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August 27, 1982

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FROM: C. M. BECK

PLAINTIFF'S
EXHIBIT
DUP-1680

ROLLAWAY PORTABLE DUST COLLECTOR

The intake air velocity of the Tepco Model 21 Rollaway dust collector in Central Shops was checked on 7/28/82 and found to be inadequate. The hose arm was replaced and the collector was again monitored using the Alnor Type 8500 Thermo-anemometer. Ten measurements were taken at the face of the cone on 8/26/82. The table below compares the BEFORE and AFTER measurements with manufacturer specifications:

		<u>Measured</u>	
	<u>Spec</u>	<u>BEFORE</u>	<u>AFTER</u>
Air Volume	686 cfm	220.2 cfm	669.8 cfm
Area of Cone	—	.687 sq. ft.	-
Area of Duct	-	.196 sq. ft.	-
Duct Velocity	3500 fpm	1123.4 fpm	3417.3 fpm
Cone Face Velocity	(998.5 fpm*)	320.5 fpm	975 fpm
Capture Velocity (at 1')	2000 fpm	**	**

*Calculated from specs.

**Unable to measure due to extraneous wind currents

The air volume and dust velocity measurements are very close to the specifications now. The ACGIH recommended duct design velocity for grinding ventilation is 3500 fpm. The manufacturer's specification for capture velocity is impossible to attain at their own air volume and duct velocity specs. Calculated from these, however, the cone face velocity (spec) is 998.5 fpm, which is very close to the measured 975 fpm. Annual velocity checks will ensure that the collector maintains adequate performance.

CMB:sgd

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