

BFG TECHNICAL DOCUMENT

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A BFG GOODRICH ANALYTICAL AND TECHNOLOGY SERVICES REPORT

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REQUESTED BY R. J. COZENS	REFERENCE 413 801-001	PROJECT NO. 5055	FORM BFG 100-102

SUBJECT
ANALYSIS OF DIALLYLPHTHALATE IN PLAQUEMINE RECOVERED VINYL CHLORIDEIntroduction - Summary

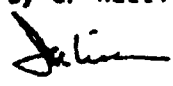
Diallylphthalate (DAP) is being incorporated into mass resins produced at Plaquemine. Of major concern since VCM is recovered from the process and recycled for other uses is the possible contamination of the recovery system and the R-VCM with DAP. Previous work¹ on ALIC laboratory polymerizations with DAP have shown no DAP contamination of the R-VCM. Two samples of Plaquemine R-VCM (Lots 1913 and 1914) and a control sample of VCM with added DAP were submitted for analysis by gas chromatography/mass spectrometry. The sample bomb labeled lot 1914 was found to be completely empty (no pressure, no water, no VCM). The lot 1913 sample was analyzed and no DAP was found. However, this sample and the control with added DAP were found to contain significant levels of diethylphthalate.

Experimental

See reference.

Results and Discussion

Partial labeled total and extracted ion current profiles are attached to this report. The M/Z 149 trace is indicative of phthalate in general. M/Z 177 of diethylphthalate and M/Z 189 of DAP. No DAP was detectable in the lot 1913 sample (Figure 2). Diethylphthalate is present in both samples at about scan 1010. Diallylphthalate is clearly present in the control sample (Figure 1) at about scan 1140. The source of diethylphthalate is not known but could possibly be part of the initiator solvent makeup or an impurity in the DAP supplied by CP Hall.


J. A. Nikora

cc: G. E. Thompson
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1. J. A. Nikora, "Analysis of Diallylphthalate in Recovered Vinyl Chloride Monomer," BFGID, 1/27/87.

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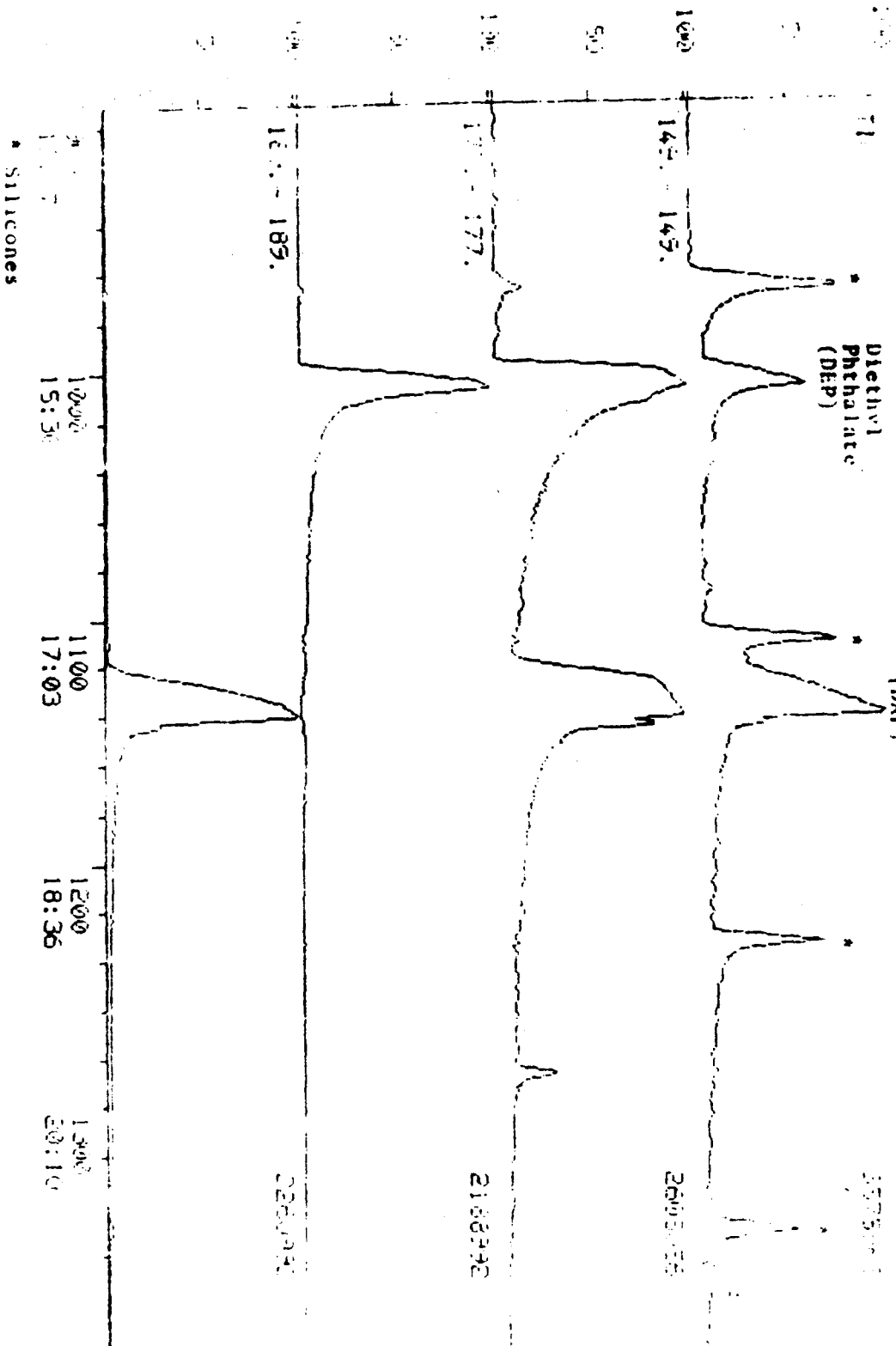
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05-11-1961 PROGRAM REPORT RUN:
05-11-1961 08:00 DUF IN VOM

