

Chapter -1 Introduction

Introduciton:

For Prevention and Control of water pollution and maintaining or restoring of wholesomeness of water and prevention, control & abatement of air pollution environmental laws namely Water (Prevention and Control Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 have been enacted. Central and State Pollution Control Boards came into existence to fulfill the purpose mentioned in the above Acts. With the Constitution of Chhattisgarh State, a Board namely **Chhattisgarh Environment Conservation Board** came into existence.

STRATEGIES

The State has prepared its Environmental Policy within the basic framework of economic and social priorities with the objective of ensuring environmental conservation without impeding any development imperatives.

It is aimed at:

- Ensuring sustainable development with an emphasis on social and intergenerational equity
- Enhancing environmental performance as a means of competitive advantage for the State
- Improving the quality of life of citizens

Additional STRATEGIES

The Chhattisgarh Environment Conservation Board (CECB) is committed to inventorization of Hazardous Waste in the state as per Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016. For this it intends to hire a consulting firm/organization (the Consultant), in accordance with the method of selection specified in the Data Sheet.

Scope of Work

1.1 Introduction:

Chhattisgarh Environment Conservation Board (CECB) has undertaken inventorization of hazardous wastes generating units as per amended Hazardous and Other Wastes (Management and Trans-boundary Movement) Amendment Rules, 2016. Till date CECB has granted authorisation to certain units (primarily large and medium) generating hazardous wastes in the State for collection, reception, treatment, transport, storage and disposal.

The Hazardous Wastes generating units in the State include mainly Cement Plants, Iron and Steel Plants, Fertilizer Plants, Aluminium Plant, Power Plants, Waste Processing Units, Mine Workshops & Wire Drawing Units. The hazardous Wastes generated from these units are mainly used/waste oil, oil sludge, cathode residues, tar residue, lead & zinc-ash/slag/dross, sulphur sludge etc.

Chhattisgarh has an abundance of above mentioned sector of industries and these together contribute substantially to the total hazardous waste generation in the state. However, many of these operators are not aware of the waste characteristics and correct quantification methods and hence waste generation records submitted to CECB are often not realistic. Further, all the industries under Red and Orange Categories (generating Hazardous Waste) located in the State are presently not included and has not been granted authorization. As such information is important for better regulation and planning, the estimation of waste generation factors for these industry segments will help the CECB in framing a realistic policy for waste management in these industries.

Chhattisgarh Environment Conservation Board is committed to inventorization of Hazardous Waste in the state as per Sec.20 (3) of Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016 collect key data and information of facilities and complexes relevant for their pollution potential and create a complete excel data base for the state. On the basis of these data the C.G. govt. will establish a Common Hazardous Waste Treatment and Disposal Facility (CHWTSDF) in the state.

There are total no. of 4973 large, medium and small scale industries enlisted as Red category and Orange category, which may potentially generate hazardous wastes. Green Category and white Category are not included in the list as these types of Industries do not produce Hazardous Waste. Consultancy Services for Inventorization and Categorization of Hazardous Waste (HW) generated from industries in state of Chhattisgarh

1.2 Objective:

- (i) Create a database in excel format and introduce or apply a categorization system of industry types which takes into account their outputs, main required resources and main waste types and quantities generated;
- (ii) Understand the spatial distribution of these industries across the State of Chhattisgarh;

1.3 The Assignment:

The work was carried out through the following broad steps:-

STEP 1: PRELIMINARY STUDY

Objective: to collect, collate and review the existing data and general information on hazardous waste generating sources.

- ❖ MEPL Team was collected data such as list of Industries, and other details as per consent orders from HO, CECB and all regional offices of CECB.
- ❖ MEPL Team was obtained data from other sources such as Industries Dept., Mines & Geology, Revenue Department, and Civil Supplies Department etc.
- ❖ All data was consolidated in consultation with respective Regional Offices of the Board.
- ❖ MEPL Team was collected list of various recyclers and Galavanizrs at Raipur from HO CECB and same units we will plan for collection of secondary data.

- ❖ MEPL Team was finalised the list of industries in consultation with the project authorities, CECB Official to carry-out further field verification.
- ❖ MEPL Team was collected the secondary data from all red , orange type industries from entire state of chhattisgarh (Durg-Bhilai , Raipur , Bilaspur , Raigarh, Korba , Ambikapur and Jagdalpur etc)

STEP 1: SECONDARY DATA COLLECTION

- MEPL Team was collected the secondary data from all red, orange type industries from entire state of chhattisgarh (Durg-Bhilai, Raipur , Bilaspur , Raigarh, Korba , Ambikapur and Jagdalpur etc We had analysed all the data collected from various organization like CECB, CSIDC and Mining and Geology department, Raipur.
- To verify existence of Mines subject to consent to authorization with respective of Air , Water and hazardous waste
- To verify waste generation record in respect to handling, storage, treatment, recycling, disposal practices, total material balance.
- To report for indentified Mines towards the works of “Inventory and Categorization of hazardous waste of all the industries” duly collecting the information and putting the data in excel format.
- Summarization and analysis of the hazardous waste data collected as per Annexure-I will be performed.
- Each of the identified hazardous waste generating facility will be geo-tagged

STEP 3: DEVELOPMENT OF PROCESS SPECIFIC HAZARDOUS WASTE GENERATION FACTORS

- To determine hazardous waste generation factors covering different sector of industries to facilitate realistic waste inventorization in these units.
- MEPL Team had visit units of the following industry sectors (only which are located in the State of Chhattisgarh) and conduct studies about their raw material, process, product and Production efficiency in order to determine the process specific hazardous Waste Generation Factors (WGF) with respect to raw material or product quantity

- A comprehensive list of all hazardous waste types generated from these identified industrial operations along with process specific waste generation factors expressed as ratio of major raw material / major product/Units serviced/ Quantity stored.

STEP 4: FINALIZATION OF HAZARDOUS WASTE INVENTORY

After aforementioned studies and field visits: -

- Total quantity of hazardous waste being generated in the state; and category wise generation of such waste as landfillable, Incinerable and recyclable.
- Quantity of waste being transported to other states for co-processing, recycling, reprocessing or for disposal etc.
- The total quantity of recyclable hazardous waste being generated in the state and the actual quantity being recycled/ reprocessed in the state.
- The total quantity of recyclable hazardous waste imported from other state for use in the state.
- Need and capacity for Common Hazardous Waste Treatment, Storage, and Disposal Facility (CHWTSDF) in view of the quantity of hazardous waste generation ascertained through this study.
- The final data will be submitted in excel data base in soft / hard copy as per deliverables list and should lend itself to be incorporated in a GIS Database, as and when required.
- A preliminary inventory of hazardous waste generating facilities (Industries, recyclers, waste management facilities etc.) and an estimate of the waste generation in the state and categorize them i.e landfillable, incinerable, and recyclable

**Chapter -2
Field Survey Data**

Scope of work:

MEPL Team was collected the secondary data from all red, orange type industries from entire state of chhattisgarh (Durg-Bhilai, Raipur , Bilaspur , Raigarh, Korba , Ambikapur and Jagdalpur etc We had analysed all the data collected from various organization like CECB, CSIDC and Mining and Gelology department, Raipur.

MEPL Team was collected the secondary data with respective to verify existence of Mines subject to consent to authorizatuon with respective of Air, Water and hazardous waste and verify waste generation record in respect to handling, storage, treatment, recycling, disposal practices, total material balance. All data of Inventory and Categorization of hazardous waste of all the industries” was summed up in excel format.

All covered industreis were tabulated in Table 2.1, Table 2.2 and Table 2.3

Table 2.1: List of industries for all regions [As per RFP Documents]

S.N	Name of Region	No. of Industries				Total
		Red		Orange		
		LSI/MSI	SSI	LSI/MSI	SSI	
1	Ambikapur	27	07	00	401	435
2	Bilaspur	45	267	05	832	1149
3	Durg	63	249	03	196	511
4	Jagdalpur	13	20	02	138	173
5	Korba	55	20	11	118	204
6	Raigarh	39	23	10	409	481
7	Raipur	118	541	17	1344	2020
Total		360	1127	48	3438	4973

Table 2.2: List of industries covered for all regions [Hazarudous waste]

S.No.	Name of Region	Hazarudous waste		Operational	Not operational
		Red	Orange		
1	Ambikapur	33	01	34	0
2	Bilaspur	40	13	53	1
3	Durg Bhilai	37	29	66	0
4	Jagadapur	8	3	11	0
5	Korba	22	10	32	7
6	Raigarh	38	6	44	5
7	Raipur	81	136	217	7
Total		259	198	457	20
Total				477	

Table 2.3: List of industries covered for all regions [Non - Hazarudous waste]

S.No.	Name of Region	Non- Hazarudous waste		Operational	Not operational
		Red	Orange		
1	Ambikapur	0	0	0	424
2	Bilaspur	25	517	542	399
3	Durg Bhilai	21	252	273	45
4	Jagadapur	2	50	52	55
5	Korba	8	20	28	52
6	Raigarh	0	36	36	146
7	Raipur	16	401	417	529
Total		72	1276	1348	1650
Total				2998	

Conclusion: We had covered total 3475 industries (HW- 477 and Non HW- 2998] against the total industry mentioned in RFP document 4973. The difference of 1498 industries had not covered because of following reasons:-

- Stone crushers
- Rice mills
- Poha mills
- Parabolied Peddy
- Closed mines
- Gur Udyog etc.

**Chapter -3
Field Report**

Report on inventory of hazardous waste generation and HW generating units in chhattisgarh state updated as on 30th October 2018.

❖ **Total waste generation:**

As per the inventory, there are 477 hazardous waste generating industries. The total hazardous waste generation of Chhattisgarh State in the year 2018 is about **3, 14,903 MT** (Three lakhs four thousand three hundred and twenty eight). The details are shown in Table 3.1

Table 3.1: Summary of Hazardous Waste Generation

S.N	Type of Waste	Quantity in MT
1	Landfillable Waste	31594.26
2	Recyclable Waste	259821.31
3	Incinerable Waste	23487.73
	Total	314903.00

❖ **Region Wise Hazardous Waste Generation**

The break up of hazardous waste generation for various Regional offices of Chhattisgarh Environment Conservation Board is presented in Table 3.2

Table 3.2: Summary of Hazardous Waste Generation –Regional office wise

S.N	Name of Region	Waste generated in MT			Total
		Landfillable	Recyclable	Incineration	
1	Bhilai	25930.6	32986.8	1562.23	60479.63
2	Raipur	2749.53	44286.86	1616.19	48652.58
3	Korba	1811.14	171802.11	5938.71	179552
4	Ambikapur	7.28	199.17	1.0941	207.5441
5	Jagdalpur	2.5175	264.32	6.5	273.3375
6	Bilaspur	1068.42	8850.85	3651.8077	13571.08
7	Raigarh	24.77	1431.2	10711.2	12167.17
	Total	31594.26	259821.31	23487.7318	314903

On the basis of our field survey we had analyzed category wise no of industries for each region at Chattisgarh state and same was tabulated in 3.2: A

Tabel 3.2A: Summary of Field survey

<i>CECB, RO, Wise Visited List of Industries</i>				
<i>S.No.</i>	<i>Name of Regional office</i>	<i>No. of HW Generated Industries</i>		
		Incinerable	Landfillble	Recyclable
1	Ambikapur Area	11	5	25
2	Bilaspur Area	22	17	51
3	Bhilai Durg Area	27	26	52
4	Jagdapur Area	3	6	11
5	Korba Area	25	20	30
6	Raigarh Area	23	6	44
7	Raipur Area	46	59	215

Inindustry –wise total quantum of hazardous waste generation, waste, sub categories, capacity of unit, size of unit, latitude, longitude, operation status for different regions of CECB In Table 3.3 , Table 3.4 , Table 3.5 , Table 3.6 , Table 3.7 , Tabel 3.8 and Table 3.9.

Waste Generation Factor:

In most countries the bulk of the volume of hazardous wastes is generated by the industry. Information is more easily collected from industrial production than from the more dispersed users of hazardous chemicals such as agriculture and households. Industry should be seen as a partner for the waste authorities in providing expertise and technology for hazardous wastes disposal services.

Generally hazardous waste surveys commonly follow an evolutionary history of estimations that gradually become more and more detailed, analytical and reliable. Hazardous wastes inventories can be described as calculations based on statistics of industrial production multiplied by the specific waste generation of each sector or process. The methodology uses **waste factors** derived from field work and uses industrial statistics in interpolating the results from a sample of industrial establishments into national or sub-national estimates. The waste factors are usually based either on the **annual production rate** or the consumption of the main raw material input. Often it is easier to acquire the data on production capacity than the actual production rate. Information of the value of production may be more easily acquired than the mass of production, because the added value of various sectors can usually be found from national statistics. In the service sectors other units can be used (number of beds, production area etc.).

The waste factor i.e. the quantity of hazardous wastes generated per unit (ton of product.) should be surveyed at different regions of Chhattisgarh state from each target sector. The final inventory can then be computed by multiplying the waste factor with total number of units (production volume, value of production).

Further, we had conducted studies about their raw material, process, product and Production efficiency in order to determine the process specific hazardous Waste Generation Factors (WGF) with respect to raw material or product quantity

The information about specific waste generation from selected processes is tabulated in Table 3.10

Industry-wise Waste Generation Factors (WGF) are tabulated in for different regions of CECB in Table 3.11, Table 3.12, Table 3.13, Table 3.14, Table 3.15, Table 3.16 and Table 3.17.A, Table 3.17:B, Table 3.17:C and Table 3.17:D.

Table 3.10: Specific waste generation from selected processes

Waste category	Waste stream	Waste Generation factor (in Kg/T)
5.1	Used Spent Oil	0.294
5.2	Waste Residue/Containing oil	13.6
1.2/13.2	Tar Residue	75.4
1.6	Steel bottom from distillation process	1.9
6.2	Zinc fine & dust	8.62
34.3/34.3	ETP Sludge	138.5
28.2/28.3	Spent Solvent/Distillation Residue	18.72
3.3	Benzological sludge	0.78
4.2	Oily sludge	0.5092
4.5	High vaccum distillation	30.86
7.4	Copper/brass slag	59.63
8.2	Sludge/Filter	4.21
9.1	Lead bearing residue	14.28
9.2	Lead Ash	1.25
11.4	Drosses & waste from treatment of salt sludge	171
11.5	Acidic residue	0.289
12.1	Spent acid	2.156
12.2	Acid sludge	1.68
13.4	Distillation/Tar Residue	54
13.5	Sulphur sludge / Acidic Residues	0.47
17.2	Spent catalyst	0.51
34.2/35.2	Spent Resin	0.35
34.4/35.4	Napthalene O & G/ Skimming	2.66
B1	Asbestos	0.025
C-4/ Sch-III	Glass wool	3.34

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Table: 3.11: Waste generation Factor - RO Raigarh

S.N	Name of Industry	Address	Waste Category as per HW Auth.	Quantity as per HW Auth.		Type of Waste	Disposal proposed	WGF
				Qty.	Unit			
1	Anjani Steel Limited	Vill. Ujalpur, Po-Gerwani, Dist-Raigarh	5.1	3	KLA	Used/Spent oil	Recycle/Reuse	0.000823333
			35.2	0.1	MTA	Spent ion residue/Resin	Incinerable	0.000925926
			5.2			Waste & Residue	Incinerable	0.00025
			33.1	3	MTA	Empty barrels	Recycle/Reuse	0.0266
2	N.R. Ispat & Power Pvt Ltd	Vill. Gourmudi, Near Gerwani, Dist-Raigarh	5.1	1.25	KLA	Used/Spent oil	Recycle/Reuse	0.001699258
			35.2	0.3	MTA	Spent ion residue/Resin	Incinerable	0.005228485
			33.1	-	-	Empty barrels	Recycle/Reuse	0.05489909
3	Singhal Enterprises Pvt Ltd	Vill.Taraimal, Po-Gerwani, Tah.Gharghora, Dist-Raigarh	5.1	6.4	KLA	Used/Spent oil	Recycle/Reuse	0.026894861
			35.2	0.4	MTA	Spent ion residue/Resin	Incinerable	0.001795864
			33.2	0.15	MTA	Empty barrels	Recycle/Reuse	0.08689109
4	Singhal Energy Pvt Ltd	Vill.Taraimal, Po-Gerwani, Tah.Gharghora, Dist-Raigarh	5.1	3	KLA	Used/Spent oil	Recycle/Reuse	0.042248181
			33.2			Empty barrels	Recycle/Reuse	0.136494123
			35.2	0.2	MTA	Spent ion residue/Resin	Incinerable	0.003610956
5	Shri Shyam Ispat (India) Pvt Ltd	Vill.Taraimal, Po-Gerwani, Tah.Gharghora, Dist-Raigarh	5.1	5.2	KLA	Used/Spent oil	Recycle/Reuse	0.046979719
			35.2	0.4	MTA	Spent ion residue/Resin	Incinerable	0.004380393
			33.2	0.15	MTA	Empty barrels	Recycle/Reuse	0.15178063
6	Seleno Steels Limited	Vill.Taraimal, Po-Gerwani, Tah.Gharghora, Dist-Raigarh	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.001696844
			33.1	-	-	Empty barrels	Recycle/Reuse	0.054821103

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7	Salasar Steel & Power Ltd	Vill.Gerwani, Ambikapur Road, Dist-Raigarh	5.1	0.5	KLA	Used/Spent oil	Recycle/Reuse	0.007141074
			35.2	0.5	MTA	Spent ion residue/Resin	Incinerable	0.00832293
			33.1	2	MTA	Empty barrels	Recycle/Reuse	0.23071161
8	Maa Kali Alloys Udyog Pvt Ltd	Vill. Pali, Po-Gerwani, Dist-Raigarh	5.1	10	KLA	Used/Spent oil	Recycle/Reuse	0.023594894
			35.2	0.5	KLA	Spent ion residue/Resin	Incinerable	0.015124932
			33.1	25	No.A	Empty barrels	Recycle/Reuse	0.76229657
9	B.S. Sponge Pvt Ltd	Vill.Taraimal, Po-Gerwani, Tah.Gharghora, Dist-Raigarh	5.1	2	KLA	Used/Spent oil	Recycle/Reuse	0.001458544
			33.2			Empty barrels	Recycle/Reuse	0.047122181
10	Nalwa Steel & Power Ltd.	Vill.Taraimal, Po-Gerwani, Tah.Gharghora, Dist-Raigarh	5.1	15	KLA	Used/Spent oil	Recycle/Reuse	0.002213143
			13.3			Tar sludge	Incinerable	6.82253109
11	Scania Steel & Power Ltd	Vill.Punjipathra, Tah.Gharghoda, Dist-Raigarh	5.1	5	KLA	Used/Spent oil	Recycle/Reuse	0.034607194
			33.1	-	-	Empty barrels	Recycle/Reuse	1.118078561
12	Maa Shakambari Steel Ltd	Vill.Sambhalpur, Hamirpur Road, Dist-Raigarh	5.1	0.5	KLA	Used/Spent oil	Recycle/Reuse	0.013258289
			33.1	-	-	Empty barrels	Recycle/Reuse	0.428344726
13	Raigarh Ispat & Power Pvt Ltd	Vill. Delari, Po-Saraipali, Dist-Raigarh	5.1	0.10	KLA	Used/Spent oil	Recycle/Reuse	0.001646994
			33.1	-	-	Empty barrels	Recycle/Reuse	0.053210583
14	Maa Mangla Ispat Pvt Ltd	Vill. Natwarpur, Tah. & Dist-Raigarh	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.008731474
			33.1	-	-	Empty barrels	Recycle/Reuse	0.282093763
15	Shiv Shakti Steel Pvt Ltd	Vill. Chakradharpur, Hamirpur Road, Dist-Raigarh	5.1	0.5	KLA	Used/Spent oil	Recycle/Reuse	0.048086309
			33.1	-	-	Empty barrels	Recycle/Reuse	1.553557668
16	Navdurga Fuel Pvt Ltd	Vill. Saraipali, Po-Gerwani, Dist-Raigarh	5.1	10	KLA	Used/Spent oil	Recycle/Reuse	0.020129032
			35.2	1	KLA	Spent ion residue/Resin	Incinerable	0.020129032

