

emailed to hkmnd.cpcb@nic.in on 14/05/2019

O/C



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KERALA STATE POLLUTION CONTROL BOARD
കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram - 695 004
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PCB/HO/HW-Inventory/18/2017-18

Dated: 08/05/2019

From

The Member Secretary

To

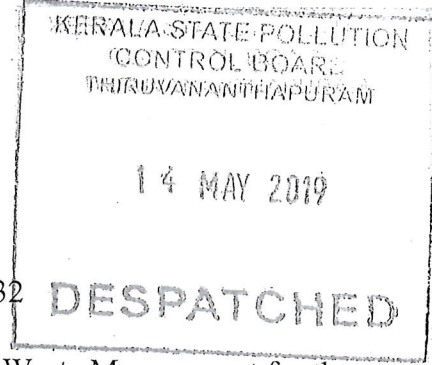
Sri. Bharat .K. Sharma

Additional Director & Head

Waste Management -II Division

Central Pollution Control Board

Parivesh Bhawan, East Arjun Nagar, Delhi-110032



Sub:- Gaps/Issues in Annual Inventory on Hazardous Waste Management for the year 2017-2018- regarding.

Ref: - 1.This office letter no: PCB/HO/HW-Inventory/18/2017-18 dated 03.12.2018.

2. CPCB letter no: B-29016(SC)/1/19/WM-II Div/17082 dated 07.03.2019.

Sir,

In response to the letter referred (2), the gaps/issues in Annual Inventory on Hazardous Waste Management for the year 2017-2018 submitted vide reference (1) has been clarified. The following clarifications are submitted for the observed gaps in the said annual inventory:

1. The differences observed in the quantity of landfillable/recyclable/incinerable HW generated and HW recycled/incinerated/stored has been resolved. The differences were due to errors in calculation and data entering. The above said quantity is 77887.387 MT.
2. In Format A1, quantity of Landfillable/Recyclable HW generated in 03 districts (DO-2, Ernakulam, ESC Eloor, Palakkad) was reported more than the authorized quantity as inert non hazardous waste was quantified along with the HW disposed. The quantity of HW generated alone has been updated in the inventory.
3. In Format A2, inter-state movement of HW for recycling/utilization/disposal has been provided.
4. In format A4 and D1, the differences in the quantity of HW disposed (40887.387 MT) through common secured landfill and the quantity of HW received (54,457.675 MT) at the common secured landfill (KEIL, Ambalamedu, Ernakulam) is due to the presence of inert non hazardous waste disposed along with the HW by the industries.

5. In format B, the quantity of used oil /waste oil recycled has been reported as 11886.52 MT due to calculation error which has been corrected as 13333.27 MT in both Format B & C.
- 6&7. In format B and C, authorized capacity for recycling and quantity recycled of spent catalyst, ink sludge/residues, spent carbon are removed from the respective columns as it is informed that this quantity has been disposed through KIEL-the only TSDF in the state. Kindly note that there are no facilities authorized for recycling/utilization/co processing of these wastes in Kerala. The updated Format B & C are submitted again.
8. In Format C, authorized capacity of used oil/waste oil has been reported in terms of KL per annum which has been modified in terms of MT per Annum as prescribed in the said format.
9. In format C, combined capacity for recycling of copper bearing waste and zinc bearing waste has been provided as 2920 Tonnes/year which has been updated in Format B.
10. In Format C, details of the recycling unit M/s K.J. Lubes w.r.t. type/category of HW, authorized capacity and quantity recycled/utilized have not been provided as the unit was not functioning.
11. In Format D2, cumulative quantity of HW disposed in captive secured landfill till end of the year has been updated as 18750MT.
12. Number of HW generating units – 1222; Number of units possessing authorization under HOWM Rules – 1222; Number of units submitted the annual returns for the year 2017-2018 – 1128.

The updated aforesaid annual inventory is enclosed herewith and the same has been submitted by email as well.

