

US EPA ARCHIVE DOCUMENT

Oil Sample Analysis Report

**U. S. EPA Region V
Case Number E10527**

**Marine Safety Laboratory
Case Number 10-313**



U.S. Department of
Homeland Security

United States
Coast Guard



Manager
U.S. Coast Guard
Marine Safety Laboratory

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16450
26 Aug 2010

U. S. Environmental Protection Agency
Attn: Joseph Victory
9311 Groh Rd.
Grosse Ile, MI 48138

Dear Joseph Victory:

The laboratory analysis of this case has been completed and our report is forwarded. The technical data supporting the report (spectrograms and chromatograms) have been archived at our facility and are available upon request. We will maintain the oil samples in refrigerated storage pending final case disposition.

Questions concerning this report or the analytical methods used should be directed to the Supervisor of Analysis, Kristy Juare.


K. JUARE
By direction

Encl: (1) MSL Report 10-313

**United States Coast Guard
Marine Safety Laboratory
Oil Spill Identification Report
10-313**

Requestor: U. S. EPA Region V

Unit Case/Activity Number: E10527

Received: 19-Aug-10

Via: Federal Express 793835625150/5231/5275

Number Of Samples: 3

Lab NO. of Spills: 1, 2 and 3

Lab NO. of Suspects: n/a

Lab NO. of Background: n/a

Analysis Methods:

- GAS CHROMATOGRAPHY (GC)
- GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GC-MS)
- INFRARED SPECTROSCOPY (IR)

Laboratory's Conclusion (as explained below): MATCH

SPECIAL INSTRUCTIONS: Compare the samples to MSL Case 10-275. Sample 10-275-1 was reanalyzed as a representative source sample.

RESULTS:

1. Samples 10-313-1, 2 and 3 were specified to be representative of spilled oil. Analysis indicates:
 - A. Sample 10-313-3 contains moderately to severely degraded heavy petroleum oil. A small amount of non-petroleum contamination is present.
 - B. Sample 10-313-1 contains severely degraded heavy petroleum oil with characteristics somewhat similar to those of spill sample 10-313-3. Significant similarities in the biomarker compounds indicate these samples are related to each other through a common source of petroleum oil. However, sample 10-313-1 does not contain a quantity of petroleum oil sufficient for conclusive comparison purposes based on the analysis conducted.
 - C. Sample 10-313-2 does not contain a quantity of petroleum oil detectable by the analysis conducted.
2. Source sample 10-275-1 contains heavy petroleum oil with characteristics similar to those of spill sample 10-313-3. Differences are attributable to weathering and non-petroleum contamination.

CONCLUSIONS:

1. Suspected source sample 10-275-1 and spill sample 10-313-3 are derived from a common source of petroleum oil.
2. Comparison of sample 10-313-1 to sample 10-313-3 is inconclusive due to an insufficient quantity of petroleum oil in sample 10-313-1.
3. Sample 10-313-2 does not contain a quantity of petroleum oil detectable by the analysis conducted.

SUPERVISOR OF ANALYSIS

K. JUAIRE

DATE

26-Aug-10

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