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			13.3			Tar sludge	Incinerable	20.9953343
			33.1	-	-	Empty barrels	Recycle/Reuse	0.650322581
17	MSP Sponge Iron Ltd	Vill. Manuapali Po-Jamgaon Dist-Raigarh	5.1	1.5	KLA	Used/Spent oil	Recycle/Reuse	0.003743472
			33.2			Empty barrels	Recycle/Reuse	0.120942936
			35.2	0.1	MTA	Waste & Residue	Recycle/Reuse	0.004363021
18	MSP Steel & Power Ltd	At Po-Jamgaon Dist-Raigarh	5.1	1	KLA	Used/Spent oil	Recycle/Reuse	0.000261337
			13.3			Tar sludge	Incinerable	4.545673889
			33.2	702	MTA	Empty barrels	Recycle/Reuse	0.008443201
19	Jindal Power Limited (4 x 600 MW)	At Po-Tamnar, Dist-Raigarh	5.1	100	KLA	Used/Spent oil	Recycle/Reuse	2.176103792
			5.2	20	KLA	Waste & Residue	Incinerable	2.333836105
			SCH-III	2.5	MTA	Toxic glass wool	Landfillable	0.374012196
			33.2			Empty barrels	Recycle/Reuse	70.30489175
			34.2	200	KGA	Spent ion residue/Resin	Incinerable	0.029920976
20	Jindal Power Limited (4 x 250 MW)	At Po-Tamnar, Dist-Raigarh	5.1	100	KLA	Used/Spent oil	Recycle/Reuse	3.7829064
			5.2	20	KLA	Waste & Residue	Landfillable	15.6
			SCH-III	2.5	MTA	Toxic glass wool	Landfillable	2.5
			34.2	100	KGA	Spent ion residue/Resin	Incinerable	0.1
21	Jindal Power Limited Coal Washery (800 TPH)	At Po-Tamnar, Dist-Raigarh	5.1	3	KLA	Used/Spent oil	Recycle/Reuse	0.0046186
22	Hindalco Industries Ltd	Gare Palma IV/5 Coal Mine, Milupara, Tamnar, Dist- Raigarh	5.1	10	KLA	Used/Spent oil	Recycle/Reuse	0.046165232
			5.2			Waste & Residue	Incinerable	7.40631E-05
23	Hindalco Industries Ltd	Gare Palma IV/4 Coal Mine,	5.1	10	KLA	Used/Spent oil	Recycle/Reuse	0.011346163

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		Banjikhol, Tamnar, Dist- Raigarh	5.2			Waste & Residue	Incinerable	5.3265E-05
24	Jindal Steel & Power Limited (4 x 144 MW)	Vill-Dongamahua, Tah-Tamnar, Dist-Raigarh	5.1	30	KLA	Used/Spent oil	Recycle/Reuse	13.54166667
			C-4	1	MTA	Glass wool	Landfillable	1.736111111
25	Jindal Steel & Power Limited (Coal Washery)	Vill-Dongamahua, Tah-Tamnar, Dist-Raigarh	5.1	6.5	KLA	Used/Spent oil	Recycle/Reuse	0
26	R.R. Energy Ltd.	Vill.Garhumaria, Orrisa Road, Dist-Raigarh	5.1	3	KLA	Used/Spent oil	Recycle/Reuse	0.232120014
			35.2	0.20	MTA	Spent resin	Incinerable	0.019839317
27	Sky Alloys & Power Pvt Ltd	Vill.Temtema, Tah-Kharasia, Dist-Raigarh	5.1	2	KLA	Used/Spent oil	Recycle/Reuse	0.060061877
			35.2	0.5	MTA	Spent resin	Incinerable	0.006875215
28	SKS Power Generation (Chhattisgarh) Limited	Vill.Binjokot & Darramuda, Tah-Kharsia, Dist-Raigarh	5.1	20	KLA	Used/Spent oil	Recycle/Reuse	2.6
			5.2	1	TPA	Waste & Residue	Incinerable	1.666666667
			35.2	1	TPA	Spent resin	Incinerable	1.666666667
			33.1	200	No.A	Empty barrels	Recycle/Reuse	84
			35.4	1	KLA	-	Recycle/Reuse	1.666666667
29	Jindal Steel & Power Ltd (Cement Plant)	P.B. No.16, Kharsia Road, Dist-Raigarh	5.1	20	KLA	Used/Spent oil	Recycle/Reuse	0.002639192
			5.2	1.5	KLA	Waste & Residue	Landfillable	0.001979394
			-	1	MTA	Cotton waste	Incinerable	0.00169179
30	Jindal Steel & Power Ltd	P.B. No.16, Kharsia Road, Patgapali, Dist-Raigarh	5.1	300	KLA	Used/Spent oil	Recycle/Reuse	
			5.2	506	MTA	Waste & Residue	Landfillable	
			13.3	7300	MTA	Tar sludge	Incinerable	
			33.2	-	-	Empty barrels	Recycle/Reuse	
31	Rukmani Power & Steel Pvt Ltd	Vill.Kukhuni Ranisagar, Po-Kharsia, Dist-	5.1	2	KLA	Used/Spent oil	Recycle/Reuse	2.15054E-06
			35.2	-	-	Spent resin	Incinerable	6.89275E-06

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		Raigarh						
32	Monnet Ispat & Energy Limited	At Po-Naharpali, Tah-Kharsia, Dist-Raigarh	5.1	50	KLA	Used/Spent oil	Recycle/Reuse	
			5.2	1	MTA	Waste & Residue	Landfillable	
33	Mahavir Energy and Coal Benefication Limited	Vill.Bhengari, Dist-Raigarh	5.1	0.7	KLA	Used/Spent oil	Recycle/Reuse	8.37747E-07
34	TRN Energy Pvt Ltd	Vill.Bhengari, Nawapara (Tenda), Tah-Gharghoda, Dist-Raigarh	5.1	10	KLA	Used/Spent oil	Recycle/Reuse	0.371428571
			5.2	2	KLA	Waste & Residue	Incinerable	0.56910836
			35.2	4	MTA	Spent ion residue/Resin	Incinerable	1.459252206
			33.1	405	No.A	Empty barrels	Recycle/Reuse	74.46564008
35	Chhal Opencast Project SECL	SECL, At Po-Chaal, Tah-Dharamjaigarh, Dist-Raigarh	5.1	4	KLA	Used/Spent oil	Recycle/Reuse	0.008553458
36	SECL Gare Pelma IV/2 & 3 OCP	Vill.Tamnar, Dist-Raigarh	5.1	10	KLA	Used/Spent oil	Recycle/Reuse	0.00647431
37	Jampali Opencast Project SECL	Vill.Jampali & Singamouja, Tah-Gharghoda, Dist-Raigarh	5.1	4	KLA	Used/Spent oil	Recycle/Reuse	0.008528433
38	SECL Gare Pelma IV/1 OCP	Vill.Tamnar, Dist-Raigarh	5.1	1	KLA	Used/Spent oil	Recycle/Reuse	0.002854414
39	Baroud Opencast Project SECL	Vill.Baroud, Tah.Gharghoda, Dist-Raigarh	5.1	6	KLA	Used/Spent oil	Recycle/Reuse	0.007414496
40	Radhegovind Steel & Alloys	Jindal Industrial Park,	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.020604396
			33.1	-	-	Empty barrels	Recycle/Reuse	0.665680473

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	Pvt Ltd	Vill.Punjipathra, Tah-Tamnar, Dist- Raigarh						
41	Raigarh Iron Industries Limited	21 KM Stone, Gharghoda Road, Vill.Punjipathra, Dist-Raigarh	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.010725089
			33.1	-	-	Empty barrels	Recycle/Reuse	0.346502888
42	Maa Banjari Ispat (P) Ltd	Jindal Industrial Park, Vill.Punjipathra, Tah-Tamnar, Dist- Raigarh	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.019571436
43	Ind Synergy Limited	Vill.Kotmar, Siyarpali & Malwapali, Dist- Raigarh	5.1	3	KLA	Used/Spent oil	Recycle/Reuse	0.221695879
			33.2			Empty barrels	Recycle/Reuse	7.162482236
			35.2	0.5	MTA	Spent ion residue/Resin	Incinerable	0.118427286
44	Sreechem Resins Ltd.	Vill.Darramuga Dist-Raigarh	5.1			Used/Spent oil	Recycle/Reuse	9.250071478
			23.1	10	KGA	Waste & Residue	Incinerable	7.344664391

Table 3.12: Waste generation Factor - RO -Korba

Sr. No.	Name of Industry	Address	Waste Category	Quantity		Type of Waste	Disposal Method (Proposed)	WGF
				Qty.	Unit			
1	Hasdeo Thermal Power Station	STPS, CPGCL, Korba West, Po-Gamnipati, Dist-Korba	5.1	100	KLA	Used/Spent Oil	Recycle Reuse	22.2066
			5.2	2	KLA	Waste & Residue	Incineration	1.865671642
			35.2	5	MTA	Resin containing toxic	Incineration	1.865671642
			C-9	70	MTA	Glasswool	Landfillable	1.119402985
			C-9	2	MTA	Asbestos	Landfillable	1.492537313
			35.3		MTA	Chemical Sludge	Landfillable	76.40485075
					MTA	Cotton waste	Incineration	0.373134328
					MTA	Hose pipe	Incineration	2.388059701
			33.2		MTA	Empty barrels	Recycle Reuse	717.444
2	Shyama Prasad Mukharjee TPS	Dr.Shyama Prasad Mukharjee TPS, Korba(E), Dist-Korba	-	1.10	MTA	Battery Acid	Recycle Reuse	1.492537313
			5.1	50	KLA	Used/Spent Oil	Recycle Reuse	22.776
			5.2	1	MTA	Waste & Residue	Incineration	5
			34.2	1	KLA	Used iron resin	Incineration	4
			36.3	0.1	KLA	Spent acid from batteries	Recycle Reuse	4
			35.2	1.5	KLA	Resin toxic metal	Incineration	4
3	Indosponge Power & Steel Ltd.	Plot No.13/2,13/13,14/4, 14/23, Rajganar Road, Korba, Dist-Korba	33.1	6.75	MTA	Empty barrels	Recycle Reuse	735.84
			35.2	-	-	Spent acid	Recycle Reuse	0.672
			34.3			ETP Sludge	Landfillable	
			5.1	-	-	Used/Spent Oil	Recycle Reuse	0.1336712

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4	Korba Thermal Power Station	Korba TPS, Korba(E), Kohadiya, Korba, Dist-Korba	5.1	40	KLA	Used/Spent Oil	Recycle Reuse	22.776
			5.2	1	MTA	Waste & Residue	Incineration	2.272727273
			35.2	1	MTA	Resin containing toxic	Incineration	2.272727273
					MTA	Waste oil		2.272727273
					MTA	Acid containg battery	Recycle Reuse	4.545454545
					MTA	Cotton waste	Incineration	1.136363636
					MTA	Waste Hose pipe	Incineration	4.545454545
			33.2			Empty barrels	Recycle Reuse	735.84
5	Bharat Aluminium Corporation Ltd.	Vill. & Po-Balconagar, Korba, Dist-Korba	C-1	3	MTA	Waste glasswool & asbestos	Landfillable	6.818181818
			5.1	300	MTA	Used/Spent Oil	Recycle Reuse	0.704109589
			5.2	7	MTA	Waste/Residue	Recycle Reuse	0.008781173
			11.2	1200	MTA	Cathode Residue	Recycle Reuse	110.4
			35.3	20	MTA	ETP Sludge	Landfillable	0.035124693
			33.1	50	MTA	Rejected filter bags	Recycle Reuse	0.087811732
			C-1	0.4	KLA	Flammable chemical waste from Lab	Landfillable	0.000547945
			11.6	100000	MTA	Used Anode Batteries	Recycle Reuse	138
			11.5	10000	MTA	Drosses & Waste	Recycle Reuse	27.6
			11.4	5000	MTA	Flue gas & dust	Incineration	10
			35.2	60	KL	Resin containing toxic	Incineration	0.010537408
			C-4	150	MTA	Glasswool & cerawool	Landfillable	0.263435195
			15.2	100	MTA	Discarded Asbestos	Landfillable	0.175623463
35.4	1	KLA	O & G skimming residue	Landfillable	0.001369863			

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			33.1	2000	No.A	Contaminated HW	Landfillable	0.020977871
6	Manikur Opencast Mine	SE Coal Field Ltd. Korba Area, Po-Manikpur, Dist-Korba	5.1	39.06	KLA	Used/Spent Oil	Recycle Reuse	0.0420576
			33.2			Empty barrels	Recycle Reuse	0.1358784
			5.2	1.2	MTA	Waste & Residue	Incineration	0.003428571
7	Himadree Speciality & Chemical Ltd.	Gram-Jagraha, Po-Risdi, Dist-Korba	34.3	150	KGA	ETP Sludge	Landfillable	0.683333333
			1.1	400	MTA	Furnace Residue	Landfillable	10.34166667
8	Sourth Easte Coal Field Limited (Workshop)	Central Elect. & Mech. Workshop S-E Coalfield Ltd., Korba, Dist-Korba	5.1	5	KLA	Used/Spent Oil	Recycle Reuse	0.761637239
			5.2	1.75	MTA	Waste & Residue	Incineration	0.936329588
			34.4	0.20	MTA	O & G skimming residue	Landfillable	0.107009096
9	Gajanand Industry	Plot No.47, Indl. Area, Korba, Dist-Korba	11.5	3000	MTA	Drosses & Waste	Recycle Reuse	173.65
			11.4	2750	MTA	Flue gas & dust	Incineration	868.25
10	Kusmunda Open Cast Mine	GM Kusmunda Colony, 495454, Korba, Dist-Korba	5.1	350	KLA	Used oil	Recycle Reuse	0.33514
			5.1	0.1	KLA	Waste Oil	Incineration	
			5.2	400	MTA	Waste & Residue	Incineration	0.002777778
			33.2			Empty barrels	Recycle Reuse	1.08276
			34.4	450	MTA	ETP Sludge	Landfillable	0.0275
11	Bansal Netachem	Plot No. 81/B, Indl. Area, Korba, Dist-Korba	11.5	600	MTA	Drosses & Waste	Recycle Reuse	500
			11.4	560	MTA	Flue gas & dust	Incineration	980
13	Gevla Opencast Mine	Gevla Area, Po-Gevla Project, Dist-Korba	5.1	251.5	KLA	Used/Spent Oil	Recycle Reuse	0.038133333
			5.2	25	MTA	Waste & Residue	Incineration	0.002222222
			35.4	1	KLA	O & G skimming residue	Landfillable	0.036666667
			33.2	300	MTA	Empty barrels	Recycle Reuse	0.1232

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14	Shiva Industries	Plot No.72, 79, Indl. Area, Rajganar Road, Korba, Dist-Korba	11.5	2000	MTA	Drosses & Waste	Recycle Reuse	467.25
			11.4	1750	MTA	Flue gas & dust	Incineration	50
			11.7	400	MTA	Sludge from alumina	Recycle Reuse	311.5
			-	168	MTA	Filter press residue	Recycle Reuse	55
15	Matriachhaya Industries	57/B, Indl. Estate, Rajganar Road, Korba, Dist-Korba	11.5	3600	MTA	Drosses & Waste	Recycle Reuse	811.7647059
			11.4	3200	MTA	Flue gas & dust	Incineration	50
16	Shivam Motors	4 Km Mile Stone, Risdi/Urga Bypass Road, Vill.Pandripani, Dist-Korba	5.1	20	KLA	Used/Spent Oil	Recycle Reuse	31.2624
			5.2	4	MTA	Waste Residue	Incineration	20
			33.2			Empty barrels	Recycle Reuse	101.0016
			35.4	0.2	MTA	O & G skimming residue	Landfillable	8.25
17	Dipka Expansion Project	SE Coal Field Ltd. Dipka Area, Tah-Katghora, Dist-Korba	5.1	201	KLA	Used/Spent Oil	Recycle Reuse	0.066411429
			5.2	20	MTA	Waste & Residue	Incineration	0.001657143
			35.3	200	MTA	ETP Sludge	Landfillable	0.011785714
			33.2			Empty barrels	Recycle Reuse	0.21456
			-	185	No.	Batteries	Recycle Reuse	0.051428571
18	Bharat Aluminium Co. Ltd. CPP 240 MW (BALCO)	Balconagar, Korba, Dist-Korba	5.1	81.4	MTA	Used/Spent Oil	Recycle Reuse	
			5.2	0.25	MTA	Waste & Residue	Incineration	
			35.2	5	KLA	Resin toxic metal	Incineration	
			33.1	500	Nos.	Empty barrels	Recycle Reuse	

