

Introduction

One sample labeled Site 18 was received at Zymax on 29 July, 2004 for petroleum fuel characterization. It was anticipated that free product would be present. However, Zymax was unable to separate enough free product, and the sample was treated as a water sample, and analyzed as TPH diesel by low resolution GC/MS.

The complete laboratory data report is presented as an Appendix to this report.

Methodology

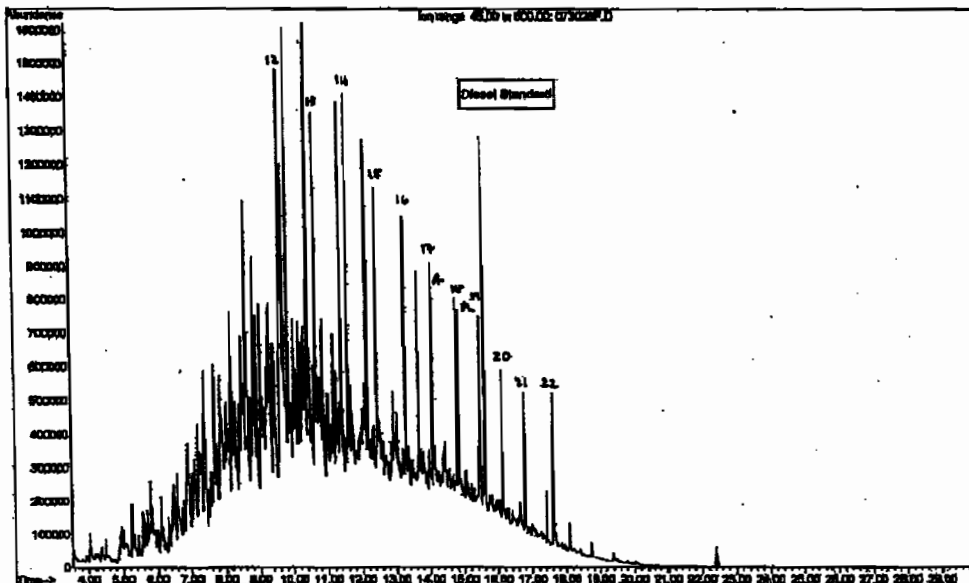
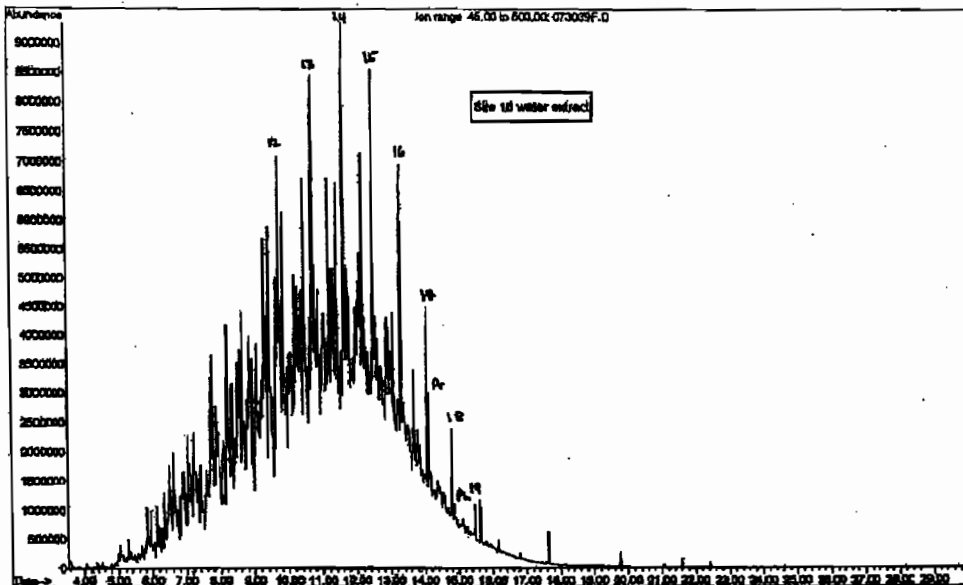
TPH (Total Petroleum Hydrocarbons) as diesel by GC/MS Combination

Water samples are extracted with methylene chloride solvent and the solvent extract concentrated. Soil samples are sonicated with methylene chloride solvent and the solvent extract concentrated.

The extract is injected into a GC equipped with a 30 meter narrow bore DB5 capillary column to separate the hydrocarbon, which are detected with a mass spectrometer (MS) interfaced to the GC. TPH concentrations are calculated by comparison with a standard diesel fuel.

Product Characterization

The sample contained 22 mg/L of TPH, the chromatogram of which is shown below. A chromatogram of a #2 diesel standard is shown for comparison. The Site 18 extract has a narrower distribution with less of the higher boiling hydrocarbons. This is characteristic of a light diesel such as Arctic Diesel. The ratio of nC_{17} /pristane (Pr) is around 2, which is similar to many fresh diesels dispensed in the US. This indicates that the diesel in the Site 18 water has experienced, at most, mild degradation from environmental exposure.



Cossaboom, Carey C POA02

From: Sharp-Dahl, Julie L POA02
Sent: Tuesday, September 07, 2004 09:32 AM
To: Geist, Lisa K POA02
Cc: Cossaboom, Carey C POA02
Subject: Gambell fuel analysis (from GW sample)



gambell fuel
product data.pdf

isa,

Here's the "forensics" guys take on the water sample you sent in with fuel.

Bottom line is, the sample looks too fresh to be from a FUDS site. The chromatogram clearly shows this!

Question- what did the city spill- Arctic diesel?

Julie

-----Original Message-----

From: Sharp-Dahl, Julie L POA02
Sent: Tuesday, September 07, 2004 9:28 AM
To: Sharp-Dahl, Julie L POA02
Subject: Scanned document <4 pages -76 KB> -- 9/7/2004 9:27:59 AM

Gambell fuel product data attcahed

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