BY Lusardi DATE 2/20/67 SUBJECT _____ SHEET NO. _____ OF _____

CHKD. BY _____ DATE _____ JOB NO. _____

To: Mr. F. G. Steward ✓ From: J.J. Lusardi

Re: TCP Purification - Explanation of data reported 2/13/67

The first activated carbon test showed that all impurities could be removed quantitatively. In this experiment, TCP solution was treated with 6% (wt) carbon to TCP for one half hour. Other tests determined that 30 seconds treatment (residence time) was sufficient to accomplish all the adsorption that would take place.

This particular test was performed to find the effect of varying the carbon/TCP ratio. As suspected, the amount of each impurity removed in each test increased with increased carbon/TCP ratio (figure 1), however, when viewed in terms of adsorption per gram of carbon, the utility of the carbon either diminishes with increased ratio (for p-Dioxin related impurities), or remains relatively constant (for anisole related impurities). See figure 2.

The data shows no reason for increasing the carbon/TCP ratio beyond 1/100.

cc: FRK

J. J. Lusardi

J. J. Lusardi

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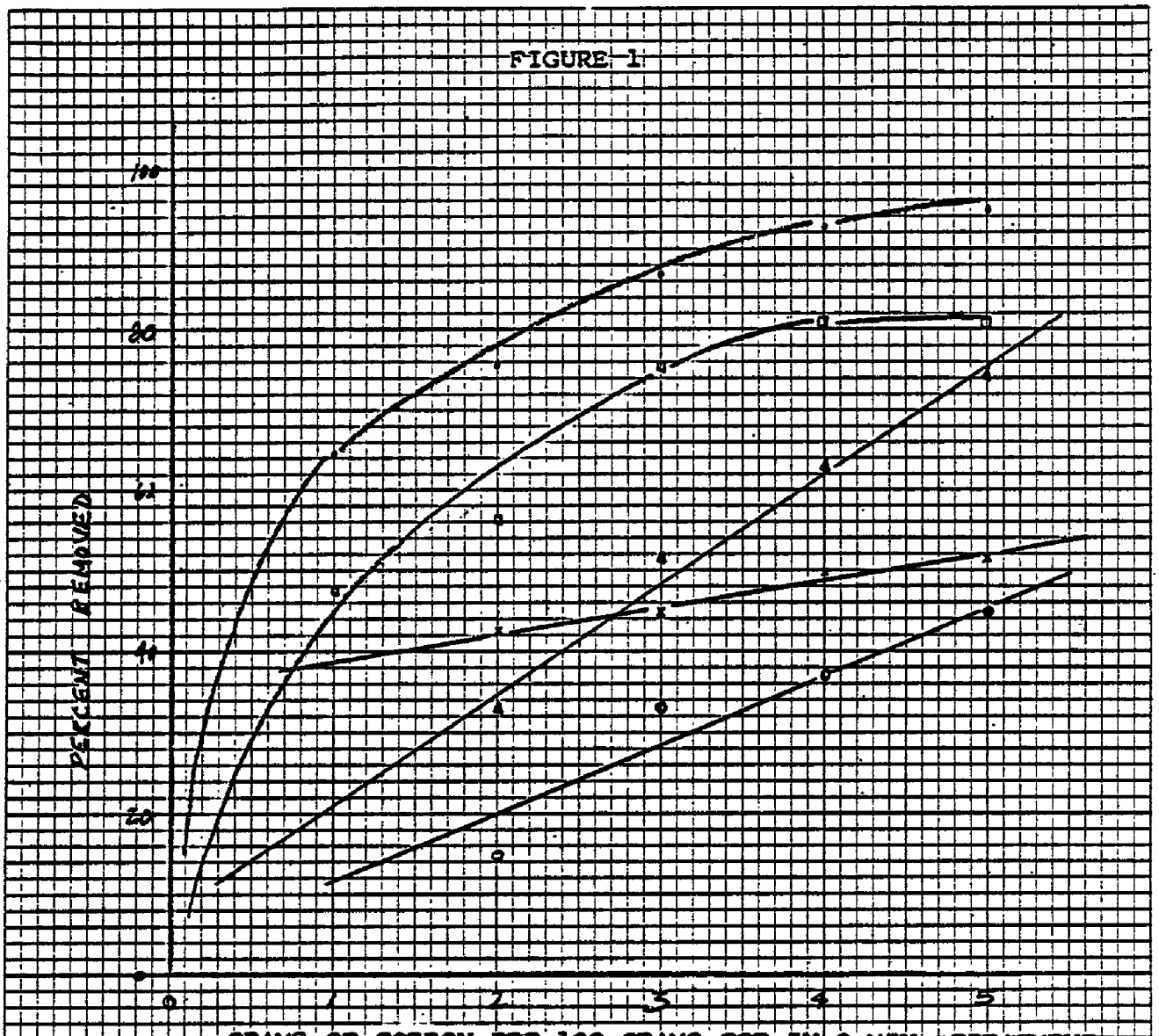
PLAINTIFF'S EXHIBIT 277 ALL-STATE LEGAL SUPPLY CO.

