CONOCO

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Interoffice Communication

To A. H. Sather

From J. V Uptain

Date June 27, 1978

Subject CHEMICAL EXPOSURE MONITORING SUMMARY
SECOND QUARTER, 1978

I. COLOR WEIGH ROOM

The results of high-volume air sampling in the color weigh room are shown in Table I (Attached). Major points revealed were

A. Excessive airborne concentrations of Antimony, Barium, Cadmium, and Lead were found.

B Five (5) of the thirteen (13) samples were above the OSHA Standard for total particulates Four (4) others were greater than 50% of the Standard.

C All but two (2) of the thirteen samples were above the OSHA "Equivalent Exposure" Standard (See Table I for a definition of this term).

Following sampling, the color weigh hood was connected to the compound ventilation system to improve exhaust rates

At present, more samples are being taken to assess the effect of the hood change. No sample analyses are available at writing, but gross particulate concentrations are 1,340, 9,270; 14,500, and 16,100 micrograms per cubic meter of air.

II. DRY BLEND HIGH-VOLUME AIR SAMPLING

Nine (9) samples from the Dry Blend area have been analyzed (See Table II). Six (6) other samples have been taken, but not yet analyzed.

The results are very encouraging. No materials were found to exceed limits Tin, the major concern, was found to be at very low levels The OSHA "Equivalent Exposures" were nil except for one (1) sample (#78-20), which also indicated an excursion above the total particulate limit.

Pending further results, it is concluded that no significant exposures are evident in the Dry Blend area.

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III. COMPOUND AREA HIGH-VOLUME AIR SAMPLING

A total of 21 samples have been taken in the Compound area Analyses is now underway and the results will be shown in the 3rd quarter report.

Approximately 15 more samples are needed to adequately define the use of Barium/Cadmium material and two (2) lead compounds (a phosphite and a stearate) Sampling is limited by the availability of production runs involving these materials.

IV SULFURIC ACID

A method for sampling airborne concentrations of sulfuric acid was developed by the Lab. The procedure was to collect 0.1 - 0.4 M^3 of air, using a Bendix air pump and a "midget" liquid impinger containing 20 ml of distilled water The solution was then treated with barium chloride and a turbidity comparison made against standard solutions The sensitivity of the analysis was ±0 02 milligrams of sulfuric acid.

Six (6) samples were taken at the treatment lagoon area during sulfuric acid addition. The results were well below the 1 0 milligram per cubic meter of air standard, amounting to 0.067, 0.053, 0 17, 0 074, 0 077, and 0.08 milligrams per cubic meter of air.

V PHTHALIC ANHYDRIDE

A test method for phthalic anhydride was developed by the Lab Sampling will commence within early July. The technique involves dosimetry and will involve Yard Operators and Plasticizer Operators.

VI. SILICON DIOXIDE

A test method for silicon dioxide was developed by the Lab and a sampling vortex for collecting respirable fractions during dosimetry was obtained Sampling will begin during early July and will involve Plasticizer Operators

Jerald V. Uptain

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Attachments
c GGD, DWF, Department Heads, DSC, B Lloyd
DAK, JJH, ODS