07.2022
Sampling Location	CETP	Date of sample receipt	12.07.2022
Sample Collected By	Lab Person	Sample I.D.	CEFT|GEN|2207|268
Sampling procedure	As per SOP	Date of test	12.07.2022- 19.07.2022

S. NO.	PARAMETERS	TEST RESULTS Inlet	TEST RESULTS Outlet	TEST METHODS
1	pH	1.0	7.15	IS 3025(Part-11): 2002
2	Total Suspended Solids, mg/L	88	BDL	IS 3025 (Part-17) : 1984
3	Total Dissolved Solid, mg/L	9938	725	IS 3025 (Part-16) : 1984
4	Bio-chemical Oxygen Demand at 27°C 3 days, mg/L	..	BDL	IS 3025 (Part-44): 2003
5	Chemical Oxygen Demand, mg/L	..	BDL	IS 3025 (part-58) : 2006
6	Ammonical Nitrogen (as N), mg/L	12.4	BDL	IS-3025 (Part-34): 1988
7	Nickel (as Ni), mg/L	56	BDL	IS 3025 (Part-54)
8	Hexavalent Chromium (as Cr), mg/L	23	BDL	IS 3025 (Part-52): 2003
9	Total Chromium (as Cr), mg/L	49	BDL	IS 3025 (Part-52): 2003
10	Sulphides (as s), mg/L	BDL	BDL	IS 3025 (Part-29)
11	Sulphates (as SO_4), mg/L	1124	32	IS 3025 (Part-24): 2003
12	Phosphates (as p), mg/L	156	BDL	IS 3025 (Part-31)
13	Oil & Grease, mg/L	36	BDL	IS 3025 (Part-39): 2003
14	Iron (as Fe) mg/l	575	BDL	IS 3025 (Part-53): 2003
15	Zinc (as Zn) mg/l	244	BDL	IS 3025 (Part-49): 1994
16	Lead (as Pb) mg/l	1.4	BDL	IS 3025 (Part-47): 1994
17	Cadmium (as Cd) mg/l	BDL	BDL	IS 3025 (Part-41): 1992

Note: ND Denotes Not Detectable

Page No. 1/1

End of Report

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Centre for Environment and Food Technology Pvt. Ltd.

An ISO 9001: 2015, ISO 45001: 2018 (OHSAS); ISO/IEC 17025: 2017
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TEST REPORT

Issued To : M/s JBR Technologies Limited,
D 260-261, Phase-II, Focal Point, Ludhiana, Punjab

Report No.	CEFT/2212/190	Report Date	19.10.2022
Your Ref. No.	Nil	Type of sample	Waste Water
Sample Code Given by Customer	Nil	Quantity	5 LITER Plastic Bottle + 1 Liter Glass Bottle
		Date of sampling	11.10.2022
Sampling Location	CETP	Date of sample receipt	12.10.2022
Sample Collected By	Lab Person	Sample I.D.	CEFT/GEN/2212/190
Sampling procedure	As per SOP	Date of test	12.10.2022- 19.10.2022

S. NO.	PARAMETERS	TEST RESULTS Inlet	TEST RESULTS Outlet	TEST METHODS
1	pH	1.7	7.25	IS 3025(Part-11): 2002
2	Total Suspended Solids, mg/l	78	BDL	IS 3025 (Part-17) : 1984
3	Total Dissolved Solid, mg/L	10136	713	IS 3025 (Part-16) : 1984
4	Bio-chemical Oxygen Demand at 27°C 3 days, mg/L	..	BDL	IS 3025 (Part-44): 2003
5	Chemical Oxygen Demand, mg/L	..	BDL	IS 3025 (part-58) : 2006
6	Ammonical Nitrogen (as N), mg/L	11.2	BDL	IS-3025 (Part-34): 1988
7	Nickel (as Ni), mg/L	52	BDL	IS 3025 (Part-54)
8	Hexavalent Chromium (as Cr), mg/L	21	BDL	IS 3025 (Part-52): 2003
9	Total Chromium (as Cr), mg/L	46	BDL	IS 3025 (Part-52): 2003
10	Sulphides (as s), mg/L	BDL	BDL	IS 3025 (Part-29)
11	Sulphates (as SO_4), mg/L	1036	28	IS 3025 (Part-24): 2003
12	Phosphates (as p), mg/l	130	BDL	IS 3025 (Part-31)
13	Oil & Grease, mg/L	33	BDL	IS 3025 (Part-39): 2003
14	Iron (as Fe) mg/l	565	BDL	IS 3025 (Part-53): 2003
15	Zinc (as Zn) mg/l	236	BDL	IS 3025 (Part-49): 1994
16	Lead (as Pb) mg/l	1.3	BDL	IS 3025 (Part-47): 1994
17	Cadmium (as Cd) mg/l	BDL	BDL	IS 3025 (Part-41).: 1992

Note: ND Denotes Not Detectable

Page No. 1/1

End of Report

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TEST REPORT

Issued To : M/s JBR Technologies Limited,
D 260-261, Phade-8, Focal Point, Ludhiana, Punjab

Report No.	CEFT|2301|114	Report Date	10.01.2023
Your Ref. No.	Nil	Type of sample	Waste Water
Sample Code Given by Customer	Nil	Quantity	5 LITER Plastic Bottle + 1 Liter Glass Bottle
		Date of sampling	03.01.2023
Sampling Location	CEFT	Date of sample receipt	04.01.2023
Sample Collected By	Lab Person	Sample I.D.	CEFT|GEN|2301|114
Sampling procedure	As per SOP	Date of test	04.01.2023- 10.01.2023

S. NO.	PARAMETERS	TEST RESULTS Inlet	TEST RESULTS Outlet	TEST METHODS
1	pH	1.3	7.44	IS 3025(Part-11): 2002
2	Total Suspended Solids, mg/L	80	BDL	IS 3025 (Part-17) : 1984
3	Total Dissolved Solid, mg/L	9905	729	IS 3025 (Part-16) : 1984
4	Bio-chemical Oxygen Demand at 27°C 3 days, mg/L		BDL	IS 3025 (Part-44): 2003
5	Chemical Oxygen Demand, mg/L		BDL	IS 3025 (part-58) : 2006
6	Ammonical Nitrogen (as N), mg/L	12.5	BDL	IS-3025 (Part-34): 1988
7	Nickel (as Ni), mg/L	59	BDL	IS 3025 (Part-54)
8	Hexavalent Chromium (as Cr), mg/L	24	BDL	IS 3025 (Part-52): 2003
9	Total Chromium (as Cr), mg/L	53	BDL	IS 3025 (Part-52): 2003
10	Sulphides (as s), mg/L	BDL	BDL	IS 3025 (Part-29)
11	Sulphates (as SO_4), mg/L	1236	38	IS 3025 (Part-24): 2003
12	Phosphates (as p), mg/L	166	BDL	IS 3025 (Part-31)
13	Oil & Grease, mg/L	39	BDL	IS 3025 (Part-39): 2003
14	Iron (as Fe) mg/l	596	BDL	IS 3025 (Part-53): 2003
15	Zinc (as Zn) mg/l	244	BDL	IS 3025 (Part-49): 1994
16	Lead (as Pb) mg/l	1.6	BDL	IS 3025 (Part-47): 1994
17	Cadmium (as Cd) mg/l	BDL	BDL	IS 3025 (Part-41).: 1992

Note: ND Denotes Not Detectable

End of Report

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TEST REPORT

Issued To : M/s JBH Technologies Limited,
D 260-261, Phade-8, Focal Point, Ludhiana, Punjab

Report No.	CEFT|2304|383	Report Date	17.04.2023
Your Ref. No.	Nil	Type of sample	Waste Water
Sample Code Given by Customer	Nil	Quantity	5 LITER Plastic Bottle + 1 Liter Glass Bottle
		Date of sampling	10.04.2023
Sampling Location	CETP	Date of sample receipt	11.04.2023
Sample Collected By	Lab Person	Sample I.D.	CEFT|GEN|2304|383
Sampling procedure	As per SOP	Date of test	11.04.2023- 17.04.2023

S. NO.	PARAMETERS	TEST RESULTS Inlet	TEST RESULTS Outlet	TEST METHODS
1	pH	1.9	7.36	IS 3025(Part-11): 2002
2	Total Suspended Solids, mg/L	84	BDL	IS 3025 (Part-17) : 1984
3	Total Dissolved Solid, mg/L	10045	710	IS 3025 (Part-16) : 1984
4	Bio-chemical Oxygen Demand at 27°C 3 days, mg/l	..	BDL	IS 3025 (Part-44): 2003
5	Chemical Oxygen Demand, mg/L	..	BDL	IS 3025 (part-58) : 2006
6	Ammanical Nitrogen (as N), mg/L	13.2	BDL	IS-3025 (Part-34): 1988
7	Nickel (as Ni), mg/L	53	BDL	IS 3025 (Part-54)
8	Hexavalent Chromium (as Cr), mg/L	23	BDL	IS 3025 (Part-52): 2003
9	Total Chromium (as Cr), mg/L	50	BDL	IS 3025 (Part-52): 2003
10	Sulphides (as s), mg/L	BDL	BDL	IS 3025 (Part-29)
11	Sulphates (as SO_4), mg/L	1325	33	IS 3025 (Part-24): 2003
12	Phosphates (as p), mg/L	156	BDL	IS 3025 (Part-31)
13	Oil & Grease, mg/L	33	BDL	IS 3025 (Part-39): 2003
14	Iron (as Fe) mg/l	585	BDL	IS 3025 (Part-53): 2003
15	Zinc (as Zn) mg/l	236	BDL	IS 3025 (Part-49): 1994
16	Lead (as Pb) mg/l	1.2	BDL	IS 3025 (Part-47): 1994
17	Cadmium (as Cd) mg/l	BDL	BDL	IS 3025 (Part-41) : 1992

Note: NT? Denotes Not Detectable

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End of Report

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TEST REPORT

Issued To : M/s JBH Technologies Limited,
D 260-261, Phade-B, Focal Point, Ludhiana, Punjab

Report No.	CEFT|2304|383	Report Date	17.04.2023
Your Ref. No.	Nil	Type of sample	Waste Water
Sample Code Given by Customer	NB	Quantity	5 LITER Plastic Bottle + 1 Liter Glass Bottle
		Date of sampling	10.04.2023
Sampling Location	CETP	Date of sample receipt	11.04.2023
Sample Collected By	Lab Person	Sample I.D.	CEFT|GEN|2304|383
Sampling procedure	As per SOP	Date of test	11.04.2023- 17.04.2023

S. NO.	PARAMETERS	TEST RESULTS Inlet	TEST RESULTS Outlet	TEST METHODS
1	pH	1.9	7.36	IS 3025(Part-11): 2002
2	Total Suspended Solids, mg/L	84	BDL	IS 3025 (Part-17) : 1984
3	Total Dissolved Solid, mg/L	10045	710	IS 3025 (Part-16) : 1984
4	Bio-chemical Oxygen Demand at 27°C 3 days, mg/L	..	BDL	IS 3025 (Part-44): 2003
5	Chemical Oxygen Demand, mg/L	..	BDL	IS 3025 (part-58) : 2006
6	Ammonical Nitrogen (as N), mg/L	13.2	BDL	IS-3025 (Part-34): 1988
7	Nickel (as Ni), mg/L	53	BDL	IS 3025 (Part-54)
8	Hexavalent Chromium (as Cr), mg/L	23	BDL	IS 3025 (Part-52): 2003
9	Total Chromium (as Cr), mg/L	56	BDL	IS 3025 (Part-52): 2003
10	Sulphides (as s), mg/L	BDL	BDL	IS 3025 (Part-29)
11	Sulphates (as SO_4), mg/L	1325	33	IS 3025 (Part-24): 2003
12	Phosphates (as p), mg/L	156	BDL	IS 3025 (Part-31)
13	Oil & Grease, mg/L	33	BDL	IS 3025 (Part-39): 2003
14	Iron (as Fe) mg/l	585	BDL	IS 3025 (Part-53): 2003
15	Zinc (as Zn) mg/l	236	BDL	IS 3025 (Part-49): 1994
16	Lead (as Pb) mg/l	1.2	BDL	IS 3025 (Part-47): 1994
17	Cadmium (as Cd) mg/l	BDL	BDL	IS 3025 (Part-41) : 1992

Note: ND Denotes Not Detectable

Page No. 1/1

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Punjab Pollution Control Board

Zonal Laboratory, E-648-B, 2nd Floor,
Phase-5, Focal Point, Ludhiana.

Water Analysis Report

1.	Laboratory Sample no.:	E-41/Zonal Lab. Monitoring/2022
2.	Name & address of Industry :	M/s JBR Technologies Pvt. Ltd., Ludhiana
3.	Name of Sample Collecting Officer :	Er Ravdeep Singh, Asstt. Environmental Engineer
4.	Designation of the officer authorizing test	Environmental Engineer, Regional office-4, Ludhiana
5.	Type of Sample :	Grab
6.	Date & Time of Sample Collection :	04/05/2022 at 5:00 pm
7.	Date & Time of Sample receipt in lab	05/05/2022
8.	Test Methods	As per relevant parts of IS:3025/ Methods of APHA

Test Results:

Sr. No.	Parameters	Results		
		Inlet of CETP	Outlet of CETP	Units
1.	pH	<2	7.1	-
2.	Total Suspended Solids (TSS)	148	BDL	mg/l
3.	Total Dissolved Solids (TDS)	10512	534	mg/l
4.	Chemical Oxygen Demand (COD)	340	BDL	mg/l
5.	Oil & Grease	52.0	BDL	mg/l
6.	Zinc	945	BDL	mg/l
7.	Nickel	81	BDL	mg/l
8.	T.Cr	339	BDL	mg/l
9.	Iron	2116	BDL	mg/l

-----End of Report-----

Scientific Assttant,
Zonal Lab, Ludhiana

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Punjab Pollution Control Board

Zonal Laboratory, E-64B-B, 2nd Floor,
Phase-5, Focal Point, Ludhiana.

Water Analysis Report

1. Laboratory Sample no.: E-336/Zonal Lab /2023
2. Name of Industry : M/s J.B.R. Technologies Pvt. Ltd., D-260/61, Focal Point, Phase-8, Ludhiana.
3. Name of Sample Collecting Officer : Er. G.S. Chhina, AEE.
4. Type of Sample : Grab
5. Date of Sample Collection : 14.03.2023
6. Date of Receiving: 14.03.2023

Results:

Sr. No.	Parameters	Inlet	Outlet
1.	pH	<2	7.0
2.	Total Suspended Solids (mg/l)	88	BDL
3.	Total Dissolved Solids (mg/l)	10,406	732
4.	Chemical Oxygen Demand(mg/l)	-	BDL
5.	Bio-chemical Oxygen Demand(mg/l)	-	BDL
6.	Oil & Grease (mg/l)	35.9	BDL
7.	Sulphide (mg/l)	BDL	BDL
8.	Ammonical Nitrogen (mg/l)	12.4	BDL
9.	Phospahte (mg/l)	197	21
10.	Sulphate (mg/l)	1096	BDL
11.	Iron (mg/l)	640	BDL
12.	Zinc (mg/l)	285	BDL
13.	Nickel (mg/l)	55	BDL
14.	Total Chromium (mg/l)	52	BDL
15.	Hexa Chromium (mg/)	16	BDL
16.	Lead (mg/l)	1.6	BDL
17.	Cadmium (mg/l)	BDL	BDL

Remarks
1. BDL means Below Method Detection Limit.
2. No specific standards are prescribed as per EPA, However if any stringent/other standards is licensed by the board, the same shall prevail

Scientific Assi... Lab, Lud...