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19	Bharat Aluminium Co. Ltd. (Hospital)	Balconagar, Korba, Dist-Korba	5.1	0.005	MTA	Used/Spent Oil	Recycle Reuse	
			C-4			Toxic from equipment vessel	Landfillable	
20	Bharat Aluminium Co. Ltd. (BALCO)	Chotia Captive Coal Mines, Dist-Korba	5.1	14	KLA	Used/Spent Oil	Recycle Reuse	
			34.3			Chemical Sludge	Recycle Reuse	
21	R.R. Ferro Alloys Pvt. Ltd.	65, Indl. Area, Korba, Dist-Korba	35.4	1008	MTA	Filter press residue	Landfillable	1357.009346
						Drosses & Waste	Recycle Reuse	1413.333333
						Sludge from alumina	Recycle Reuse	371
						Flue gas & dust	Incineration	50
22	Indian Oil Corporation Ltd.	Vill.Gepalpur, Tah.Katghora, Dist-Korba	5.1	300	KLA	Used/Spent Oil	Recycle Reuse	3.9
			34.4			Sludge from oil separator	Landfillable	1.32
23	Lanco Amarkantak Power Ltd.	Vill.Pathadi, Po.Tilkeja, Dist-Korba	5.1	35	KLA	Used/Spent Oil	Recycle Reuse	63.414
			5.2	1	MTA	Waste & Residue	Incineration	1.666666667
			34.2	0.5	MTA	Used IE resin	Incineration	0.833333333
			C-9			Waste glasswool & asbestos		3.333333333
			36.3	0.5	KLA	Spent acid	Recycle Reuse	0.65
24	Indian Explosive (P) Ltd.	Korba	-	0.265	MTA	-	Incineration	2.5
25	2 X 50 MW Spectrum Gal & Power Ltd.	Vill.Ratiya Dist-Korba	35.2	6.5	MTA	Spent resin	Incineration	5
			5.1	3	KLA	Used/Spent Oil	Recycle Reuse	11.7
			5.2	0.2	KLA	Waste & Residue	Incineration	1.56
			35.4			Chemical Sludge	Landfillable	1166.022
			C-9			Waste glasswool & asbestos	Landfillable	20
			9.3	0.5	KLA	Batteries	Recycle Reuse	5

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26	ACB India Ltd. 30 MW	Vill.Chakabuta, Tah.Katghora, Dist-Korba	5.1	5	KLA	Used/Spent Oil	Recycle Reuse	0.8125
			35.2			Spent resin	Incineration	0.347222222
			C-9			Waste glasswool & asbestos	Landfillable	1.388888889
			9.3			Batteries	Recycle Reuse	0.270833333
			35.4			Chemical Sludge	Landfillable	45.885125
			5.2	2.5	KLA	Waste & Residue	Incineration	1.041666667
27	Maruti Clean Coal & Power Ltd. (1 x 300 MW)	Bandhakhar, Tah.Pali, Dist.Korba	5.1	1	KLA	Used/Spent Oil	Recycle Reuse	2.6
			5.2	0.5	KLA	Waste & Residue	Incineration	3.333333333
			35.2	0.5	MTA	Used ion resin	Incineration	1.666666667
			33.1	1	MTA	Empty barrels	Recycle Reuse	84
28	2 X 135 MW ACB (India) Ltd.	Kasipali, Po.Sawali, Tah.Katghora, Dist-Korba	5.1	1.5	KLA	Used/Spent Oil	Recycle Reuse	28.88888889
			5.2	1	MTA	Waste & Residue	Incineration	3.703703704
			35.2	0.5	MTA	Spent ion resin	Recycle Reuse	1.851851852
			35.4			Chemical Sludge	Landfillable	115.1626667
			9.3	0.5	KLA	Empty barrels	Recycle Reuse	1.851851852
29	S.V. Power Pvt. 1 x 60 MW	Vill.Renkey, Tah.Pali, Dist-Korba	5.1	4	KLA	Used/Spent Oil	Recycle Reuse	
			5.2	1	KLA	Waste & Residue	Incineration	
			35.2	0.5	MTA	Spent ion resin	Incineration	
			35.4			Chemical Sludge	Landfillable	
			33.2	3.5	MTA	Empty barrels	Recycle Reuse	
30	Vinay Industries	45-B Indl. Area, Rajgamar Road, Korba	9.1	3.60	MTA	-	Recycle Reuse	19.08396947
			9.2	3.60	MTA	-	Incineration	25
			9.3	1	KLA	-	Incineration	5.72519084
31	Ideal Industrial Explosives Ltd	156/7, Raki Road, Handi Bazar, Korba	33.3	0.24	MTA	Empty barrels	Recycle Reuse	134.4
			5.1			Used/Spent Oil	Recycle Reuse	4.16
			33.1			Chemical Sludge	Landfillable	0.090436
32	Solar Industries India Ltd	Vill.Mudapar, Tah.Pali, Dist-Korba	33.1	5	MTA	ETP Sludge	Landfillable	0.11
			5.1			Used/Spent Oil	Recycle Reuse	4.264029763
			33.3	5	MTA	Empty barrels	Recycle Reuse	137.7609616

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33	NTPC Ltd Korba	Jamnipali, Korba	5.1	150.5	KLA	Used/Spent Oil	Recycle Reuse	10.53
			34.3			Chemical Sludge	Landfillable	32.42884615
			C-9			Waste glasswool & asbestos	Landfillable	0.576923077
						Waste oil	Incineration	0.769230769
						Cotton waste	Incineration	0.192307692
						waste Hose pipe	Incineration	1.230769231
			33.2			Empty barrels	Recycle Reuse	34.02
			5.2	2	MTA	Waste & Residue	Incineration	0.769230769
			35.2	3.6	MTA	Spent resin	Incineration	11.53846154
			9.3	4	KLA	Used batteries	Recycle Reuse	0.769230769

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Table 3.13: Waste Generation Factor -Regional office -Ambikapur

S.N	Name of Industry	Address	Waste Category	Quantity		Type of Waste	Disposal Proposed	WGF
				Qty.	Unit			
1	Hindalco Industries Ltd. (Kudag Bauxite Mine)	Vill-Kudag, Tah-Samri, Dist-Balrampur	5.1	800	Lit/A	Used Oil /Waste oil	Recycle/Reuse	0.011246283
			33.3	92	KG/A	Empty Barrels	Recycle/Reuse	0.363341444
2	Hindalco Industries Ltd. (Tatijharia Bauxite Mine)	Vill-Tatijharia & Betapani, Tah-Samri, Dist-Balrampur	5.1	800	Lit/A	Used Oil /Waste oil	Recycle/Reuse	0.001744479
			33.3	92	KG/A	Empty Barrels	Recycle/Reuse	0.056360078
3	Hindalco Industries Ltd. (Samri Bauxite Mine)	Post-Kusmi, Tah-Samri, Dist-Balrampur.	5.1	800	Lit/A	Used Oil /Waste oil	Recycle/Reuse	0.00146242
			33.3	92	KG/A	Empty Barrels	Recycle/Reuse	0.047247416
4	NDRA Power Gen (P) Ltd	Vill-Nayanpur, Dist-Surjapur	5.1	-	-	Used Oil /Waste oil	Recycle/Reuse	35.1
			35.2			Resin Toxic	Incineration	5
			35.3			ETP Sludge	Landfill	396
			33.1			Empty Barrels	Recycle/Reuse	1134
5	Maa Mahamaya SSK Mydt.	Vill-Karta, Pratappur, Dist-Surjapur	5.1	0.2	KLA	Used/Spent oil	Recycle/Reuse	0.012243202
			35.2	-	-	Resin Toxic	Incineration	0.000243885
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.395549594
			35.3	-	-	ETP Sludge	Landfill	0.009755384
6	Indian Oil Corporation Ltd.	P.H.No.40, Kh.No.175/1, Vill-Shivnandpur, Dist-Surjapur	3.1	3	KLA	Sludge containing oil	Incineration	0.06370814

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7	Gayatri UG Mine SECL (Bishrampur Area)	Vill-Getra, Po-Ketka, Dist-Surguja	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.006354022
8	Bishrampur OCM	Po-Bishrampur, Dist-Surjapur	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.000207292
9	SECL Amgaon Opencast	Po-Salhi, Tah-Ramanuj, Dist-Ambikapur	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.000755159
10	Rehar UG Mine	Vill-Getra, Po-Ketka, Dist-Surguja	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.000112555
11	AMERA OCP	Vill-Amera, Po-Lahpaira, Tah-Lakhanpur, Dist-Surguja	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.000724363
12	Balrampur 10/12 Incline SECL	Kumda Sub Area, Po-Bishrampur, Dist-Surjapur	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.006464865
13	Kumda 7/8 Incline SECL	Kumda Sub Area, Po-Bishrampur, Dist-Surjapur	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.010340852
14	West Chirmiri Colliery	Chirmiri Area, Dist-Korea	5.1	-	-	Used/Spent oil	Recycle/Reuse	0
15	Nawapare UG Project SECL	Kalyani Sub Area, Bhatgaon Colliery, Dist-Ambikapur	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.00015722
16	Mahan OC Bhatgaon Area	Po-Bhatgaon Colliery, Tah-Bhatgaon, Dist-Surjapur	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.000192957
17	Shivani UG Project SECL	Bhatgaon Area, Dist-Surjapur	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.001969832

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18	Kalyani UG Coal Mine	Po-Bhatgaon Colliery, Tah-Bhatgaon, Dist-Surjapur	5.1	-	-	Used/Spent oil	Recycle/Reuse	0
19	Bhatgan UG Coal Mine SECL	Bhatgaon Project, Dist-Surjapur	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.002590183
20	Mahan-II OC SECL	Vill-Paraswarkala Po-Dhandhapur, Dist-Balrampur	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.000539952
21	Mahamaya UG Coal Mine SECL	Mahamaya Colliery SECL, Po-Bhatgaon, Dist-Surjapur	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.007799876
22	CMDC Limited Barima Bauxited Mine	Kh.No. 10/5/5, 10/5/6, 10/5/7, 10/5/8, 10/5/9, 10/5/10, 10/5/11, Vill-Barima, Tah-Mainpat, Dist-Surguja	5.2	-	-	Waste residue /Filters	Incineration	0
23	Chhattishgarh Mineral Development Corporation Ltd. (Barima Bauxite) Mine No.1	Vill-Barima, Tah-Sitapur, Dist-Surguja	5.2	-	-	Waste residue /Filters	Incineration	0
24	Chhattishgarh Mineral Development Corporation Ltd. (Barima Bauxite Mine)	Vill-Barima, Tah-Sitapur, Dist-Surguja	5.2	-	-	Waste residue /Filters	Incineration	0
25	Chhattishgarh Mineral Development Corporation Ltd.	Vill-Barami, Po-Narmadapur, Dist-Surguja	5.2	-	-	Waste residue /Filters	Incineration	0
26	Balco Maninpati Bauxite	Kesra-Kudaridhi	5.1	1.5	MT/A	Used/Spent oil	Recycle/Reuse	0.00200864

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	Mine, Mainpat	Po-Kamleshwarpur, Tah-Sitapur, Dist-Surguja	33.1	2	MT/A	Empty Barrels	Recycle/Reuse	0.006489453
			36.3	0.5	MT/A	Spent Acid	Recycle/Reuse	0.000928997
			33.3	0.14	KG/A	HDPE Chemical Bag	Landfill	2.60119E-07
27	CMDC Limited Barima Bauxited Mine	Vill-Keshra, Tah-Mainpat, Dist-Surguja	-	-	-	-	-	0
28	Shivam Motors (P) Ltd.	Vill-Sanjay Nagar, Mahavirpur, Dist-Surguja	5.1	20	KL/A	Used/Spent oil	Recycle/Reuse	0.018352941
			5.2	4	MT/A	Used/Spent oil	Recycle/Reuse	0.004705882
			35.4	0.2	MT/A	O&G Skimming sludge	Landfill	0.000235294
			33.1	0.2	MT/A	Empty Barrels	Recycle/Reuse	0.005929412
29	CMDC Limited Bauxited Mine	Narmadapur Bauxited Mine, Tah-Mainpat, Dist-Surguja	-	-	-	-	-	0
30	Rajsthan Rajya Vidyut Utpadan Nigam Limited	Parsa East & Kanta Besan OC Mine, Dist-Surguja	5.1	20	KL/A	Used Oil /Waste oil	Recycle/Reuse	0.0005785
			5.2	1.5	MTA	Waste/Residue	Recycle/Reuse	1.80104E-05
31	NCPH SECL Chirimiri Area	Po-West Chirimiri, Dist-Korea	5.2	-	-	Waste Residue	Incineration	0.00030303
32	North Chirimiri Colliery	Chirimiri Area, Dist-Korea	5.2	-	-	Waste Residue	Incineration	0
33	Chirimiri Underground Mine	Chirimiri Area, Dist-Korea	5.2	-	-	Waste Residue	Incineration	0.000343607
34	Chirimiri Opencast Mine	Chirimiri Area, Dist-Korea	5.1	-	-	Used/Spent oil	Recycle/Reuse	0.002671201
			5.2	-	-	Waste Residue	Incineration	5.50581E-05

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			35.3	-	-	ETP Sludge	Landfill	0.000192703
35	Kurasia Colliery	Chirmiri Area, SECL, Po-West Chirimiri, Dist- Korea	-	-	-	-	-	0
36	U.B. Ventures Pvt Ltd	Plot No.94 to 115, Indl. Area, Nayanpur, Dist- Surjapur					Recycle/Reuse	0

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Table 3.14: Waste generation Factor - RO Jagdalpur

S.N	Name of Industry	Address	Waste Category	Quantity		Type of Waste	Disposal Proposed	WGF
				Qty.	Unit			
1	Vijay Mettalics Pvt Ltd	Vill.Rajkot, Tah.Tokapar, Dist-Bastar	5.1	0.05	KLA	Used or Spent Oil	Recycle	0.00286112
2	Jaika Automobiles & Finance Pvt Ltd (Tata Motor) Unit-I	Semi Urban Indl. Area, Frezepur, Nayamunda Jagdalpur, Dist-Bastar	5.1	50	KL	Used or Spent Oil	Recycle	0.1612
			5.2	6.67	MT	Waste Residue	Incineration	0.83333333
			33.1	-	-	Empty Barrels	Recycle	5.0568
			33.4	-	-	O&G Skim sludge	Landfillable	93.6
3	Jaika Automobiles & Finance Pvt Ltd (Tata Motor) Unit-II	Semi Urban Indl. Area, Frezepur, Nayamunda Jagdalpur, Dist-Bastar	5.1	30	KL	Used or Spent Oil	Recycle	0.51566667
			5.2	7.5	MT	Sludge from filter press	Landfillable	2.22222222
			33.1		-	Empty Barrels	Recycle	16.6516
			33.4		-	O&G Skim sludge	Landfillable	0.52
4	BIOM Kirandul Complex, Deposit 11B NMDC Ltd.	BIOM Kirandul Complex, Deposit 11B NMDC Ltd. Po-Kirandul	5.1	75	KL	Used or Spent Oil	Recycle	819.745223
			5.2	2	MT	Waste Residue	Incineration	318.471338
			33.2			Empty Barrels	Recycle	2648.40764
			35.4	0.075	MT	O&G Skim sludge	Landfillable	119235.669
5	National Mineral Development Corporation Ltd.	Bailadila Iron Ore Project, Deposit No.14. 11C, Kirandul, Dist-South Bastar Dantewada	5.1	100	KL	Used or Spent Oil	Recycle	2728.22665
			5.2	3.5	MT	Waste Residue	Incineration	122.420427
			33.2			Empty Barrels	Recycle	8814.27072
			35.4	0.075	MT	O&G Skim sludge	Landfillable	6547.74397

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6	Essar Steel India Ltd Iron Ore Benefication Plant	Palnar Road, Near Manual Loading Point, Kirandul, Dist- South Bastar Dantewada	5.1	60	KLA	Used or Spent Oil	Recycle	0.0013159
			33.2			Empty Barrels	Recycle	0.00425136
7	Indian Explosives Pvt Ltd	Kailash Nagar, Kirandul, Dist- Dantewada	5.1	17	KL	Used or Spent Oil	Recycle	0.38621098
			33.3	25	No	Empty HDPE Bag	Landfillable	26.4475696
			33.2	25	No	Empty Barrels	Recycle	12.4756964
8	Keltech Energies Limited	BIOP Deposite-5, Akash Nagar, Dist-South Bastar Dantewada	5.1	0.06	KL	Used or Spent Oil	Recycle	0.20694504
			33.3	100	No	Empty HDPE Bag	Landfillable	52.9078873
			33.1	200	No	Empty Barrels	Recycle	6.68591668
9	Essar Steel India Ltd	Water Pumping Station, Sukma, Vill.Khumava, Dist-Sukma	5.1	17	KLA	Used or Spent Oil	Recycle	0
10	National Mineral Development Corporation Ltd.	Bailadila Iron Ore Project, Deposit No.5, Bachali, Dist-South Bastar Dantewada	5.1	100	KLA	Used or Spent Oil	Recycle	92.7577595
11	N.M.D.C. Limited	Bailadila Iron Ore Project Deposit No. 10 & 11A, Bachali, Dist- Dantewada	5.1	50	KLA	Used or Spent Oil	Recycle	83.9612487

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Table 3.15: Waste generation Factor - Regional Office – Bilaspur

S.N	Name of Industry	Address	Waste Category	Quantity		Type of Waste	Disposal Proposed	WGF
				Qty.	Unit			
1	Geetanjali Ispat & Power Pvt Ltd.	Silpahri Indl. Area, Dist-Bilaspur	5.1	0.025	KLA	Used/Spent Oil	Recycle/Reuse	0.1219385
			33.2			Empty barrels	Recycle/Reuse	3.9395518
2	Airan Steel & Power Pvt Ltd	Silpahri Indl. Area, Dist-Bilaspur	5.1	0.025	KLA	Used/Spent Oil	Recycle/Reuse	0.1288546
3	Indian Oil Corporation Ltd	Tarbahar Phatak, Bilaspur, Dist-Bilaspur	3.1	0.6	KLA	Cargo residue	Lanfillable	
			33.1	10	No.A	Empty barrels	Recycle/Reuse	
4	Narmada Drinks Pvt. Ltd.	Indl. Area, Sirgitti, Dist-Bilaspur	5.1	3	KLA	Used/Spent Oil	Recycle/Reuse	
			3.1	0.75	MTA	Empty barrels	Incineration	
			35.2	1.2	KLA	Resin toxic metal	Incineration	
						waste Paper	Incineration	
			35.3	90	MTA	ETP Sludge	Lanfillable	
5	Bhatia Wine Merchants Pvt Ltd	Punjabi Colony, Dayalganj, Bilaspur, Dist-Bilaspur	5.1	0.2	MTA	Used/Spent Oil	Recycle/Reuse	
			35.2	1.2	MTA	Resin toxic metal	Incineration	
6	Aeges Beverages Pvt Ltd	Plot No.41, Sector-B, Sirgitti, Dist-Bilaspur	34.2	120	KGA	Resin toxic metal	Incineration	0.0133333
			5.1			Used/Spent Oil	Recycle/Reuse	0.00052
7	BEC Fertilizers	Silpahri Indl. Area, Dist-Bilaspur	17.1	60	MTA	Residues, dust	Lanfillable	0.2755556
			17.2	200	Lit.A	Spent catalyst	Recycle/Reuse	0.7146667
			33.2			Empty barrels	Recycle/Reuse	0.0336
			34.4			chemical sludge	Lanfillable	0.0146667
			5.1	50	Lit.A	Used/Spent Oil	Recycle/Reuse	0.0104
8	Legend Distillery Pvt. Ltd.	Sirgitti Indl. Area, Dist-Bilaspur	34.2	250	KGA	Resin toxic metal	Incineration	
			5.1			Used/Spent Oil	Recycle/Reuse	