Yours Faithfully


MEMBER SECRETARY (i/c)

Format -A for Submission of Annual Inventory on Hazardous Waste Management by Occupiers
 Name of SPCB/PCC : Kerala State Pollution Control Board
 A1 Details on Hazardous Waste Generation

Year:2017-18

SL NO	Name of Districts	No of HW generation Industry	Authorised Quantity of Hazardous Waste(Metric Tonne)					Quantity of Hazardous Waste Generated as per Annual Return within the state/UT (Metric Tonne)					Quantity of HW imported during the year (Metric Tonne)	Quantity of HW exported during the year (Metric Tonne)
			Landfillable	Incinerable	Recyclable	Utilizable	5-	Landfillable	Incinerable	Recyclable	Utilizable	9		
1	TVM	1	2	3	4	5-	6	7	8	9	10	11		
2	KOLLAM	34	2537.02	nil	10.5	nil	2400.18	nil	7.2	nil	nil	nil		
3	PATHANAMTHITTA	53	18750	nil	97.024	nil	18750	nil	97.024	nil	nil	nil		
4	ALAPPUZHA	14	nil	nil	43530.18	nil	nil	nil	43530.18	nil	nil	nil		
5	KOTTAYAM	82	303.69	nil	176.06	nil	303.69	nil	176.06	nil	nil	nil		
6	IDUKKI	39	nil	nil	702.3	nil	nil	nil	702.3	nil	nil	nil		
7	EKM DO 1	44	nil	nil	118.98	nil	nil	nil	118.98	nil	nil	nil		
8	EKM DO 2	133	13723.32	11.27	864.404	nil	13723.32	11.27	864.404	nil	nil	nil		
9	ESC	317	6650	nil	250	nil	6650	250	nil	nil	nil	nil		
10	THRISSUR	27	1658.87	nil	10695.25	nil	1658.87	nil	250	nil	nil	nil		
11	PALAKKAD	95	15170.51	nil	1420.47	nil	15170.51	nil	7307.499	nil	nil	nil		
12	MALAPPURAM	106	715.37	nil	302.265	nil	715.37	nil	1420.47	nil	nil	nil		
13	WAYANAD	56	nil	nil	215.81	nil	715.37	nil	302.265	nil	nil	nil		
14	KOZHIKODE	33	nil	nil	5.1	nil	nil	nil	215.81	nil	nil	nil		
15	KANNUR	78	41.985	1.1	439.56	nil	41.985	1.1	5.1	nil	nil	nil		
16	KASARGODE	105	222.992	5	236.86	nil	222.992	5	439.56	nil	nil	nil		
	Total	6	0.47	17.37	65.64	nil	0.47	17.37	65.64	nil	nil	nil		
		1222	59774.227	17.37	59130.403	nil	59637.387	17.37	55739.352	nil	nil	nil		

Format A2 : Details on Interstate Movement of Hazardous Waste for recycling/utilization/disposal

SI No	Hazardous Waste	Hazardous Waste received from other State/UT		Hazardous Waste sent to other State/UT (Name of State/UT where waste sent)	
		(Name of State/UT from which waste received)	Quantity received (MT)	Name of the state where waste sent	Quantity sent (MT)
1	For disposal at common secured landfill	nil	nil	nil	nil
2	For disposal at common Incinerator	nil	nil	nil	nil
3	For recycling by Schedule IV recyclers	nil	nil	Maharashtra(3S Reclaimers Plot No:13/3)	Waste Oil- 0.52 MT
4	For utilization in co-processing in (cement plants)	nil	nil	nil	nil
5	For utilization under Rule 9 (other than co-processing)	nil	nil	nil	nil
			12		13

A4 Details on Hazardous Waste Disposed

SI No.	Name of the District	Quantity Disposed in Common Secured Landfill (MT) (generated within the State/UT)	Quantity Disposed in Secured Captive Landfill (MT) (generated within the State/UT)	Quantity Disposed through Common Incinerator (MT) (generated within the State/UT)	Quantity Disposed through Captive Incinerator (MT) (generated within the State/UT)	Quantity Disposed in Common Secured Landfill (MT) (received from other State/UT)	Quantity Disposed in Secured Captive Landfill (MT)	Quantity Disposed through Common Incinerator (MT) (received from other State/UT)	Quantity Disposed through Captive Incinerator (MT) (received from other State/UT)
		22	23	24	25	26	27	28	29
1	Trivandrum	2400.18							
2	Kollam		18750						
3	Pathanamthitta	nil							
4	Alappuzha	303.69							
5	Kottayam	nil							
6	Idukki	nil							
7	DO-1 Ernakulam	13723.32							
8	DO-2 Ernakulam	6650		11.27					
9	ESC Eloor	1658.87							
10	Thrissur	15170.51							
11	Palakkad	715.37							
12	Malappuram	nil							
13	Wayanad	nil							
14	Kozhikode	41.985		1.1					
15	Kannur	222.992		5					
16	Kasarode	0.47							
	Total	40887.387	18750	17.37					