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7.2 POSSIBLE REASONS FOR LOW PH (2.51 TO 5.74) MONITORED IN THE SAMPLES COLLECTED ON 30.04.2023 AFTER THE INCIDENT

- Some hydrogen sulfide gas diffuses into the headspace environment above the wastewater. Moisture evaporated from warm sewage may condense on unsubmerged walls of sewers, and is likely to hang in partially formed droplets from the horizontal crown of the sewer. As a portion of the hydrogen sulfide gas and oxygen gas from the air above the sewage dissolves into these stationary droplets, they become a habitat for sulfur oxidizing bacteria (SOB), of the genus *Acidithiobacillus*. Colonies of these aerobic bacteria metabolize the hydrogen sulfide gas to sulfuric acid. Favorable conditions for Sulfur Oxidizing bacteria (SOBs) and acid regression may be the cause for reducing the pH to 2-3.

- Sudden acidification in the short stretch under consideration by accidental/illegal discharge of acidic effluent into the sewer around the sampling time at 11.30 A.M to 01.40 P.M on 30.04.2023 may not be ruled out.

7.3 IMPACT OF SODA-CAN EFFECT

H_2S has high solubility in water i.e 10 times more soluble in water than carbon dioxide. A sewer main can contain huge amounts of undetected H_2S dissolved in the wastewater. As a result of the "soda-can effect," this can turn into gaseous toxic clouds when the water is disturbed.

Heavy rainfall on the earlier night on 29.04.2023 causing heavy flow of storm water may have caused accumulation of sludge to the sewer pipeline at the affected area. As per record of IMD, Chandigarh, the rainfall intensity is reported to be 16mm on 29.04.2023. The storm water laden with sewage sludge draining into the under designed main sewer and obstruction of sewer (probably due to sludge deposition and waste from meat shops in the upstream) could have reduced the head space in the sewer pipelines. This along with the storm/heavy rain created turbulence could have led to what is known as a "soda-can" effect, creating back pressure and releasing this H_2S toxic sewer gas through the sewer branches from the unsealed houdis'connected to the sewer line. The same is supported by the fact that people on opposite side of the affected roadside, where there is no houdi/manhole, remained unaffected.

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Sardar Beant Singh State University
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(Established by Govt. of Punjab)
GURDASPUR (PUNJAB)143530

Prof. (Dr) Susheel Mittal CChem FRSC
VICE CHANCELLOR

Ref. No. SBSSU/1205
Date 25/05/2023

Preliminary report on the visit of the Expert Committee comprising of Professor Susheel Mittal, Vice Chancellor, Sardar Beant Singh State University, Gurdaspur and Professor Raj Kumar Gupta, Department of Chemical Engineering, Thapar Institute of Engg. & Technology, Patiala on May 2, 2023 at 3.30 PM

The committee visited the site of the incident on May 2, 2023 (Tuesday). The committee was briefed about the incident. The committee interacted with local residents and witnesses of the incident and spent about 90 minutes at the site. It was informed to the committee that PPCB had already collected samples of sewerage line from the incident site on 30.4.2023 and other nearby locations on 1.5.2023. Preliminary observations of the committee are:

1. Incident happened on early morning of April 30, 2023 (Sunday) around 7 AM, as informed by the local residents who were available for the comments.
2. Incident site is surrounded by commercial, residential and tiny industrial establishments like fabrication units, machining units, buffing/polishing addas, wire drawing units. Some tiny electroplating units are also reported to be working in the vicinity. In front of the incident site, there are number of small food eateries (dhabas and tea shops). On the upstream of the incident point, there is a cluster of raw fish and meat slaughtering shops.
3. Brother of one of the victims, owner of Goyal Karyana Store informed us that his brother suddenly fell unconscious and died near the 'Haudi' just outside the shop when he visited the shop. His mother and brother's wife also died on the spot when they came down from the house on the first floor of the shop where they lived, on hearing voices of the passer-byes.
4. It was also informed by the residents that five persons died inside the Aarti Clinic, located next to Goyal Karyana Store. Some more people are reported to have died near the incident site.
5. When our team visited the site, whole of the incident site was found clean and man-hole covers of sewerage lines replaced and cleaning of the sewerage line done, as

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Prof. (Dr) Susheel Mittal CChem FRSC
VICE CHANCELLOR

Ref. No.....
Date.....

informed by the residents. Further, the residents informed us that the main sewerage line might have been blocked as it was cleaned with super suction machines in the late night on 30.4.2023. They also told us that the problem of sewerage line blockage is common in this area.

6. Poor or no ventilation was found in the residences of affected persons
7. We were informed by the people that the cause of deaths could be inhalation of H_2S, as declared by the NDRF and district administration also.

As per the information available to us supported with Chemical Testing Reports (provided by PPCB) of the samples reported above, following are our **preliminary findings:**

a. Loss of life was due to inhalation of some poisonous gases like Hydrogen sulphide (H_2S) in high concentration (more than 700 ppm).
b. H_2S is mainly generated in the sewer from the biochemical degradation of human excreta, kitchen refuse, detergents, oil and grease, animal waste by microflora of organisms, which are always present in the waste aqueous streams. Where ever there is blockage of the sewer stream or a sludge deposition in the sewer line, it leads to anaerobic conditions. Possibilities of accumulation of high concentration of H_2S is highly probable when there is sewerage line blocked. Since the sewerage manholes in the vicinity of the Karyana Store and Aarti Clinic were all tightly covered, the sewerage pipe became a closed chamber leading to accumulation of the H_2S gas.
c. A high concentration built up of the gas in the underground pipe might have been triggered by the residents in the affected houses, who tried to clear the blocked sewerage themselves.

Some additional findings based on the lab test reports:

1. Low pH in the range of 2.5 reported in the sewerage samples collected from manholes near the affected site indicated anaerobic conditions in the said sewer line portion. pH conditions are reported to be in the range 4.4 to 5.7 in the upstream and downstream stretches of the sewer line, which indicates building up of anaerobic condition only in the accident area and sustaining in adjoining pockets.
2. High concentrations of sulphides in the range 56-60 mg/L in the affected sewerage pockets as compared to 6 - 8.8 mg/L in the upstream and downstream pockets might have come from anaerobic biodegradation of the organic matter and conversion of sulphates to sulphides in acidic (low pH) conditions, especially in the focused stretch of the underground sewer line accompanied with inadequate slime stripping, long detention and insufficient design planning of the sewer line. A similar pattern of concentrations was observed for chlorides, in the relevant pockets.
3. Iron in particle/powder form probably enters in the sewer system from the cottage industry operating in the area engaged in machining processes like buffing, polishing,

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Prof. (Dr) Susheel Mittal CChem FRSC
VICE CHANCELLOR

Ref. No.....
Date.....

nut-bolt making, drilling and wire drawing industry. The iron so entered in the waste stream got accumulated in the affected pocket due to reasons of sludge settling or some other similar reasons. High concentrations of iron in the range 989-1459 mg/L in the affected sewerage pockets as compared to 291 - 333 mg/L in the upstream and downstream pockets might have come due to solubility of the metal in the acidic conditions converting metal particles to the dissolved aqueous form. Results dated 1.5.2023 of adjoining streets suggest low concentration of iron contents upto a range of 9 ppm compared to high concentration of iron observed in affected areas also indicates accumulation of iron and others in a particular stretch. High TDS (19426mg/L) near the incident point and low TDS (1730 mg/L) upstream supports the above finding.

4. Presence of metals, especially iron, zinc, nickel, chrome or any other heavy metal in the sewerage sample cannot lead to the generation of H_2S. On the contrary, iron and other metals in the aqueous medium or iron salts would combine with sulphide ions (from H_2S or any other source of sulphide) to immediately convert to highly stable iron/metal sulphide through an irreversible reaction leading to the formation of respective metal sulphides. Hence, due to above property of metals, iron, nickel, zinc, chromiun etc. would never be a source of H_2S generation, rather are used as H_2S scavengers to remove sulphide from various streams likely to contain H_2S.
5. Moreover, due to the presence of heavy metals including iron, the low BOD is likely to be observed due to inhibition by these metal ions.
6. In case of a waste water stream in running condition with proper ventilation of sewerage network, the generation of H_2S at high concentrations are not possible, as there would not be anaerobic conditions developed in the sewerage line. However, when blockage is built up and anaerobic conditions prevail, only then biochemical degradation of organic matter would lead to the generation of gases including H_2S.
7. Meat/fish slaughtering cluster on the upstream and unauthorized eateries in front of the incident point contributes to high organic load and might have added to the H_2S generation under anaerobic conditions in the sewer line.
8. Possibility of accidental inoculation with any unknown chemical or material in the affected stretch of the sewer line could also have triggered generation of any poisonous gas leading to causalities.

Susheel Mittal 25.5.23
Dr. Susheel Mittal
Vice Chancellor, SBS State University, Gurdaspur
(Former Registrar & Sr Prof. Chemistry at TIET, Patiala)

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Annexure-E
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01/05/2023

Subject: Findings and recommendations during visit to Sua Road, Giaspura, Ludhiana regarding inspection and investigation of gas leak accident.

This is in reference to the above subject matter, I visited the said site on 01.05.2023 at 11:30 AM. During my visit, I met Ms. Swati Tiwana, SDM (West), Ludhiana and she introduced me to the Hon'ble Deputy Commissioner Ma'am. ADC (General), Officers from Punjab Pollution Control Board, Director of factories and Police authorities were also present. Gist of my interaction with all the above administrative staff and my opinion is as follows:

1. It has been told that as per the findings of NDRF and CSIO, the gas leakage accident might have occurred due to high concentration of hydrogen sulphide (H_2S) and carbon monoxide dissipated due to blockage of sewerage lines. One of the person from the deceased family tried to open up the block sewer using stick or might be with chemicals led to immediate release of huge amount of H_2S. As H_2S is a toxic gas which can cause severe health risk. As per the cited literature concentrations above 500 ppm is lethal for human beings which can cause immediate death. As per the discussions on the site this concentration was much higher when it was immediately released from the sewer. Role of H_2S in immediate deaths of persons is imminent as H_2S cause inhibitions of the cytochrome oxidase enzyme system resulting in lack of oxygen use in cells
2. I along with Ms. Swati Tiwana, SDM (West), Ludhiana and other administrative staff visited the house where five family members were died due to acute gas exposure. Based upon our findings we conclude the house was constructed with very poor ventilation. Moreover, there was sewer opening in the bedroom itself where the family members might have been present. The H_2S gas might have found its route as back flow into this room which could have led to high concentration of this gas in that room leading to deaths.

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3. While inspecting the nearby areas it is observed that it is densely populated area without any proper arrangement of sewer flow. This could lead to heavy accumulation of organic matter which eventually lead to bio-chemical degradation with more H_2S formation. Heavy rain on the proceeding evening of fateful tragedy i.e. on 29.04.2023 may have contributed to the regular flow in sewerage line and might have created temporary blockage in lines.
4. There were no ventilation pipes (vent pipes) provided with sewer lines along the affected stretch, which might have accelerating the buildup of H_2S and other gases in the sewage system.
5. I could try co-relating this incident with industrial discharge also from nearby industries. But based upon my observations and personal opinion, if it could have been the industrial untreated discharge, the long stretch of houses would have been affected. However, the diameter of the affected area was limited to 3-4 houses so, hypothesis of industrial discharge could be neglected. Even if it is presumed that there is some untreated industrial discharge in that particular stretch then in that case; the severity of high concentration of H_2S is not possible. If administration recommends, the sampling of sewer manholes can be carried out.
6. Once again based upon the onsite discussions with concerned officials, I could co-relate this incident as a case of sewer blockage where anaerobic digestion of organic matter led to formation of H_2S. During anaerobic digestion / fermentation, bio-chemical reactions lead to the formation of gases like carbon monoxide along with other gases like H_2S, CH_4, CO_2, N_2O, H_2. Also, H_2S combines with oxygen to form sulphuric acid which eventually can lead to reduction in pH of slurry.

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There were many small slaughter houses, dhabas in the close vicinity of the affected site which could have led to release of huge amount of organic content in the sewer lines. Again, this organic content is feeder to anaerobic digestion which ultimately lead to formation of H_2S, CO and other gases.

7 Based upon the overall inspection of the site and subsequent interactions with all the administrative staff, I have some personal recommendations to cope up future incidents like this:

i. While designing sewer lines, the contribution of rainwater run off should also be accounted for. Regular cleaning of sewer lines where there is a poor drainage systems and provision of vent pipes in the sewer lines should be provided. Moreover, illegal connections from the households to the main sewer line should be checked regularly.

ii. Regular mock drills for gas leakage safety, fire from gas leakage would be adopted by Municipal Corporation for densely populated area like this.

iii. Municipal Corporation and other regulatory bodies should collaborate with institutes of repute to develop state of the art technologies to avoid any such incident in near future.

Dr. Anoop Verma

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HYDROGEN SULPHIDE GAS IN SEWERS – THE CHALLENGES OF ODOUR AND CORROSION

Paper Presented by:

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39th Annual WIOA
Queensland Water Industry Operations Conference and Exhibition
Logan Metro Indoor Sports Centre, Logan
3 to 5 June, 2014

HYDROGEN SULPHIDE GAS IN SEWERS – THE CHALLENGES OF ODOUR AND CORROSION

Jason Kane, *Engineer*, McBerns

ABSTRACT

The presence of Hydrogen Sulphide gas (H_2S) in sewers can result in hazardous work environments, odour complaints and accelerated corrosion of assets. In the water industry, we are all familiar with the impacts of H_2S gas in sewers, pump station wells, discharge manholes and treatment plants.

H_2S gas problems generally occur after the infrastructure has been built. Therefore, operators are typically the front line when odour complaints are received or H_2S gas is detected.

This paper discusses the challenges operators face due to H_2S gas, how it is generated, how H_2S gas corrodes our assets, odour and corrosion examples, accepted removal/treatment technologies, what can be done to reduce H_2S gas generation and typical repair techniques.

Controlling H_2S gas and repairing corroded infrastructure is achieved by the combined efforts of operators and engineers. Treatment and reduction options can be developed by knowing how much and how often the H_2S gas occurs. Examples of H_2S gas management are presented. Practical, low cost strategies in reducing H_2S gas are also discussed.

1.0 INTRODUCTION

Once released from the sewage (i.e. the liquid phase), H_2S gas can be toxic to sewer workers, even at low concentrations, and cause nuisance odours. Under certain conditions H_2S gas can be converted to sulphuric acid which can corrode the internal walls of sewers, manholes, pump stations and other concrete and steel structures.