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9	K.K. Lubes Pvt. Ltd.	Sirgitti Indl. Area, Dist-Bilaspur	4.1	9360	Lit.A	Oily sludge emulsion	Incineration	14.617688
			4.4	374400	KGA	Organic residue	Incineration	3.125
			4.5	93600	KGA	Spent clay oil	Incineration	7.3088438
			5.1	6000	KLA	Used/Spent/Waste Oil	Recycle/Reuse	0.0975
			5.2				Recycle/Reuse	0.0365625
10	Goa Carbon Limited	34-40, Sector-B, Sirgitti Indl. Area, Dist-Bilaspur	5.1	180	Lit.	Used Oil	Recycle/Reuse	0.0955811
			33.2			Empty barrels	Recycle/Reuse	3.0880063
11	Mahamaya Calcination	Sector-B, 73, Sirgitti Indl. Area, Dist-Bilaspur	11.5	6000	MTA	Dross & waste from treat of salt sludge	Recycle/Reuse	161.92
12	Kejriwal Metal Castings	Sirgitti Indl. Area, Dist-Bilaspur	11.5	2800	MTA	Dross & waste from treat of salt sludge	Recycle/Reuse	90
			11.4	2440	MTA	Flue gas & dust	Incineration	50
13	Shiv Metal Industries	Maharana Pratap Nagar, Bilaspur, Dist-Bilaspur	11.5	3000	MTA	Dross & waste from treat of salt sludge	Recycle/Reuse	800
			11.4	2800	MTA	Flue gas & dust	Incineration	100
14	Golden Prince Wines Pvt. Ltd.	116 AB, Sector-B, Indl. Area, Sirgitti, Dist-Bilaspur	5.1	50	KGA	Used/Spent Oil	Recycle/Reuse	0.013
			34.2	187	KGA	Resin toxic metal	Incineration	0.0346296
15	Hirri Dolomite Mines	Gram-Hirri, Po-Hirri Mines, Dist-Bilaspur	5.1	50	KLA	Used/Spent Oil	Recycle/Reuse	0.0002177
16	Apollo Hospitals	Seepat Road, Bilaspur, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0258571
			33.2			Empty barrels	Recycle/Reuse	0.8353848
			34.3			chemical sludge	Lanfillable	0.0089484
17	Real Power Pvt Ltd	Khamhardin (Rambode), Block-Patharia, Dist-Mungeli	SCH-I	-	-	Spent oil	Recycle/Reuse	41.6
			SCH-I	-	-	Resin	Incineration	26.666667
18	Phil Ispat Pvt Ltd	Vill.Dighora, Po-Mota Bilha, Raipur Road, Dist-Bilaspur	5.1	-	-	Used/Spent Oil		0.0027857
19	Welcome Distilleries (P) Ltd	Vill.Chherkabandha,	5.1	0.2	KLA	Used/Spent Oil	Recycle/Reuse	0.0085526

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		Tah-Kota, Dist-Bilaspur	35.2	0.6	MTA	Resin toxic metal	Incineration	0.0164474
						Yeast Sludge	Recycle/Reuse	80.275
			35.4			chemical sludge	Lanfillable	6.8188421
			33.1	20	No.A	Empty barrels	Incineration	0.2763158
20	Om Oil Extraction Ltd	Plot No.55,56 & 58B, Sector-C, Indl. Area Sirgitti, Dist-Bilaspur	-	-	-	-		0
21	Jai Durga Oil Extraction Pvt. Ltd.	Plot No. 118/A Sector-B, Indl. Area, Sirgitti, Dist.Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	17.222952
			33.2			Empty barrels	Recycle/Reuse	55.643382
22	Sudha Bio Power Pvt Ltd	Vill.Mohatarai Po-Semartal, Dist-Bilaspur	5.1	400	KLA	Used Oil Transformer	Recycle/Reuse	8360.1286
			33.2			Empty barrels	Recycle/Reuse	27009.646
			5.1	600	KLA	Used oil Turbine	Recycle/Reuse	0
23	Arpa Fuel Pvt Ltd	Vill.Gatauri, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.00039
24	Bhatia Coal Tradelink	Vill.Lokhandi, Tah.Takhatpur, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.00039
25	Mangal Sponge & Steel Pvt Ltd	FCI Road, Bilha, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0118696
26	Maheshwari Coal Benefications & Infra	Indl. Area, Sirgitti, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	14820
			34.3			chemical sludge	Lanfillable	7524
27	Chhattisgarh Power & Coal Benefication Ltd.	Sector-C, Plot No.60, Indl. Area, Sirgitti, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0287938
28	Clean Coal Enterprises Pvt Ltd	Vill.Baloda, Tah.Baloda, Dist-Janjgir-Champa	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0
29	Hind Energy & Coal Benefication (I) Ltd.	Vill.Birgahani, Tah.Baroda, Dist-Janjgir-Champa	5.1	-	-	Used/Spent Oil	Recycle/Reuse	812.5
			34.3			chemical sludge	Lanfillable	1567.5
30	Hind Energy & Coal Benefication (I) Ltd.	Vill.Gatora, Tah.Masturi, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	812.5
			34.3			chemical sludge	Lanfillable	1567.5
31	Hind Energy & Coal Benefication (I) Ltd.	Vill.Karra, Tah.Masturi, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0134063
			34.3			chemical sludge	Lanfillable	0.015675

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32	Hind Energy & Coal Benefication (I) Ltd.	Vill.Hindadih, Tah.Masturi, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0325
			34.3			chemical sludge	Lanfillable	0.0236867
33	KSK Mahanadi Power Company Ltd	Vill.Naniyara, Tah.Akalkina, Dist-Janjgir-Champa	5.1	5.28	MTA	Used/Spent Oil	Recycle/Reuse	3.0333333
			5.2			Waste residue	Incineration	0.6666667
			35.4			chemical sludge	Lanfillable	2.5
			33.2			Empty barrels	Recycle/Reuse	98
34	Mahavir Coal Washeries Pvt Ltd	Vill.Bhelai, Po.Tah-Baloda, Dist-Janjgir-Champa	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.024222
			35.4			chemical sludge	Lanfillable	0.0175237
35	Narmada Phosphate Ltd.	Vill.Hardi, Block-Bilha, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0161887
			5.2	-	-	Waste & Residue	Incineration	0.0377358
36	Kalindi Ispat (P) Ltd.	Vill.Belpar, Po-Manikchori, Tah-Masturi, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0680174
37	Satya Power & Ispat Ltd. (Washery Unit)	Vill.Gasauri, Po-Samarsal, Rodaspur Road, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	5.417E-06
38	Satya Power & Ispat Ltd (Steel)	Vill.Gasauri, Po-Samarsal, Rodaspur Road, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0010833
						ESP Dust	Lanfillable	7.8708333
39	Phil Coal Benefication Pvt Ltd	Vill.Ghutku, Tah.Takhatpur, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0006864
40	Phil Coal Benefication Pvt Ltd	Vill.Lokhandi, Tah.Takhatpur, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	9.75E-06
41	Shivam Motors Pvt Ltd	Sector-C/4, Indl.Area, Sirgitti, Raipur Road, Dist-Bilaspur	1.3	1500	MTA	Oily sludge emulsion	Incineration	0
			5.2	1500	KLA	Furnace oil sludge	Incineration	0
			4.5	64	MTA	Spent clay oil	Incineration	0
			5.1	3200	KLA	Used/Spent oil	Recycle/Reuse	0
			4.1	50	KLA	Oily sludge emulsion	Incineration	0
			34.3	900	KLA	Blast water containing oil	Lanfillable	0
42	Rashi Steel & Power Ltd	Vill.Paraghat,	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0834484

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		Po-Jairamnagar, Tah-Masturi, Dist-Bilaspur				Coal Tar	Incineration	5.0501024
43	MTTPS, Marwa, CSPGCL (2 X 500 MW)	Janjgir-Champa	5.1	80	KLA	Used/Spent Oil	Recycle/Reuse	252.408
			5.2	2	MTA	Waste & Residue	Incineration	2
			33.1	4	MTA	Empty barrels	Incineration	815.472
			35.2	4	KLA	Resin	Incineration	4
44	NTPC Ltd. Sipat	NTPC Ltd. Sipat, Dist-Bilaspur	5.1	50	KLA	Used/Spent Oil	Recycle/Reuse	112.02685
			5.2	2.5	KLA	Waste & Residue	Incineration	0.6543624
			35.2	500	KGA	Resin	Incineration	0.1677852
			33.1	2000	No.A	Empty barrels	Incineration	338.25503
45	Nuvoco Vistas Corporation Ltd. (Arasmeta cement)	Po-Gopalnagar, Tah.Akaltarg, Dist-Bilaspur	5.1	49900	Lit.A	Used/Spent Oil	Recycle/Reuse	0.0014035
			5.2	74548	Lit.A	Waste & Residue	Incineration	0.0014395
			3.1	69	MTA	Oil residue	Incineration	0
			33.3	5	MTA	Empty barrels	Incineration	0.0045345
46	Madhya Bharat Paper Limited	Vill.Birgahni, Po-Champa, Dist-Janjgir-Champa	5.1	1.8	KLA	Used/Spent Oil	Recycle/Reuse	0.161781
			32.2	6	MTA	Acid based	Lanfillable	0
			32.3	1.5	MTA	Organic residue	Incineration	25.044248
			35.2	0.475	KLA	Resin	Incineration	0.0553097
47	Mahendra Power Pvt Ltd (9.8 MW/A)	Vill.Madwa-Champa, Dist-Janjgir-Champa	5.1	-	-	Used/Spent Oil	Recycle/Reuse	119.38776
			5.2			Waste residue	Incineration	102.04082
			33.2			Empty barrels	Recycle/Reuse	3857.1429
			35.2			Spent ion resin	Incineration	2.0408163
48	Prakash Industries Ltd.	Vill.Hathneora, Tah-Champa, Dist-Janjgir-Champa	5.1	20000	Lit.A	Used oil	Recycle/Reuse	0.0250492
			34.2	15	Lit.A	Spent ion resin	Incineration	2.409E-05
49	D.B. Power Ltd. (2 x 600 MW)	Badadarha, Po-Kanwali, Dist-Janjgir-Champa	5.1	20	MTA	Used/Spent Oil	Recycle/Reuse	120.56525
			5.2	5	MTA	Waste & Residue	Incineration	4.1666667
			34.2	0.2	MTA	ETP Sludge	Lanfillable	45.3453
			35.2			Spent ion resin	Incineration	0.1666667
			33.2			Empty barrels	Recycle/Reuse	389.5185

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50	R.K.M. Powerger Pvt Ltd (2 x 360 MW)	Vill.Ucchpinda, Po-Dhorkot, Tah.Dabhara, Dist-Jinjgir- Champa	5.1	200	KLA	Used/Spent Oil	Recycle/Reuse	97.527581
			5.2	100	KLA	Waste & Residue	Recycle/Reuse	0.0707214
			35.2	20	KLA	Used Resin	Incineration	0.0141443
			33.1	1525	No.A	Empty barrels	Incineration	315.08911
			33.2	0.25	MTA	contaminated cotton waste	Incineration	0.1768034
			35.4			ETP Sludge	Lanfillable	4.9477595
51	Shanti GD Ispat & Power Pvt. Ltd	Mahuda, Korba Road, Champa, Dist-Janjgir- Champa	5.1	-	-	Used/Spent Oil	Recycle/Reuse	7.28
52	Shyam Warehousing & Power Pvt Ltd	At-Po-Banari, Dist-Janjgir-Champa	5.1	-	-	Used/Spent Oil	Recycle/Reuse	10.92
53	Indramani Minerals Media Pvt Ltd	Vill.Beltara, Tah-Belha, Dist-Bilaspur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0624

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Table 3.16 waste Generation Factor -Regional office -Durg -Bhilai

S.N	Name of Industry	Address	Waste Category	Quantity		Type of Waste	Disposal Method [Proposed]	WGF
				Qty.	Unit			
1	Vossloh Beekay Castings Limited	25-28, Light Indl. Area, Bhilai, Dist-Durg	5.1	600	Lit	Used/Spent Oil	Incineartion	2.324934425
1A	Vossloh Beekay Castings Limited	25-28, Light Indl. Area, Bhilai, Dist-Durg	33.3	150	Nos	Emapty containers	Incineartion	37.55663302
2	Indian Petro Coal Product	23-C, Light Indl. Area, Bhilai, Dist-Durg	35.3	1.5	MTA	ETP Sludge	Landfillable	
3	Bhilai Engineering Corporation Ltd.	2F/2L, Vill.Hathkhoj, Bhilai, Dist-Durg	-	65	MTA	-	Recycle/Reuse	54.16666667
4	Vishnu Chemical Ltd.	18-26, Indl. Estate Nandini Road, Bhilai, Dist-Durg	A-5	4500	MTA	Sludge (Leach Mud)	Landfillable	552.1472393
5	Simplex Casting Ltd.	Industrial Estate ,Bhilai	5.1	0.035	KLA	Used/Spent Oil	Recycle/Reuse	
6	Hindustan Chemical & Aluminium Industries	Plot No.50 Lia Indl. Area, Bhilai, Dist-Durg	1.2	-	-	Tar Residue	Recycle/Reuse	
			6.1	-	-	Antracine Residue	Incineartion	
			35.3	-	-	ETP Sludge	Landfillable	
			34.1	-	-	Chemical containg Residue	Incineartion	
7	J S Oil Company	123/F, 124/D, Light Indl. Area, Bhilai, Dist-Durg	13.6	5200	MTA	Distillation unit, blending	Recycle/Reuse	
			1.2	250	MTA			
			13.5	200	MTA			

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8	Gulati Udyog	120, Light Indl. Area, Bhilai, Dist-Durg	1.6	1.2	MTA	Distillation Residue	Recycle/Reuse	
			34.3	1.2	MTA	ETP Sludge	Landfillable	
9	Kusum Kemikals Pvt. Ltd.	73-74, Light Indl. Area, Bhilai, Dist-Durg	-	1.44	MTA	Distillation	Recycle/Reuse	0.654545455
10	G.N. Chemicals	123, Light Indl. Area, Bhilai, Dist-Durg	4.5	40	MTA	High vaccum distillation	Landfillable	
11	Utkal Hydrocarbons	Plot No.6, 16-B & 16C Light Industrial Area, Bhilai	1.6	0.6	MTA	Steel bottom from distillation process	Recycle/Reuse	
			5.1	0.002	MTA	Used Oil	Recycle/Reuse	
			34.3	3.6	MTA	ETP Sludge	Landfillable	
12	Coal Chem	Plot No. 98, 99, 101 & 102, Light Indl. Area, Bhilai, Dist-Durg	1.6	1.5	MTA	Steel bottom from distillation process	Recycle/Reuse	0.509445372
			5.1	0.002	Ltrs	Used/Spent Oil	Recycle/Reuse	0.001018891
			13.4	3700	MTA	Tar residue		380.288203
			20.2	120	MTA	Spent Solvent		12.33367145
			34.4	50	MTA	O&G skim sludge		25.4722686
13	NAGREE Chemical & Tar Products	3/A, Light Indl. Area, Bhilai, Dist-Durg	1.6	1.2	MTA	Distillation	Recycle/Reuse	5.172413793
			34.3	3.6	MTA	ETP Sludge	Landfillable	15.78947368
14	Bhilai Engineering Corporation Ltd.	Post Box No.31, Indl. Area, Transportnagar, Hathkhoj, Bhilai, Dist-Durg	1.2	3	KLA	Sludge from Machine shop	Recycle/Reuse	
			1.3	3	KLA	Oil & Grease	Incineartion	
			2.4	1	KLA	Spent Solvent	Incineartion	
			-	1.5	KLA	Waste paint	Incineartion	

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15	Beekay Engg. Corporation	45/47, Indl. Estate, Bhilai, Dist-Durg	5.1	10000	LitA	Waste Oil	Incineartion	8.666666667
16	Swarna Home Care Products	123/B, Light Indl. Area, Bhilai, Dist-Durg	1.2	3	MTA	Distillation Residue	Incineartion	8.333333333
			35.3	1.5	MTA	ETP Sludge	Incineartion	4.166666667
			33.1	..	MTA	Empty barrels	Incineartion	84
17	Indian Petro Coal Product	23/C, Light Indl. Area, Bhilai, Dist-Durg	35.3	3.6	MTA	ETP Sludge	Incineartion	
			1.2	2.4	MTA	Tar Residue	Incineartion	
18	Niros Ispat (P) Ltd	14-A, Heavy Indl. Area, Hathkhoj-Bhilai, Dist-Durg	5.1	1.25	KLA	Used/Spent Oil	Recycle/Reuse	0.003939267
			35.2	0.3	MTA	In D M Plant	Recycle/Reuse	0.001212082
19	Supreme Petro Synth Specialities	15/B, Heavy Indl. Area, Hathkhoj, Bhilai, Dist.Durg	5.1	9000	KGA	Used oil	Recycle/Reuse	5400
			5.2	12000	KGA	Waste Oil	Recycle/Reuse	9230.769231
			20.3	3.6	MTA	Distillation Recycling	Landfillable	2.769230769
			34.4	-	-	O & G Residue	Incineartion	0.923076923
20	Supreme Industries	12/F, Heavy Indl. Area Hathkhoj, Bhilai, Dist-Durg	34.4	5000	MTA	Napthalene O & G	Recycle/Reuse	
			20.3			Distillation Residue	Recycle/Reuse	0.782608696
			1.2			Tar Residue	Recycle/Reuse	
			20.2	3.6	MTA	Spent Solvent	Incineartion	
21	S S Udyog	17/N, Heavy Indl. Area, Bhilai, Dist-Durg	1.2	3.4	MTA	Tar Residue (Naphelin)	Incineartion	8
			35.3	0.3	MTA	ETP Sludge	Landfillable	0.3
22	Haryana Rolling Mills (Bhilai) Pvt Ltd	71, Light Indl. Area, Bhilai, Dist-Durg	6.2	20	MTA	Zinc Fines	Recycle/Reuse	2.75862069
			9.2	5	MTA	Lead Ash	Recycle/Reuse	0.689655172
			12.1	65	MTA	Acidic residue	Landfillable	8.965517241
			35.3	1	MTA	ETP Sludge	Landfillable	0.275862069
23	Shyam Trade Link	39, Light Indl. Area, Bhilai, Dist-	6.2	6	MTA	Zinc fines	Recycle/Reuse	0.769230769
			12.1	5	MTA	Acidic residue	Landfillable	0.641025641

