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OHS 44 12620392865



TAMILNADU WASTE MANAGEMENT LTD.,
SF No : 135-40, 143-148 & 152
Undurmikidakulam, Tiruchuli - TK
Virudhunagar District. - 630611
Email : mbdtnwml.vdr@ramky.com

02.03.2022

M/s. Ramky Energy and Environment Limited,
S.F. No. 136,137, Undurmikidakulam,
Tiruchuli taluk, Virudhunagar District-630611.

Dear Sir/Madam,

We are here with enclosing the Comprehensive analysis report for solid waste sample **Incineration Ash** received on Date: 10.02.2022 and report No. TNWML VDR/COM/22/R/0212.

Disposal Mechanism:

Based on the characteristics of the sample received by TNWML VDR laboratory, the disposal mechanism is **Direct Landfill**. We are also enclosing the invoice for analysis.

This is based on the CPCB criteria for disposal of Hazardous Waste in to Secured Landfill. If the characteristics of actual waste received for disposal in landfill varies from any of the characteristics mentioned in the test report, it may lead to discrepancy and disposal mechanism may vary depending upon the changed characteristics of the waste. Thanking you for your business. Please contact us again if we can be of service in the future. Our fullest co-operation and best service assured always.

For TamilNadu Waste Management Ltd.,

Authorized Signatory

S. Suresh

Quality Manager

Managing Hazardous Waste

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TEST REPORT

TEST REPORT NO: TNWML VDR/COM/21-22/R/0212

NAME AND ADDRESS OF THE CUSTOMER

M/s. Ramky Energy and Environment Limited,
S.F. No. 136,137, Undurmikidakulam,
Tiruchuli taluk, Virudhunagar District-630611.

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Report Date	:02.03.2022	Sampling Method	:NA
Analysis Completion Date	:25.02.2022	Sampling Procedure	:NA
Analysis Starting Date	:10.02.2022	Sample Registration No	:C-0212/R/21-22
Sample Received Date	:10.02.2022	Sample Description	:Incineration Ash
Sampling Date	:09.02.2022	Sample Packing	:Plastic Cover
Sub Contracting of Tests	:(*) Applicable	Sample Collected by	:Customer
Environmental Condition	:NA	Sample Quantity	:2 Kg
(Temp.) (During sampling)		Location of Sampling	:NA

Physical Observations:

Parameter	Result
Physical State(Liquid/Slurry/Solid/Semi Solid)	Solid
Color	Black
Texture	Powder
Waste is Multi layered (Yes/No)	No
Is there any violent chemical change (in air) (Normally unstable) (Yes/No)	No
Reacts violent with water (Yes/No)	No
Generating of toxic fumes with water/acid/base (Yes/No)	No
Forms potentially explosive mixture with water (Yes/No)	No
Explosion when subjected to a strong initiating force (Yes/No)	No
Explosion at normal temperature & pressure (Yes/No)	No

TEST RESULT

S. No	Parameter	Unit	Method	Result	CPCB Std. For Direct Landfill Disposal
1	Paint Filter Liquid Test	-	USEPA SW846 -9095B	Pass	Pass
2	Bulk Density	gm/cc	ASTM D 5057-2017	1.02	---
3	pH at 26.7°C	-	USEPA SW 846- 9045D	7.95	4 to 12
4	Flash Point	°C	USEPA SW 846- 1010B	>60	60°C
5	Loss on Drying at 105°C	%	APHA 23 rd Edition 2017, 2540G	1.62	---
6	Loss on Ignition at 550°C (Dry Basis)	%	APHA 23 rd Edition 2017, 2540G	4.08	<= 20% Non biodegradable<= 5%: Biodegradable
7	Calorific Value	Cal/gm	ASTM D 5468-02 (2007)	<200	<2500