H_2S gas impacts include:

- Release from the sewage at manholes, vents, pump stations and channels into the atmosphere, resulting in odour problems
- H_2S gas is denser than air so it may sit at the bottom of maintenance structures such as tanks, wells, enclosures, pits, buildings, storage areas etc.
- H_2S gas can be oxidised within the sewer headspace on the sewer pipe wall resulting in the generation of sulphuric acid, which is corrosive, especially to concrete or concrete lined pipe.

Practice has shown that very low concentrations of H_2S gas in solution, for example 1mg/L, can produce a concentration of hundreds of ppm by volume in air. This has been observed in sewer 'headspaces' and wet wells.

The whole of life cost of corroded sewer assets has been estimated at many thousands of dollars per km resulting from H_2S gas. Cesca et al. state that "*The cost associated with premature deterioration of sewer assets has been estimated at over $12,000 per km for a hydrogen sulphide concentration of 100 ppm in a 300 mm diameter sewer*".

2.0 DISCUSSION

2.1 How is H_2S Gas Generated

The following describes the H_2S gas generation process:

"Hydrogen sulphide is formed under anaerobic conditions at low flow velocities and warm temperatures. The rate of release is increased at points of high turbulence and at the outlets of inverted syphons and pressure mains."(H_2S Control Manual, Water Services Association of Australia)

Inputs to H_2S gas generation include available oxygen, suphates, organic matter, inadequate slime stripping velocities, detention time, temperature (e.g. tradewastes versus domestic sewage) and insufficient planning (e.g. catchment growth outstripping hydraulic capacity)

Mechanisms for the creation and release of H_2S gas occur when sulphate or oxygen is used/depleted to produce sulphide. The resulting hydrogen sulphide gas can remain in solution or under certain conditions can be released to the atmosphere.

2.2 How is H_2S Gas Measured

H_2S gas can be measured using the following methods:

- OU's – Odour Units (i.e. refer AS/NZS 4623) – odour sample needs to be captured and scientifically tested. Reported as OU/m^3
- ppmV – the volume of H_2S gas in proportion to the total air volume in parts per million. H_2S gas loggers and proprietry software are available for logging and analysing data
- Sulphide concentration modelling (i.e. predictive only):

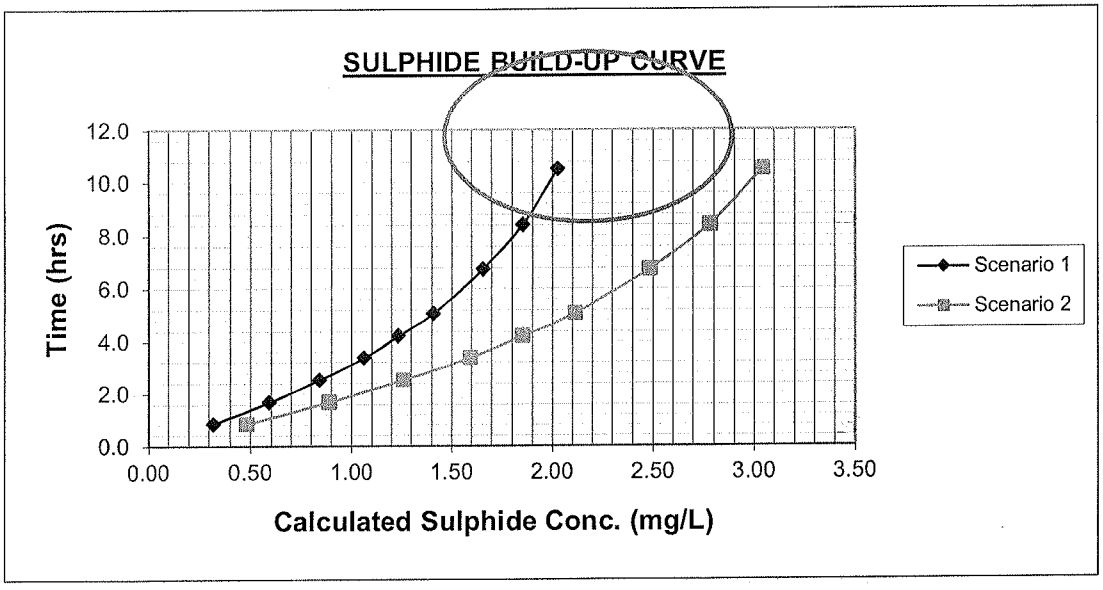

Figure 1: ***Predicting sulphide concentration in a sewer***

- H_2S gas dispersion modelling (i.e. predictive only) – assumed or measured concentrations are predicted from environmental inputs using proprietry software.

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2.3 Health Effects of H_2S Gas

Tables 1 & 2 show the health effects and recommended limits for H_2S gas exposure

Table 1: ***H_2S gas levels and impacts***

Level in air (ppm)	Impacts & Health Effects
0.008	Odour threshold (with some individual variability)
>0.008	Increasing possibility of annoyance and headache, nausea, fatigue
2	Bronchial restriction in some asthmatics
4	Increased eye complaints
5-10	Minor metabolic effects
20	Neurological effects including memory loss and dizziness

Table 2: ***Exposure limits***

Limit (ppm)	Exposure Time
2	30 minutes
0.1	24 hours
0.014	90 days

(*Hydrogen Sulpide and Public Health*, Department of Health, WA Government, 2009)

Concentrations of H_2S gas greater than 150 ppm become undetectable to the olfactory system. Concentrations greater than 300 ppm can cause loss of consciousness and death. Very high concentrations greater than 1000 ppm can result in immediate collapse after a single breath (Wikipedia, search: sewer gas, March 2014, http://en.wikipedia.org/wiki/Sewer_gas).

2.4 Removal of H_2S Gas

H_2S gas reduction or removal usually depends on where in the sewerage system the appropriate method can be applied. The H_2S gas problem can be attacked in the dissolved or undissolved form:

Liquid phase:

- Dosing to precipitate out the sulphur containing compounds. For example, dosing ferric chloride, where H_2S gas will react with metal ions in the liquid to produce metal sulfides that are not water soluble
- Dosing for biological and/or chemical conversion/capture, for example, the addition of microbes that consume enzymes, oxygen injection, pH adjustment (e.g. magnesium hydroxide)
- Masking agents/deodorising

Gas phase:

- Sealing the system – usually silicon based products such as Sikaflex™
- Ventilation – induct/educt of air (i.e. dilution over time)
- Extraction - wind assisted or fan extracted
- Adsorption – activated carbon (usually impregnated for H2S gas removal), other media types include plastics, coconut husks, timber mulch
- Biological and/or chemical conversion/capture
- Burning off.

In more recent times, the following reduction methods have been found to be the most effective, based on longevity and not necessarily cost.

Table 3: *Accepted H_2S gas reduction methods*

Prevention	Containment	Treatment
Calcium nitrate	Magnesium hydroxide	Carbon filters
Ferric nitrate	Sodium hydroxide	Bio-filters
Oxygen injection	Ferric chloride	Chemical scrubbers

2.5 Reducing H_2S Gas Generation

Some practical H_2S gas reduction methods include:

- Reduce turbulence in MH's and inlet structures
- Venting – designed induct and educt ideally
- Increase pumping frequency and/or flow
- Improve slime stripping velocities
- Submerge inlets where possible – discharge MH's and wet well inlets
- Vent outlets at high points
- Flush mains with long detention times or low velocities
- Reduce fats, oils and greases in wet wells
- Choose materials to suit the amount of potential H_2S gas e.g. high CAC cement lining, HDPE pipe and liners, epoxy liners
- Saw tooth rising mains:
  - Automatic air release valves on high points
  - Monitor long 'falling main' sections
  - Condition inspection – wall thickness, non-destruction or coupon/cut-out sampling and testing to track deterioration (N.B. testing can be expensive); hardness testing; cover tests; chemical or physical analysis
  - Where possible, don't build them
- Improve quality by reducing H_2S gas producing tradewastes – high BOD, high temperature, high sulphur containing wastes e.g. food manufacturers
- Monitor and track H_2S gas concentrations at critical points e.g. pump stations, discharge MH's, inlet structures, pressure mains
- Map odour complaints versus seasonal changes.

In practice even retic gravity sewers or small diameter rising mains have the potential to generate high H_2S gas concentrations, usually due to long detention times. But how can we vent sewers near houses and businesses without adversely affecting customers? Some form of treatment combined with dispersion is usually required. Figures 2 and 3 show some relatively low cost treatment and dispersion options.

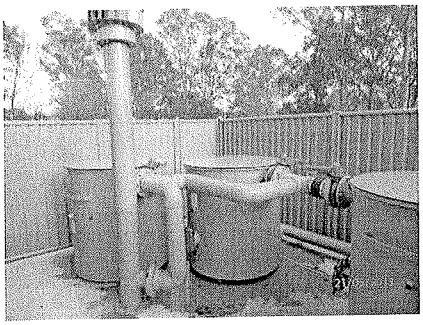

Figure 2: *Typical AC filter & vent*

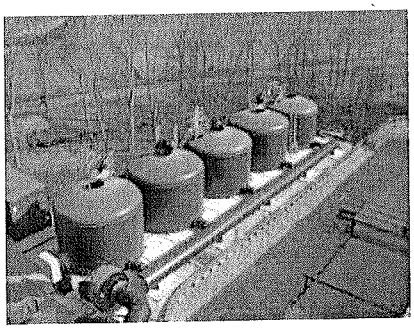

Figure 3: *Biotrickling filter*

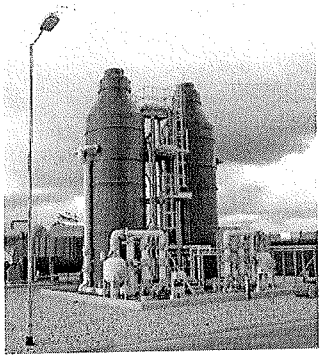

Figure 4: *Chemical scrubber*

2.6 Corrosion, Prevention and Repair

When H_2S gas is converted by microbes to sulphuric acid (e.g. on the pipe wall), its corrosive effects can cause long term loss of wall thickness or even complete failure/collapse.

The extent of corrosion depends on the asset type, materials, system design and operational decisions. Examples of H_2S gas corrosion include:

- Concrete – microbial induced corrosion via acid attack (refer figure 5)
- Asbestos cement pipe – lime leaching making pipe susceptable to cyclic failure (refer Figure 6)
- Ferrous – found in older pipes and fittings, knifegate valves, penstocks, inlets etc.
- Plastic – not likely but some evidence of pock-marks in HDPE pipe

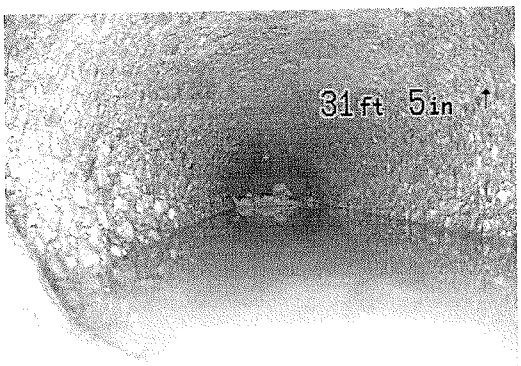

Figure 5: *Corroded concrete pipe*

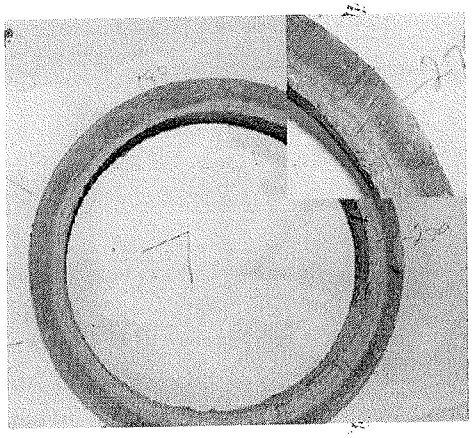

Figure 6: *AC Sewer rising main-internal leaching due to H_2S gas*

2.6.1 H_2S gas Corrosion Protection

Protective coatings are the most common H_2S gas prevention technique. Some typical coatings used in the water industry include:

- Cement mortar – trowelable or spray-on
- Epoxy spray-on
- HDPE liner
- Cement-based spray-on liner e.g. gunite

It should be noted that the success of protective coatings is dependent on the material type, surface integrity and preparation.

2.6.2 Repair Techniques

Some proven H_2S gas corrosion repair techniques include:

- Pipe relining – CIP liners, spiral liners, structural liners
- Patching/clamping (small dia.) – internal or external (e.g. pressure main repair bands)
- Patching (large dia.) – reline shorts for large pipe
- Repair wraps e.g. resin-soaked fibreglass bandage
- Sand blasting, priming and re-coating

Renewal or complete replacement as a result of H_2S gas corrosion are generally an expensive exercise that may have been avoided if monitoring and adequate repairs were in place. At the very least, a successful repair will afford time to determine the most cost effect renewal as well as time to procure the specialist contractors that are usually required.

3.0 CONCLUSION

The role of the operator in managing the challenges of H_2S gas includes:

- Ensuring that operating and maintenance work is conducted safely when H_2S gas has the potential to exist
- Note any conditions or changes that may increase the likelihood of H_2S gas generation
- Identify and report H_2S gas and corroded assets
- Implement a repair solution that will maintain service until rehab/renewal is done.

Key messages for the operator to consider:

- How is H_2S gas generated
- What are the conditions that may increase H_2S gas
- How is H_2S gas concentration measured and what units are used
- What are the exposure levels and relative health impacts
- What are some proven treatment and removal techniques
- What actions can be taken to reduce the likelihood of H_2S gas generation
- What are the typical forms of corrosion
- What are some typical repair techniques

4.0 ACKNOWLEDGEMENTS

I wish to acknowledge the assistance of David Jobberns and Noel Southern from McBerns for their valuable input.

5.0 REFERENCES

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Sodium Chlorite Hydrogen Sulfide Control in Wastewater Collection Systems

Introduction

Hydrogen sulfide (H_2S) is a dense, colorless, strongly odorous toxic gas that corrodes infrastructures and impairs the performance of wastewater treatment operations.

Hydrogen sulfide is naturally converted to sulfuric acid, which is corrosive towards steel and concrete. Control of H_2S will result in increased life and lower maintenance cost for facilities and piping. In addition, worker safety is of concern as hydrogen sulfide is extremely toxic at levels above 500 ppm, which can be reached in confined spaces.

A number of sulfide control strategies are available depending on the system design and treatment goal.

