

SHELL OIL COMPANY

SHELL CHEMICAL COMPANY

DEER PARK MANUFACTURING COMPLEX

PLAINTIFF'S EXHIBIT

SH-2924

DATE MARCH 6, 1979

TO MAINTENANCE SUPERVISOR
D. O. CHRISMERFROM SENIOR INDUSTRIAL HYGIENIST
DEER PARK MANUFACTURING
COMPLEXSUBJECT ABRASIVE BLASTING WITH
APACHE-BLAST

A review of the composition of Apache-Blast and preliminary air sampling results during its use at the Refinery Sandblast Yard indicate Apache-Blast is a suitable replacement for silica sand. The material is primarily oxides of iron, silicon, aluminum, and calcium, and contains less than 1 percent free (crystalline) silica. The material also contains various heavy metal impurities but not in significant amounts. The material should present less of a potential health hazard than silica sand. The air sampling results show that the abrasive blaster can be adequately protected by the air-supplied hood and downwind dust concentrations for Apache-Blast are probably less than for silica sand. I concur with and encourage the substitution of Apache-Blast for silica sand.

The preliminary air sampling results are attached for posting in the Sandblast Yard. Monitoring of abrasive blasting operations will continue on a regular basis.



J. D. Ransdell

JDR:gri

Attachments

cc: M. T. Anderson
R. P. Frutiger
R. V. Mattern
D. E. Miller
C. H. Rivers
Chron File
Monitoring File

Without Attachments

G. L. Buchanan
M. E. Davison

ABS-058469

LAM 030844

MONITORING RESULTS DURING ABRASIVE I STING WITH APACHE-BLAST

REFINERY SANDBLAST YARD

10-16-78/12-14-78

<u>Metals</u>	<u>Apache-Blast Composition</u>	<u>ACGIH TLV</u>	<u>Sampling Results (mg/m³)</u>			
			<u>S-3</u>	<u>S-6</u>	<u>S-8</u>	<u>F-3</u>
Iron	41.2 %	5 mg/m ³	0.343	0.316	0.200	0.396
Silicon	38.5 %	10 mg/m ³	0.257	0.063	0.060	0.423
Aluminum	9.41 % (oxide)	10 mg/m ³	0.034	0.019	0.020	0.052
Calcium	6.1 % (oxide)	5 mg/m ³	1.029	0.063	0.060	0.370
Magnesium	1.51 % (oxide)	10 mg/m ³	0.103	0.032	0.020	0.079
Zinc	1.46 %	5 mg/m ³	<0.034	<0.063	<0.200	<0.013
Manganese	0.50 %	5 mg/m ³	0.010	0.006	0.002	0.052
Copper	0.38 %	1 mg/m ³	0.010	0.126	0.060	0.052
Lead	0.015%	0.15 mg/m ³	0.003	<0.006	<0.020	<0.013
Chromium	0.035%	0.05 mg/m ³	0.002	0.002	0.006	0.002
Vanadium	0.006%	0.05 mg/m ³	0.034	<0.003	<0.010	<0.005
Cobalt	0.015%	0.1 mg/m ³	<0.001	0.003	0.002	<0.005
Barium	0.027%	0.5 mg/m ³	0.002	0.004	0.002	0.005

ABS-058470

LAM 030845

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Monitoring Data

3/6/79	Memo, "Abrasive Blasting With Apache-Blast"
8/15/78	Note w/attachments re Apache-Blast abrasive
1/76-12/76	Sampling Forms
12/1/75	Memo, "Respirable Dust Monitoring During Sandblasting"
1/8/75	Memo, "Silica Sampling - Sandblast Yard - Deer Park Mfg. Complex (Refinery)"

Procedures

7/7/86	Safety Order S-108, Respiratory Protection
1/84-85	"Requirements For Silica Sandblasting Inside Tanks At DPMC"
4/84	"DPMC Industrial Health Work Practice Guideline For Inorganic Lead and/or Chromate Exposure Potential"
1/12/84	"Requirements For Silica Sandblasting A322 Tank Repair"
3/18/80	Memo, "Silica"
11/20/78	Safety Bulletin, "Silica"
7/13/78	Memo, "Silica"
10/26/86	Safety Bulletin, "Silica"

Index-Monitoring Data

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