



May 13, 1994

Ms. Barbara Pope
Southwestern Refining Company, Inc.
P.O. Box 9217
Corpus Christi, Texas 78469-9217

Dear Ms. Pope:

Sample Data:

Number of Samples:	3 Total
Number of Field Blanks:	1
Date Received:	May 11, 1994
Date Analyzed:	May 12, 1994
Job Reference:	W4-377

Test Method: NIOSH 7400 Method; "A" Rules

Enclosed is written confirmation of the analytical results for the above referenced sample(s).

Calculations of f/cc are based solely on the flow rates and times provided by the client. Envirotest, Inc. assumes no responsibility for whether the sample(s) accurately represent the regulated area nor for any subsequent use or interpretations of the analytical results.

The air sample analyses were performed at our laboratory by NIOSH 582-certified personnel with a Nikon Alphaphot or Olympus CH-2 microscope equipped with 400X magnification, Walton-Beckett graticule, and positive phase contrast. Envirotest, Inc. is licensed by the Texas Department of Health (#30-0005) for asbestos laboratory analysis.

This report and the findings contained herein shall not, in whole or in part, be altered, dispersed, or disclosed to any other party. It is provided for your sole use and may not be used or relied upon by any other party, in whole or in part, without prior written consent from Envirotest, Inc.

If you have any questions regarding the sample analyses, please call. We appreciate the opportunity to be of service to you.

Sincerely,

Stuart C. Williams, Ph.D.
Chief Executive Officer
Envirotest, Inc.

SCW/rlo

1B 047314

Envirotest, Inc. Laboratory Air Sample Analysis Report

SOUTHWESTERN REFINING CO., INC.
CORPUS CHRISTI, TEXAS

REC'D: MAY 11, 1994
ANALYZED BY: *Ray Orsatt*

SAMPLE #	FLOW L/M	TIME MIN.	VOLUME LITERS	NUMBER FIELDS	NUMBER FIBERS	BLANK COUNT	F/MM2	F/CC
CRUDE II UNIT								
94092	1.71	75	128.5	100	5.0	1.50	8.9	< .027
AREA MONITOR / CORNER CRUDE II UNIT / NORTHWEST OF WORK AREA								
94093	1.47	75	110.6	100	3.5	1.50	8.9	< .031
PERSONNEL MONITOR / VICTOR VALLEJO / 464-58-2722								
94094	.00	0	.0	100	1.5	1.50	.0	.000
FIELD BLANK								

Dept Insulation
Site Corpus Christi
Area Crude II

Kerr McGee
INDUSTRIAL HYGIENE DATA FORM

Accession _____
File No. 33-0441
Site Use _____

ID	CAS	Registry/Code No.	K	Yr.	Mo.	Day	Sheet No.									
			E	94	05	09										
1	2	3	11	12	13	14	15	16	17	18	19	24				
Elapsed																
S	T	D	Time, Min	M/E	L/G	Concentration	U	P	Parameter Value	Prot Equip.	No	Samp.				
A	F	F					C									
25	26	27	28	30	31	32	33	37	38	39	40	44	45	46	47	49
Site Locator Codes													SSN			
X												464-58-27				
50	51	55	60	65	70	71	75	80								

CODES
K—Monitoring Standard
A—8 Hour TWA
B—12 Hour TWA
C—Short Term TWA
D—Instantaneous Peak
E—Duration of Task
O—Other
S—Sample
A—General Area
B—Breathing Zone
C—Continuous
H—Blood (ZZ only)
Q—Other
P—Personal
S—Source Sample
U—Urinalysis
(ZZ only)
T—Type
F—Full Period Single
G—Series Grab
I—Full Period Consecutive
O—Other
P—Partial Period
S—Single Grab
D—Device
A—Aspiration Tube
B—Passive Dosimeter
D—Direct Instrument
F—Filter
G—Grab Sample
I—Impinger/Bubbler
Q—Other
R—Filter, Respirable Dust
T—Detector Tube
U—Units
B—Parts/Billion
C—Fiber/cm
D—Decibels
J—µg/100 g blood (ZZ only)
K—µg/mL (urine ZZ only)
L—µg/mL (urine ZZ only)
M—Parts/Million
O—Other
P—Percent
U—gm/3
X—mg/m³
P—Statistical Parameter
G—Geometric Mean and Geometric Std. Dev
L—50 Percentile and 95th Percentile
O—Other
X—Arithmetic Mean and Std. Deviation
Protective Equipment Form
A—Air Supplied Respirator, Continuous Flow
B—Air Supplied Respirator, Demand
C—Cover All Goggles
F—Face Shield
G—Impervious Gloves
H—Air Supplied Respirator, Pressure Demand
I—Hearing Protection—Inserts
J—Impervious Suit—Not Air Supplied
M—Hearing Protection—Muffs
N—None Required
O—Other
P—Air Purifying Respirator, Full Face
Q—Air Purifying Respirator, Half Face
R—Air Purifying Respirator, Quarter Face
S—Self-Contained Respirator, Pressure Demand
T—Self-Contained Respirator, Demand
U—Impervious Suit—Air Supplied
V—Power Air Purifying Respirator
W—Disposable Respirator—Dust
M—Measured Value
E—Estimated Value
L—Less Than
G—Greater Than