Application Description

Sulfide exists in wastewater in three forms: hydrogen sulfide gas (H_2S), non-volatile ionic species hydrogen sulfide (HS^-) and sulfide (S^{2-}). The ratio of each of the three species H_2S, HS^- and S^{2-} is dependent on the pH. At pH 6, 90% of the sulfide will be present as H_2S, and the higher the H_2S concentration the greater the tendency for it to volatilize. Conversely, at pH 10, 100% of the sulfide will be present as S^{2-}.
Hydrogen sulfide occurs naturally through the anaerobic decay of organic matter and recognized by its characteristic rotten egg odor. In typical domestic wastewater, microbial reduction of the sulfate ion is the dominant mechanism for sulfide formation. In the absence of dissolved oxygen (DO) and in the presence of soluble Biological Oxygen Demand (BOD), *Desulfovibrio desulfuricans* (SRB) and other sulfate-reducing bacteria (SRB's) convert the sulfate ion to sulfide.

$$SO_4^{2-} + \text{Organic matter} \xrightarrow[\text{(no D.O)}]{\text{Anaerobic Microorganisms}} H_2S + CO_2$$

Hydrogen sulfide formation in wastewater systems occurs primarily in the gelatinous slime layer that accumulates on pipe walls and in the sludge blankets of clarifiers and other solids processing units. The rate of sulfide production is dependent upon the concentrations of sulfate ions, organic matter, and dissolved oxygen, as well as other factors such as pH, temperature, retention time, stream velocity, and surface area.

Treatment Alternatives

There are two basic ways to control hydrogen sulfide:

- Prevent sulfide formation
- Remove the sulfide after its formed

Preventing Sulfide Formation

Inhibiting bacterial action or moderating the variables affecting hydrogen sulfide generation is often the basis for controlling hydrogen sulfide in wastewater treatment systems. Treatment options include the following chemicals: Chlorine dioxide and Nitrate.

Chlorine dioxide (ClO_2) is applied at or near the source of hydrogen sulfide. Chlorine dioxide, when fed at doses higher than the minimum required to destroy hydrogen sulfide will remove the biofilm layer, which contains the bacteria creating the sulfide. Chlorine dioxide

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reacts more rapidly and completely than other available oxidizers and does not form colloidal sulfur.

Sodium nitrate ($NaNO_3$) is applied to retard septicity and promote bio-oxidation of organic odors in systems with a retention time greater than four hours. Sodium nitrate is a biological approach to controlling odors in wastewater, providing naturally occurring facultative anaerobic denitrifying bacteria with a source of bound oxygen, which is metabolized preferentially over other sources of oxygen like sulfate. This results in the production of nitrogen gas via intermediates like nitrite (NO_2^-), nitric oxide (NO), nitrous oxide (N_2O) and other metabolic byproducts rather than sulfide.

$$BOD + NO_3^- \xrightarrow[\text{(no D.O)}]{\text{Anaerobic Microorganisms}} N_2 + CO_2 + \text{Biomass}$$

Typical field applications require a minimum of 1.5 pounds of nitrogen-oxygen (N-O) per pound of BOD.

Removing Sulfide After its Formation

Removing the sulfide after it has been formed can be achieved using a variety of chemicals either alone or in combination. The treatment mechanism generally employed is oxidation of the hydrogen sulfide to either sulfur or the sulfate ion. In some cases, the chemical treatment program also promotes bio-oxidation of organic odors. Common treatment options include: Nitrates, Sodium chlorite, Hydrogen peroxide, and Iron Salts

Nitrate (NO_3) may also be effective for the removal of existing sulfide in the presence of bacteria that can utilize the nitrate for the oxidation of sulfide to sulfur or sulfate. Examples of such bacteria include *Thiabacillus denitrificans, Thiomicrospira denitrificans* and *Thiosphera pantotropha*[1]. Bacteria able to utilize nitrate for the bio-oxidation of sulfide are naturally present in sewage systems.

Sodium chlorite ($NaClO_2$) is applied at or near the source of hydrogen sulfide. It is also applied in wastewater systems where a retention time of greater than 3 hours is encountered, such as remote sites for long duration control. Sodium chlorite selectively oxidizes sulfide and related organic odors. Unlike hypochlorite, sodium chlorite does not react with ammonia, and does not form chlorinated organics.

$$2H_2S + NaClO_2 \rightarrow 2S^0 + 2H_2O + NaCl$$

Typical field applications require a minimum of 3 mg/L of sodium chlorite per 1 mg/L of sulfide.

Hydrogen peroxide (H_2O_2) is applied to the wastewater system usually where there is a retention time of less than 5 hours and at least 30 minutes prior to the point where the hydrogen sulfide is released. Hydrogen peroxide is a stronger oxidant than either chlorine or potassium permanganate. Hydrogen peroxide will oxidize the hydrogen sulfide present and promote bio-oxidation of organic odors. Hydrogen peroxide decomposes into oxygen and water, environmentally harmless byproducts.

$$H_2S + H_2O_2 \rightarrow S^0 + 2H_2O \quad (pH < 8.5)$$

$$H_2S + 4H_2O_2 \rightarrow SO_4^{2-} + 2H_2O \quad (pH > 8.5)$$

Typical field applications require 1 to 3 mg/L hydrogen peroxide per 1 mg/L sulfide. The reaction with sulfide is rapid with 90% of the hydrogen peroxide typically consumed within 10 to 15 minutes.

Iron Salts are applied to wastewater systems for long-duration control. Both ferrous and ferric salts react with dissolved sulfide to form metal sulfide precipitates that are removed at the treatment plant.

Ferrous Salts: $Fe^{2+} + HS^- \rightarrow FeS + H^+$
Ferric Salts: $2Fe^{3+} + 3HS^- \rightarrow Fe_2S_3 + 3H^+$

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Typical field applications require 3-5 mg/L as Fe per 1 mg/L of sulfide.

Further Information

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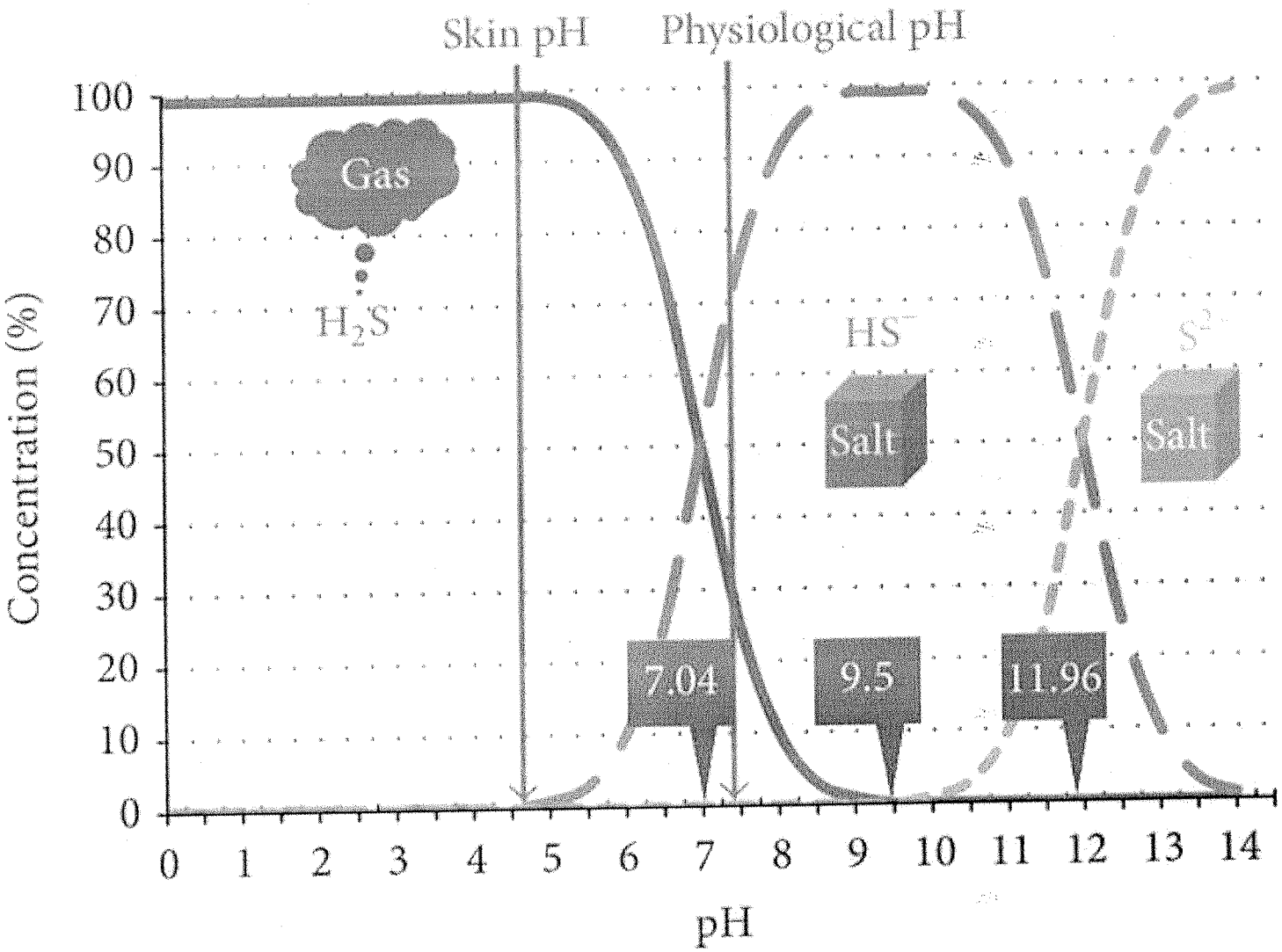

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TECHNICAL INFORMATION FROM THE CONCRETE PIPE ASSOCIATION OF AUSTRALASIA

September 2013 - No.1

BIOGENIC SULPHURIC ACID ATTACK ON CONCRETE PIPE

In concrete pipes carrying aged sewage, in warm climates, the interior surface above the effluent level is subject to attack by sulfuric acid generated by bacterial action at the pipe wall, making use of hydrogen sulfide gas in the sewer atmosphere. The production of hydrogen sulphide and the consequential deterioration of concrete sewer pipes is first and foremost a function of sewer design and environmental factors. This process, known as "H_2S attack", can lead to very rapid deterioration.

Biogenic sulphiric acid (BSA) attack is regarded as one of the most aggressive forms of attack on concrete sewer infrastructure. This has been studied since 1945 when it was discovered that bacteria are responsible for the attack mechanism. Colonisation of the concrete surfaces is progressive with various strains of the same family, Thiobacilli, thriving at different pH levels. The final stage is the most aggressive, with acid producing bacteria thriving at pH levels less than 2 and being capable of generating sufficient acid to reduce the pH to 1, which is highly aggressive to all cementitious materials.

The mechanism for this type of attack on concrete is summarised below:

Step 1: Newly installed concrete pipe has a highly alkaline surface pH of approximately 12-13. In the wastewater, sulphate reducing bacteria (SRB) reside which utilise sulphates present in the wastewater as an oxygen source, reducing them to produce hydrogen sulphide (H_2S) and CO_2.

Step 2: If there is sufficient oxygen, nutrients and moisture present, colonisation of neutrophilic bacteria, can cause oxidisation of H_2S to create sulphuric acid (H_2SO_4). The acid reacts with the concrete pipe obvert and walls, and further lowers the pH. This facilitates colonisation by new strains, adapted for lower pH conditions, and so the pH gradually decreases.

Step 3: When the pH of the concrete falls to around 4, colonisation by aggressive acidophilic bacteria occurs. These bacteria are capable of generating enough sulphuric acid to reduce the surface pH to 1-2 which is considered highly aggressive to all cementitious materials.

Step 4: The corrosion process now results in concrete mass loss. The sulphuric acid first reacts with the calcium hydroxide ($CaOH_2$) in the concrete to form gypsum. The formation of gypsum is associated with an increase in volume by a factor of 1.2 to 2. Furthermore, the reaction between gypsum and tri-calcium aluminate (C_3A) with the formation of ettringite causes an even larger volume expansion, which leads to increase of internal pressure and deterioration of the concrete matrix.

The factors that influence this type of attack to occur include:

- Hydrogen sulphide being generated
- The release of H_2S from a water phase to a gaseous phase
- Biological oxidisation of H_2S to sulphuric acid above the wastewater surface
- Acid attack on the damp surfaces of the exposed interior surface of the concrete pipe

However, not all concrete pipes will be affected by hydrogen sulphide problem. The physical factors that that may impact on the affect sulphide generation and corrosion include:

- Concentration of organic material and nutrients in the sewerage.
- Sulfate concentrations.
- Dissolved oxygen level in the sewerage.
- Temperature (i.e. higher temperature increase likelihood of bacterial growth rate).
- Relative humidity (corrosion requires moisture on the pipe wall).
- Stream velocity, surface area to volume ratio, vertical drop points, detention time.
- Level of construction, grit and debris, surcharging.
- Turbulence (at the point of turbulence, the water surface area for gas transfer increases often leading to a dramatic release of H_2S to the gaseous phase)

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Whilst all these factors have an important role in contributing to the corrosion impact on concrete pipe in sewerage wastewater, good design, specification and manufacture, can help to mitigate the onset and the severity of sewer corrosion.

Extensive field and laboratory research has shown that corrosion is significantly reduced under the following operating conditions:

- High slopes in the network
- High dissolved oxygen content
- High wastewater pH
- Surcharging of sewer networks
- Short sewer reaches
- High concrete alkalinity
- Moderate operating temperatures

Over the years considerable efforts have been dedicated to the understanding of the corrosion process, and how to better deal with this form of corrosion. BSA is a complex process and there is much conjecture in the literature surrounding the critical level of H_2S concentration required to start the process, and significant knowledge gaps appear to exist particularly concerning concrete mix design. The test methods and parameters used have varied considerably.

It is generally well known that blended cements containing slag (GBS), fly ash, Microsilica or silica fume, provide improved durability and increased resistance to chemical attack. In the late 1990's CPAA member companies along with BRANZ and Auckland University developed a laboratory based sulphuric acid (inorganic or mineral) methodology to measure the relative laboratory attack rates on various Portland cement mixes. This research work was completed in 2001 and indicated a superior laboratory performance of GBS blends.

More recent research started in 2001, and still ongoing, is indicating that BSA attack is much more aggressive than chemical sulphuric acid generally used in laboratory testing. This research indicates that relative lab mineral acid resistance of various cement blends is not a reliable indicator of field performance under field biogenic conditions, with the environment determined by the cement structure being considered to be an important parameter. The BSA mechanism reduces the pH level down to severe levels with some cements and blends allowing different critical levels and acid production rates. The result is that all cements and blends are equally vulnerable to rapid corrosion.

Recommendations

There are many factors that come in to play when determining how severe the internal exposure conditions of concrete sewer pipes will be. It is vitally important that designer understand what level of performance they are expecting from the concrete, and how best to adapt the product to the conditions.

Recent research has indicated that there is no recognised cement blend (slag, silica fume, etc.) that can effectively resist biogenic sulfuric acid attack particularly when extremely high acidic environments (pH < 1.0) develop inside a concrete sewer pipeline.

However, blended cements can be an excellent mechanism to provide durability provision against sulfate attack (as opposed to sulfuric acid attack), chloride exposure, or acidic effluent, for external pipe wall protection.