A5 Details on Hazardous Waste Stored at Occupier Premises

Sl no.	Name of the District	Quantity of Landfillable HW stored at Occupier premises at the beginning of the financial year i.e. 01.04.2017 (MT)					Quantity of Landfillable HW stored at Occupier premises during the financial year i.e. 1st April to 31st March 2018 (MT)				
		Landfillable	Incinerable	Recyclable	Utilizable		Landfillable	Incinerable	Recyclable	Utilizable	
1	Wayanad	30	31	32	33	34	35	36	37		
2	Kollam	18250	nil	0.0854	nil	18250	nil	5.1	nil		

Format D1: Annual Inventory w.r.t Common TSDF(s)

SI No	Name and Address of the TSDF	Quantity in Stock at the beginning of the year (MT)		Quantity of Hazardous Waste Received (MT)			Quantity of Hazardous Waste Disposed (MT)			Quantity Pre-processed for utilization (MT)	Quantity in stock at the end of the year (MT)		Cumulative HW disposed in SLF by the end of the financial year(MT)	Capacity			
		Landfill	Incineration	For Direct landfill	For Landfill after treatment	For Incineration	Quantity Landfilled directly	Quantity Landfilled after treatment	Quantity Incinerated		Landfill	Incineration		Landfill(MT/A)			
1	Kerala Enviro Infrastructure Limited, TSDF Project, Inside FACT-CD Campus, Ambalamedu, Kochi.	590	nil	42436.94	12020.735	nil	42885.94	12082.24			79.5	nil	352560.44	Incinerator(Kcal)	Incinerator(T/H)	Landfill(MT/A)	50000

Format D2: Annual Inventory w.r.t Captive TSDF(s)

SI No	Name and Address of Captive facility	Type of facility (landfill/Incineration/ble/bot h)	Capacity of Incinerator (T/H)	Capacity of Landfill(MT/A)	HW disposed during the year	Cumulative HW disposed till the end of financial year
1	KMML, Chavaira, Kollam	Landfill	nil	37000	18750	18750

Format B-Annual Inventory on Recycling /Co-Processing/Utilization of Hazardous Waste

Sl.No.	Type of Recycling Facilities	No of Facilities authorized for recycling / utilization / Co-processing of HW	Total Authorized Capacity (MTA)	Quantity Recycled/ Utilized/ Co-processed (MT)
A	Commonly Recyclable HW			
1	Brass Dross	nil	nil	nil
2	Zinc Bearing Wastes			
3	Copper Bearing Waste	1	2920	Unit is temporarily closed
4	Spent catalyst containing nickel, cadmium, Zinc, copper, arsenic, vanadium and cobalt	nil	nil	nil
5	Lead bearing waste including battery waste			
6	E-Waste			
7	Paint and ink Sludge/residues	nil	nil	nil
8	Used oil			
9	Waste Oil	3	41355	13333.27
10	Spent Carbon	nil	nil	nil
	Total	nil	nil	nil
B	Utilization of HW under Rule 9	nil	nil	nil
1	Recovery of solvents from spent solvents Utilization of APCD Dust/ Residue generated from LD Furnace/EAF/Blast Furnace for producing cold briquettes for use in Blast Furnace for production of Pig Iron	nil	nil	nil
2	Iron	nil	nil	nil
3	Utilization of Spent Catalyst - to recover - Platinum, Iridium, Osmium, Palladium, Rhodium, Ruthium, Rhenium, Gold & Silver	nil	nil	nil

