

Inter-Organization Correspondence

B.F. Goodrich

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FIELD POINT OR DEPT. & BLCG NO.
Brecksville R & D Center

25-1863

DATE YOUR LETTER

P. M. Zakriski

FIELD POINT OR DEPT. & BLCG NO.
Brecksville R & D Center, D/8506

DATE THIS LETTER
Dec. 13, 1976

Personal Protection from Vinyl Chloride During Source Testing

To the best of my knowledge, no one has measured the vinyl chloride concentrations on the roof tops where source measurement are to be made. It is probable that if a source is in compliance its vinyl chloride concentration will be no greater than 10 ppm. Then, with dilution by the outside air the roof top concentration can not be greater than 10 ppm. However, in lieu of measurements to prove that roof top concentrations are below 1 ppm we will follow the following procedure. We will amend this procedure as our roof top measurements indicate we can safely do so.

PROCEDURE

The source testing team will always take to the roof the following equipment:

- a) Organic vapor analyzer or H-NU organic vapor analyzer.
- b) NIOSH approved carbon cannisters for vinyl chloride and face masks.

Bendix PMCC tubes for vinyl chloride and micron air pumps.

The following procedure will be followed:

- a) Personnel sampling tubes and pumps will be worn and the tubes analyzed upon return to the lab.
- b) Measurements with the OVA or H-NU will be made often. When these measurements indicate average levels in excess of 1 ppm the masks with carbon cannisters will be worn. Work will be permitted with face mask and cannister as long as the apparent average pollution level is below 25 ppm.
- c) When the OVA or H-NU measurements show the pollutant level (vinyl chloride and/or all others) to be greater than 25 ppm (on the average), then work will be carried on only with either a Scot air pack or an air line respirator from the building. In the event that neither of these protections can be used, then no further work will be carried on until the average pollutant level falls below 25 ppm. When the levels retreat below 25 ppm, then testing may be resumed.

We see the very strong possibility that our OVA or H-NU and PMCC tube measurements will show that roof top levels of vinyl chloride are below 1 ppm. When this situation has been documented, we will dispense with the requirement to take masks and cannisters.

Paul Zakriski
Paul M. Zakriski

THE B. F. GOODRICH CO.

DEC 21 1976

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FROM P. M. Zakriski	FIELD POINT OR DEPT. & BLOC. NO. Brecksville R & D Center, D/8506	DATE THIS LETTER Dec. 14, 1976
SUBJECT RESEARCH LIBRARY		

Passive Personnel Monitor Badges for Vinyl Chloride and Other Organic Vapors

Gulf South Research Institute (GSRI) has developed a technology base which leads them to believe that they can demonstrate the feasibility of a vinyl chloride detector badge. That is a passive dosimeter that does not need a battery operated pump and will replace the Bendix tube for measurement of personnel exposure to vinyl chloride. They would like very much to present a proposal to B.F. Goodrich for the purpose of demonstrating the feasibility of this badge. I expect the cost of this proposal would be in the neighborhood of \$25,000.

I have discussed this subject with them. They have not completely revealed their technology base to me but they have given me the following insight. Their work directs them to approach the badge from the point of specific adsorbants, that is different adsorbants for different organic vapors. They do not use or intend to use carbon as a adsorbant. They intend to prepare badges with as many as a dozen separate compartments. Some of these compartments will hold the same adsorbant and therefore be used for replication of analyses. Other compartments will hold other adsorbants which will enable the same badge to measure other pollutants.

They have already proposed a feasibility study to a pharmaceutical house, for a prototype badge to be used by operating room personnel. In this case the badge will be used for the fluoro-chloro-carbons used as anesthetic gases. I mention this to indicate that they are serious in their work and they do have active efforts to invent specific dosimeter badges.

Let me talk briefly about the agreement that GSRI would like to enter into when they undertake a contract. For the limited amount of approximately \$25,000 they would be preparing a badge feasibility study. I have presumed our interests would be in vinyl chloride at first, but it could be in something else, for instance, benzene. This work would take 1-2 months. At that time, BFG would own the patent and be in a position to field test and then produce privately or commercially, the dosimeter badge. GSRI would not plan to go into any sort of commercial production of the invented dosimeter. In the event BFG does not like or wish to pursue the findings of GSRI relative to the badge, then GSRI would, by contract, retain all rights and privileges to the findings and inventions of the work. Then, they could sell it to someone else. They indicated to me that they simply want to guarantee that their research work doesn't become permanently locked up in unexploited contracts.

I firmly believe that B.F. Goodrich should ask GSRI to submit this vinyl chloride badge proposal for careful review. If that review indicates that the cost for this feasibility study is reasonable and the business aspects are sound we should seriously consider acting on this proposal. My reasoning is that I believe the cost of personnel testing for vinyl chloride can be significantly reduced by employing a badge and the quality of the measurements can be significantly improved by eliminating the pump.

When it appears that B.F. Goodrich does wish to review this proposal, I will arrange for its presentation.

Paul
Paul M. Zakriski I-000 56

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