It is recommended by the CPAA that when designing concrete sewers to resist severe H_2S attack mechanism, that designers consider alternative solutions for the interior of the pipe to deal with the aggressive nature of this environment. This can include utilising the following durability provisions:

- Increasing the total alkalinity of the concrete using appropriate materials
- Increasing the cover of the concrete pipe, or including a sacrificial layer of concrete that won't impact on the structural or durability design requirements over time.
- Specifying a keyed-in plastic liner over the interior surface of the pipe to protect it from H_2S attack.
- Using concrete made with antimicrobial additives

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The rapid chemically induced corrosion of concrete sewers at high H2S concentration

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The rapid chemically induced corrosion of concrete sewers at high H2S concentration

Abstract

Concrete corrosion in sewers is primarily caused by H2S in sewer atmosphere. H2S concentration can vary from several ppm to hundreds of ppm in real sewers. Our understanding of sewer corrosion has increased dramatically in recent years, however, there is limited knowledge of the concrete corrosion at high H2S levels. This study examined the corrosion development in sewers with high H2S concentrations. Fresh concrete coupons, manufactured according to sewer pipe standards, were exposed to corrosive conditions in a pilot-scale gravity sewer system with gaseous H2S at 1100 ± 100 ppm. The corrosion process was continuously monitored by measuring the surface pH, corrosion product composition, corrosion loss and the microbial community. The surface pH of concrete was reduced from 10.5 ± 0.3 to 3.1 ± 0.5 within 20 days and this coincided with a rapid corrosion rate of 3.5 ± 0.3 mm year −1. Microbial community analysis based on 16S rRNA gene sequencing indicated the absence of sulfide-oxidizing microorganisms in the corrosion layer. The chemical analysis of corrosion products supported the reaction of cement with sulfuric acid formed by the chemical oxidation of H2S. The rapid corrosion of concrete in the gravity pipe was confirmed to be caused by the chemical oxidation of hydrogen sulfide at high concentrations. This is in contrast to the conventional knowledge that is focused on microbially induced corrosion. This first-ever systematic investigation shows that chemically induced oxidation of H2S leads to the rapid corrosion of new concrete sewers within a few weeks. These findings contribute novel understanding of in-sewer corrosion processes and hold profound implications for sewer operation and corrosion management.

Keywords

h2sconcentration, induced, corrosion, concrete, rapid, sewers, chemically, high

Disciplines

Engineering | Science and Technology Studies

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The Rapid Chemically Induced Corrosion of Concrete Sewers at High H_2S Concentration

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Highlights:

- The first report of chemically induced concrete corrosion in sewers
- High concentration of H_2S can be chemically oxidized into sulfuric acid at sewer crown

21 **Abstract:**

22 Concrete corrosion in sewers is primarily caused by H_2S in sewer atmosphere. H_2S
23 concentration can vary from several ppm to hundreds of ppm in real sewers. Our understanding
24 of sewer corrosion has increased dramatically in recent years, however, there is limited
25 knowledge of the concrete corrosion at high H_2S levels. This study examined the corrosion
26 development in sewers with high H_2S concentrations. Fresh concrete coupons, manufactured
27 according to sewer pipe standards, were exposed to corrosive conditions in a pilot-scale gravity
28 sewer system with gaseous H_2S at 1100±100 ppm. The corrosion process was continuously
29 monitored by measuring the surface pH, corrosion product composition, corrosion loss and the
30 microbial community. The surface pH of concrete was reduced from 10.5 ± 0.3 to 3.1 ± 0.5
31 within 20 days and this coincided with a rapid corrosion rate of 3.5 ± 0.3 mm year $^{-1}$. Microbial
32 community analysis based on 16S rRNA gene sequencing indicated the absence of sulfide-
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34 supported the reaction of cement with sulfuric acid formed by the chemical oxidation of H_2S.
35 The rapid corrosion of concrete in the gravity pipe was confirmed to be caused by the chemical
36 oxidation of hydrogen sulfide at high concentrations. This is in contrast to the conventional
37 knowledge that is focused on microbially induced corrosion. This first-ever systematic
38 investigation shows that chemically induced oxidation of H_2S leads to the rapid corrosion of
39 new concrete sewers within a few weeks. These findings contribute novel understanding of in-
40 sewer corrosion processes and hold profound implications for sewer operation and corrosion
41 management.

43

44 **Key words:** Sewer, Corrosion, Concrete, Hydrogen sulfide, Chemically Induced Corrosion

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45 **1. Introduction**

46 As one of the most critical components of the urban infrastructure in modern societies, sewer
47 networks collect and transport sewage to treatment plants, preventing human exposure to
48 unhygienic sewage and related sewage-borne diseases. The prevalence of concrete corrosion
49 weakens the structural strength of sewers and leads to early collapse of pipes (Zhang et al.
50 2008). The damage inflicted on many sewer networks and the cost of preventive measures is a
51 significant world-wide economic problem (Alexander et al. 2013, Jiang et al. 2016a, Jiang et
52 al. 2015a). In addition to enormous sewer remediation expenditure, the structural failure also
53 poses potential issues of odor emission and public safety (Jiang et al. 2017).

54 The corrosion of concrete pipes is mainly a result of hydrogen sulfide (H_2S). H_2S is formed by
55 sulfate-reducing bacteria (SRB) in the anaerobic sewer biofilms/sediments. From the sewage,
56 H_2S is emitted to the sewer air, part of which is absorbed/adsorbed into the moisture layer on
57 the concrete walls exposed to air, here it is oxidized to sulfuric acid and causes corrosion (Li
58 et al. 2017). H_2S is ubiquitous in sewer systems, although the concentrations differ temporally
59 and spatially from a few ppm to several hundred ppm (Jiang et al. 2014, Wells and Melchers
61 2015).

62 Sewer concrete corrosion is a relatively slow process that may take years or decades to occur
63 (Joseph et al. 2012). A three-stage concept proposed by Islander et al. (1991) is widely adopted
64 to describe the corrosion development. In the initiation stage, the surface pH of the concrete is
65 reduced from c.a.13 to c.a. 9 by carbonation and H_2S dissolution. This leads to the later stages
66 where the pH of the concrete surface is conducive for microorganisms to colonize. Depending
67 on the pH, both neutrophilic and acidophilic sulfide oxidizing microorganisms will biologically
68 oxidize sulfur compounds to sulfuric acid. The reaction between cementitious material and
69 sulfuric acid produces corrosion products like gypsum ($CaSO_4$), resulting in the structural

70 weakening of concrete sewers (Davis et al. 1998, Harrison Jr 1984, Islander et al. 1991, Nica
71 et al. 2000, Parker 1947). Since the biological oxidation rate is much higher than the chemical
72 oxidation rate, microbial induced sulfuric acid production is regarded as the main cause for the
73 sewer concrete corrosion (Hvitved-Jacobsen et al. 2013).

74 Current strategies for controlling sewer corrosion are targeted to: (1) prevent H_2S production
75 and its partition from the sewer liquid phase through the dosing of antimicrobials, iron salts,
76 pH elevating compounds and oxidants to the sewage; (2) reduce the H_2S concentration in sewer
77 air through forced ventilation; (3) applying surface treatment on concrete sewers (Jiang et al.
78 2015a). Corrosion resistant materials like antimicrobials, silver-loaded zeolite, and polymers
79 coatings are widely used to mitigate the corrosion of sewers (Berndt 2011, De Muynck et al.
80 2009, Haile and Nakhla 2010, Sun et al. 2015).

81 With the increased use of corrosion-resistant materials and surface treatments in sewers,
82 instead of reacting with concrete, the H_2S in sewer air can accumulate to very high
83 concentrations. In real sewers, H_2S concentrations of over 800 ppm are observed in a gravity
84 pipe (Wells and Melchers 2015). Furthermore, various factors such as high wastewater sulfate
85 concentrations, and extended hydraulic retention times can lead to high sewer H_2S
86 concentrations (Lahav et al. 2004, Sharma et al. 2008).

87 To date, microbially induced sulfuric acid generation from H_2S is considered as the major
88 contributing cause of sewer mass loss and structure failure.

89 The observed rapid corrosion and the formation of sulfate as the main corrosion products
90 cannot be explained by either the three-stage corrosion development model (Islander et al. 1991)
91 or the previous theory describing the initiation of corrosion (Jiang et al. 2015b, Joseph et al.
92 2012). The short exposure time suggests that there was likely no development of any sulfide
93 oxidizing microorganisms. Instead, fast chemical oxidation of H_2S to sulfuric acid might be
94 the main cause of the observed fast corrosion and sulfate dominated corrosion products.

95 *3.2. Microbial community in the corrosion layer*

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96 In microbial induced concrete corrosion, once the pH is reduced to lower than 4, due to the
97 sulfide oxidation and acid production, acidophilic microbes usually become the dominant
98 species (>50%). The most typical genus of acidophilic microorganisms associated with
99 biogenic acid production is *Acidithiobacillus* including *A. ferrooxidans*, *A. thiooxidans*, and *A.*
100 *caldus* (Davis et al. 1998, Harrison Jr 1984, Islander et al. 1991, Jiang et al. 2016b, Parker
101 1945b). In addition to *Acidithiobacillus spp.*, *Acidiphilium spp.*, *Mycobacterium spp.*,
102 *Xanthomonadales spp,* are often detected as abundant in acidophilic communities of sewer
103 corrosion layers (Cayford et al. 2017, Jiang et al. 2016b, Li et al. 2017, Okabe et al. 2007,
104 Pagaling et al. 2014). None of these typical acidophilic sulfur-oxidizing microorganisms was
105 detected in the corrosion products collected from the concrete samples in this study. Therefore,
106 it is highly likely that biological sulfide oxidation was not playing a major role in the rapid
107 corrosion observed in the presence of high H_2S levels.

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3.3. Sulfide oxidation rates of the concrete coupons after exposure

The SOR of the coupons prior to and after sterilization were quite similar for H_2S concentrations up to 200 ppm (Figure 6). It shows clearly that sterilization of the concrete did not have any impact on the SOR and it confirms that the microbes on the concrete had negligible role in H_2S oxidation. Together with the absence of sulfide oxidizing microbes in the corrosion layer (Section 3.2), it clearly suggests that biological sulfide oxidation is not the cause of the concrete corrosion and thus the SOR observed were mainly due to chemical oxidation of sulfide.

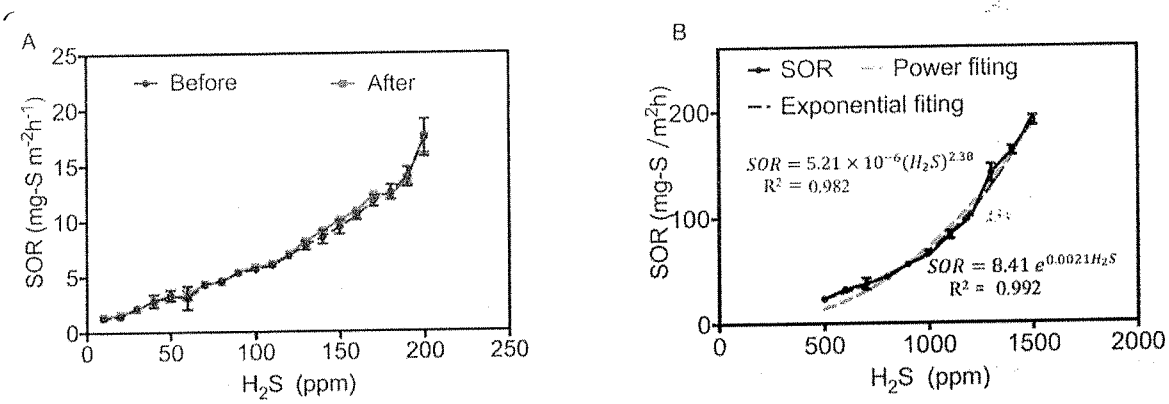

Figure 6. Sulfide oxidation rates of concrete coupons before and after sterilization under 10-200 ppm H_2S (A), and the sulfide oxidation rates of concrete coupons under 500-1500 ppm H_2S (B).

The SOR of both coupons were below 25 mg-S m^{-2} h^{-1} under 10-200 ppm H_2S and increased to around 200 mg-S m^{-2} h^{-1} at approximately 1500 ppm H_2S. The SOR observed for the chemical oxidation process is comparable to the sulfide uptake rate (SUR). SUR is usually used as a good indicator for the development and activity of sulfide oxidizing bacteria in microbial induced concrete corrosion. The SUR of 250 ± 5 mg-S m^{-2} h^{-1} was reported for microbial induced corrosion after 33 months exposure to H_2S at 50 ppm (Sun et al. 2014) and around 100 mg-S m^{-2} h^{-1} for coupons after 17 months exposure under 25 ppm H_2S (Jiang et al. 2016b). At the exposure of 1000 ppm of H_2S, a rapid consumption of H_2S, 3600 mg-S m^{-2} h^{-1} was

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127 observed in a pipe section after several months (Vollertsen et al. 2008). Under the same H_2S
128 concentration, the SOR measured in this study was relatively lower compared with previous
129 studies reported for microbially induced corrosion. However, the SOR at above 1000 ppm H_2S
130 of this study were comparable to the uptake rate of microbes under 50 ppm (Sun et al. 2014),
131 which could lead to similar magnitudes of corrosion.

132 Under the high levels of H_2S (500ppm-1500ppm), the SOR increased significantly along with
133 the increase of H_2S concentration (Figure 6B). Kinetic models (i.e. exponential, power), have
134 been previously used to describe the oxidation rate of sulfide in microbially induced concrete
135 corrosion (Æsøy et al. 2002, Sun et al. 2014). Fitting SOR results into exponential kinetics, the
136 exponent showed a positive value (0.0021) (Figure 6B), which is contrary to the negative value
137 previous reported for microbial corrosion (-0.0135) (Sun et al. 2014). In power kinetic models,
138 the reaction order for sulfide oxidation in this study was estimated to be 2.4, which is higher
139 than the reaction order (1.5) previously reported for chemical dominated sulfide oxidation on
140 concrete surfaces and also higher than that reported for microbial induced sulfide oxidation on
141 corroding concrete surfaces (0.45-0.7) (Satoh et al. 2009, Vollertsen et al. 2008). With the
142 highest R^2 (0.995) and lowest sum of residual squares (323.2), exponential kinetics best
143 described the chemical sulfide oxidation on the concrete surface in this study (Table S2). The
144 kinetic analysis suggested that chemical sulfide oxidation is different to the biological sulfide
145 oxidation and that the SOR increases exponentially with H_2S concentration, implicating that
146 chemically induced corrosion will be more severe in sewers with higher H_2S concentrations.

147 Therefore, with sulfuric acid as the main product, chemically induced corrosion of concrete
under high H2S concentration in sewers plays a critical role,especially for newly manufactured
concrete sewers.

148 4. Conclusions

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149 The rapid corrosion of fresh concrete within 20 days at high hydrogen sulfide concentration in

150 sewers was investigated. Different from previous studies, which mainly focus on microbially
151 induced corrosion of concrete sewers, this was the first-ever report of chemically induced
152 corrosion. This has resulted in the following key findings:

153 • Hydrogen sulfide of around 1000 ppm led to fast concrete corrosion within one month,
154 this was characterized by a surface pH around 3 and a corrosion rate around 3 mm $year^{-1}$.

