

APCL Analytical Report

Submitted to:

Paradigm International, Inc.

17165 Gillette

Irvine, CA 92714

Tel: (714)660-1414 Fax: (714)660-1940

Service ID #: S01-942079

Received : 04/04/94

Collected by:

Tested : 04/06-11/94

Collected on:

Reported : 04/12/94

Sample description:

"Stardust" adsorbent, saturated with Waste Oil

Classification of Waste

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Component Analyzed	Method	Unit	PCL	Concentration	Regulation
				STARDUST S4-2079-1	Level
TRPH	418.1	mg/kg	10	163.000	
TTLIC Metals					
Antimony, Sb	204.1/7040	mg/kg	10	N.D.	500
Arsenic, As by GFAA	206.2/7060	mg/kg	0.3	0.24*	500
Barium, Ba	208.1/7080	mg/kg	50	77	10,000
Beryllium, Be	210.1/7090	mg/kg	0.5	N.D.	75
Cadmium, Cd	213.1/7130	mg/kg	0.3	N.D.	100
Chromium, Total	218.1/7180	mg/kg	10	N.D.	2,500
Cobalt, Co	219.1/7200	mg/kg	2	N.D.	8,000
Copper, Cu	220.1/7210	mg/kg	1	7	2,500
* Lead, total	239.1/7420	mg/kg	1	N.D.	1,000
Mercury, Hg	245.1/7470	mg/kg	0.13	N.D.	20
Molybdenum, Mo	246.1/7480	mg/kg	10	N.D.	3,500
Nickel, Ni	249.1/7520	mg/kg	2	N.D.	2,000
Selenium, Se by GFAA	270.2/7740	mg/kg	0.3	N.D.	100
Silver, Ag	272.1/7760	mg/kg	1	N.D.	500
Thallium, Tl	279.1/7840	mg/kg	10	N.D.	700
Vanadium, V	7910	mg/kg	1	N.D.	2,400
Zinc, Zn	289.1/7950	mg/kg	0.3	205	5,000
17 STLC Metals, STLC					
Antimony, Sb	7040	mg/L	0.2	N.D.	15
Arsenic, As by GFAA	7060	mg/L	0.005	0.01	5.0
Barium, Ba	7080	mg/L	0.5	5.4	100
Beryllium, Be	7090	mg/L	0.01	N.D.	0.75
Cadmium, Cd	7130	mg/L	0.005	N.D.	1.0
Chromium, Total	7190	mg/L	0.2	N.D.	560
Cobalt, Co	7200	mg/L	0.04	N.D.	80
Copper, Cu	7210	mg/L	0.02	N.D.	25
Lead, total	7420	mg/L	0.07	N.D.	5.0
Mercury, Hg	7470	mg/L	0.0006	N.D.	0.2

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Classification of Waste

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Component Analyzed	Method	Unit	PQL	Concentration	Regulation
				STARDUST 94-2079-1	Level
Molybdenum, Mo	7480	mg/L	0.2	N.D.	350
Nickel, Ni	7520	mg/L	0.04	N.D.	20
Selenium, Se by GFAA	7740	mg/L	0.005	N.D.	1.0
Silver, Ag	7760	mg/L	0.02	N.D.	5
Thallium, Tl	7840	mg/L	0.2	N.D.	7.0
Vanadium, V	7910	mg/L	1	N.D.	24
Zinc, Zn	7950	mg/L	0.005	24	250

PQL : Practical Quantitation Limit

N.D. : Not Detected or less than the quantitation limit.

* Less than PQL. Reported to compare with STLC analysis.

Respectfully submitted.



Jack Y. Zhang, Ph. D.

Director

Applied P & Ch Laboratory

APCL Analytical Report

Submitted to:

17165 Gillette
Irvine, CA 92714
Tel: (714)660-1414

Service ID #: 801-924193 Received : 12/15/92
Collected by: Shu-Teh Pan Tested : 12/22-29/92
Collected on: 10/22/92 Reported : 12/29/92
Sample description:
Expanded Amorphous Silica - "Stardust"