FOR SITE USE

Monitoring For: Asbestos
(Common Chemical Name)

IN: _____ Person Sampled Vallejo, Victor Area Northwest
(Site Designation) (Last Name) First Initial
Corner Crude II

DATA/OBSERVATIONS

Protective Equipment Used _____

Sample No. 94092 Avg Temp. 78 Avg Atm Press. _____ Predominant Wind Direction E Avg Speed 12
Sampler Pump Make MSA Model Flow-1.7e Ser. No. 7962 No. _____
Calibration Method _____ Reference _____ By _____ Date _____

PUMP SETTING		ELAPSED		CALIBRATED FLOW RATE		VOLUME SAMPLED, LITERS	
Start	Stop	Min	Strokes	Pre/Post	Average	Uncorrected	Corrected
0830	0945	75		1756/1673	1.714		128.58

Sampling Method 7300 Reference _____ Precision _____ Accuracy _____
Make _____ Model _____ Adsorbent _____ Lot No. _____
Anal. Method _____ Reference _____ Precision _____ Accuracy _____
Anal. Equip. _____ Manufacturer _____ Model _____ Ser. No. _____

Analytical				Results		
No	Reference	Analyst	Analyte	Mass/No Particles	Concentration	Units
			<u>Asbestos</u>		<u><0.027</u>	<u>f/c</u>

Investigator (Signature) B. Pope Date 5-9-94
Received by (Signature) _____ Date/Time _____
Completed by (Signature) _____ Date/Time _____

Removed from 3/4 steam line NW corner crude II
Amount removed 6'
HLR-AS 2

SWRf/Asbestos 1321

1B 047319

Dept Insulation
Site Corpus Christi
Area Crude II

Kerr McGee
INDUSTRIAL HYGIENE DATA FORM

Accession _____
File No. 93-0441
Site Use _____

ID			CAS Registry Code No.			K	Yr.	Mo.	Day	Sheet No.		
						E	99	05	09			
1 2 3			11 12 13 14			15 16 17 18			19 24			
Elapsed												
S	T	D	Time, Min	M/E	L/G	Concentration	U	P	Parameter Value	Prot Equip.	No Samp.	
A	F	F					C					
25	26	27	28 30	31	32	33	37	38 39	40	44	45 46 47 49	
Site Locator Codes											SSN	
											464-58-2722	
50	51	55	60	65	70	71	75	80				

FOR SITE USE

Monitoring For: Asbestos
(Common Chemical Name)

IN: _____ Person Sampled Vallejo, Victor
(Site Designation) (Last Name First Initial)

DATA/OBSERVATIONS

Protective Equipment Used _____

Sample No. 94093 Avg Temp. _____ Avg Wind Direction _____ Avg Speed _____
Sampler Pump Make MSA Model Flow 1.7C Ser. No. 8027 No. _____
Calibration Method _____ Reference _____ By _____ Date _____

PUMP SETTING		ELAPSED		CALIBRATED FLOW RATE		VOLUME SAMPLED, LITERS	
Start	Stop	Min.	Strokes	Pre/Post	Average	Uncorrected	Corrected
0830	0945	75		4.77/1477	1.475		110.625

Sampling Method 2300 Reference _____ Precision _____ Accuracy _____
Make _____ Model _____ Adsorbent _____ Lot No. _____
Anal. Method _____ Reference _____ Precision _____ Accuracy _____
Anal. Equip _____ Manufacturer _____ Model _____ Ser. No. _____

Analytical				Results		
No	Reference	Analyst	Analyte	Mass/No Particles	Concentration	Units
			<u>Asbestos</u>			

Investigator (Signature) B. Pope Date 5-9-98
Received by (Signature) _____ Date/Time _____
Completed by (Signature) _____ Date/Time _____

CODES

K—Monitoring Standard
A—1 Hour TWA
B—12 Hour TWA
C—Short Term TWA
D—Instantaneous Peak
E—Duration of Task
O—Other

S—Sample

A—General Area
B—Breathing Zone
C—Continuous
H—Blood (Z2 only)
O—Other
P—Personal
S—Source Sample
U—Urine Sample (Z2 only)

T—Type

F—Full Period Single
G—Series Grab
L—Full Period Consecutive
O—Other
P—Partial Period
S—Single Grab
D—Device
A—Adsorption Tube
B—Passive Dosimeter
D—Direct Instrument
F—Filter
G—Grab Sample
I—Impinger/Bubbler
O—Other
R—Filter, Respirable Dust
T—Detector Tube

U—Units

B—Parts/Billion
C—Fibers/cm
D—Decibels
J—µg/100 g (blood Z2 only)
K—µg/mL (urine Z2 only)
L—µg/mL (urine Z2 only)
M—Parts/Million
O—Other
P—Percent
Q—gm3
X—mg/m3

P—Statistical Parameter

G—Geometric Mean and Geometric Std. Dev
L—50 Percentile and 85th Percentile
O—Other
X—Arithmetic Mean and Std. Deviation