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- The fast corrosion of concrete with high levels of H_2S in the sewer was mainly due to the chemical oxidation of hydrogen sulfide to sulfuric acid.
- The rate of chemical sulfide oxidation increased exponentially with hydrogen sulfide concentrations and this could induce potentially high corrosion rates.
- These novel findings of in-sewer corrosion processes hold profound implications for sewer operation and corrosion management. The chemically induced corrosion of newly manufactured concrete sewers would be critical when high H_2S concentrations occur in the sewer atmosphere, especially at certain corrosion hot spots.

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Iron Salts (Ferric and Ferrous)

Iron Salt Applications

Iron salts are a proven technology for long-duration hydrogen sulfide control in collection system gravity and forcemains, solids processing units, solids transfer lines and anaerobic digesters. They have been used for over 30 years in hydrogen sulfide control applications and are a well understood technology.

Depending on the wastewater plant unit process configuration, iron salts may also provide improvements in clarification, phosphate removal, struvite control, solids dewatering and anaerobic digester performance. Iron salt performance is not impacted by oxygen uptake rates but they do remove dissolved oxygen from the water.

Iron Salt Properties and Dosing

Iron salts are supplied as liquid solutions containing 5-13% ferrous or ferric iron as either a chloride or sulfate salt. They are supplied in containers of 55 or 300 gallons, or in bulk shipments of 4,000 - 20,000 gallons.

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Experiences with iron chloride dosing to control sulfide-induced corrosion problems in sewers

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Abstract:

Dosing iron salts is one way of dealing with sulfide-induced corrosion problems in sewers. By dosing iron salts such as $FeCl_2$ and $FeCl_3$, the dissolved sulfide molecules present in the wastewater chemically react with $Fe^{++(+)}$ to form elemental sulfur (S^0) and iron sulfide (FeS). These products precipitate and thereby the amount of sulfide available for release to the sewer atmosphere decreases.

After a test phase *on-site*, this control measure was implemented in full-scale to deal with sulfide-induced corrosion problems that had been observed at a pumping station in the vicinity of Antwerp, Belgium. This contribution describes Aquafin's experiences with this control measure and elaborates on how the effectiveness was tested and evaluated prior to a full-scale application. Further, it describes how the dosage was implemented in full-scale and presents the results obtained so far. To conclude, the pros and cons of this control measure are discussed based on our experiences so far.

Keywords: hydrogen sulfide, biogenic sulfuric acid corrosion, sewer, iron chloride dosing

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Introduction

Aquafin was established in 1990 by the Flemish government and is responsible for the design, construction, operation and pre-financing of the supra-municipal wastewater treatment infrastructure of Flanders, which is the northern part of Belgium residing approximately six million inhabitants. Basically, this means that cities and municipalities are responsible for their own sewer systems, but their sewer networks connect to Aquafin's collector (or interceptor) sewers that transport the wastewater to the wastewater treatment plant.

Anno 2011, Aquafin's assets include 247 wastewater treatment plants, 1174 pumping stations and approximately 4735 km of collector sewers. The wastewater collection system, which covers the majority of Aquafin's assets and still expands at a rate of approximately one km per day, is the main focus of this paper. More precisely, this paper deals with the problems wastewater service providers around the world are facing that can be appointed to the presence of hydrogen sulfide in the wastewater collection system.

To introduce the terminology used in this paper, the different parts of a conventional wastewater collection system are shown schematically in Figure 1. Wastewater from the households is mainly and preferably transported through gravity sewers, but it is often not possible to reach the wastewater treatment plant in this manner. Therefore, pumping stations are needed, where the

wastewater is collected in a wet well which is equipped with level measurement instruments that monitor the amount of wastewater present. When full, the wastewater is pumped to a higher level through a force main (or pressure main or rising main) and discharged in an inspection chamber or manhole from which the wastewater continues its path through gravity sewers. This is typically repeated until eventually the wastewater arrives at the wastewater treatment plant. Needless to say that the sewer system is hardly ever a linear system, and often many sewer pipes are connected with each other to form a complex network with many branches.

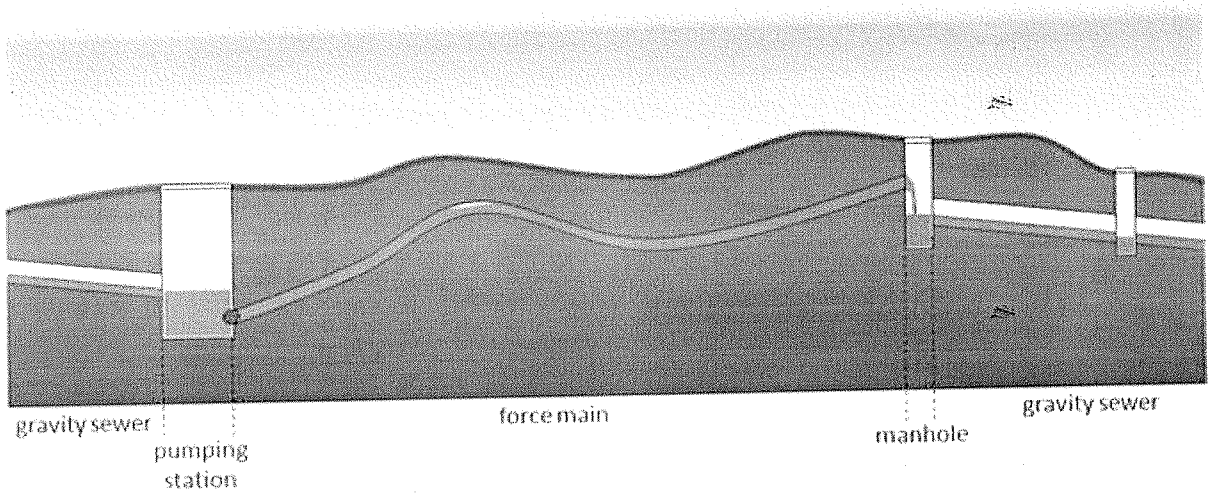

Figure 1: Schematic representation of a simplified, conventional wastewater collection system, illustrating its most common constituents.

As stated above, some problems that arise in the sewer infrastructure are caused by the presence of hydrogen sulfide (H_2S). Sulfides are formed under anaerobic conditions, which in this context can be interpreted as conditions where oxygen is absent (sewage does typically not contain nitrate). Anaerobic conditions can occur at different places in the sewer infrastructure (Figure 1 and Figure 2), such as:

- force mains;
- inverted siphons;
- gravity sewers with high filling degree;
- slow-flowing, partially filled gravity sewers;
- biofilm and sediment layers found in gravity sewers;
- wet well of pumping stations and other places where the wastewater stands still for a significant amount of time.

After being emitted to the sewer atmosphere, hydrogen sulfide will initiate a process called biogenic sulfuric acid corrosion. The concrete sewer pipes corrode and lose their mechanical strength. In addition, malodorous compounds are typically formed under the same anaerobic conditions as hydrogen sulfide and the latter thus contributes to odor nuisance. In this paper, however, only corrosion problems are dealt with.

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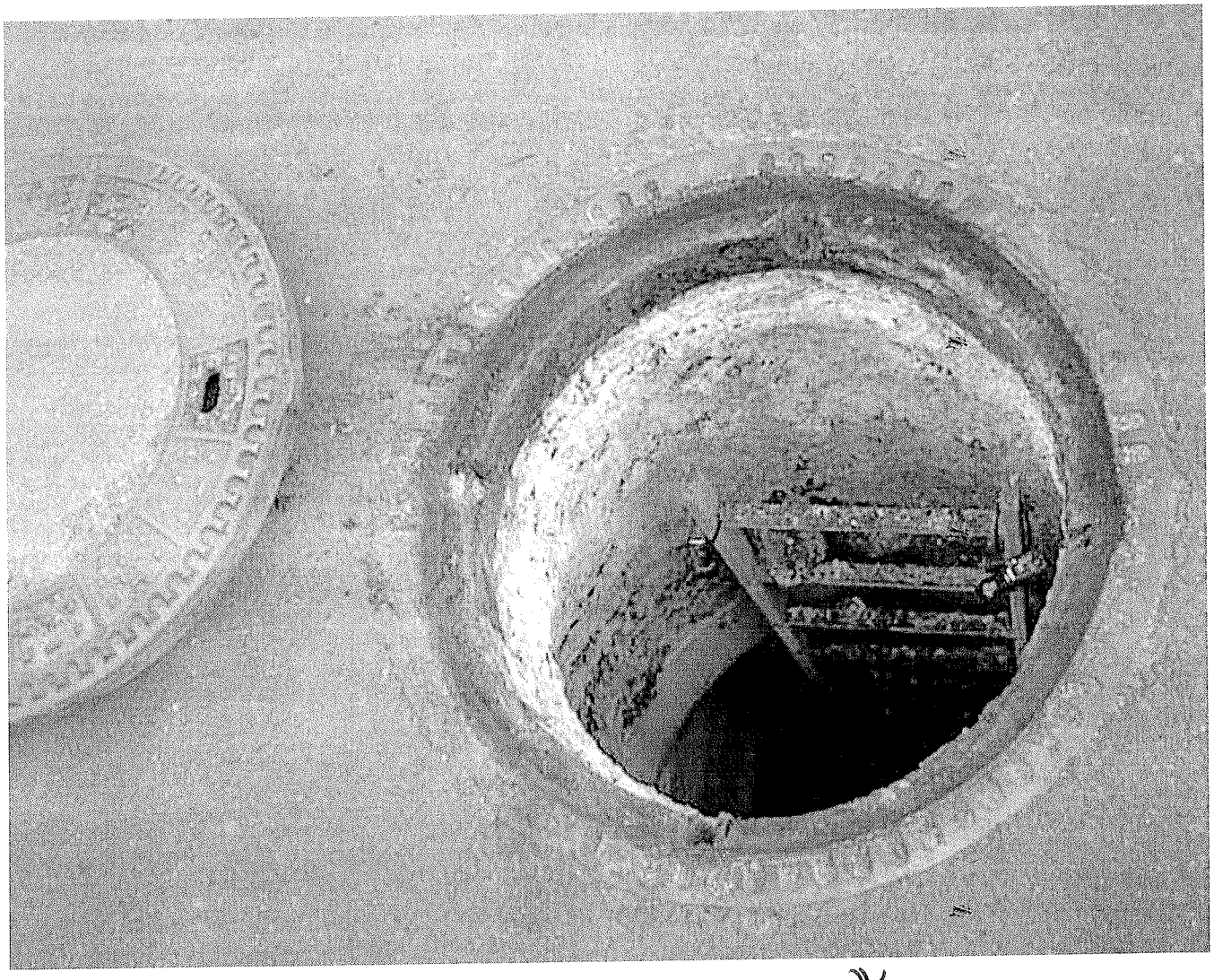
Technical Information 3.09

Elimination of Hydrogen Sulfide from Wastewater Collectors using Iron Salts

The occurrence of hydrogen sulfide (H_2S) in sewers is a commonly known problem. This foul-smelling, acidic gas is produced by the biogenic decomposition of sulfurous organic and inorganic constituents under anaerobic conditions. Hydrogen sulfide can particularly be expected to form in combination with long flow times, high temperatures and especially in pressure pipelines.



Damage in a manhole caused by biogenic sulfuric acid corrosion (BSC)

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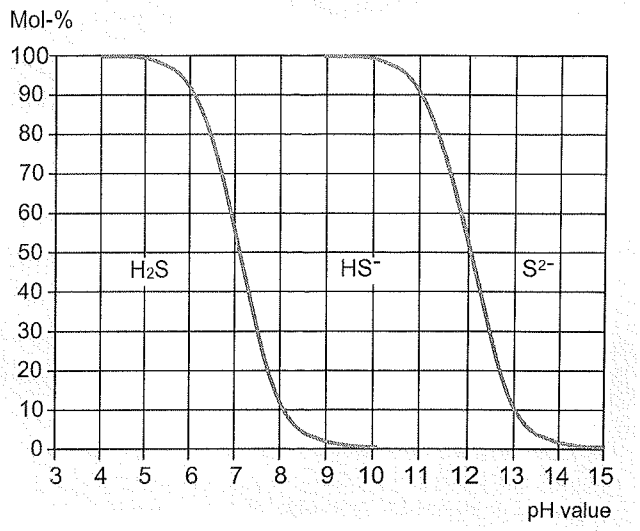

Fig. 1: Hydrogen sulfide – bisulfide – sulfide equilibrium as a function of pH value

Beer	160 mg S/kg
Whey	250 mg S/kg
Potatoes	340 mg S/kg
Onions	510 mg S/kg
Coffee, instant	600 mg S/kg
Maize	800 mg S/kg
Rice	1,000 mg S/kg
Fish	2,300 mg S/kg
Yeast	3,000 mg S/kg

Table 1: Sulfur content of several foods

1. What leads to the formation of hydrogen sulfide?

The hydrogen sulfide and other sulfides initially exist in dissolved – relatively harmless – form as H_2S, HS^- or S^{2-} depending on the pH value of the wastewater (Fig. 1). The more acidic the environment, the more the equilibrium shifts towards hydrogen sulfide (H_2S), which then escapes from the water phase in the form of a gas. In principle, hydrogen sulfide can form in any kind of wastewater. The main source of sulfur in the formation of H_2S in an anaerobic environment are the sulfate ions that enter the municipal sewage flow in high concentrations from tap water (desulfurication). In addition, wastewater with a high protein content, such as occurs in the food industry, for example, tends towards rapid decomposition and strong H_2S evolution (desulfuration). Table 1 lists the typical sulfur content of several foods.

2. Why is hydrogen sulfide so dangerous?

- Even in very low concentrations (< 0.2 ppm), H_2S can be detected by its "smell of rotten eggs", causing severe odour problems.
- At higher concentrations, the gas becomes an increasing threat to health, and at upwards of about 300 ppm has a potentially lethal effect.
- Hydrogen sulfide leads to corrosion in the sewer system and causes high repair costs (cover photo). Its severely corrosive effect – especially on concrete – results from the fact that the hydrogen sulfide oxidises on the surface of the components exposed to the sewer atmosphere to form sulfuric acid.
- Hydrogen sulfide or the sulfide ions can have a negative impact on the process of biological wastewater treatment.

3. How can the formation of hydrogen sulfide be prevented?

Because hydrogen sulfide only forms under strictly anaerobic conditions, changing the environment by any kind of oxygen supply would, in principle, be a method for preventing sulfide formation. However, it must always be ensured in such cases that an adequate oxygen supply is also guaranteed at the end of the line.

Since the biogenic formation of H_2S often cannot be prevented – even when using oxidative control measures – it is necessary to apply elimination methods, including targeted precipitation of the sulfides using iron salts.

4. Why are iron salts so well-suited to eliminating hydrogen sulfide?

Bonding H_2S with iron salts is based on the high affinity of iron for sulfides. Regardless of the compound form or valence of the iron, iron sulfide always forms in the presence of sulfides (FeS; Table 2). On account of the extremely low solubility of FeS, competitive reactions with other constituents in the water can be ruled out.