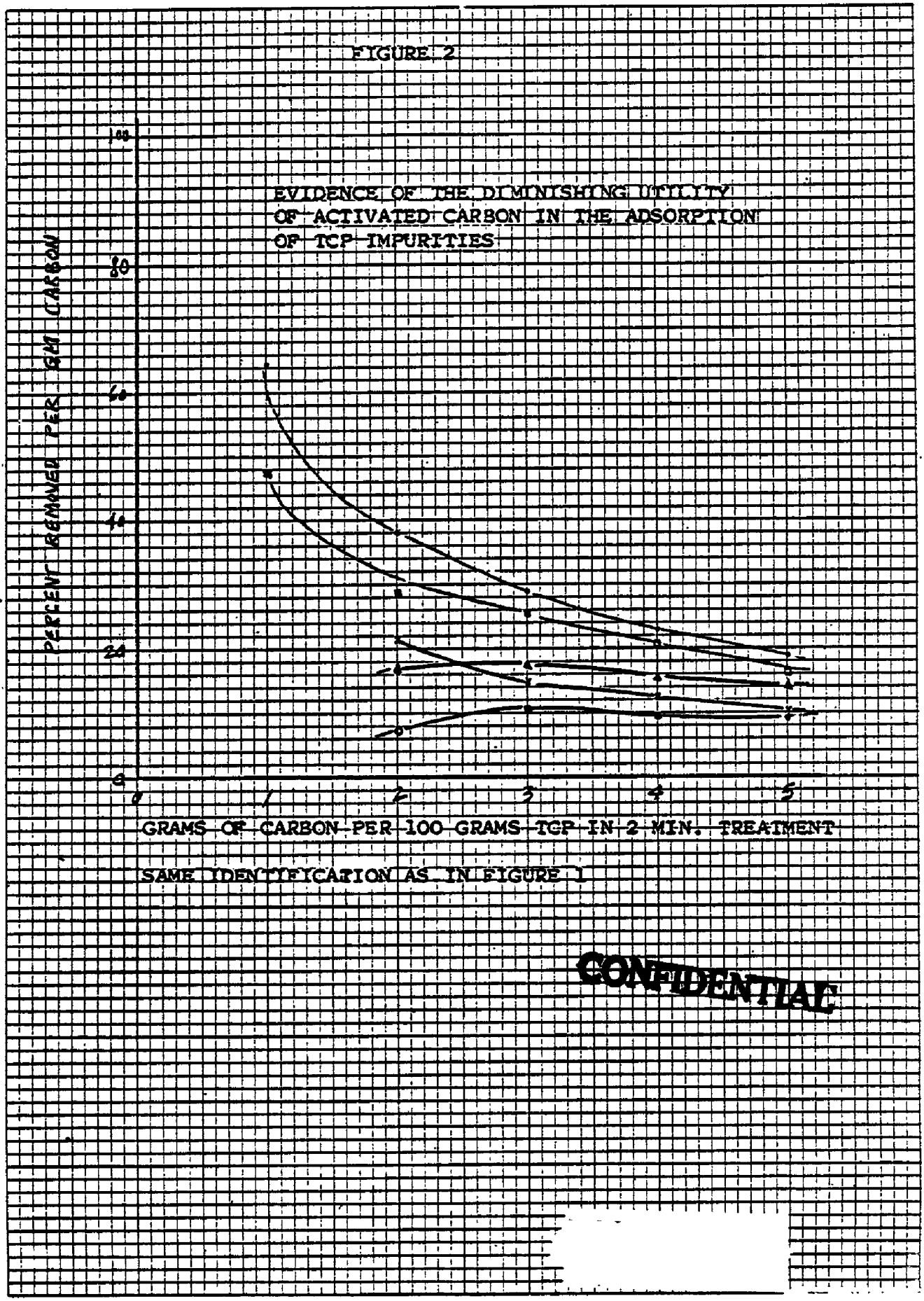
FIGURE 1




| SYM | INIT CONC. | IDENTIFICATION |
|---|---|---|
| • | 48.1 ppm | 2,2',4,4',5-PC-5'-MeO-DPO and 2,3,7-TC-8-MeO-DB-p-Dioxin |
| □ | 12.4 ppm | p-Dioxin related unknown |
| △ | 0.27 % | 2,4,5-Trichloroanisole |
| ○ | 0.27 % | Anisole related unknown |
| × | 0.85 % | 2,4-Dichloro-1,5-Dimethoxybenzene |

2,3,7,9-TCDB-p-Dioxin appeared innitially in conc. less than 1 ppm. 2,3,7,8-TCDB-p-Dioxin (the most active chloroacnegen) appeared initially in a conc. of 86.5 ppm and was totally removed by the 1% carbon/TCP treatment.

FIGURE 2

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