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		Durg	35.3	2.5	MTA	ETP Sludge	Landfillable	0.000320513
24	Power Pack Industries	32/D, Light Indl. Area, Bhilai, Dist-Durg	9.1	6	MTA	Lead bearing residue	Recycle/Reuse	8.571428571
			9.2	3	MTA	Lead Ash	Recycle/Reuse	4.285714286
			8.2	3	MTA	Sludge/Filter	Incineartion	4.285714286
25	Shreyansh Industries	14A, Light Indl. Area, Bhilai, Dist-Durg	9.1	18	MTA	Lead slag	Recycle/Reuse	20
			7.4	7	MTA	Copper/brass slag	Recycle/Reuse	7.777777778
26	Bhilai Jaypee Cement Ltd (Unit Bhilai Jaypee Grinding Plant)	BSP Premises, Slag Yard Road, Opp-Sector-4, Near NMOH, Bhilai, Dist-Durg	5.1	20	KLA	Used/Spent Oil	Recycle/Reuse	0.025088856
			5.2	1	MTA	Waste residue containing oil	Incineartion	0.0160826
27	Shree Shyam Chemicals	12/I, Heavy Indl. Area, Bhilai, Dist-Durg	13.4	3.5	MTA	Waste residue containing oil	Incineartion	0.729166667
			33.3	0.5	MTA	Discarded container	Incineartion	0.104166667
28	Om Kamal Steel Pvt Ltd	16-G, Heavy Indl. Area, Hathkhoj, Bhilai, Dist-Durg	6.2	62	MTA	Zinc ash	Recycle/Reuse	1.517376407
			9.2	12	MTA	Lead Ash	Recycle/Reuse	0.293685756
			12.1	200	MTA	Acid residue	Landfillable	4.894762604
			34.3	24	MTA	ETP Sludge	Landfillable	0.587371512
			33.3	50	KGA	Barrels	Incineartion	0.616740088
29	Chhatisgarh Distilleries Ltd	Vill.Khapavi, Kumhavi, Durg, Dist-Durg	5.1	200	LitA	Used/Spent Oil	Recycle/Reuse	21300000.00
30	A.B. Ispat Pvt Ltd	18 & 18-I, Heavy Indl. Area, Hathkhoj, Bhilai, Dist-Durg	6.2	3.5	MTA	Zinc fines	Recycle/Reuse	0.269230769
			12.1	2.5	MTA	Acidic residue	Landfillable	0.192307692
			34.3	0.5	MTA	ETP Sludge	Landfillable	0.038461538
31	N.R. Wires Pvt Ltd	20, Light Indl. Area, Bhilai, Dist-Durg	5.1	-	-	Used/Waste oil	Incineartion	7.09091E-05
32	Shyam Kemicals	15-C, Heavy Indl. Area, Hathkhoj,	1.2	3.6	MTA	Tarry residue	Recycle/Reuse	6.605504587
			35.3	3.6	MTA	ETP Sludge	Landfillable	6.605504587

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		Bhilai, Dist-Durg						
33	Aparna Carbons Pvt Ltd	Plot No. 88-90 Vill-Jewga, Sirsa Dhamdhe Road, Durg, Dist-Durg	13.4	285	MTA	Tar Residue	Landfillable	8.644746421
			5.1	0.1	KLA	Used/Spent Oil	Incineartion	0.000236593
			1.6	1	KLA	Steel bottom from distillation process	Incineartion	0.023659306
34	Jaya House Hold Products Pvt Ltd	12J/13, Heavy Indl. Area, Hathkhoj, Bhilai, Dist-Durg	13.4	6	MTA	Tar residue	Landfillable	16.66666667
			34.3	1.5	MTA	ETP Sludge	Landfillable	4.166666667
			33.3	0.5	MTA	Discarded container	Incineartion	1.388888889
35	Shree Shiv Industries	Engg. Park, Hathkhoj, Bhilai, Dist-Durg	6.2	90	MTA	Zinc fines	Recycle/Reuse	4.182933631
			12.1	4	KLA	Acidic residue	Landfillable	0.145008366
			35.3	6	MTA	ETP Sludge	Landfillable	0.278862242
			5.1	0.2	KLA	Used/Spent Oil	Incineartion	0.007250418
36	Topworth Steel & Power Pvt Ltd.	Bhilai Growth Centre, Rasmadha, Dist-Durg	5.1	10.5	KLA	Used/Spent Oil	Recycle/Reuse	0.001909091
			34.2	100	KGA	Resin containing toxic metals	Landfillable	0.0002331
37	Raipur Power & Steel Ltd	Plot No.75,76, Indl. Growth Centre Borai, Rasmada, Dist-Durg	5.1	0.5	KLA	Used/Spent Oil	Recycle/Reuse	0.000125893
			35.2	0.2	MTA	Toxic Metals	Landfillable	0.000645604
38	Crest Steel Power Pvt Ltd	Vill.Jorataria, Po-Mangatta, Rajnandgaon, Dist-Durg	5.1	10	KLA	Used/Spent Oil	Recycle/Reuse	0.002517855
			34.2	100	KGA	Spent Resin	Incineartion	0.000322802
39	Bhilai Engineering Corporation Ltd.	2L/IA, Hathkhoj, Durg, Dist-Durg	-	-	-	Used/Spent Oil	Recycle/Reuse	0.013825702
40	ACC Limited-	Jamul Cement	5.1	2	MTA	Used/Spent	Recycle/Reuse	0.000307692

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	Pathriya Lime Stone Mines	Works, Dist-Durg				Oil		
41	ACC Limited- Jamul Lime Stone Mines	Jamul Limestone Mines, Po-Jamul Cement Works, Dist-Durg	5.1	200	MTA	Used/Spent Oil	Recycle/Reuse	11173.18436
42	ACC Limited, Jamul Cement Works	Po-Jamul Cement Works, Dist-Durg	5.1	200	MTA	Used/Spent Oil	Recycle/Reuse	6134.969325
43	ACC Limited- Jam Pathriya Limestone Mines	Po-Jamul Cement Works, Dist-Durg	5.1	2	MTA	Used/Spent Oil	Recycle/Reuse	540.5405405
44	J K Lakshmi Cement Ltd (Lime stone mine)	Vill-Malpuri Khurd, Khasadih, Po-Ahiwara, Tah-Dhamdha, Dist-Durg	5.1	20	KLA	Used/Spent Oil	Recycle/Reuse	0.000689895
			5.2	20	KLA	Waste Residue	Incineartion	0.006898949
			33.3	500	No/Y	Discarded container	Recycle/Reuse	0.11144456
45	J K Lakshmi Cement Ltd	Vill-Malpuri Khurd, Khasadih, Po-Ahiwara, Tah-Dhamdha, Dist-Durg	5.1	40	KLA	Used/Spent Oil	Recycle/Reuse	0.000863376
			5.2	40	KLA	Waste/Residue	Landfillable	0.008633765
46	Tankeshwari Metals Powder Products Pvt Ltd	Vill-Aheri, Po-Nankatti, Dist-Durg	5.1	15	MTA	Used/Spent Oil	Recycle/Reuse	11.21293801
47	Bhilai Cement	Vill.Dhaba, Po-Kumhari, Dist-Durg	1.2	6000	MTA	Tar Residue	Landfillable	571.4285714
			13.3			Tar Sludge	Landfillable	
			13.4			Residue	Incineartion	
			13.2	2000	MTA	Acid sludge	Landfillable	190.4761905
			20.3	1000	MTA	Distillation Residue	Landfillable	95.23809524
48	Ayush Industries	17-G, Heavy Indl. Area, Bhilai, Dist-Durg	6.2	12	MTA	Zinc fines	Recycle/Reuse	0.952380952
			12.1	36	MTA	Acidic residue	Landfillable	2.857142857
			35.3	3	MTA	ETP Sludge	Landfillable	0.238095238

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49	Jai Balaji Industries Ltd	Indl. Growth Centre, Borai, At-Po-Rasmada, Dist-Durg	5.1	3000	LitA	Used/Spent Oil	Recycle/Reuse	0.001063636
			35.2	75	LitA	Resin	Recycle/Reuse	0.000265909
50	Bhilai Steel Plant, SAIL	Ispat Bhavan, BSP, Dist-Durg	3.3	2500	MTA	Benzological sludge	Landfillable	0.78610716
			13.5	1500	MTA	Tar residue	Landfillable	0.471664296
			13.4	4000	MTA	Tar Sludge	Landfillable	1.257771455
			5.1	500	MTA	Used/Spent Oil	Incineartion	0.157221432
			20.2	500	MTA	Spent Solvent	Incineartion	0.157221432
			35.4	100	MTA	O & G skimming	Incineartion	0.031444286
			35.3	2500	MTA	ETP Sludge	Landfillable	0.78610716
			33.1	275	MTA	Barrels	Incineartion	0.086471788
			17.1	500	MTA	Acidic residue	Incineartion	0.157221432
			A6	400	MTA	Copper compound	Recycle/Reuse	0.125777146
			A5	50	MTA	Lead compound	Recycle/Reuse	0.015722143
			B1	80	MTA	Asbestos	Recycle/Reuse	0.025155429
51	Rajhara Mechanized Mine	Rajhara Mech Mine, Po-Dalli, Rajhara, Dist-Belod (CG)	5.1	50000	Ltrs	Used/Spent Oil	Recycle/Reuse	0.002271162
52	Dalli Mechanized Mines	Po-Dalli Rajhara, Dist-Balod	5.1	50	KLA	Used/Spent Oil	Recycle/Reuse	0.001060471
53	Mahamaya Mines	Vill. & Po-Mahamaya, Dist-Balod	5.1	4.73	KLA	Used/Spent Oil	Recycle/Reuse	0.000355731
54	NTPC-SAIL Power Co. Ltd	Power Plant-II (74 MW) BSP Premises, Bhilai,	5.1	10	KLA	Used/Spent Oil	Recycle/Reuse	1.92
			34.2	7	KLA	Spent Resin	Incineartion	13.45

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		Dist-Durg	33.3	0.25	MTA	Discarded container	Incineartion	0.61577113
55	NTPC-SAIL Power Co. Ltd Expansion Power Plant (2x250MW)	Expansion Power Plant (2x250MW) Po-Bhilai(E), Dist-Durg	5.1	3.4	KLA	Used/Spent Oil	Recycle/Reuse	0.068396701
			33.3	0.3	MTA	Discarded container	Incineartion	0.051581222
56	Nandini Lime Stone Mine	Nandini Lime Stone Mine, BSP, Po-Nandini, Dist-Durg	5.1	19.92	KLA	Used/Spent Oil	Incineartion	0.09786064
57	P.S. Steel Tubes (P) Ltd Unit-II	Vill. & Po-Tedesara, Dist-Rajnandgaon	6.2	829	MTA	Zinc fine & dust	Recycle/Reuse	11.53384484
			12.2	296	KLA	Spent acid	Recycle/Reuse	3.212224484
58	Sejal Sales Corporation	Plot No. 11/5, Heavy Indl. Area, Hathkhoj, Bhilai, Dist-Durg	5.1	8000	KLA	Used/Spent Oil	Recycle/Reuse	0.577777778
			5.2	12000	KLA	Waste/Residue	Incineartion	57777.77778
			4.1	22	MTA	Oily sludge	Incineartion	135.8024691
			4.5	5	MTA	Spent Clay	Incineartion	30.86419753
59	A D V Metal Combine Pvt Ltd	Borai Indl. Growth Cener, Shed No.9, Rasmada Durg, Dist-Durg	11.5	2000	MTA	Drosses & waste from treatment of salt sludge	Recycle/Reuse	7.334330419
			11.4	1600	MTA	Flue gas dust	Incineartion	6.111942016
60	Praxair India (P) Ltd	Plant premises of BSP, Vill.Jorajair, Dist-Durg	5.1	5.8	KLA	Used/Spent Oil	Recycle/Reuse	0.00033477
			5.2	1	MTA	Waste/Residue	Incineartion	0.001430642
61	Bodai Daldali Bauxite Mines	Po-Badlapur, Dist-Kabirdham	5.1	0.5	MTA	Used/Spent Oil	Recycle/Reuse	0.002949467
62	Bhoramdeo Sahakari Shakar Karkhan Mydt.	Ramdeopur, Kawardha, Dist-Kabirdham	5.1	400	LitA	Used/Spent Oil	Recycle/Reuse	0.001042189
			34.3	-	-	ETP Sludge	Landfillable	0
			5.2	20	KGA	Residue containing oil	Incineartion	0.00066807

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			33.3	400	KGA	Empty containers	Incineartion	0.013361392
			33.1	-	-	Discarded waste	Incineartion	0
63	Chattisgarh Rajya Vidhut Utpadak Company	Vill.Ramhepur, Budhwara, Dist-Kabirdham	5.1	-	-	Used/Spent Oil	Recycle/Reuse	1.07534E-07
			34.3	-	-	ETP Sludge	Landfillable	2.75729E-06
64	Kamal Solvent Extractions Pvt Ltd	Vill.Khuteri, Somni, Dist-Rajnandgaon	5.1	150	Lit	Used/Spent Oil	Recycle/Reuse	0.000145558
65	Khaitan Chemicals & Fertilizers Ltd	Vill.Farhad, Po-Somni, Dist-Rajnandgaon	17.2	1	MTA	Spent catalyst	Incineartion	0.003830447
			17.1	30	MTA	Sulphur sludge	Landfillable	0.878780047
66	Charbhuj Gold Cement Pvt Ltd	Vill.Gordpendri, Dist-Durg	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.005823068

Table 3.17 A: Waste Generation Factor - RO Raipur

S.N.	Name of Industry	Address	Waste Category	Quantity		Type of Waste	Disposal Proposed	WGF
				Qty.	Unit			
1	Devi Iron & Power Pvt Ltd	Vill-Tanda, Mohandi Road, Block Dharsiva, Raipur	5.1	-	-	Used spent oil	Recycle/Reuse	0.000744508
			35.1	-	-	Resin toxic	Incineration	0
			33.1	-	-	Empty Barrel	Recycle/Reuse	0.240533297
2	Prayash Steel	Plot No. 5-8, Phase-II, Siltara, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	4.60666
3	Dham Industries	Plot No. 31, Siltara Indl. Area, Phase-II Part, Raipur	5.1	Used spent oil	Recycle/Reuse	6.9674
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.675301474
4	Pankaj Oxygen Limited	Plot No. 454/B, Sector-C, Urla Indl. Area, Raipur	5.1			Used spent oil	Recycle/Reuse	0.00000039
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.00252
5	Hindustan Coils Limited	Plot No. 19-20, Phase-I, Siltara Indl. Area, Raipur	5.1			Used spent oil	Recycle/Reuse	4.3376E-06
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.140137919
6	J.C. Reclamations	Plot No.13 (Part), Phase-I, Siltara, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	1.819494585
7	Narayani Rail Products Pvt Ltd	Plot No. 6/8, Urla Indl. Area, Raipur	5.1			Used spent oil	Recycle/Reuse	0.000624
			33.1	-	-	Empty Barrels	Recycle/Reuse	3.024

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8	Aditya Steel	600-601, Urla Indl. Area, Raipur	5.1			Used spent oil	Recycle/Reuse	0.0039
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.84
9	Satish Steel Industry	Sondongri Indl. Area, Ring Road No.2, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0039
10	Pawan Putra Industries	Plot No. 544, Urla Indl. Area, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	3.76119403
11	H.S.R. Re-Rollers Pvt Ltd	Urla Indl. Area, Dainik Bhaskar, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	1.84689125
12	Alpha Bio Products	Plot No. 372, Sector-C, Urla Indl. Area, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	210.0218773
13	Shriram Iron & Steel (P) Ltd	439/80-84-85, Urla Indl. Area, Dist-Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	1.084246762
14	Radharani Steel (P) Ltd	Urla Indl. Area, Dist-Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.382416432
15	Raipur Forging (P) Ltd (Unit-II)	2 & 3, Indl. Area, Urla, Dist-Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	1.732953276
16	Surya Ispat	270, Indl. Area, Urla, Dist-Raipur	5.1			Used spent oil	Recycle/Reuse	0.004333333
			33.1	-	-	Empty barrels	Recycle/Reuse	0.07
17	S. Pyrelal Ispat Pvt Ltd	143-145 & 148 Part Sector-C, Urla Indl. Area, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.168
18	Ganpati Ispat	144, Sector-C, Urla Indl. Area, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.136400541
19	Katani Steel Pvt Ltd	Plot No. 6/8, Urla Indl. Area, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.501852073

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20	Jainam Infraways Pvt Ltd	130, 137, Sector-C, Indl. Area, Urla, Dist-Raipur	SEC-IV	-	-	Silica containing metal	Landfillable	23.09073311
21	Lingraj Steel & Power Pvt Ltd	Vill-Gondwara, Ural Indl. Area, Dist-Raipur	5.1			Used spent oil	Recycle/Reuse	0.00195
			33.1	-	-	Empty barrels	Recycle/Reuse	0.0294
22	Indsil Energy & Electrochemical Limited	114-122, Sectors-C, Urla Indl. Area, Dist-Raipur	SEC-IV	-	-	Silica containing metal	Recycle/Reuse	0
23	Real Ispat & Power Ltd	262, 312-321 & 356-363, Urla, Indl. Area, Dist-Raipur	5.1			Used spent oil	Recycle/Reuse	0.002808
			33.1	-	-	Empty barrels	Recycle/Reuse	0.06048
24	Royal Infrastructure Ltd	209, Sector-C, Indl. Area, Urla, Dist-Raipur	5.1			Used spent oil	Recycle/Reuse	0
			33.1	-	-	Empty barrels	Recycle/Reuse	0
25	Navdurga Ispat	Plot No.435-A, Sector-C, Indl. Area, Urla, Dist-Raipur	5.1			Used spent oil	Recycle/Reuse	0.0039
			33.1	-	-	Empty barrels	Recycle/Reuse	0.1008
26	Lupin Gases Pvt Ltd	8/1, 8/2, Sector-D, Indl. Area, Urla, Dist-Nagpur	5.1	-	-	Used oil	Recycle/Reuse	1.46067E-05
27	Ganpati Industries (P) Ltd	Plot No. 65-66, 9/A, Urla Indl. Area, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	1.072340426
28	Jekay International Track Pvt Ltd.	Vill-Birgaon, Block-Dharsiwa, Tah & Dist-Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	2.16
29	R.B. Strips Pvt. Ltd.	Plot No. 312/313, Indl. Area, Urla, Dist-Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.903177249

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30	Simplex Castings Limited	Incl. Area, Urla, Dist-Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	34.72280432
31	Hanukripa Ispat (P) Ltd.	P.H.No.101, Kh.No.439, Urla, Dist-Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.026526316
32	Amrit Steel Re-Rolling Industries	870, Sector-D, Incl. Area, Urla, Dist-Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.48
33	Dinesh Industry	730-A, Incl. Area, Urla, Dist-Raipur	24.1			ETP Sludge	Landfillable	0.092165899
			5.1	-	-	Spent Oil	Recycle/Reuse	2.87558E-05
34	Sachdev Food Product Pvt Ltd	Incl. Area, Urla, Dist-Raipur	34.3	-	-	ETP Sludge	Landfillable	0.5
35	Shree Dhaniram Laminate	Borzgara Incl. Area, Bendri Road, Raipur	34.3			ETP Sludge	Landfillable	0.153846154
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.232615385
36	APL Apollo Tube Limited	Vill-Bendri, Tah. & Dist-Raipur	33.1			Empty Barrels	Recycle/Reuse	0.04
			5.1	-	-	Used oil	Recycle/Reuse	6.19048E-05
37	Prime Ispat Ltd	Vill-Bana, Via Hirapur-Tanda, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.178829095
38	Radhe Hurkut Ispat Pvt Ltd	Plot No. 735-B, Urla Incl. Area, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	1.04042663