	Utilization of Spent H2SO4 generated from Pickling operations for manufacturing Ferrous Sulphate	nil	nil	nil
4	Utilization of Spent Acid containing Molybdenum generated from filament industries for producing Molybdenum Trioxide by heating process	nil	nil	nil
5	Utilization of Spent HCl generated from steel rolling mills for producing Ferric Chloride	nil	nil	nil
6	Utilization of Used Anode Butt to produce Carbon Pellets and High Energy (HE) Coke for use in Steel furnaces/foundries.	nil	nil	nil
7	Utilization of Used Anode Butt to produce Carbon Blended Coke / Electrode carbon Paste /Carburiser for use in Steel or ferroalloy furnaces	nil	nil	nil
8	Utilization of pre-processed Used Anode Butt to produce Green Anodes through Anode-Baking Process for use in Aluminium Smelters	nil	nil	nil
9	Utilization of pre-processed used Anode Butt generated to produce Carbon Electrode Paste.	nil	nil	nil
10	Utilization of Coal Tar/Tarry Residue generated from coal gasifier for energy recovery in Sodium silicate industry.	nil	nil	nil
11	De-contamination of contaminated drums/containers/ barrels	nil	nil	nil
12	Utilization of process sludge and primary ETP sludge generated from Pulp & Paper Industries for producing Paper Board/ Mill Board/ Card Board	nil	nil	nil
13	Captive Utilization of Aluminium Dross generated from refining and casting house of Aluminium smelter units to recover Aluminium Metal	nil	nil	nil
14		nil	nil	nil

	Utilization of Aluminium Dross generated from refining and casting house of Aluminium smelter units to recover Aluminium Metal	nil	nil	nil
15	Utilization of Oil based Iron Sludge of Ball & Roller bearings for producing Ferrous Sulphate	nil	nil	nil
16	Utilization of Mercury Waste generated from various industry for recovering Mercury	nil	nil	nil
17	Utilization of Spent H ₂ SO ₄ generated from Dye and Dye intermediates to produce gypsum suitable for use in cement plants	nil	nil	nil
18	Utilization of Spent fixer (hypo) solution generated from Photography / X-rays films to recover Silver metal	nil	nil	nil
19	Utilization of Hydro fluoro silicic acid ? Acidic scrubber solution generated during Single Super Phosphate manufacturing industry Recovered Sodium Silico Fluoride (Sodium fluorosilicate) for use in Glass industry	nil	nil	nil
20	Utilization of Spent Sulphuric Acid Para generated during Nitro Toulene Ortho Sulfonic Acid/Oxadiazyl Anthraquinone manufacturing industry for production of Ferrous Sulphate	nil	nil	nil
21	Utilization of Vanadium Sludge generated from Alumina refineries for production of Vanadium metal	nil	nil	nil
22		nil	nil	nil

23	Utilization of Phenolic Waste water generated from Coal Gasifier condensate water for Quenching of hot gases in After Burning Chamber of Direct-reduced iron (DRI) kiln of Sponge Iron Industry	nil	nil	nil
24	Utilization of Chemical sludge (Primary sludge) of ETP from Pulp & Paper Industry For energy recovery in Atmospheric Fluidized Bed Combustion (AFBC) Boiler/Pressurized Fluidized Bed Combustion (PFBC) Boiler/Circulating Fluidized Bed Combustion (CFBC) Boiler for steam or electricity generation	nil	nil	nil
25	Utilization of Spent Carbon (Carbon Slurry) generated from Urea manufacturing plant for Quenching of carbon slurry in the reactor for manufacturing carbon black.	nil	nil	nil
26	Utilization of Spent Acid containing Molybdenum compound generated from Bulb filament manufacturing industries for manufacturing of Ammonium Molybdate	nil	nil	nil
27	Utilization of Resin Waste (mixture of Bisphenol A and Epichlorohydrin) generated from Resin impregnation of electrical coils power/hydro equipments industries for manufacturing of High Tension/Low Tension Insulators	nil	nil	nil

