



Technical Service Report

Conoco Inc.
Research and Development Department
Analytical Research Section
Ponca City, Oklahoma

Report No. 409-81-804-8

To R. E. Laramy

From C. B. Herrin

Date February 3, 1981

Subject EXAMINATION OF LAKE CHARLES CHEMICAL PLANT EFFLUENT WATER BY
GCMS-VOA-ANALYTICAL NO. 5649

Results

The following volatile priority pollutants were found:

methylene chloride	5 ppb
1,2 dichloroethane	5 ppb
chloroform	2 ppb
toluene	2 ppb
ethylbenzene	1 ppb
benzene	0.3 ppb
1,1,2 trichloroethane	0.3 ppb
fluorotrichloromethane	10 ppt

Introduction

The sample was an EPA/CONOCO split taken from Outfall 001 at 0702 on 1/28/81. The sample was properly sealed, packed in ice, and shipped to Ponca City on a chartered airplane. The pollutant determinations were performed on the 29th.

Experimental

The sample was run by the purge-and-trap technique on the Finnigan OWA-30.

Sample Concentrator

Purge gas	He @ 40 mL/min
Purge time	12 min
Desorption time	4 min
Desorption temperature	180°C
Sample size	5 mL
Internal standards	1,4 dichlorobutane and bromochloromethane

Gas Chromatograph

Carrier	He @ 20 mL/min
Column	6 ft, 1% SP1000 on 60/80 mesh Carbopack B
Oven temperature program	30°C for 4 min initial hold, then 8°/min up to 180°C then hold for 120 min.

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Mass Spectrometer

Scan 40-250 amu in 4 sec
1000 scans collected.

Approximately 500 ng of each internal standard (as a methanolic solution) was injected into a syringe containing 5 ml of sample. The spiked sample was then injected into the purge cell.

Discussion

Response factors were calculated by running known blends of the pollutants and internal standards under the same conditions used for the sample. Identification was by a combination of retention time and full spectrum.

C.B. Herrin

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Research Associate
Analytical Research Section

BW

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