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S. No	Parameter	Unit	Method	Result	CPCB Std. For Direct Landfill Disposal
8	Total Chlorides as Cl ⁻	%	USEPA SW-846; 5050, 9253; 1994	NA	---
9	Total Fluoride as F ⁻	%	USEPA SW-846; 5050, APHA 23 rd Edition, 2017; 4500 D F ⁻	NA	---
10	Fluoride as F ⁻ (WLT)	mg/L	APHA 23 rd Edition, 2017; 4500 D F ⁻	<1	<50.0
11	Extractable Organics	%	USEPA SW-846; 9071 B; 1998	<1	<4.0
12	Water soluble inorganic	%	APHA 23 rd Edition, 2017; 2540 E	1.88	≤ 20% w/W
13	Water soluble organics	%	APHA 23 rd Edition, 2017; 2540 E	<1	≤ 10%
14	Reactive Cyanide	mg/Kg	USEPA SW-846; 9010C, 9014; 2014	<5	250
15	Cyanide (WLT)	mg/L	APHA 23 rd Edition, 2017; 4500 CN- C, E	<0.2	<2.0
16	Reactive Sulfide	mg/Kg	USEPA SW-846; 9030B, 9034; 1996	<5	500
17	Phenols (WLT)	mg/L	APHA 23 rd Edition, 2017; 5530 B, D	<1	<100.0
18	Ammonia as N (WLT)	mg/L	APHA 23 rd Edition, 2017; 4500 NH ₃ B, C	8.41	<1000.0
19	Nitrate Nitrogen as N (WLT)	mg/L	IS: 3025 (Part 34) – 1988; (Re affirmed 2014)	<1	<30.0
20	Arsenic as As (Total)	mg/L	APHA 23 rd Edition, 2017; 3114 As B	<2	---
21	Arsenic as As (TCLP)	mg/L	APHA 23 rd Edition, 2017; 3114 As B	<0.1	<5.0
22	Arsenic as As (WLT)	mg/L	APHA 23 rd Edition, 2017; 3114 As B	<0.1	<1.0
23	Mercury (Total)	mg/kg	APHA 23 rd Edition, 2017; 3112 B	<2	---
24	Mercury (TCLP)	mg/L	APHA 23 rd Edition, 2017; 3112 B	<0.1	<0.2
25	Mercury (WLT)	mg/L	APHA 23 rd Edition, 2017; 3112 B	<0.1	<0.1
26	Lead (Total)	mg/kg	USEPA SW-846; 3050B, 7000B; 2007	61.9	---
27	Lead (TCLP)	mg/L	APHA 23 rd Edition, 2017; 3111B	<0.1	<5.0
28	Lead (WLT)	mg/L	APHA 23 rd Edition, 2017; 3111B	<0.1	<2.0
29	Cadmium (Total)	mg/kg	USEPA SW-846; 3050B, 7000B; 2007	<5	---
30	Cadmium (TCLP)	mg/L	APHA 23 rd Edition, 2017; 3111B	<0.1	<1.0
31	Cadmium (WLT)	mg/L	APHA 23 rd Edition, 2017; 3111B	<0.1	<0.2
32	Total Chromium (Total)	mg/kg	USEPA SW-846; 3050B, 7000B; 2007	<5	---
33	Total Chromium (TCLP)	mg/L	APHA 23 rd Edition, 2017; 3111B	<0.1	5.0
34	Hexavalent Chromium (Total)	mg/kg	USEPA 1998, SW-846; 3060 A, 7196A	<5	---
35	Hexavalent Chromium (WLT)	mg/L	APHA 23 rd Edition, 2017; 3500 Cr B	<0.1	<0.5
36	Nickel (Total)	mg/kg	USEPA SW-846; 3050B, 7000B; 2007	36.1	---
37	Nickel (WLT)	mg/L	APHA 23 rd Edition, 2017; 3111B	<0.1	<3.0
38	Zinc (Total)	mg/kg	USEPA SW-846; 3050B, 7000B; 2007	132.8	---
39	Zinc (WLT)	mg/L	APHA 23 rd Edition, 2017; 3111B	<0.1	<10
40	Copper (Total)	mg/kg	USEPA SW-846; 3050B, 7000B; 2007	85.2	---
41	Copper (WLT)	mg/L	APHA 23 rd Edition, 2017; 3111B	<0.1	<10
42	Carbon (C)	%	CHNS Analyser	NA	---
43	Hydrogen (H)	%	CHNS Analyser	NA	---
44	Nitrogen (N)	%	CHNS Analyser	NA	---
45	Sulphur (S)	%	CHNS Analyser	NA	---
46	Chloroform	mg/L	GC-MS	ND	6.0 mg/L (TCLP)
47	Carbon tetra chloride	mg/L	GC-MS	ND	0.5 mg/L (TCLP)
48	Benzene	mg/L	GC-MS	ND	0.14 mg/L (TCLP)
49	Chloro Benzene	mg/L	GC-MS	ND	100.0 mg/L (TCLP)
50	1,4 - Dichloro Benzene	mg/L	GC-MS	ND	7.5 mg/L (TCLP)
51	Hexachloro benzene	mg/L	GC-MS	ND	0.13 mg/L (TCLP)