28	Utilization of Spent Alumina generated during Polymerization in SWING unit of Petrochemical Plant for manufacturing of Refractory material like Insulation bricks, Mortar, Castables, High Alumina bricks	nil	Utilization of Spent Ion Exchange Resin generated from Demineralization (DM) Plant for energy recovery in boiler for steam or power generation	nil	nil
29	Utilisation of Spent Ion Exchange Resin generated from Demineralization (DM) Plant for energy recovery in Direct-reduced iron (DRI) kiln of Sponge Iron Industry	nil	Utilisation of Spent Pot Lining generated during production of Primary Aluminium from Alumina Smelting Industries for utilization as a supplementary resource for manufacturing of Carbon Mineral Fuel	nil	nil
30	Utilisation of Tungsten Scrap generated from Metal cutting operation (using Tungsten carbide insert), mining tool buttons and worn out drills for manufacturing Tungsten Carbide Powder	nil	Utilisation of Spent Sulphuric Acid and Spent Sodium Thiosulphate generated during manufacturing of 4,4 Diaminobenzene Sulphanilide for Isolation and purification of 2-NADSFA & 6-Acetyl APSA	nil	nil
31	Utilisation of Spent Pot Lining generated during production of Primary Aluminium from Alumina Smelting Industries for utilization as a supplementary resource for manufacturing of Carbon Mineral Fuel	nil	33	nil	nil

34	Utilisation of Coal Tar/Tarry Residue generated from Coal gasifier units for utilization as supplementary fuel in furnace for energy recovery in Frit manufacturing units	nil	nil	nil
35	Utilisation of Gasifier Slag containing Nickel & Spent Catalyst containing Molybdenum generated from Nitrogenous Fertilizer Industry for manufacturing of Alloy steel ingots and stainless steel ingots	nil	nil	nil
36	Utilisation of Synthetic Oil based mud/drill cuttings generated from Oil & Natural Gas Exploration for Road Construction / Oil recovery	nil	nil	nil
37	Utilisation of Flue Gas Cleaning Residue generated from Bag filter connected to steel scrap melting Induction furnace for recovery Zinc Metal	nil	nil	nil
38	Utilisation of Spent Sulphuric Acid and Spent Sodium Thiosulphate generated during manufacturing of 4,4 Diaminobenzene Sulphanilide for Isolation and purification of 2-NADSA & 6-Acetyl APSA for manufacturing of Nitrosyl Sulphuric Acid (NSA)	nil	nil	nil
39	Utilisation of Spent Phosphoric Acid generated during manufacturing of Quinacridone Pigment for production of Di-basic Calcium Phosphate	nil	nil	nil
40	Utilisation of Spent Sulphuric Acid generated during manufacturing of Vinyl Sulphone for production of H-acid	nil	nil	nil

41	Utilisation of Waste Dichromate Solution generated during manufacturing of Ibuprofen for production of Basic Chromium Sulphate	nil	nil	nil
42	Utilisation of Used Waste Thinner generated during cleaning of paint feeding lines using solvents for manufacturing of Industrial Primer to be used as Automotive Paints	nil	nil	nil
Total	C Co Processing In Cement Plants	6	41355	13333.27

Format C: List of authorised Recyclers/Utilizers/Co-Processors of Hazardous Waste

Sl.No.	Type of Recycling Facilities	No of Facilities authorized for recycling / utilization / Co-processing of HW	Total Authorized Capacity (MTA)	Quantity Recycled/ Utilized/ Co-processed (MT)
1	Southern Refineries Ltd, Kauzhinjankula, Parassala P.O, Thiruvananthapuram 695 502 Kerala Ph: 0471- 2203073	Used Oil/Waste Oil	7300 t/y	Annual Return Not Submitted (Unit not functioning)
2	Cee Jee Lubricants VI/592, Industrial Development Area, Edayar, Binanipuram P.O Aluva- 683 502, Kerala Ph: 0484-2558486	Used Oil/ Waste Oil	10695.25	7262.86
3	K.J Lubes SIDCO Industrial Park Athani, Thrissur- 680 581 Ph: 9744483574	The unit is not functioning now.		
4	API Refineries Pvt. Ltd Pudussery Central Village, New Industrial, Development Area, Kanjikkode- 678 621, Palakkad Ph: 0491-2566595, 9995821648	Used Oil/ Waste Oil	Used Oil 14600 t/y Waste Oil 8760 t/y	6070.41
5	Aaron International Plot No. 10, Industrial Development Plot, Parakulam, Anakkara P.O Palakkad-679 551 Ph: 9447871237	Cu & Zn bearing waste	2920 tonnes per Year	Unit is temporarily closed