

GRINDING SLURRY ANALYSIS



Introduction

In May, 1990, seven samples of grinding slurry were presented to an independent testing laboratory in Charlotte, North Carolina for chemical analysis. The objectives of the analysis were to determine composition of the slurry, quantify each component and compare volume to maximum permissible limits for each component as established by the U.S. Environmental Protection Agency and the North Carolina Department of Environment, Health & Natural Resources.

The slurry samples were taken from three different work sites. One site had twenty year old PCC pavement; one site had two year old PCC pavement; and one site had one year old PCC pavement.

Two samples were obtained from different locations on a highway grinding project in Delaware; three samples were taken from different locations on an interstate highway grinding project in Pennsylvania; two samples were taken from different locations on a bridge deck grinding project in South Carolina. These job sites were selected because they were considered representative of most grinding work and because work was underway at the time samples were needed; the actual sample locations were selected at random and samples were obtained on different days.

Results of the analysis are contained in the following laboratory report. The conclusion at the bottom of the report summarizes the significance of the analysis as follows:

UNDER THE CRITERIA FOR IDENTIFYING HAZARDOUS WASTE UNDER 40 CFR 261, THE ABOVE WASTE IS NON-IGNITABLE, NON-CORROSIVE AND NON-TOXIC; THEREFORE, IT IS GENERALLY CONSIDERED A NON-HAZARDOUS WASTE.

SAMPLE	1	2	3	4	5	6	7	LIMITS	
								EPA	NC
MILLIGRAMS PER KILOGRAM (PARTS PER MILLION)									
Arsenic	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<5.00	<.50
Barium	0.80	1.10	0.96	2.10	2.00	1.65	1.80	<100.00	<10.00
Cadmium	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<1.00	<.10
Chromium	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<5.00	<.50
Lead	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<5.00	<.50
Mercury	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.20	<.02
Selenium	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<1.00	<.10
Silver	<.05	<.05	<.05	<.05	<.05	<.05	<.05	<5.00	<.50
Copper	3.10	1.60	1.70	2.60	3.15	2.10	1.85	NA	NA
Zinc	2.60	2.90	1.65	2.65	2.80	1.76	1.90	NA	NA
Aluminum	6570.00	6900.00	8210.00	7420.00	6840.00	7250.00	9130.00	NA	NA
Benzene	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.05	<.01
Toluene	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.06	<.01
Ethyl Benzene	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.08	<.01
Xylene	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.08	<.01
Gasoline	<.10	<.10	<.10	<.10	<.10	<.10	<.10	<1.00	<.10
Fuel Oil	<.10	<.10	<.10	<.10	<.10	<.10	<.10	<1.00	<.10
Diesel Fuel	<.10	<.10	<.10	<.10	<.10	<.10	<.10	<1.00	<.10
Lube Oil	<.10	<.10	<.10	<.10	<.10	<.10	<.10	<1.00	<.10
Other Solvents	<.10	<.10	<.10	<.10	<.10	<.10	<.10	NA	NA
Silica (SiO ₂)%	15.60	12.95	13.10	16.90	18.10	19.10	16.20	NA	NA
Iron Oxide (Fe ₂ O ₃)%	1.40	1.60	1.95	1.65	1.40	1.31	1.29	NA	NA
Alumina (Al ₂ O ₃)%	1.80	1.70	1.25	1.65	1.28	1.16	1.40	NA	NA
Lime (CaO)%	25.60	24.10	20.90	26.50	30.70	27.10	29.60	NA	NA
Magnesia (MgO)%	0.85	0.96	1.10	0.87	0.97	1.20	0.89	NA	NA

NA-Not Available

Under the criteria for identifying hazardous waste under 40 CFR 261, the above waste is non-ignitable, non-corrosive and non-toxic; therefore, it is generally considered a non-hazardous waste.

Additional copies of this report, as well as other information on grooving, grinding and texturing are available from :



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