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Test Report No: TNWML VDR/COM/21-22/R/0212

S. No	Parameter	Unit	Method	Result	CPCB Std. For Direct Landfill Disposal
52	Nitro Benzene	mg/L	GC-MS	ND	2.0 mg/L (TCLP)
53	1,2 – Dichloro Ethane	mg/L	GC-MS	ND	0.5 mg/L (TCLP)
54	Hexachloro ethane	mg/L	GC-MS	ND	3.0 mg/L (TCLP)
55	Tetrachloro Ethylene	mg/L	GC-MS	ND	0.7 mg/L (TCLP)
56	Trichloro Ethylene	mg/L	GC-MS	ND	0.5 mg/L (TCLP)
57	1,1 – Dichloroethylene	mg/L	GC-MS	ND	0.7 mg/L (TCLP)
58	Pentachlorophenol	mg/L	GC-MS	ND	100.0 mg/L(TCLP)
59	2,4,5 – Tri Chlorophenol	mg/L	GC-MS	ND	400.0 mg/L(TCLP)
60	2,4,6 – Trichlorophenol	mg/L	GC-MS	ND	2.0 mg/L (TCLP)
61	Toxaphene	mg/L	GC-MS	ND	0.5 mg/L (TCLP)
62	Ethyl Methyl Ketone	mg/L	GC-MS	ND	200.0 mg/L(TCLP)
63	Hexachlorobutadiene	mg/L	GC-MS	ND	0.5 mg/L (TCLP)
64	Pyridine	mg/L	GC-MS	ND	5.0 mg/L (TCLP)
65	Lindane	mg/L	GC-MS	ND	0.4 mg/L (TCLP)
66	Methoxychlor	mg/L	GC-MS	ND	10.0 mg/L (TCLP)
67	2,4 – Dinitrotoluene	mg/L	GC-MS	ND	0.1 mg/L (TCLP)
68	Heptachlor	mg/L	GC-MS	ND	0.008 mg/L(TCLP)
69	Endrin	mg/L	GC-MS	ND	0.02 mg/L (TCLP)
70	2,4,5 – TP (Silvex)	mg/L	GC-MS	ND	1.0 mg/L (TCLP)
71	Vinyl Chloride	mg/L	GC-MS	ND	0.2 mg/L (TCLP)
72	2,4 -Dichlorophenoxyacetic acid	mg/L	GC-MS	ND	10.0 mg/L (TCLP)
73	Chlordane	mg/L	GC-MS	ND	0.03 mg/L (TCLP)
74	Cresols	mg/L	GC-MS	ND	200.0 mg/L(TCLP)

End of the Report

ND: Not Detected

NA: Not Applicable

- Reports pertained only to the submitted sample.
- Test reports shall not be reproduced except in full, without written approval of the laboratory.
- Report of S.Nos 42. to 74 Parameter results are belongs to sub contracting of tests (*).

Checked By

R.Venkatesan
(Technical Manager)

Authorized Signatory

S. Suresh
(Quality Manager)