Protective Equipment from

A—A/R supplied Respiator, Continuous Flow
B—A/R supplied Respiator, Demand
E—Cover All Goggles
F—Face Shield
G—Impervious Gloves
H—A/R supplied Respiator, Pressure Demand
I—Hearing Protection—Inserts
J—Impervious Suit—Not A/R supplied
M—Hearing Protection—Muffs
N—None Required
O—Other
P—A/R Purifying Respiator, Full Face
Q—A/R Purifying Respiator, Half Face
R—A/R Purifying Respiator, quarter Face
S—Self-Contained Respiator, Pressure Demand
T—Self-Contained Respiator, Demand
U—Impervious Suit—A/R supplied
V—Power A/R Purifying Respiator
W—Disposable Respiator—Dust

M—Measured Value

E—Estimated Value

L—Less Than

G—Greater Than

Dept Insulation Kerr McGee
 Site Corpus Christi
 Area Crude #1 INDUSTRIAL HYGIENE DATA FORM

Accession _____
 File No. 93-0441
 Site Use _____

ID	CAS Registry Code No.	K	Yr.	Mo.	Day	Sheet No.
			<u>094</u>	<u>05</u>	<u>09</u>	
1	2	3	11	12	13	14
15	16	17	18	19	24	
Elapsed						
S	T	D	Time, Min	M/E	UG	Concentration
<u>0</u>	<u>0</u>	<u>F</u>				<u>C</u>
25	26	27	28	30	31	32
33	37	38	39	40	44	45
46	47	49	Parameter Value			
Prot Equip.			No Samp.			
Site Locator Codes						
X						SSN
50	51	55	60	65	70	71
75	80					

CODES

K—Monitoring Standard
 A—8 Hour TWA
 B—12 Hour TWA
 C—Short Term TWA
 D—Instantaneous Peak
 E—Duration of Task
 O—Other

S—Sample
 A—General Area
 B—Breathing Zone
 C—Continuous
 H—Blood (Z2 only)
 O—Other
 P—Personal
 S—Source Sample
 U—Urinalysis (Z2 only)

T—Type
 F—Full Period Single
 G—Series Grab
 L—Full Period Consecutive
 O—Other
 P—Partial Period
 S—Single Grab

D—Device
 A—Adsorption Tube
 B—Passive Dosimeter
 D—Direct Instrument
 F—Filter
 G—Grab Sample
 I—Impinger/Bubbler
 O—Other
 R—Filter, Respirable Dust
 T—Detector Tube

U—Units
 B—Parts/Billion
 C—Fiber/cm
 D—Decibels
 J—µg/100 g blood (Z2 only)
 K—µg/mL (urine Z2 only)
 L—µg/mL (urine Z2 only)
 M—Parts/Million
 O—Other
 P—Percent
 U—gm/3
 X—mg/m³

P—Statistical Parameter
 G—Geometric Mean and Geometric Std. Dev
 L—50 Percentile and 95th Percentile
 O—Other
 X—Arithmetic Mean and Std. Deviation

Protective Equipment/Worn
 A—Air supplied respirator, Continuous Flow
 B—Air supplied respirator, Demand
 E—Cover All Goggles
 F—Face Shield
 G—Impervious Gloves
 H—Air supplied respirator, Pressure Demand
 I—Hearing Protection—Inserts
 J—Impervious Suit—Not Air supplied
 M—Hearing Protection—Muffs
 N—None Required
 O—Other
 P—Air Purifying Respirator, Full Face
 Q—Air Purifying Respirator, Half Face
 R—Air Purifying Respirator, quarter Face
 S—Self-Contained Respirator, Pressure Demand
 T—Self-Contained Respirator, Demand
 U—Impervious Suit—Air supplied
 V—Power Air Purifying Respirator
 W—Disposable respirator—Dust

FOR SITE USE

Monitoring For: Asbestos
 (Common Chemical Name)

IN: _____ Person Sampled _____
 (Site Designation) (Last Name First Initial)

DATA/OBSERVATIONS

Protective Equipment Used _____

Sample No. 94094 Avg Temp. 78 Avg Atm Press. _____ Predominant Wind Direction E Avg Speed 12
 Sampler _____ Model _____ Ser. No. _____ No. _____
 Pump Make _____ Calibration Method _____ Reference _____ By _____ Date _____

PUMP SETTING		ELAPSED		CALIBRATED FLOW RATE		VOLUME SAMPLED, LITERS	
Start	Stop	Min	Strokes	Pre/Post	Average	Uncorrected	Corrected

Sampling Method _____ Reference _____ Precision _____ Accuracy _____
 Make _____ Model _____ Adsorbent _____ Lot No. _____
 Anal. Method _____ Reference _____ Precision _____ Accuracy _____
 Anal. Equip. _____ Manufacturer _____ Model _____ Ser. No. _____

Analytical				Results		
No	Reference	Analyst	Analyte	Mass/No Particles	Concentration	Units
			<u>Asbestos</u>		<u>0.00</u>	<u>f/cc</u>

Investigator (Signature) B. Pore Date 5-9-94
 Received by (Signature) _____ Date/Time _____
 Completed by (Signature) _____ Date/Time _____