

L1G0-T940046-00-B



Chicago Bridge & Iron
TELEFAX TRANSMISSION *Technical Services Company*

Research Center
1501 North Division Street
Plainfield, Illinois 60544-8929

Phone: 815-439-6000
FAX: 815-436-8345

TO:	LARRY JONES	FROM:	STEVE PETERS
COMPANY:	CALTECH	DATE:	12/15/94
FAX NO.:	(818) 304-9834	# OF PAGES:	4 (including cover)

Larry,

Attached is the report from Fitzsimmons dated 12/14/94 for the cleanliness assessment samples taken during the cleaning of the 22-A beam tube assembly.

As noted in yesterdays meeting, we delivered the cleanliness assessment samples for the 22-B beam tube assembly to Fitzsimmons on Monday, December 12. We anticipate the result from Fitzsimmons by Monday, December 19. We will transmit the 22-B report to you as soon as we receive it.

Please call if you have any questions or comments concerning the attached report.

Steve Peters

R. V. FITZSIMMONS & ASSOCIATES

1860 ARTHUR DRIVE
WEST CHICAGO, ILLINOIS 60185

PHONE: (708) 231-0680
FAX: (708) 231-0811

TO: MARTY TELLALIAN (CBI)

FROM: RVF & ASSOC

NUMBER OF PAGES IN THIS FAX (INCLUDING COVER): 3

DATE: 12/14/94

TIME: 2:00PM

NOTES: _____

RECEIVED
CHICAGO BRIDGE & IRON

DEC 14 1994

TECHNICAL SERVICES CO.
TIME 2:00pm

R. V. FITZSIMMONS AND ASSOC. INC.
CHEMICAL ANALYSIS AND CONSULTANTS

1860 Arthur Drive
 West Chicago, Illinois 60185
 (708) 231-0680
 FAX: (708) 231-0811

ANALYSIS REPORT FOR:

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

Attn: Steve Peters

PURCHASE ORDER NO. 12-005 Rev. 0

DATE 12/14/94

REPORT OF MATERIALS ANALYSIS: Analysis of seven samples of 2-propanol used in cleaning tube 22A.
 Samples submitted 12/12/94: Cleaning assessment samples 1A, 2A, 3A & 4A
 Wash & Rinse samples: Wash, Rinse & Control

METHODS: For both the propanol solvent and the contaminated propanol solution, 100 ml or 200 ml of each liquid was quantitatively oven dried in clean glass vessels.

The non-volatile materials left after the oven drying were analyzed by FTIR spectral analysis on a KBr window for identification and comparison. The ordinate expansion factor (abex) is the same for all spectra except where indicated.

Copies of the FTIR spectra enclosed.

RESULTS:Cleaning Assessment Samples

Control (virgin propanol) - The non-volatile (NV) residue was 7.0 mg/l and found to be predominantly a hydrocarbon oil or grease with a small amount of ester type oil.

Sample 1A - The NV residue was 14.5 mg/l and found to be a mixture of hydrocarbon oil, ester oil and other components.

Sample 2A - The NV residue was 8.5 mg/l and found to be a mixture of hydrocarbon oil, ester oil and other components.

Sample 3A - The NV residue was 5.5mg/l and found to be predominantly a hydrocarbon oil similar to the NV content of the virgin propanol of the control.

Sample 4A - The NV residue was 7.5 mg/l and found to be predominantly a hydrocarbon oil with smaller amounts of an ester oil similar to the NV content of the control propanol sample.

PRE CLEAN

POST CLEAN / RINSE

POST STEAM

POST WASH / ALCOHOL

Page 2

Wash & Rinse samples from 22A

Virgin Propanol (Control) - The NV residue was 13.0mg/l and was found to be a hydrocarbon oil or grease.

Tube 22A. Propanol Rinse - The NV residue was 28.0mg/l and was found to be predominantly a hydrocarbon oil with a small amount of ester type oil, similar to the control sample.

Tube 22A. Propanol Wash - The NV residue was 43.5mg/l and found to be a complex mixture containing hydrocarbon oil, ester type oil and other components.

DEC 14 '94 14:02

708 231 0811 PAGE.003

** TOTAL PAGE.004 **