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$Fe^{2+} + S^{2-}$	$\rightarrow FeS\downarrow$
$2\ Fe^{3+} + 3\ S^{2-}$	$\rightarrow 2\ FeS\downarrow + S$
$2\ Fe(OH)_3 + H_2S$	$\rightarrow S + 2\ Fe(OH)_2 + 2\ H_2O$ (Reaction 1)
$Fe(OH)_2 + H_2S$	$\rightarrow FeS\downarrow + 2\ H_2O$ (Reaction 2)

Table 2: Reaction equations for sulfide precipitation

5. Which KRONOS products are most suitable for this purpose?

In principle, all KRONOS iron salts are suitable for hydrogen sulfide elimination. The question as to which product should be given preference is primarily governed by local conditions with regard to logistics and handling.

The primary candidates are:

1. KRONOFLOC ferrous chloride solution as a ready-to-use liquid precipitant with 8.7% Fe^{2+}.

The product is delivered in 60 l canisters, 200 l drums, 1 m^3 containers or in bulk in road tankers. If only small quantities are required, the product can be metered directly from its original container. TI 2.03 provides information on the transport, storage and metering of KRONOFLOC delivered in bulk.

2. FERRIFLOC ferric chloride sulfate solution with 12.3% Fe^{3+}.

Delivery and storage are the same as for KRONOFLOC.

3. QUICKFLOC ferrous sulfate as a solid precipitant with 17.8% Fe^{2+}.

The product is delivered in 25 kg bags on 1 t pallets. The QUICKSOLV metering station is available for storing, dissolving and metering. This system is described in detail in TI 2.01.1.

It occasionally is claimed that it is impossible to eliminate hydrogen sulfide using iron salts containing sulfate. This argument seems plausible at first, but naturally is false. The reason is that the sulfate concentration in the wastewater is not the minimizing factor in the biogenic formation of H_2S.

This means that a major surplus of sulfates is present in virtually all types of wastewater, enabling the formation of hydrogen sulfide, and that any additional contribution from the precipitant is irrelevant. The question of how much sulfide can be formed in a given type of wastewater is essentially governed by the temperature, the volume of wastewater, the hydraulic and design-related parameters, as well as the concentration of simple organic compounds, such as organic acids and alcohols (similar to denitrification).

6. Where should the precipitant be added?

The effect of the iron salts is based on the precipitation of the dissolved sulfides in the water phase. This must occur at an early stage, before the hydrogen sulfide enters the gas phase and becomes perceptible. Points where the following requirements can be met are suitable as metering points in the sewer system:

- Delivery by road tanker
- Safe storage
- Safe handling of chemicals

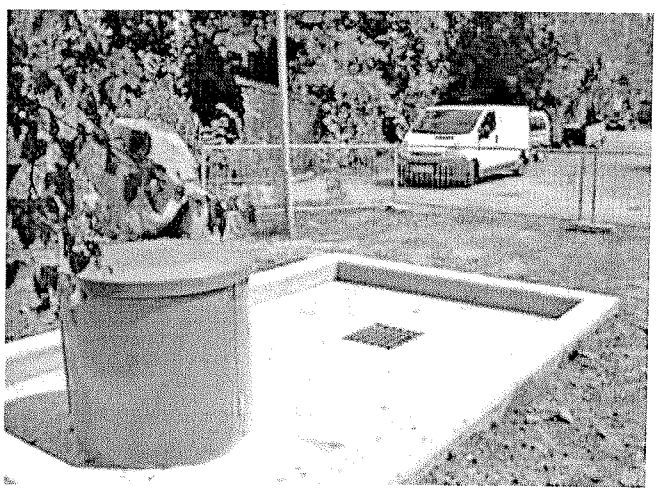

Fig. 2: Underground tank at a pumping station with catch basin

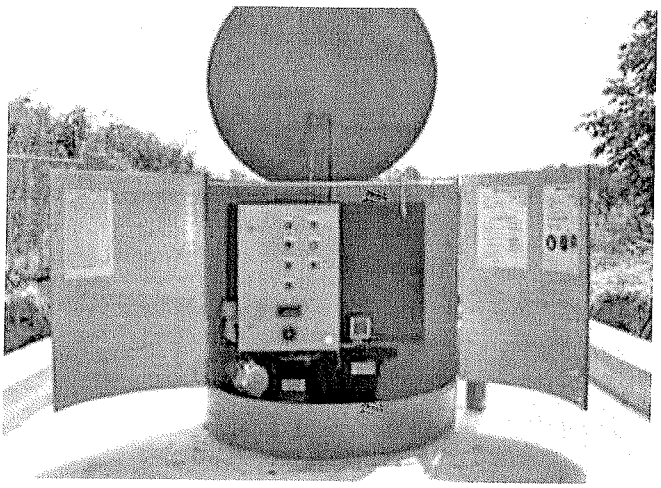

Fig. 3: Metering station in a manhole

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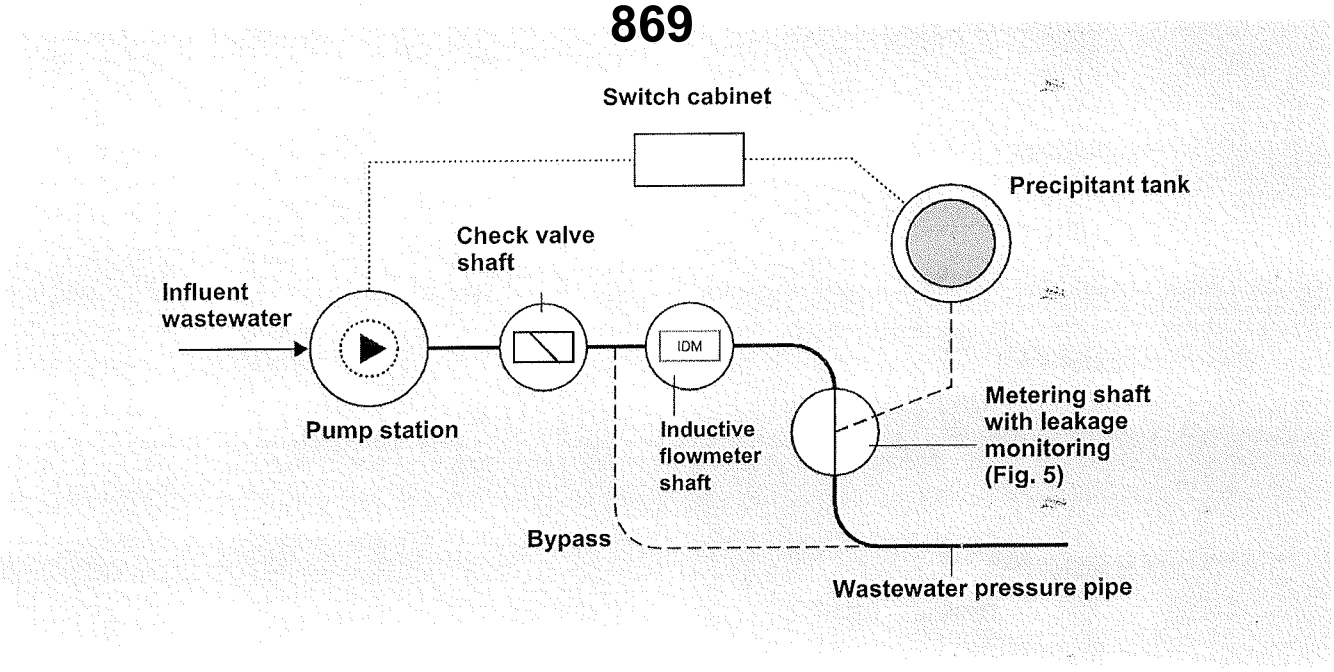

Fig. 4: Arrangement for preventive metering

The high speed of reaction of sulfate precipitation with iron salts supports two metering options:

a) Preventive metering (Fig. 4):

The iron salt is added at the start of a problematic section, i.e. at a point where no degradation processes have yet begun. It has proven effective in the case of wastewater pressure lines to add the iron salt directly to the pressure line via a seeding point (e.g. tapping sleeve, Fig. 5).

Acid-proof diaphragm pumps are used to meter the product (TI 2.3). To adapt the added quantities to the rate of sulfide generation, we recommend using the pipeline dimensions and the wastewater volume generated to calculate the dwell time of the wastewater between inflow and outflow. The quantity of iron salt added is preferably adapted to the expected sulfide concentration by a measurement curve controller (e.g. PLC). If necessary, the system should also account for rain events.

Premature addition need not be feared, since the products of hydrolysis (hydroxides) of the iron can also bond the hydrogen sulfide (Table 2).

b) Addition upstream of the emission point:

The spontaneous reaction between the dissolved iron and the dissolved sulfides takes only a few seconds, but can be observed by watching the wastewater rapidly turn black. For this reason, it is also effective to add the iron salts a short distance upstream of the emission point – i.e. into wastewater that has already begun to degrade. Basically, any turbulent outflow of anaerobic wastewater at the end point of pressure lines, for example, should be avoided. In practice, this can be achieved by shifting the pressure line outlet to below the water level while at the same time adding iron salt just upstream from the end of the wastewater line or into the wastewater pumping station.

An arrangement of this kind makes it possible to establish a controlled section for sulfide precipitation, similar to online phosphate precipitation. Continuously monitoring H_2S emissions by connecting an online H_2S sensor to the metering pump can help to reliably maintain target values, e.g. a maximum allowed workplace concentration (MAC) of 10 ppm in the coarse and fine screening building (Fig. 6).

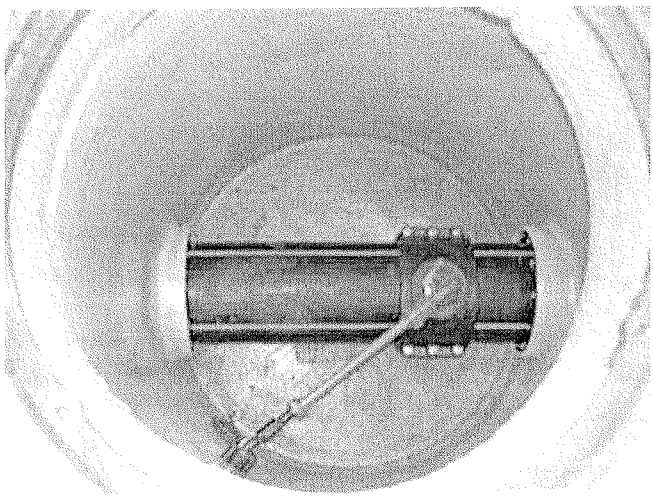

Fig. 5: Addition directly into the pressure pipeline via a seeding point.

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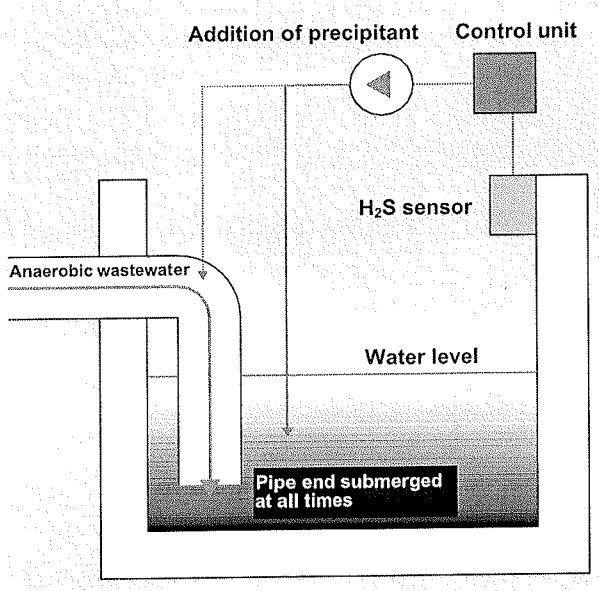

Fig. 6: Online addition upstream of the emission point

Existing or expected sulfide concentration	4 mg S^{2-}/l
in the problematic area of the collector	· 4 g S^{2-}/m^3
Wastewater inflow (e.g. wastewater pump capacity)	50 m^3/h
Iron concentration in the precipitant (KRONOFLOC)	8.7 % Fe^{2+}
Density of KRONOFLOC	1.37 g/cm^3
Molar mass sulfur	32.06
Molar mass iron	55.85

$$\frac{0.004 \cdot 55.85 \cdot 50}{32.06 \cdot 0.087 \cdot 1.37} = 3.0 \text{ l KRONOFLOC/h}$$

Table 3: Sample calculation for determining quantities to be added

7. How much has to be added?

a) Theory:

The dissolved sulfides in the wastewater can be determined analytically as S^{2-} e.g. according to DIN EN 38 405.

If data on the concentration of dissolved sulfides in the wastewater are available, and the wastewater flow rate is known, a simple calculation can be used to determine the quantity to be added (Table 3).

b) Practice:

In practice, however, data are usually only available for the hydrogen sulfide concentration in the gas phase. But even these values support a fairly good estimation of the required quantities. The actual quantities required can then be determined empirically.

The following, pragmatic procedure has proven successful in practice:

1. The H_2S content in the collector air is measured at neuralgic problem points over several days.
2. The iron salt solution is added at suitable dosing points upstream of the measurement points, using a typical standard quantity of 15 g Fe/m^3 wastewater.
3. The quantity added is adapted in accordance with the results of gas analysis, based on the residual H_2S content in the collector air. In this context, the added quantities may have to be adapted to the flow and dwell times in the sewer system.
4. When adding quantities online, the times at which the metering pumps are switched on and off, and the steepness of the metering curve, must be adapted to the target value.

8. What happens to the precipitated sulfides??

The virtually insoluble iron sulfide is a very fine solid with poor sedimentation properties. In other words, iron sulfide does not settle in the sewer, but passes into the treatment plant with the wastewater flow. As a rule, this dark-black wastewater also passes through the primary sedimentation stage; only in the biological stage of the treatment plant is it oxidised, thus being made available for simultaneous phosphate precipitation. This double precipitation effect is illustrated schematically in Fig. 7.

The black discoloration of the treated wastewater inflow provides clear, visual proof that H_2S elimination has taken place. The iron method is not well accepted by receiving treatment plants that have no biological stage, i.e. no oxidative decolouration.

On account of the high buffer capacity in the untreated wastewater, this condition is never reached as a rule when using common added quantities.

