

B. F. Goodrich Chemical Company

Inter-Organization Correspondence

To	W. E. McCormick	From	E. G. DeCapita (EGD-34-70)
Location	Akron	Location	ALDC
Department		Department	
Subject	GC Analysis of Pechiney-Saint-Gobain Reactor Atmospheres at Pedricktown		Date 12-14-70

At your request I visited the Pedricktown plant on November 18 and 19, 1970 to supervise analyses of reactor atmospheres. The chromatograph used for the analyses was an F&M Model 700 located in the plant Quality Control Laboratory. The calibration standards containing 97 ppm of vinyl chloride were taken from the cylinder at the Development Center on the morning of November 18 and analysed a few hours later at the Pedricktown plant in the afternoon. Reproducibility of GC peak heights for six calibration standards was very good. All analyses were made by D.P. O'Keefe. Samples were taken by various operators under the supervision of R.W. Modrell. All samples were analysed within a few minutes after being taken. Quantitative results are tabulated on page 2.

To my knowledge, this is the first time atmospheres of a PSG type reactor have been analysed. In this type of reactor, the final dry, powdery polymer is removed from the reactor by a stream of air. This should at the same time serve to purge the reactor atmosphere to lower levels of vinyl chloride vapors than usually found in our other type reactors. However, this may not necessarily be true. The atmosphere of PSG Reactor #83 was analysed on two successive days. As shown by the data, the vinyl chloride content was much higher the first day than the second. More sampling and analyses should be made to obtain more positive results.

Another observation is that the vinyl chloride level in Reactor #83 did not increase after the cleaning procedure had begun. Past experience with our usual reactor has shown that the vinyl chloride level increases as the surface layers of buildup are brijeb awat, The buildup material in the PSG reactors evidently does not trap vinyl chloride. Probably because the reactor is charged with partially polymerized material from a pre-poly.

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rym

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<u>Time Sampled</u>	<u>Location in Reactor</u>	<u>PPM VC1</u>
<u>PSG Reactor #83; 11-19-70</u>		
30' after opening	Near manhole	222
30' after opening	Middle of reactor	188
15' after entering	Near manhole	755
15' after entering	Middle	181
<u>PSG Pre-poly; 11-19-70</u>		
4 hours after evacuation	Above manhole	11
4 hours after evacuation	Below manhole	12
<u>PSG Reactor #81*; 11-19-70</u>		
When reactor was opened	Lower outlet	108
When reactor was opened	Lower outlet	98
25' after opening	Near manhole	8
25' after opening	Middle	15

*Resin transfer lasted several hours more than normal due to clogged outlet.

<u>PSG Reactor #83; 11-20-70</u>		
When opened	Lower outlet	755
When opened	Near manhole	46
30' after opening	Near manhole	15
30' after opening	Middle	28
30' after entering	Near manhole	10
30' after entering	Middle	27
60' after entering	Near manhole	15
60' after entering	Middle	21

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