**Diethyl
Phthalate
(DEP)**

Diallyl
phthalate
(DAP)



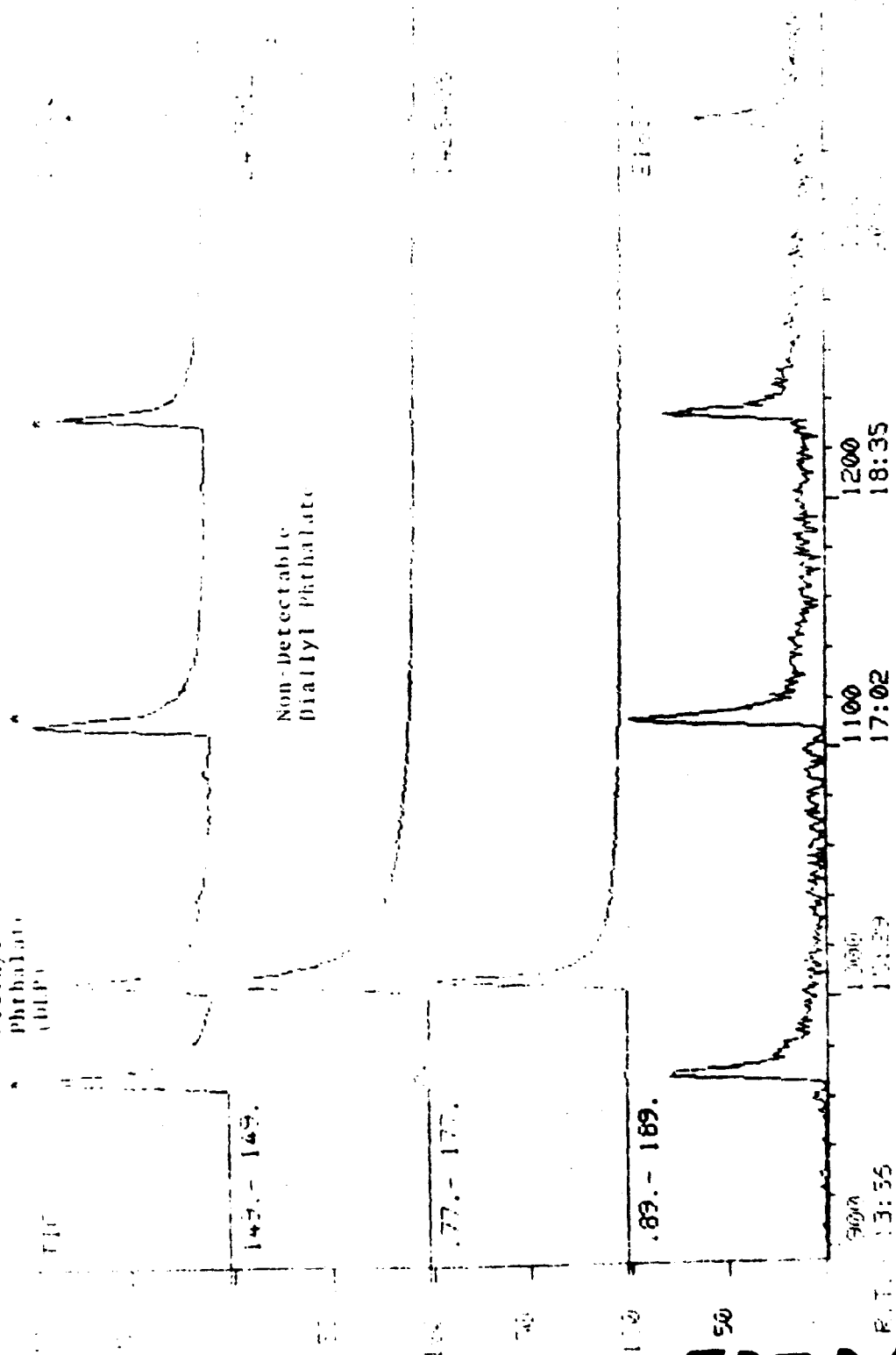
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Figure 2

USE-90 CHROMATOGRAM REPORT R440 0402870003 4/ 2/87 14:34
RECOVERED VINYL CHLORIDE SAMPLE, LOT 1913

Diethyl
phthalate
(DEP)

Non-Detectable
Diethyl Phthalate



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