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39	Casmo Enterprises	P.H.No.103, Kh.No.50/3, 51/2 Part, Vill-Hirapur, Jarway, Dist-Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	3.15
40	Prakash Monomores Pvt Ltd	P.H.No.103, Kh.No. 51/5,11, 52 Vill-Hirapur, Jarway, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	4.2
41	Kasare Varya Silk Mill Pvt Ltd	Plot No. 389, 390/1,2, Indl. Area, Bhanpuri, Dist-Raipur	-	-	-	Cotton Waste	Incineration	0
42	Sunil Steel Wires Pvt LTd (Unit-II)	Bhanpuri Indl. Area, Dist-Raipur						0

Table 3.17 .B: Waste Generation Factor - RO Raipur

S.N.	Name of Industry	Address	Waste Category	Quantity		Type of Waste	Disposal Proposed	WGF
				Qty.	Unit			
1	Ashutosh Engineering Industries	Hirapur-Jarway, Po-Tendua-Tatibandh, Dist-Raipur	6.2	10	MTA	Zinc Ash skimming	Recycle /Reuse	3.3333333
			12.1	0.5	MTA	Acid Residue	Landfilling	0.5555556
			34.3	6	MTA	ETP Sludge	Landfilling	5.5555556
2	Shri Ashutosh Engg. Industry (Unit-II)	Plot No.157/, 160 & 161, New Patharidih, Urla, Dist-Raipur	6.2	24	MTA	Zinc ash	Recycle /Reuse	3.6363636
			12.1	1	MTA	Acid Residue	Landfilling	0.4545455
			34.3	24	MTA	ETP Sludge	Landfilling	2.7272727
			33.1	-	-	Empty drums	Recycle /Reuse	0.1099636
3	Real Ispat & Power Ltd.	Vill.Borjhara, Po-Urla, Dist-Raipur	5.1	1800	Lit.A	Used/Spent Oil	Recycle /Reuse	0.00195
			1.2	1500	Lit.A	Jarry residue	Landfilling	0.01625
			33.1	30	No	Empty barrels	Recycle /Reuse	0.21
			34.2	100	KGA	Resin toxic metal	Incineration	0.0013889
4	Paral Vanaspati (P) Ltd.	Urla Indl. Area, Raipur, Dist-Raipur	5.2	Industry complete burnt not in operation				0
			34.2					0
5	Narayana Hrudayalaya MMI Multispeciality Hospital	Dhamtari Road, Lalpur, Raipur, Dist-Raipur	5.1	200	Lit.A	Used/Spent Oil	Recycle /Reuse	0

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6	Aero Agro Chemical Industry	Plot No.427/3, Indl. Area, Bhanpuri, Dist-Raipur	29.1	5	MTA	Process waste & residue	Recycle /Reuse	3.8907175
			29.2	5	MTA	Sludge residual pesticide	Landfilling	3.8907175
7	Uniworth Ltd. (Dyeing Division)	923, 945, Urla Indl. Estate, Sarora Sector, Dist-Raipur	5.1	0.1	KLA	Used/Spent Oil	Recycle /Reuse	7.8549849
			35.3	0.15	MTA	ETP Sludge	Landfilling	0.1510574
8	Ador Welding Limited	Bilaspur Road, Indl. Estate Bhanpuri, Raipur, Dist-Raipur	5.1	400	KLA	Used/Spent Oil	Recycle /Reuse	0.5571429
			35.3	3600	KGA	ETP Sludge	Landfilling	0.0642857
			33.1	-	-	Empty container	Recycle /Reuse	0.072
9	Navbharat Explosives Co Ltd.	Vill.Urla, Tah-Abhanpur, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	0.0021667
			34.3	-	-	ETP Sludge	Landfilling	8.25
10	Ambika Steel Industry	Plot No. 11(A) Indl. Estate, Rawabhata, Raipur, Dist-Raipur	12.1	3.2	KLA	Acid Residue	Landfilling	0.2773333
			6.2	4	MTA	Zinc dust	Recycle /Reuse	1.2833333
			34.3	200	KG	ETP Sludge	Landfilling	2.5666667
11	Lahri Laminates Pvt Ltd	Hirapur-Jarway, Po-Tendua-Tatibandh, Dist-Raipur	5.1	-	-	Spent Oil	Recycle /Reuse	0
			34.3	70	KG	ETP Sludge	Landfilling	0
12	Fortune Metal Ltd	Phase-II Siltara Indl. Area, Vill.Sondra Chikli, Dist-Raipur	6.2	30	MTA	Zinc Fines	Recycle /Reuse	0.7692308
			12.1	2	KLA	Acidic alkaline residue	Landfilling	0.04
			35.3	2	MTA	ETP Sludge	Landfilling	0.0512821

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13	Nandan Steel & Power Ltd.	Vill.Sondra, Near Phase-II/A, Block Dharsiwa, Dist-Raipur	5.1	0.2	KLA	Used/Spent Oil	Recycle /Reuse	12.257143
			6.2	225	MTA	Zinc Fines	Recycle /Reuse	3.4285714
			12.1	900	KLA	Acid Residue	Landfilling	4.68
			34.3	54	MTA	ETP Sludge	Landfilling	2.8571429
14	Sona Wire Ltd.	209-305, Urla Indl. Area, Po-Birgaon, Urla, Dist-Raipur	12.1	0.36	MTA	Acid Residue	Landfilling	0.05616
			34.3	10	MTA	ETP Sludge	Landfilling	2
			9.2	3.6	MTA	Lead ash	Recycle /Reuse	0.72
			6.2	3.6	MTA	Zinc Ash	Landfilling	0.72
15	Laxmi Kripa Steel & Power Ltd.	Vill.Sondra, Tah. & Dist-Raipur	6.2	40	MTA	Zinc Fines	Recycle /Reuse	0.1333333
			12.1	20	MTA	Acid Residue	Landfilling	0.0666667
			35.3	60	MTA	ETP Sludge	Landfilling	0.2
			5.1	3	KLA	Used/Spent Oil	Recycle /Reuse	0.00078
			33.1	-	-	Empty container	Recycle /Reuse	0.0336
16	Aarati Sponge & Power Ltd.	Vill.Mumrethi, Bahesar Road, Siltara, Dist-Raipur	5.1	1.5	KLA	Used/Spent Oil	Recycle /Reuse	0.0006075
			35.2	0.1	MTA	Resin toxic metal	Incineration	0.0005192
			33.1	-	-	Empty lubrication oil	Recycle /Reuse	0.1831776
17	Mahendra Sponge & Power Ltd.	Plot No. 76, 77, Phase-II, Siltara growth centre, Siltara, Dist-Raipur	5.1	1.25	KLA	Used/Spent Oil	Recycle /Reuse	0.0008864
			35.2	0.3	MTA	Resin toxic metal	Incineration	0.0027273
			35.3	0.2	MTA	ETP Sludge	Landfilling	0.0181817

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18	Shri Harekrishna Sponge Iron Ltd	Siltara, Raipur, Dist-Raipur	5.1	0.025	KLA	Used/Spent Oil	Recycle /Reuse	6.978E-05
19	National Garage (Bahubali Motors Pvt. Ltd.)	Tatibandh, Raipur, Dist-Raipur	5.1	300	Lit.A	Used/Spent Oil	Recycle /Reuse	0
			34.3	0.06	MTA	ETP Sludge	Landfilling	0
20	Agrawal Channels Mills Pvt. Ltd.	Plot No. 34, 35, Phase-II, Siltara, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	2.438E-05
21	Jayaswal Neco Industries Ltd.	Siltara Indl. Growth Centre, Dist-Raipur	5.1	25	KLA	Used/Spent Oil	Recycle /Reuse	0.00325
			5.2	5	KLA	Waste Residue	Incineration	8.333E-06
22	Agrawal Sponge Pvt Ltd	Plot No. 91, 92, Phase-II, Siltara Indl. Area, Dist-Raipur	5.1	0.1	KLA	Used/Spent Oil	Recycle /Reuse	0.13
			33.1	-	-	Empty drums	Recycle /Reuse	0.126
23	API Ispat and Powertech Pvt Ltd	Near Indl. Growth Centre, Phase-II, Siltara, Dist-Raipur	5.1	3	KLA	Used/Spent Oil	Incineration	0.0005298
			35.2	2	MTA	Spent Oil	Recycle /Reuse	0.0040753
			35.3	0.4	MTA	ETP Sludge	Landfilling	0.0010188
24	SKS Ispat & Power Ltd	Siltara Indl. Growth Centre, Dist-Raipur	5.1	6	KLA	Used/Spent Oil	Recycle /Reuse	0.0012094
			34.2	1	MTA	Resin toxic metal	Recycle /Reuse	0.0025841
			C-4	50	KGA	Glasswool & cerawool	Recycle /Reuse	0.0001292
25	Nakoda Ispat Ltd	Plot No.09, Phase-I, I/A Siltara, Dist-Raipur	5.1	1.6	KLA	Used/Spent Oil	Recycle /Reuse	0.000279
			34.2	115	KGA	Resin toxic metal	Incineration	0.0002742
26	Shri Shyam Iron & Power Pvt Ltd.	Plot No.103 (Part) & 104, Siltara, Dist-Raipur	33.1	-	-	Empty drums	Recycle /Reuse	0.1448276

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27	Rashmi Iron & Power Ltd.	90, Indl. Growth centre, Phase-II, Siltara, Dist-Raipur	5.1	1.25	KLA	Used/Spent Oil	Recycle /Reuse	0.02925
			35.2	0.3	MTA	Resin toxic metal	Incineration	0.001875
			35.3	0.2	MTA	ETP Sludge	Landfilling	0.00125
			33.1	-	-	Empty drums	Recycle /Reuse	0.315
28	Trimula Sponge Iron Pvt Ltd	Vill.Charoda, Dharsiva, Dist-Raipur	5.1	0.25	KLA	Used/Spent Oil	Recycle /Reuse	0.0827273
			33.1	200	Lit.A	Empty drums	Recycle /Reuse	0.0763636
29	Refracast Metallurgical Pvt Ltd (Unit-I)	23, Indl.Area, Bhanpuri, Dist-Raipur	5.1	-	-	Spent oil	Recycle /Reuse	0.00195
			33.1			Empty barrels	Recycle /Reuse	2.5205
30	P.D. Industries Pvt Ltd	Kh.No.104, Siltara, Dist-Raipur	5.1	0.1	KLA	Used/Spent Oil	Recycle /Reuse	0.00013
			33.1	-	-	Emphth barrels	Recycle /Reuse	0.1008
31	Indian Oil Corporation	Siltara, Raipur, Dist-Raipur	5.1	0.5	KLA	Used/Spent Oil	Recycle /Reuse	0.0004333
32	Vandana Global Ltd.	Phase-II Indl. Siltara, Dist-Raipur	5.1	0.6	KLA	Used/Spent Oil	Recycle /Reuse	0.0001398
			35.2	4	MTA	Resin toxic metal	Recycle /Reuse	0.011951
33	Sarda Energy & Minerals Ltd.	Phase-I, Siltara, Raipur, Dist-Raipur	5.1	1.60	MTA	Used/Spent Oil	Recycle /Reuse	0.0002713
34	Nikita Metallurgical Pvt Ltd	Shed No.6, Phase-I, Indl. Area, Siltara, Dist-Raipur	11.5	4350	MTA	Drosses & waste	Recycle /Reuse	39.130435
			11.4	3750	MTA	Flue gas & dust	Incineration	10.869565
35	Shivam Metallurgical Pvt Ltd	Plot No. 16/1, Indl. Area, Siltara, Dist-	11.5	13200	MTA	Drosses & waste	Recycle /Reuse	36.060606

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		Raipur	11.4	600	MTA	Flue gas & dust	Incineration	8.4848485
36	Vaswani Industries Ltd	Vill.Sondra, Phase-II, Siltara Indl. Area, Dist-Raipur	5.1	1.25	KLA	Used/Spent Oil	Recycle /Reuse	0.013
			35.2	0.3	MT	Spent ion resin	Incineration	0.002381
			35.3	0.2	MT	Chemical Sludge	Landfilling	0.0015873
			33.1	Empty barrels	Recycle /Reuse	0.04
			35.2	0.3	MTA	Resin toxic metal	Incineration	
			35.3	0.2	MTA	ETP Sludge	Landfilling	
			33.1	-	-	Empty Drum	Recycle /Reuse	
37	Ghankun Steel Pvt Ltd	Plot No.78, Indl. Area, Siltara, Phase-II, Siltara, Dist-Raipur	33.1	-	-	Empty container	Recycle /Reuse	0.096
38	Bhagwati Power & Steel Ltd.	Phase-II, Siltara Indla. Area, Dist-Raipur	34.2	-	-	Empty barrels	Recycle /Reuse	0.2964415
			35.2	-	-	Used Resin	Incineration	0.0001961
39	Arth Metallurgicals Pvt Ltd	P.H.No. 95/2, Kh.No.226/1, Vill.Lalpur, Dist-Raipur	11.7	5000	MTA	Sludge from alumina refiners	Recycle /Reuse	1666.6667
			SCH-IV 10	1500	MTA	Spent catalyst nickel	Recycle /Reuse	500
			SCH-IV 10	900	MTA	Spent catalyst Cobalt	Recycle /Reuse	300
			SCH-IV/ 17	100	MTA	Lead batteries	Recycle /Reuse	33.333333
			5.1	1200	Lit.A	Spent oil	Recycle /Reuse	0.00312
			6.2	600	MTA	Zinc Fines	Recycle /Reuse	200
			35.3	80	MTA	ETP Sludge	Landfilling	27.36

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			-	2050	MTA	Filter Press residue	Landfilling	
40	Lim bani Wires Pvt Ltd	Plot No. 8/B, Indl. Area, Bhanpuri, Dist-Raipur	5.1	0.003	KLA	Used/Spent Oil	Recycle /Reuse	2.08
			6.2	0.5	MTA	Zinc fines	Recycle /Reuse	1.4444444
			9.2	2	MTA	Lead ash	Recycle /Reuse	0.4444444
			12.1	0.7	KLA	Acid Residue	Landfilling	0.1213333
			34.3	0.12	MTA	ETP Sludge	Landfilling	0.0266667
			33.1			Empty barrels	Recycle /Reuse	0.896
41	Surya Wire Ltd.	209-305, Urla Indl. Area, Po-Birgaon, Urla, Dist-Raipur	12.1	0.36	MTA	Acid Residue	Landfilling	0.0156
			34.3	10	MTA	ETP Sludge	Landfilling	0.6
			9.2	3.6	MTA	Lead ash	Recycle /Reuse	0.24
			6.2	3.6	MTA	Zinc Ash	Landfilling	0.2456
			5.1			Used Spent oil	Recycle /Reuse	0.0936
			33.1			Empty barrels	Recycle /Reuse	0.2016
42	Accumulator Industry	Indl. Area, Bhanpuri, Dist-Raipur	9.1	0.6	MTA	Lead breaking residue	Recycle /Reuse	0
			9.2	5.8	MT	Lead ash	Recycle /Reuse	0
			-	-	-	Battery scrap	Recycle /Reuse	0
43	Columbia Petrochemicals	22, Indl. Area, Bhanpuri, Dist-Raipur	5.1	3200	KLA	Used/Spent Oil	Recycle /Reuse	113.9726
			5.2	3200	KLA	Waste oil	Recycle /Reuse	113.9726

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			4.5	64	MTA	Spent clay containing oil	Incineration	29.223744
			20.3	100	KLA	Distillation process residue	Landfilling	35.616438
44	Walmart Pvt. Ltd.	Near Sandip Coal Storage, Bhanpuri Ring Road No.2, Raipur, Dist-Raipur	5.1	0.18	KLA	Used/Spent Oil	Recycle /Reuse	0
45	United Pesticides	13 Block, Indl. Area, Rawabhata, Raipur, Dist-Raipur	33.1	-	-	Empty drums	Recycle /Reuse	0
46	Refracast Metallurgical Pvt Ltd (Unit-II)	22, J/A, Bhanpuri, Po-Birgaon, Raipur, Dist-Raipur	SCH-II B & C	9000	MTA	Spent catalyst	Landfilling	0
			SCH-II 10	3000	MTA	Spent catalyst contains	Landfilling	0
47	Swastik Wires Pvt. Ltd.	Indl. Area, Bhanpuri, Dist-Raipur	12.1	0.27	MTA	Acid Residue	Landfilling	0.0565682
			35.3	0.073	MTA	ETP Sludge	Landfilling	0.0152944
			5.1	0.031	MTA	Used/Spent Oil	Recycle /Reuse	0.0326838
			6.2	3.5	MTA	Zinc Ash	Recycle /Reuse	0.7332914
			33.2	-	-	Lead Ash	Recycle /Reuse	0.4190237
			1.1	-	-	Cotton used for insulation	Incineration	0.2095118
48	Prakash Industries Ltd. Rolling Mill Div. Unit-I	New Indl. Area, Ring Road No.2, Gogaon, Dist-Raipur	5.1	5500	Lit.A	Used/Spent Oil	Recycle /Reuse	0.002432
			33.1	-	-	Empty barrels	Recycle /Reuse	0.0714286
49	Prakash Industries Ltd. Wire Rod Mill (Unit-II)	New Indl. Area, Ring Road No.2, Gogaon, Dist-Raipur	5.1	4500	Lit.A	Used/Spent Oil	Recycle /Reuse	0.0006566
			33.1	-	-	Empty barrels	Recycle	0.0188552

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							/Reuse	
50	Monnet Ispat and Energy Ltd.	Monnet Marg, Mandir Hasaud, Raipur, Dist-Raipur	5.1	6100	KGA	Used/Spent Oil	Recycle /Reuse	
			34.2	1000	KGA	Resin toxic metal	Incineration	
			33.1	-	-	Empty drums	Recycle /Reuse	
51	Refmet Technology Pvt Ltd	Vill.Pacheta, Satya Vihar, Tah.Arang, Dist-Raipur	SCH-IV 10	1000	MTA	Spent containing copper	Recycle /Reuse	
			SCH-IV 10	3000	MTA	Spent catalyst nickel	Recycle /Reuse	
			SCH-IV 10	500	MTA	Spent catalyst zinc	Recycle /Reuse	
			SCH-II 2,5,8,9,10	2500	MTA	Cobalt compound	Recycle /Reuse	
			SCH-IV 3,4,6	1000	MTA	Copper oxide	Recycle /Reuse	
			SCH-IV 1,2,11, 12	1000	MTA	Brass, Dross	Recycle /Reuse	
52	Emami Cement Limited	Vill.Risda, Balodabazar, Dist-Bhatapara	5.1	70	KLA	Used/Spent Oil	Recycle /Reuse	
			33.1	10	MTA	Empty barrels	Recycle /Reuse	
			35.2	0.5	MTA	Resin toxic metal	Incineration	
			3.3	10	MTA	Sludge & filter with oil	Incineration	
			35.3	0.5	MTA	ETP Sludge	Landfilling	
53	Vijay Transmission Pvt. Ltd.	Plot No.121/3,8,12,13, Vill.Kanhera, Urla-Acholi Marg, Po-Urgla,	6.2	100	MTA	Zinc Fines	Recycle /Reuse	5.5555556
			12.1	200	KLA	Acidic alkaline	Landfilling	8.6666667

