LIGO-T940030-00-B

FACSIMILE MESSAGE

CBI
1501 North Division Street
Plainfield, Illinois 60544-8929

Fax No. is: 815 439 6010
Verify No. is: 815 439 6000

November 2, 1994

To: Rai Weiss
LIGO Project - MIT

Fax No. (617)253-7014

From: M. L. Tellalian Phone (815)439-6517

Plainfield Engineering - PAE

RE: Laboratory Analysis of the Contaminated Solvent
LIGO Design & Qualification Test - Caltech Contract C146

Rai,

Attached is a two page fax report from the local laboratory. Let me know if you have any questions or want this lab to perform any additional tests.

Regards,

Marty

M. L. Tellalian
Plainfield Engineering

cc: Larry Jones - LIGO Project
FAX # (818)304-9834

R. V. FITZSIMMONS AND ASSOC. INC.
CHEMICAL ANALYSTS AND CONSULTANTS
1860 Arthur Drive
West Chicago, Illinois 60185
(708) 231-0680
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ANALYSIS REPORT FOR:

CBI TECHNICAL SERVICES
1501 N. Division St.
Plainfield, IL 60544

Attn: Steve Peters

PURCHASE ORDER NO: 10311-003 Rev.0

DATE: 11/2/94

REPORT OF MATERIALS ANALYSIS: Analysis of two propanol solutions for non-volatiles content.
Determination of amount and type of non-volatiles.

METHODS: For both the propanol solvent and the contaminated propanol solution, 20 ml of each liquid was quantitatively oven dried in glass petri dishes.
The non-volatile materials left after the oven drying were analyzed by FTIR spectral analysis in a KBr matrix.
A small portion of the contaminated solution was dried on a microscope slide and examined at 100X magnification to identify the insoluble matter in the solution.

RESULTS:

Non-Volatile Content of the Propanol Solvent

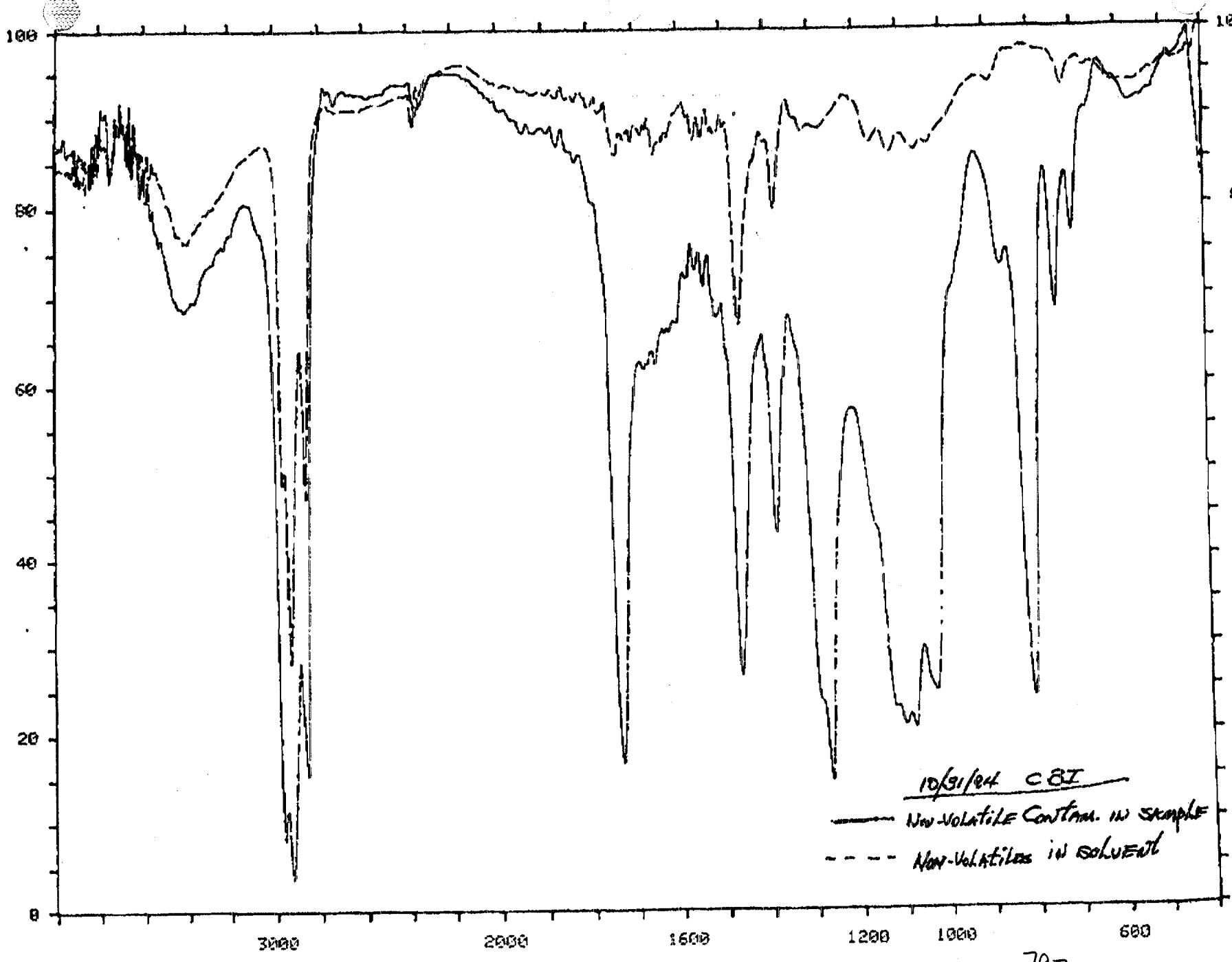
The solvent was found to contain 24.5 mg/l of non-volatile matter which appears to be a hydrocarbon type lubrication oil.

Non-Volatile Content of Contaminated Solution

This solution contained 180mg/l (224 ppm) of non-volatile matter.
FTIR spectral analysis of the Non-volatiles indicates the presence of 2 or more organic componments which appear to be:

A Silicone oil or grease
An organic ester (possible a Phthalate Ester)
Possibly also a small amount of a hydrocarbon oil or grease.

Copies of the FTIR spectra of the non-volatiles are enclosed for your examination.


100
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10/31/84 CBI
Non-Volatile Contam. in Sample
Non-Volatiles in Solvent
MIT: 2854-2956
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