Toxicity Characteristic Leaching Procedure

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Component Analyzed	Method	Unit	MDL	Concentration	Regulation
				Expand Amorphous Silica 32-4193-1	Level
Ash	ASTM D2974 ²	weight%	0.01	98.9	-
TCLP Volatile Organics					
Benzene	8240	µg/L	5	34	500
2-Butanone (MEK)	8240	µg/L	100	N.D.	200,000
Carbon Tetrachloride	8240	µg/L	5	N.D.	500
Chlorobenzene	8240	µg/L	5	N.D.	100,000
Chloroform	8240	µg/L	5	N.D.	6,000
1,2-Dichloroethane	8240	µg/L	5	N.D.	500
1,1-Dichloroethene	8240	µg/L	5	N.D.	700
Tetrachloroethene	8240	µg/L	5	N.D.	700
Trichloroethene	8240	µg/L	5	N.D.	500
Vinyl chloride	8240	µg/L	10	N.D.	200
TCLP Metals					
Arsenic, Total	7061	mg/L	0.0002	N.D.	5.0
Barium, Ba	7080	mg/L	0.09	N.D.	100
Cadmium, Cd	7130	mg/L	0.002	0.014	1.0
Chromium, Total	7190	mg/L	0.01	N.D.	5.0
Lead, total	7420	mg/L	0.03	N.D.	5.0
Mercury, Hg	7470	mg/L	0.0004	N.D.	0.2
Selenium, Se	7741	mg/L	0.0002	N.D.	1.0
Silver, Ag	7760	mg/L	0.005	N.D.	5.0
TCLP Semi-Volatile Organics					
o-Cresol	8270	µg/L	10	N.D.	200,000
m,p-Cresol	8270	µg/L	10	N.D.	200,000
1,4-Dichlorobenzene	8270	µg/L	10	N.D.	7,500
2,4-Dinitrotoluene	8270	µg/L	10	N.D.	130
Hexachlorobenzene	8270	µg/L	10	N.D.	130
Hexachlorobutadiene	8270	µg/L	10	N.D.	500
Hexachloroethane	8270	µg/L	10	N.D.	3,000

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Toxicity Characteristic Leaching Procedure

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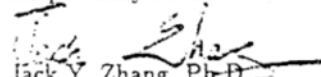
Component Analyzed	Method	Unit	MDL	Concentration	Regulation
				Expand Amorphous Silica 92-4193-1	Level
Nitrobenzene	EPA 8270	µg/L	10	N.D.	2,000
Pyridine	EPA 8270	µg/L	10	N.D.	5,000
Pentachlorophenol	EPA 8270	µg/L	20	N.D.	100,000
2,4,5-Trichlorophenol	EPA 8270	µg/L	10	N.D.	400,000
2,4,6-Trichlorophenol	EPA 8270	µg/L	10	N.D.	2,000
TCLP Organochlorine Pesticides					
Chlordane	EPA 3080	µg/L	10	N.D.	30
γ-BHC (Lindane)	EPA 3080	µg/L	0.1	N.D.	100
Heptachlor	EPA 3080	µg/L	0.1	N.D.	3
Heptachlor epoxide	EPA 3080	µg/L	0.09	N.D.	3
Endrin	EPA 3080	µg/L	0.04	N.D.	20
Methoxychlor	EPA 3080	µg/L	1	N.D.	10,000
Toxaphene	EPA 3080	µg/L	1	N.D.	500
TCLP Chlorinated Herbicides					
2,4-D	EPA 8150	µg/L	1	N.D.	10,000
2,4,5-TP (Silvex)	EPA 8150	µg/L	1	N.D.	1,000

MDL : Method Detection Limit

N.D. : Not Detected in this analysis, or less than the method detection limit.

¹EPA methods specified by SW-846: TCLP - EPA 1311 (40CFR, Part 261, App.III).²Performed a generalized ASTM method D2974 for hazardous wastes.

Respectfully submitted,



Jack Y. Zhang, Ph.D.
Lab Director
Applied P & Ch Laboratory

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APCL Analytical Report

Submitted to:
Paradigm International, Inc.

17165 Gillette
Irvine, CA 92714
Tel: (714)660-1414

Service ID #: 801-933647 Received : 08/12/93
Collected by: Tested : 08/25/93
Collected on: Reported : 08/25/93
Sample description:
"Stardust"


Paint Filter Test

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Component Analyzed	Method	Unit	PQL	Concentration
				Stardust 93-3647-1
Paint Filter Test	9095	mL/kg	10	N.D.

PQL : Practical Quantitation Limit

Respectfully submitted,


Shu-Teh Pan
Lab Manager
Applied P & Ch Laboratory