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		Dist-Raipur				residue		
			35.3	40	MTA	ETP Sludge	Landfilling	2.2222222
54	Shree Raipur Cement Plant	Vill.Khaparadih, Tah.Simga, Dist-Balodabazar, Bhatapara	5.1	64	KLA	Used/Spent Oil	Recycle /Reuse	
			33.1	-	-	Empty container	Recycle /Reuse	
55	Raipur Tar Product	Indl. Area, Bhanpuri, Dist-Raipur	1.3	-	-	Oily sludge	Incineration	143.75
			1.4	-	-	Organic residue	Incineration	231.25
			5.1	-	-	Spent oil	Recycle /Reuse	0.0075
56	Porwal Chemical	43, Indl. Area, Bhanpuri, Dist-Raipur	33.1	-	-	Empty barrels	Recycle /Reuse	127.87334
57	Hindustan Petroleum Corporation Ltd.	LPG Bottling Plant, Mandir Hasaud, Raipur, Dist-Raipur	3.1	4	KGA	Oil containing residue	Incineration	6.667E-05
			5.1	20	Lit.A	Used/Spent Oil	Recycle /Reuse	0.0075
			21.1	15	KGA	Process waste & residue	Landfilling	0.00025
58	Mahamaya Sponge Iron Pvt Ltd	Plot No. 21 & 22, Siltara Indl. Growth Centre, Siltara, Dist-Raipur	5.1	0.1	KLA	Used/Spent Oil	Recycle /Reuse	0.00026
			33.1	-	-	Empty barrels	Recycle /Reuse	0.2688
59	R.K. Metal	Plot No.20, Metal Park, Rawabhata, Raipur, Dist-Raipur	11.4	2750	MTA	Flue gas & dust	Incineration	
			11.6	3000	MTA	Drosses & waste	Recycle /Reuse	
60	Maruti Nandan Structures Pvt Ltd (Unit-II)	Plot No.11, Metal Park, Rawabhata, Phase-I, Dist-Raipur	6.2	10.5	MTA	Zinc Fines	Recycle /Reuse	1.7132442
			12.1	0.6	KLA	Acidic alkaline residue	Recycle /Reuse	
			35.3	25	MTA	ETP Sludge	Landfilling	1.1421628
			5.1	0.05	KLA	Spent oil	Recycle /Reuse	0.0003949

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			33.1	-	-	Empty container	Recycle /Reuse	0.3061968
61	Dhaniram Laminated (I) Ltd	Kh.No.438, 442/1, Vill.Rawabhata, Dist-Raipur	35.3	0.36	MTA	ETP Sludge	Landfilling	0
			5.1	0.0136	MTA	Spent oil	Recycle /Reuse	0
			33.1	-	-	Empty container	Recycle /Reuse	0
62	Agrawal Oil Extraction Ltd	Vill.Tulsi, Po-Neora, Dist-Raipur	34.4	200	KGA	ETP Sludge	Landfilling	0.1527884
63	Mahendra Sponge & Power Ltd. Unit-II	Vill.Sarora (Parsada), Tah.Tilda, Dist-Raipur	5.1	0.045	KLA	Spent oil	Recycle /Reuse	0.0578298
			33.1	-	-	Empty container	Recycle /Reuse	0.1334534
64	Sambhav Sponge & Power Ltd	Vill.Sarora, Tah-Tilda-Neora, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	0
			33.1	-	-	Empty container	Recycle /Reuse	0.4041732
65	Hitech Power & Steel Ltd	Vill.Parsada, Tah.Tilda, Dist-Raipur	5.1	1.5	KLA	Used/Spent Oil	Recycle /Reuse	0.0337663
			35.2	0.3	MTA	Spent ion resin	Recycle /Reuse	0.0247249
			34.3	0.25	MTA	ETP Sludge	Landfilling	0.0576914
66	GMR Chattisgarh Energy Ltd	Vill.Raikheda, Block-Tilda, Dist-Raipur	5.1	9000	KLA	Used/Spent Oil	Recycle /Reuse	512.40876
			5.2	12000	MTA	Waste Residue	Incineration	1.8248175
			1.3			Oily sludge	Incineration	0.8759124
			1.8			emulsion	Incineration	0.3649635
			3.1			Oil from WTP	Incineration	1.459854
			3.3			oil containing sludge & fileter	Incineration	3.649635
			20.2			Spent solvent	Incineration	1.0948905

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			34.4			Oil & Grease	Incineration	54.919708
			1.2			Tarry residue	Landfilling	0
			13.3			Decanter tank sludge	Landfilling	0
			33.1	3000	MTA	Empty barrels	Recycle /Reuse	0
			35.2			Waste spent Resin	Incineration	0
			34.3	1.2	MTA	ETP Sludge	Landfilling	0
			1.6	1368	KLA	Still bottoms	Landfilling	0
			4.5	60	MTA	Spent clay containing oil	Recycle /Reuse	0
			4.1	120	MTA		Recycle /Reuse	0
			20.3	3.6	MTA	Distillation residue	Recycle /Reuse	0
			35.2	-	-	Spent ion resin	Incineration	7.2992701
			33.1	-	-	Empty container	Recycle /Reuse	73.576642

Table 3.17 -C: Waste Generation Factor - RO Raipur

S.N.	Name of Industry	Address	Waste Category	Quantity		Type of Waste	Disposal Proposed	WGF
				Qty.	Unit			
1	P.B.S. Oil Industries Ltd	P.B.No.54, Plot No.1, Arjuni Indl. Area, Dist-Dhamtari	34.4	5	MTA	ETP Sludge	Landfilling	2.9961888
2	Bharti Rasayanic Udyog	Soridbhat Nagar, Jagdalpur Road, Dist.Dhamtari	29.1	-	-	Waste Residue	Incineration	0.025
			33.1	-	-	Empty barrels	Recycle /Reuse	1.5
			29.3	-	-	Expired pesticides	Incineration	0.025
3	Wagon Repair Shop, SEC Railway, Raipur	WRS Colony, Raipur	5.1	2.2	KLA	Used/Spent Oil	Recycle /Reuse	0
4	Divisional Loco Shed Raipur	Sr.DME(D)/DLS/Raipur/ SECR Po-Pandri, Dist-Raipur	5.1	25000	Lit.A	Used/Spent Oil	Recycle /Reuse	0
			3.3	0.5	MTA	Sludge & filter with oil	Landfilling	0
			5.2	56.7	MTA	Waste Residue	Incineration	0
			34.3	1	MTA	ETP Sludge	Landfilling	0
			34.4	9	KLA	O & G skimming residue	Landfilling	0
36.2	5	MTA	Flue gas cleaning residue	Landfilling	0			

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5	Jindal Steel & Power Ltd (Machinery Division)	Vill.Mandir Hasaud, Dist.Raipur	5.1	8	KLA	Used/Spent Oil	Recycle /Reuse	0.19
6	Ambuja Cement Ltd	Po-Rawan, Tah- Balodabazar, Dist- Raipur	5.1	198	MTA	Used/Spent Oil	Recycle /Reuse	0.0038372
			5.2	40	KLA	Waste Residue	Incineration	0.0060464
			3.3	50	MTA	Sludge & filter with oil	Incineration	0.0096898
			33.1	40	MTA	Empty barrels	Recycle /Reuse	0.0077518
			35.2	50	Lit.A	Spent ion resin	Incineration	9.69E-06
7	Ultra Tech Cement Ltd. (Rawan Cement Works)	Vill.Rawan, Po-Grasim Vihar, Dist-Balodabazar	3.1	1	KLA	Oil containing residue	Incineration	0
			5.1	68.75	KLA	Used/Spent Oil	Recycle /Reuse	0
			5.2	335	KLA	Waste Residue	Incineration	0
			34.2	0.9	MTA	Spent ion resin	Incineration	0
			33.1	15	MTA	Empty container	Recycle /Reuse	0
8	P.K. Industries	Dhanlaxkshmi Nagar, Bhanpuri, Po-Birgaon, Dist-Raipur	33.3	950	MTA	Discarded containers	Incineration	1.9230769
			34.3	0.1	MTA	ETP Sludge	Landfilling	0.0240385
			5.2	0.1	KLA	Waste Residue	Incineration	0.001875
9	B. K. Infrastructure Pvt Ltd	Vill.Dhaneli, Girodh Bypass Road, Dist- Raipur	6.2	6.5	MTA	Zinc Fines	Recycle /Reuse	1.0857143
			12.1	0.7	KLA	Acidic alkaline residue	Recycle /Reuse	0.5428571
			34.3	0.12	MTA	ETP Sludge	Landfilling	1.0857143
			5.1	0.05	KLA	Spent Oil	Recycle /Reuse	2.0057143
10	Crown Distillaries Pvt Ltd	Plot No. 53/72, Phase-II, Indl. GC Siltara, Dist- Raipur	5.1	1200	Lit.A	Used/Spent Oil	Recycle /Reuse	0.0034667

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11	Arise Chemical Industries	Plot No. 567A, Indl. Area, Urla, Dist-Raipur	11.5	9000	MTA	Drosses & waste	Recycle /Reuse	23.774294
			11.4	7890	MTA	Flue gas dust	Recycle /Reuse	0.4870655
12	Hi-Tech Metafluxes	354, Sector C, Indl. Area, Urla, Dist-Raipur	11.5	4000	MTA	Drosses & waste	Recycle /Reuse	30
			11.4	10000	MTA	Flue gas dust	Landfilling	20
13	Reliance Corporate IT Park Ltd	Gokulpur, Dist-Dhamtari	5.1	6.5	Lit.A	Used/Spent Oil	Recycle /Reuse	0
14	Shivam Motors	Plot No. 22 & 23, Indl. Area, Birkoni, Dist-Mahasamund	9.1	5	MTA	Lead bearing residue	Recycle /Reuse	0
			9.2	4	MTA	Lead ash	Recycle /Reuse	0
			8.3	1	MTA	Flue gas dust	Landfilling	0
			1	150	MTA	Brass, Dross	Recycle /Reuse	0
			2	150	MTA	Copper dross	Recycle /Reuse	0
			17	700	MTA	Used lead acid batteries	Recycle /Reuse	0
15	R.K. Industries	Ring Road No.2, Vill.Gondwara, Dist-Raipur	9.1	2	MTA	Lead bearing residue	Recycle /Reuse	12.394366
			9.2	1.8	MTA	Lead ash	Recycle /Reuse	6.1971831
			17	300	MTA	Used lead acid batteries	Recycle /Reuse	2112.6761
16	IOT Infrastructure & Energy Services Ltd	Vill.Lakholi, Tah.Arang, Dist-Raipur	3.1	1	MTA	Cargo residue	Landfilling	0
			5.1	0.6	KLA	Used/Spent Oil	Recycle /Reuse	0

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			5.2	0.1	MTA	Waste Residue	Incineration	0
			33.1	0.5	MTA	Empty container	Recycle /Reuse	0
			33.2	0.1	MTA	Contaminated cotton	Incineration	0
17	Century Cement	Baikunth, Dist-Raipur	5.1	60	KLA	Used/Spent Oil	Recycle /Reuse	0.0003393
			35.2	0.3	MTA	Spent ion resin	Incineration	8.699E-05
18	Ultra Tech Cement Ltd. (Hirmi Cement Works)	Po-Hirmi, Tah-Simga, Dist-Balodabazar, Bhatapara	5.1	60	KLA	Used/Spent Oil	Recycle /Reuse	0.011917
			5.2	600	KLA	Waste Residue	Incineration	0.0007639
19	Sonadih Cement Plant (Nuvoco vistar corpn. Ltd.)	Po-Rasada, Dist-Balodabazar, Bhatapara	3.1	45	MTA	Oil containing residue	Incineration	0.0276154
			5.1	50	MTA	Used/Spent Oil	Recycle /Reuse	0.0624621
			5.2	160	MTA	Waste Residue	Incineration	0.0200199
			1.2	2400	MTA	TDI /Tar	Recycle /Reuse	2.401036
			33.3	5	MTA	Discarded containers	Incineration	0.0314809
20	R.R. Ispat	490/L, Urla Indl. Area, Dist-Raipur	5.1	2	KLA	Used/Spent Oil	Recycle /Reuse	0.0132523
			6.2	1650	MTA	Zinc Fines	Recycle /Reuse	14.016905
			12.1	6	MTA	Acid Residue	Landfilling	0.5097056
			35.3	100	MTA	ETP Sludge	Landfilling	0.8495094
			1.2	21	MTA	Coal tar	Incineration	0.178397
21	Hira Power & Steels Ltd Unit-II	Kh.No.511/1, 512/2, Ural Indl. Complex, Dist-Raipur	5.1	15	KLA	Used/Spent Oil	Recycle /Reuse	0.0115945
			34.2	0.25	MTA	Spent ion resin	Incineration	0.0024775
22	Godawari Power & Ispat	Plot No. 428/2, Phase-I	5.1	30	KLA	Used/Spent Oil	Recycle	

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	Ltd	Indl. Area, Siltara, Dist-Raipur					/Reuse	
			5.2	1	KLA	Waste Residue	Incineration	
			1.2	11000	KLA	Tar residue	Recycle /Reuse	
			1.4	3630	KLA	Organic residue	Incineration	
			33.1	0.2	MTA	Empty barrels	Recycle /Reuse	
23	Kalptaru Power Transmission Limited	Vill.Khorpa, Tah.Abhanpur, Dist-Raipur	5.1	2.5	KLA	Used/Spent Oil	Recycle /Reuse	0.2411414
			6.2	800	MTA	Zinc Fines	Recycle /Reuse	4.9122247
			12.1	9	MTA	Acid Residue	Landfilling	0.1159333
			33.3	12	MTA	Discarded containers	Incineration	0.1215352
			34.3	350	MTA	ETP Sludge	Landfilling	0.6508707
24	Shri Bajrang Power & Ispat Ltd.	Vill.Tandwa, Dharsiwa, Tah.Tilda, Dist-Raipur	5.1	2	KLA	Used/Spent Oil	Recycle /Reuse	0.0078
			35.2	5	KGA	Spent ion resin	Incineration	0.000025
			1.4	2190	KLA	Organic residue	Incineration	0.08541
25	Chanda Metal & Engineering	Plot No. 111, Indl. Area, Siltara, Phase-II, Dist-Raipur.	11.5	2000	MTA	Drosses & waste	Recycle /Reuse	880
			11.4	1880	MTA	Flue gas dust	Incineration	73.333333
26	Reliance Corporate IT Park Ltd	City Center Mall, Tarenga Road, Ward No.7, Bhatapara, Dist-Balodabazar	5.1	4.5	Lit.A	Used/Spent Oil	Recycle /Reuse	0
27	Reliance Corporate IT Park Ltd	Capital Plaza, Devpuri, Raipur	5.1	14.5	Lit.A	Used/Spent Oil	Recycle /Reuse	0
28	Reliance Corporate IT Park Ltd	Giroud Ring Road No.3, Raipur	5.1	8.5	Lit.A	Used/Spent Oil	Recycle /Reuse	0
29	Reliance Jio Infocomm	Harshid Chamber,	5.1	6.5	Lit.A	Used/Spent Oil	Recycle	0

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	Ltd	Tatibandh, Raipur					/Reuse	
30	Reliance Jio Infocomm Ltd	Ashoka, Millenium, New Rajendra Nagar, Raipur	5.1	12.5	Lit.A	Used/Spent Oil	Recycle /Reuse	0
31	Akash Wires	14B, New Indl. Estate, Rawabhata, Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	0.0278571
			6.2	-	-	Zinc ash	Recycle /Reuse	0.7142857
			12.1	-	-	Acidic alkaline residue	Landfilling	0.2228571
			34.3	-	-	ETP Sludge	Landfilling	0.0357143
			33.1	-	-	Empty container	Recycle /Reuse	0.54
32	Ankit Electro Grating	Ring Road No.2, Gondwara Indll. Area, Raipur						0
33	Shree Wires	Plot No.19 & 20 (Part), Indl. Area, Siltara, Phase-I, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	0
			6.2	-	-	Zinc dust	Recycle /Reuse	0.4285714
			9.2	-	-	Lead Ash	Recycle /Reuse	0.1428571
			12.1	-	-	Acidic alkaline residue	Landfilling	0.2228571
			34.3	-	-	ETP Sludge	Landfilling	0
			33.1	-	-	Empty container	Recycle /Reuse	0.216
34	Suryoday Wires	Plot No.79-B & C, Phase-II, Indl. Area, Siltara, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	0
			9.2	-	-	Lead Ash	Recycle /Reuse	0.0909091

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			6.2	-	-	Zinc Ash	Recycle /Reuse	0.3636364
			12.1	-	-	Acidic alkaline residue	Landfilling	0.1418182
			34.3	-	-	ETP Sludge	Landfilling	0
35	Sunrise Wire	Indl. Area, Siltara, Phase-II, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	0
			6.2	-	-	Zinc Ash	Recycle /Reuse	0.3003905
			9.2	-	-	Used Ash	Recycle /Reuse	0.0750976
			12.1	-	-	Acidic alkaline residue	Landfilling	0.3514569
			34.3	-	-	ETP Sludge	Landfilling	0
36	Harish Wire	Indl. Area, Siltara, Phase-II, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	0
			6.2	-	-	Zinc Ash	Recycle /Reuse	0.3076923
			9.2	-	-	Used Ash	Recycle /Reuse	0.2307692
			12.1	-	-	Acidic alkaline residue	Landfilling	0.36
			34.3	-	-	ETP Sludge	Landfilling	0
37	Laxmi Kripa Ispat Pvt Ltd.	Plot No. 578 & 596, Indl. Area, Urla, Dist-Raipur	33.1	-	-	Empty container	Recycle /Reuse	0.3752606
38	Honey Wires & Electroplating	Vill.Sarora, Indl. Area, Urla, Dist-Raipur	33.1	-	-	Empty container	Recycle /Reuse	120.96
39	Krishna Iron Strips & Tube Pvt Ltd	82/A, Urla Indl. Area, Sarora, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	0
			6.2	-	-	Zinc Ash	Recycle /Reuse	0.5625
			12.1	-	-	Acidic alkaline	Landfilling	0.121875