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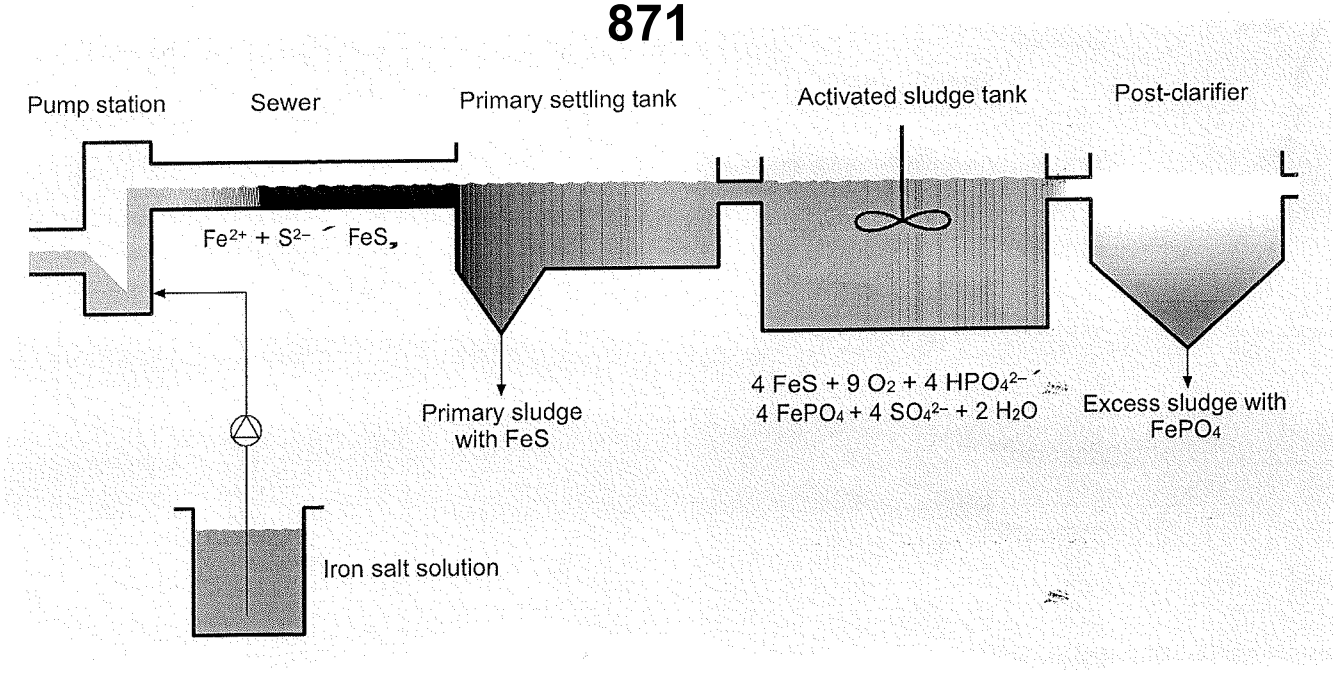

Fig. 7: Hydrogen sulfide elimination with sulfide and phosphate precipitation

9. What else needs to be considered for the successful implementation of hydrogen sulfide elimination?

Using iron salts to precipitate the sulfides dissolved in wastewater is a very reliable elimination process. The special feature of this method is that the iron salt must be added at a point where no hydrogen sulfide is yet present. Therefore, selecting a suitable dosing point is of fundamental importance for the applicability and success of the method.

In addition to being located upstream of the problem area, the dosing point must also offer the technical means for safe storage and handling of the precipitants. Several metering points are often required, depending on the design of the collector system and the affected sewer sections.

The efficiency of the process ultimately depends on how successfully the quantity of iron salt added can be adapted to the various sulfide loads.

10. What results are available??

The effectiveness of H_2S elimination with iron salts is illustrated below on the basis of two practical examples.

1. Use of KRONOFLOC in a 5 km pressure pipeline.

To avoid H_2S emissions, KRONOFLOC is added at the inlet of a pressure pipeline as a preventive measure (Fig. 9).

2. Use of KRONOFLOC to maintain the MAC in a grit chamber.

The signal from an H_2S sensor supports the establishment of a controlled section and activates the dosing pumps as needed (Fig. 8). The steepness of the rise or fall in H_2S concentration determines the added quantity.

Phases with low H_2S loads (e.g. rainy weather) are detected and the required quantity of precipitant automatically reduced (Fig. 10).

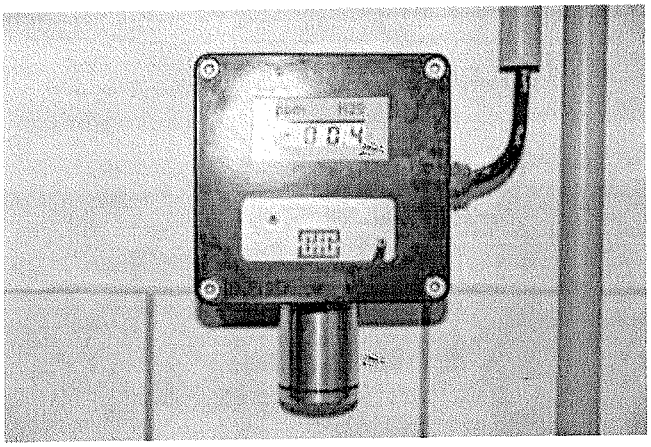

Fig. 8: An H_2S sensor takes continuous readings in the grit chamber. The signal is processed and the KRONOFLOC metering pumps activated. The results are illustrated in Fig. 10.

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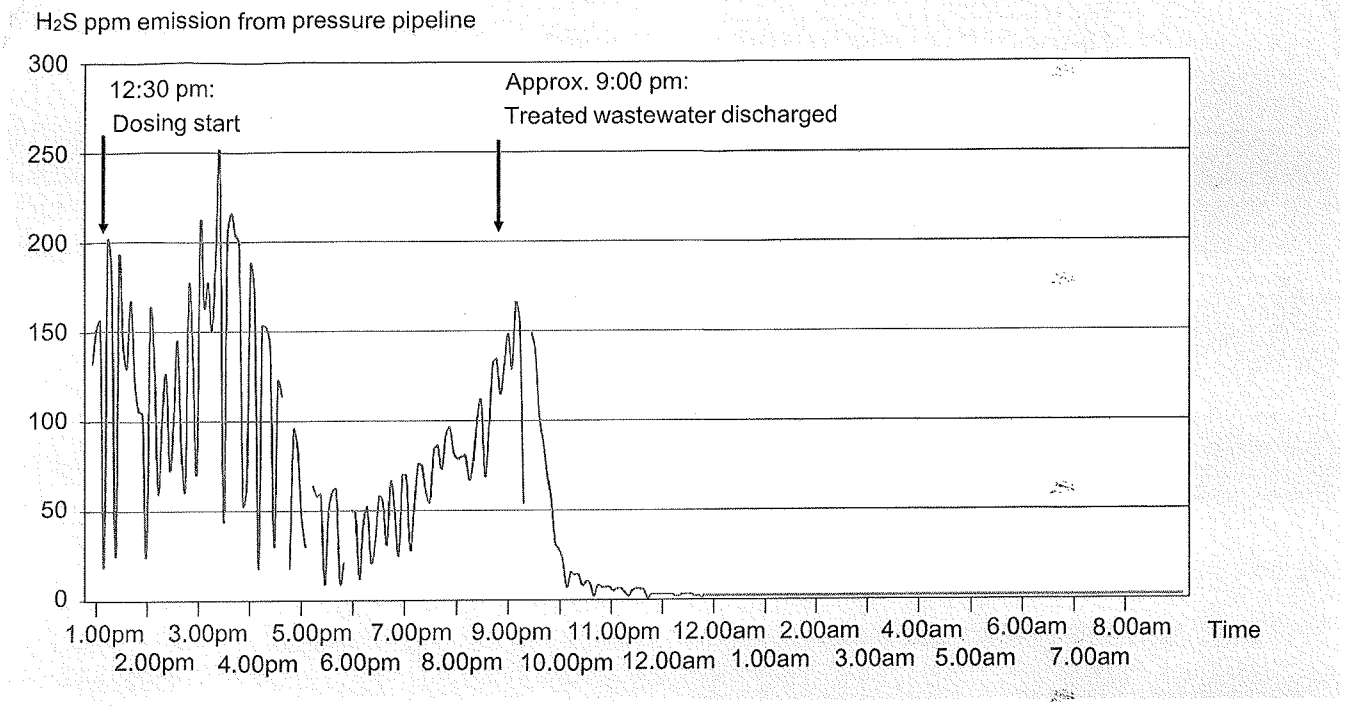

Fig. 9: Effect of KRONOFLOC addition as a preventive measure

Pressure pipeline data (Fig. 9)	
Dimensions	DN 250
Volume	Approx. 245 m^3
Wastewater volume, Q_{TW}	Approx. 570 m^3/day
Wastewater dwell time in the pressure pipeline	9 –14 hours
Average added quantity	30 g Fe^{II}/m^3

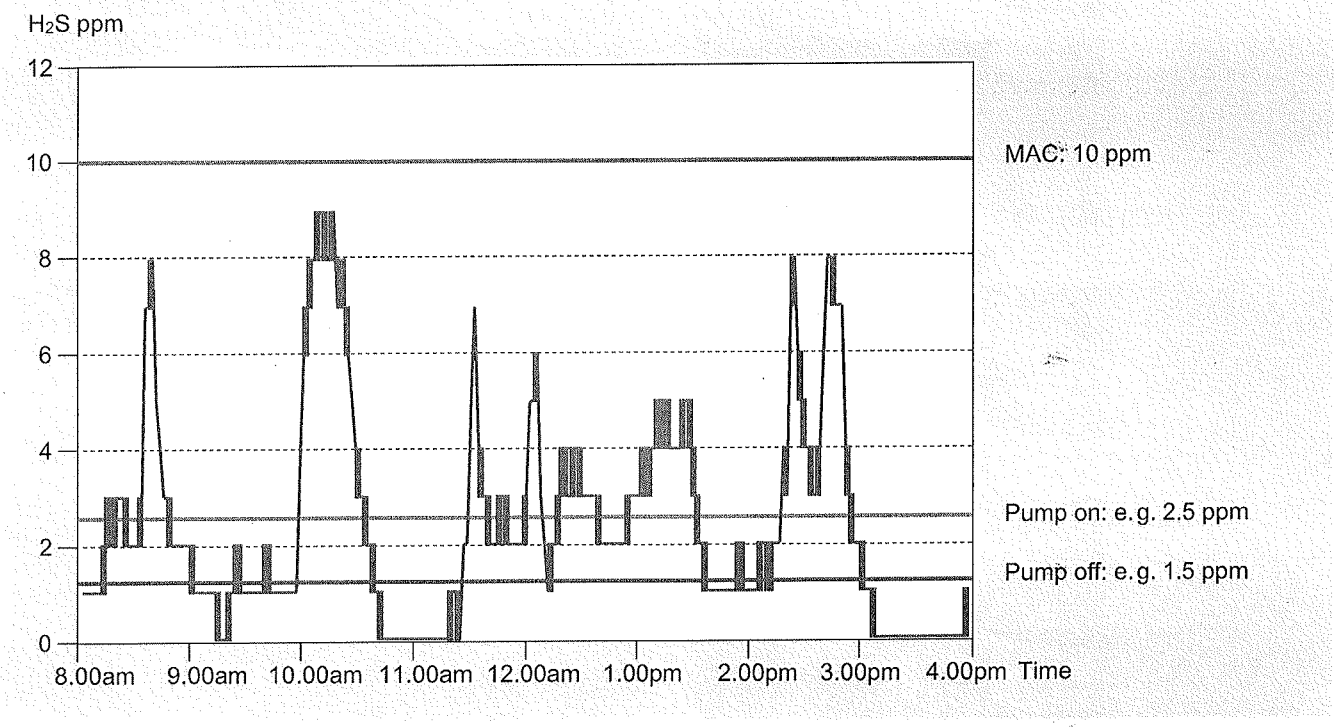

Fig. 10: Typical curve of H_2S concentration with controlled, online addition of iron salts to maintain the MAC value in a grit chamber

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Consult our Safety Data Sheets before using any of our products.

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c) Hydrogen sulfide (H_2S) is produced when the sulfate radical (SO_4) is reduced to H_2S and H2O (water). This reaction can take place only when there is lack of oxygen or other oxidants in the microbial environment (Anaerobic conditions) through microbial biochemical degradation of organic matter including human excreta, kitchen refuse, detergents, animal waste, Oil & Grease, etc. which are usually present in the waste streams. Hydrogen Sulphide is generated in relatively stagnant waste water systems or at low velocities of sewer streams. Higher Organic loadleads to more generation of H_2S gas in sewer lines.

d) Studies have shown that hydrogen sulfide has a depressant effect on thecentral nervous system in concentrations above 150 ppm. H_2S has been known to cause immediate loss of consciousness at fairly low levels: estimates are as low as 250 ppm. Over 400 ppm can result in deaths in just a few seconds of inhalation

e) **The slime layer that coats the sewer pipe below the water line is the richest source of Hydrogen Sulphides**. The three-quarters of the layer closest to the sewer pipe is so oxygen-poor that H_2S is commonly formed here in Huge Quantities.

iii) REASONS AND CAUSES OF THE INCIDENT

The FFJC has examined the area around the tragedy site and has considered various factors such as presence of a dense population, congested locality, various commercial establishments, industries, vehras, meat shops etc. which could contribute to organic or inorganic loading in the sewer around the tragedy site, conditions of the houses/establishments in which the incident occurred. The FFJC has also examined the design, maintenance and ventilation of the sewer system and the condition of the affected houses/buildings. The reasons and causes of the incident are summarized herein below:

a) Sudden discharge of any chemical by any tanker or other means has been ruled out by police at the tragedy site upto 1 Km of the incident site.

b) As per Joint Survey of MCL and PPCB, no acid consuming industry is located within 100 meters radius of the tragedy site. No illegal discharge was observed from any unit during joint visit of MCL and PPCB upto 500 meters upstream and 200 meters downstream of the tragedy point.

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(6) A team from CPCB, RD Chandigarh carried out visit of the Giaspura, Ludhiana on 20.12.2023 as directed by joint committee to assess process effluent generation and their management in a few units randomly and also assess sewer connections by the units / other premises around the affected area. The following observations are made by the team:

(a) 04 Red category units were selected from 200 m to 500 m radius up stream of the adjacent affected area of gas leak and these were visited to verify the effluent generation and its treatment mechanism. At the time of inspection these units were found in operation. All these units are members of CETP. Team observed that effluent generation through pre-post rinsing waste water after plating/acid bath is collected in effluent storage collection tank provided by these units within their premises and the same is lifted by CETP through GPS enabled tankers after on-line booking by the unit. These units are small units mainly engaged in job work and the quantum of effluent generation is very less.

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(b) Based on records provided by the unit as well as M/s JBR (the CETP operator) generated receipt/manifest for one year i.e. from 1.4.2022 to 30.4.2023, it was found that there were no discrepancy of the same. The amount of water consumption as reflected in water meters installed by these units was found in synchronization with the effluent lifted by the CETP operator as per verification made from the records as well as manifest data. As per consent, domestic effluent is permitted to be discharged into sewer.

(c) Most of the units located in the region are white category machining units and are exempted from consent management. Inspection of 03 white category units located at upstream of the gas leak site has also been carried out to see the engaged activities. These units are mostly engaged in dry work i.e. trading of iron parts, welding, Fabrication and machining of auto parts etc. Domestic effluent/rain water are discharged through houdis into the branch sewer line from these units. Drainage pipe was provided at the personal houdi of white category units for discharge of rain water.

These white category units are engaged in machining works of iron parts and, Fine Iron particles in powder form may enter the sewer line along with domestic effluent/storm water through floor cleaning as well as hand washing from these white category units.

(d) The area is crowded residential establishments with migrant labours who work in industries. At the upstream of the tragedy point, there are a lot of dormitories type establishments which are called vehras in local terms. In these small dormitories, many families live in a very small area.

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