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						residue		
			34.3	-	-	ETP Sludge	Landfilling	0.1875
			33.1	-	-	Empty container	Recycle /Reuse	0.315
40	Jai Shadani Industries	Plot No.161-A & 159-A, Indl. Area, Urla, Dist-Raipur	6.2	-	-	Zinc Ash	Recycle /Reuse	0.0833333
			12.1	-	-	Acid Residue	Landfilling	0.13
			5.1	-	-	Used spent oil	Recycle /Reuse	0
			34.3	-	-	Chemical sludge from ETP	Landfilling	0.0333333
41	Ishwar Ispat Industries Pvt Ltd	Plot No.268, Sector-C, Urla, Dist-Raipur	13.1	-	-	Spent pickling liquor	Recycle /Reuse	0.2666667
42	Cosmoss Ispat Pvt. Ltd.	Indl. Area, Urla, Raipur, Dist-Raipur	13.1	-	-	Spent pickling liquor	Recycle /Reuse	0.7168973
43	Deepak Ferro Alloys Ltd.	Indl. Area, Urla, Raipur, Dist-Raipur	5.2	-	-	Transformer oil & Grease	Recycle /Reuse	0.0273
44	Shree Girja Smelters Ltd. Unit-1	267, Sector-C, Urla, Dist-Raipur	-	-	-	Slage silco	Recycle /Reuse	0
			-	-	-	MNO slage	Recycle /Reuse	0
			-	-	-	Power Oil	Incineration	0
45	Unique Structure & Tower Ltd.	R.M.D. Indl. Area, Urla, Dist-Raipur	6.2	150	MTA	Zinc Ash	Recycle /Reuse	20.833333
			12.1	30	KLA	Acidic alkaline residue	Landfilling	3.25
			35.3	70	MTA	ETP Sludge	Landfilling	9.7222222

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46	Porwal Taar Products	200, C Sector-C, Urla Indl. Area, Dist-Raipur	1.3	-	-	Oily sludge	Incineration	10.109734
			1.4	-	-	Emulsion organic residue	Incineration	4.0438935
			5.1	-	-	Used/Spent Oil	Recycle /Reuse	1292.4202
47	Harshad Thermic Industry (Railtech Welding & Equipments India Pvt)	Plot No. 12-20 Sector-A Indl. Area, Urla, Dist-Raipur	13.6	-	-	Borken pre-fabricated moulds	Recycle /Reuse	0.0025322
48	R.Narayan Steels, Rolling Mills	Plot No.348-49, Sector-C, Urla Indl. Area, Raipur, Dist-Raipur	5.1	-	-	Waste oil	Recycle /Reuse	0.0063397
			13.1	-	-	Water used for cooling	Recycle /Reuse	0.2641559
49	Kishan Rolling Mill	Indl. Area, Urla, Raipur, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	0.0557143
50	Chetan Industries Ltd.	Indl. Area, Urla, Raipur, Dist-Raipur	6.2	15.580	MTA	Zinc Ash skimming	Recycle /Reuse	0.2822464
			35.3	2.83	MTA	ETP Sludge	Landfilling	0.0512681
			7.2	720	MTA	Zinc waste	Recycle /Reuse	13.043478
			5.1	4000	Lit.A	Empty oil drum	Recycle /Reuse	0.0084783
51	Mahamaya Steel Industries Ltd.	B-8 & 9, Sarora Indl. Area, Urla, Raipur, Dist-Raipur	1.2	-	-	Tar storage tank residue	Landfilling	6.24
52	Rukmani Electrical & Components Ltd	Vill.Urla, Sarora Road, Dist-Raipur	5.1	0.05	MTA	Used/Spent Oil	Recycle /Reuse	0.0029412
			6.2	10.5	MTA	Zinc Fines	Recycle /Reuse	0.6176471
			12.1	0.6	MTA	Acidic alkaline residue	Landfilling	0.0352941
			35.3	25	MTA	ETP Sludge	Landfilling	1.4705882

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53	Avinash Ispat Pvt. Ltd.	200-A, Indl. Area, Urla, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	0.0072
54	Chattisgarh Steel Product	Plot No. 190, 192, 193, Sector-C,	33.1	-	-	Empty lubricating oil barrels	Recycle /Reuse	0.08064
55	IMI Abrasives (P) Ltd.	Plot No.162, Part (Sector-C), Indl. Area, Urla, Dist-Raipur	5.2	-	-	Empty lubricating oil barrels	Recycle /Reuse	2.3255814
			12.1	-	-	Empty barrels HCl	Recycle /Reuse	2.6162791
			12.1	-	-	Empty barrels Nitric acid	Recycle /Reuse	0.5813953
56	Sarthak Ispat Pvt.Ltd.	CGEB Sub-Station, Urla, Sarora Road, Urla, Dist-Raipur	33.1	-	-	Lubricating oil drums	Recycle /Reuse	0.0448
			34.2	-	-	Empty oil barrels	Recycle /Reuse	0.0672
57	Vandana Ispat Ltd.	Plot No.6,7,8, Sector-B, Urla Indl. Area, Raipur, Dist-Raipur	33.1	-	-	Lubricating oil drums	Incineration	0.0730435
58	Om Chemicals Industries Pvt Ltd	Urla Indl. Area, Raipur, Dist-Raipur	13	500	MT	Zinc Ash skimming	Recycle /Reuse	204.08163
			6.1	40	MT	ETP Sludge	Landfilling	16.326531
59	Surya Ispat	270, Sector-C Indl. Area, Urla, Dist-Raipur	5.3	-	-	Waste containing oil	Recycle /Reuse	2.737
60	Prem Industries	Plot No.227 Sector-C Indl. Area, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle /Reuse	0.00039
61	Vision Textiles Pvt Ltd	Plot No.398-402 & 416-418, Indl. Area, Urla, Dist-Raipur	-	-	-	Reducer containing empty barrels	Incineration	20.16
			-	-	-	Empty barrels of Ink	Recycle /Reuse	33.6
62	Shree Bajrang Power	Vill.Borjbara, Urla-	5.1	2	KLA	Used/Spent Oil	Recycle	0.0074286

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	Ispat	Guma Road, Dist-Raipur					/Reuse	
			35.2	7	KGA	Resin toxic metal	Incineration	3.333E-05

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Table 3.17 -D: Waste Generation Factor - RO Raipur

S.N	Name of Industry	Address	Waste Category	Quantity		Type of Waste	Disposal Proposed	WGF
				Qty.	Unit			
1	Jagdish Ispat Pvt Ltd	Phase-II, Indl. Area, Siltara, Dist-Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	2.2557064
2	Hi-Tech Abrasive Ltd.	740/1, Sector-B, Urla Indl. Complex, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0012116
			33.1	-	-	Empty Barrels	Recycle/Reuse	1.5657985
3	Ratna Engineering Works	Plot No. 19/12, Indl. Area, Siltara, Phase-II, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0016957
			33.1	-	-	Empty Barrels	Recycle/Reuse	1.0956522
4	N.R. Sponge Pvt Ltd	Vill.Behsar, Near Siltara, 9/A, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	3.611E-05
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.0233333
5	Maruti Ferrous Pvt Ltd	Vill.Sondra, Siltara, Phase-II, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0024375
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.0315
6	Euro Pratik Ispat Pvt Ltd	Vill.Tauda, Near Canal Suarsiva, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0001232
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.5305263
7	Jorawar Engg. & Foundry Forge Pvt Ltd	Phase-II, Indl. Area, Siltara, Dist-Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	5.032
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.0650323
8	S.K. Sarawagi Company Pvt Ltd	Plot No. 38, 41 & 40-52, Vill.Sarkara,	5.1	-	-	Used/Spent Oil	Recycle/Reuse	3.264

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		Phase-II, Siltara, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.0421863
9	Rama Udyog Pvt Ltd	Limahi Road, Siltara Phase, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0
			35.2	-	-	Spent ion resin	Incinerable	0
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.2132633
10	Drolia Electro Steels Pvt Ltd	Vill.Siltara (Dharsiwa), Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.038752
			35.2	-	-	Spent ion resin	Incinerable	0.0003774
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.7303626
11	Sapna Industries	Plot No. 19/1, Phase-II, Indl. Area, Siltara, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0005571
			33.1	-	-	Empty Barrels	Recycle/Reuse	14.4
12	Sudarshan Metallic Pvt Ltd	Plot No. 22, 9/A, Phase-II, Indl. Area, Siltara, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0001415
			33.1	-	-	Empty Barrels	Recycle/Reuse	6.8591959
13	The Metallic Alloys	Plot No. 29, Indl. GC, Siltara, Phase-II, Raipur	SCH-II B & C	-	-	Spent catalyst contain nickel	Recycle/Reuse	500
14	Shanti Steel	Plot No. 25, Indl. Area, Siltara, Phase-II, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0
			6.2	-	-	Zinc ash	Recycle/Reuse	3.5714286
			12.1	-	-	Acidic residue	Incinerable	0
			35.3	-	-	ETP sludge	Recycle/Reuse	0
15	Anand Steel Pvt Ltd	Plot No.26, Indl. Area, Siltara, Phase-	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0014625

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		II, Raipur						
16	Salasar Pipes Pvt Ltd	Plot No. 18/1, Phase-II, Indl. Area, Siltara, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0
			33.1	-	-	Empty Barrels	Recycle/Reuse	0
17	Aniket LPG Bottling	66-67, 9/A, Siltara, Phase-II, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.00078
18	Kumar Industry	Siltara Indl. Area, Phase-II, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0
19	Ramnivash Ispat Pvt Ltd (Unit-II)	Plot No. 54/55, Phase-II, Siltara Indl. Area, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0019856
			33.1	-	-	Empty Barrels	Recycle/Reuse	1.2829827
20	Ramnivash Ispat Pvt Ltd (Unit-I)	9/A, Phase-II, Siltara, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0052093
			33.1	-	-	Empty Barrels	Recycle/Reuse	5.6099733
21	Trimurti Re-rollers Pvt Ltd	Plot No.56, Siltara Indl. Area, Phase-II, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0416
			33.1	-	-	Empty Barrels	Recycle/Reuse	1.008
22	G.R. Sponge & Power Ltd	Plot No.102, Phase-II, Siltara Indl. Area, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0288853
			35.2	-	-	Resin contain toxic metal	Incinerable	0
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.0388841
23	Bajrang Bali Steel & Ingot Pvt Ltd	Plot No.105, Phase-II, Siltara Indl. Area, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0002167
			33.1	-	-	Empty Barrels	Recycle/Reuse	1.05
24	Shri Ramnavir Kumar & Sons Ispat Pvt Ltd	Plot No.104, Phase-II, Siltara Indl. Area,	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0001625

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		Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.735
25	G.R. Minerals & Industries Pvt Ltd	Plot No.92, Phase-II, Siltara Indl. Area, Raipur	SCH-II B & C	-	-	Spent catalyst contain nickel	Recycle/Reuse	333.33333
26	M.J. Steel Pvt Ltd	Siltara Indl. Area, Phase-II, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	9.176
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.8894118
27	Kansal Sons Steel Ltd	Plot No. 57, Siltara Indl. Area, Phase-II, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	4.333
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.42
28	Maruti Engg. Work	Vill.Maruti, Siltara, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.39
29	Siddhivinayak Moulds Industriesl Pvt Ltd	Plot No. 84 D & E, Phase-II, Cycle Park, Siltara, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.756
30	Raghuveer Concost Pvt Ltd	Plot No. 92/93, Phase-II, Indl. Area, Siltara, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.2155367
31	Sunil Sponge Pvt Ltd	Plot No. 94/97, Phase-II, Indl. Area, Siltara, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0001132
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.3900929
32	Gopal Sponge & Power Ltd	Plot No. 90, Phase-II, Indl. Area, Siltara, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.000195
			35.2	-	-	Resin contain toxic metal	Incinerable	0
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.1259929

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33	Ganpati Refractories & Minerals Pvt Ltd	Plot No. 641, Sector-C, Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.000468
34	Ratusaria Industries Pvt Ltd	Plot No. 643-644, Sector-C, Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0117
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.378
35	Shree Balaji Enterprises	Plot No.740, Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0026
36	Ratusaria Steels Pvt Ltd	Plot No. 217-218-219, Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0585
			33.1	-	-	Empty Barrels	Recycle/Reuse	1.89
37	Divya Strips & Profile Pvt Ltd	641, Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.013
38	Sarvapriya Casting Pvt Ltd.	740, Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.000195
39	Arya Electricals	Plot No. 740/F, Indl. Area, Urla, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	308.57143
40	Aditya Transformers & Switchgears	Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0
			33.1	-	-	Empty Barrels	Recycle/Reuse	0
41	Mahavir Plywood Industries	Plot No. 660, 661, 680, 681, Indl. Area, Urla, Raipur	25-1	-	-	Chemical residue	Recycle/Reuse	0
42	Ganpati Refractories & Minerals Pvt Ltd (Unit-I)	Plot No. 377/3, Vill.Dhaneli, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.00156
43	Fabritech Engineers	740-C, Sector-B, Indl. Area, Urla, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	141.12
44	India Ispat	Plot No. 4 & 9, Phase-II, Indl. Area,	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0

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		Siltara, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.2038588
45	Narayan Industry	Plot No.23, Part Phase-I, Indl. Area, Siltara, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.00078
46	Silverest Industries Pvt Ltd	P.H.No.21/4, Kh.No.20, Vill.Tada, Dharsiwa, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	6.72
47	Uday Sponge & Power Pvt Ltd	Not mentioned in survey report	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.0000156
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.3024
48	Vingeshwar Ispat	Vill.Charauda, Dharsiwa, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	4.333E-06
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.112
49	Mahavir Moulds India Pvt Ltd	Not mentioned in survey report	5.1	-	-	Used/Spent Oil	Recycle/Reuse	9.176E-06
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.0592941
50	S.S. Industry	Plot No. 610, 611, Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	2.167E-05
51	S.B.T. Textile Pvt Ltd	Plot No. 589, Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	9.75E-09
52	Raipur Industrial Steel Company	Plot No. 631/632, Indl. Area, Urla, Raipur	33.1	-	-	Empty Barrels	Recycle/Reuse	0.504
53	Bridge Track & Tower Pvt Ltd	Plot No. 369, 370, 391 A & B, 392 A & B, Sector-A, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0
			33.1	-	-	Empty Barrels	Recycle/Reuse	0
54	Bridge Track & Tower Pvt Ltd	Plot No. 403-407,	5.1	-	-	Used/Spent	Recycle/Reuse	0

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		413-415, Indl. Area, ACC-A, Urla, Raipur				Oil		
			33.1	-	-	Empty Barrels	Recycle/Reuse	0
55	Shri Giriraj Structure Pvt Ltd	Plot No.7, Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0.00039
56	Ashirwad Ispat Udyog	36-38, Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.28
57	Ashok Ispat Udyog	Plot No. 215, Sector-C, Indl. Area, Urla, Raipur	5.1	-	-	Used/Spent Oil	Recycle/Reuse	0
			33.1	-	-	Empty Barrels	Recycle/Reuse	0.2458537

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We had summarized all recyclable hazardous waste for all regions in chhattisgarhs state for following points to be coroprated

- Quantity of waste being transported to other states for co-processing, recycling, reprocessing or for disposal etc.
- The total quantity of recyclable hazardous waste being generated in the state and the actual quantity being recycled/ reprocessed in the state.
- The total quantity of recyclable hazardous waste imported from other state for use in the state.

Presently most of the industries they were used some of recyclable waste as a fuel like used spent oil /Spent resin. Some of industries were sent recyclebale waste to recyclers within state and other state for recycling.

Our Recommendation for all recyclable hazardous waste data for all regions in chhattisgarhs state are tabulated in Table 3.17

Table 3.17: Disposal plan for recyclable hazardous waste data in chhattisgarhs state

S.N	Name of Area	Total recycleble HW quantity	Unit	Reuse /Recycle	Co-processing	Recyclers with in state	Recyclers outside of state	Total
1	Raigarh	1434.2	MT/A	971	0	463.2	0	1434.2
2	Bilaspur	8850.85		4372.81	0	1210.28	3267.76	8850.85
3	Korba	171802.12		10856.74	233.88	19258.04	141453.46	171802.1
4	Jagdapur	264.32		131.399	0	132.919	0	264.318
5	Ambikapur	199.17		157	0	27.885	14.29	199.175
6	Raipur	44286.86		3008.382	2416.9	16451.528	22410.05	44286.86
7	Bhilai	32986.8		842.6	5262.415	23171.09	3710.7	32986.81
	Total	259824.32		20339.9	7913.195	60714.942	170856.26	259824

We had studied and worked on potential, need and capacity for Common Hazardous Waste Treatment, Storage, and Disposal Facility (CHWTSDF) in view of the quantity of hazardous waste generation ascertained through this study.

Total hazardous waste generation in chhattisgarh state is **55083 MT /Annum** which are shown in Table 3.18

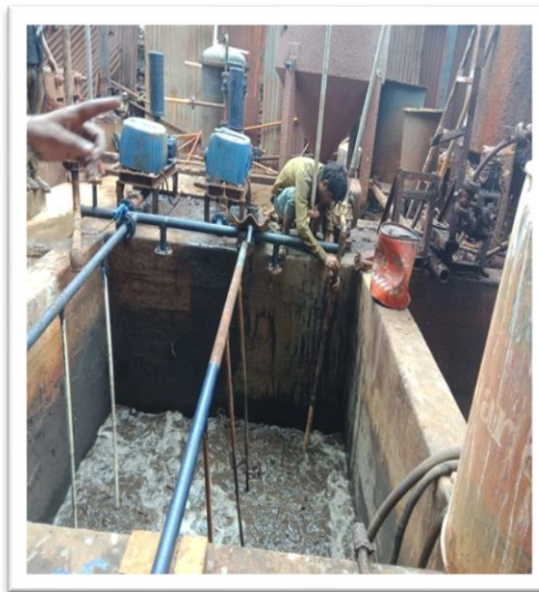
S.N	Name of Region	Waste generated in MT		
		Landfillable	Incineration	Total
1	Bhilai	25930.6	1562.23	27492.83
2	Raipur	2749.53	1616.19	4365.72
3	Korba	1811.14	5938.71	7749.85
4	Ambikapur	7.28	1.0941	8.3741
5	Jagdapur	2.5175	6.5	9.0175
6	Bilaspur	1068.42	3651.8077	4720.228
7	Raigarh	24.77	10711.2	10735.97
	Total	31594	23488	55082

- The final data will be submitted in excel data base in soft / hard copy as per deliverables list and should lend itself to be incorporated in a GIS Database, as and when required.-

Complied

- A preliminary inventory of hazardous waste generating facilities (Industries, recyclers, waste management facilities etc.) and an estimate of the waste generation in the state and categorize them i.e landfillable, incinerable, and recyclable – **Complied**

Photographs during Field visit:



Picture of Krishna iron strip and pvt ltd urla, Raipur (galvanising plant)



Field visit at Vishnu Chemicals Ltd, Bilai