



November 24, 1993

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

Dear Ms. Pope:

Enclosed is written confirmation of analytical results for the three air samples, numbers 93364, 93365, and 93366, received at our laboratory at 10:15 a.m. on Monday, November 22, 1993.

Calculations of f/cc are based solely on the volume supplied by Southwestern Refining Company. Envirotest Inc. assumes no responsibility for whether the supplied samples accurately represent the regulated area nor for any subsequent use or interpretations of the analytical results.

The air sample analyses were performed in our Houston laboratory by NIOSH 582-certified personnel with a Nikon Alphaphot microscope equipped with 400X magnification, Walton-Beckett graticule, and positive phase contrast. The NIOSH 7400 method was used. 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 Southwestern Refining Company, Inc.

Sincerely,

Daniel J. Gerhardt, C.P.G.
President
Envirotest, Inc.

DJG/ajf

SWRf/Asbestos 1036

Envirotest, Inc. Laboratory Air Sample Analysis Report

SOUTHWESTERN REFINING COMPANY, INC.

RECEIVED: NOVEMBER 22, 1993
ANALYZED BY: Alex Johnson

SAMPLE #	FLOW L/M	TIME MIN.	VOLUME LITERS	NUMBER FIELDS	NUMBER FIBERS	BLANK COUNT	F/MM2	F/CC
93364	.00	0	132.0	100	1.0	.50	8.9	< .026
93365	.00	0	132.0	100	1.0	.50	8.9	< .026
93366 FIELD BLANK	.00	0	.0	100	.5	.50	.0	.000

1B 004912

IN ANALYTICAL REQUEST

Client:

Southwestern Refining Company, Inc.

P. O. Box 9217

Corpus Christi, TX 78469

Case No:

Date Recd:

Shipment Method:

Del. agent:

Rec. agent:

Investigation:

[illegible]

Report Comments:

SWRf/Asbestos 1038

File Comments:

1B 004913

Dept Insulation
Site Copper Christ
Area Crude H

KERR MCGEE REFINING CORPORATION
INDUSTRIAL HYGIENE DATA FORM

Accession _____
File No. 93-0441
Site Use _____

ID	CAS Registry Code No.	K	Yr.	Mo.	Day	Sheet No.
		E	93	11	18	
1 2 3	11 12 13 14	15 16 17 18	19	24		
Elapsed						
S	T	D	Time, Min	M/E	L/G	Concentration
25	26	27	28	30	31	32
33	37	38	39	40	44	45
46	47	49				
Parameter Value						
Prot Equip. Samp.						
No						
Site Locator Codes						
50 51 55 60 65 70 71 75 80						

FOR SITE USE

Monitoring For: Asbestos fibers

(Common Chemical Name)

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

DATA/OBSERVATIONS

Humidity 69 Sample No. 93364 Avg Temp. 77 Avg Wind Press. 29.97 Predominant Wind Direction SW Avg Speed 10
Sampler MSA Model Flow Life Ser. No. 7961 No. _____
Pump/Make _____ Calibration Method _____ Reference _____ By Nancy Logue Date _____

PUMP SETTING		ELAPSED		CALIBRATED FLOW RATE		VOLUME SAMPLED, LITERS	
Start	Stop	Min	Strokes	Vol/Min	Vol/Stroke	Uncorrected	Corrected
1036	1200	84		1.571			132.00

Sampling Method _____ Reference 1587 1556 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
					40.026	F/cc

CALCULATIONS: (Additional data, remarks, etc.)

Pump Calibration X = 60 sec x # ml

SEC

Please Retain Pink Copy for Your Records
Please Do Not Pull Form Set Apart

Investigator (Signature) B. Pore Date 11-18-93
Received by (Signature) _____ Date/Time _____
Completed by (Signature) _____ Date/Time _____

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 - Urine (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 - Particulate
C - Fiber/cm
D - Decibels
J - $\mu\text{g}/100 \text{ g (blood Z2 only)}$
K - $\mu\text{g}/\text{ml (urine Z2 only)}$
L - $\mu\text{g}/\text{ml (urine Z2 only)}$
M - Percentile
O - Other
P - Percent
U - g/m^3
X - mg/m^3

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/Work
A - Air Supplied Respirator, Continuous Flow
B - Air Supplied Respirator, Demand
E - Cover All Goggles
F - Face Shield
G - Impervious Goggles
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

1B 004914

Dept Insulation
Site Corpus Christi
Area Crude II

KERR MCGEE REFINING CORPORATION
INDUSTRIAL HYGIENE DATA FORM

Accession _____
File No. 93-0441
Status _____

ID	CAS Registry Code No.	K	Yr.	Mo.	Day	Sheet No.										
		<u>E</u>	<u>93</u>	<u>11</u>	<u>18</u>											
1	2	3	11	12	13	14	15	16	17	18	19	24				
Elapsed																
S	T	D	Time, Min	MFE	UG	Concentration	U	P	Parameter	Prot	No					
<u>A</u>	<u>F</u>	<u>F</u>					<u>24</u>		Value	Equip.	Samp.					
25	26	27	28	30	31	32	33	37	38	39	40	44	45	46	47	49
Site Locator Codes																
X	SSN															
50	51	55	60	65	70	71	75	80								

FOR SITE USE

Monitoring For: Asbestos Fibers
(Common Chemical Name)

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

DATA/OBSERVATIONS

Protective Equipment Used _____

Sample No. 93365 Avg Temp. 77 Avg Atm Press. 29.77 Predominant Wind Direction SW Avg Speed 10
Sampler Pump Make MSA Model Flow Like Ser. No. 8027 No. _____
Calibration Method _____ Reference _____ By Nancy Logue Date _____

PUMP SETTING		ELAPSED		CALIBRATED FLOW RATE		VOLUME SAMPLED, LITERS	
Start	Stop	Min	Strokes	Vol/Min	Vol/Stroke	Uncorrected	Corrected
1036	1200	84		1.571			131.96

Sampling Method _____ Reference 1611 1531 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>40.026</u>	<u>f/cc</u>

CALCULATIONS: (Additional data, remarks, etc.)

Pump Calibration X = 60 sec x # ml

sec

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Investigator (Signature) B. Poppi Date 11-18-93
Received by (Signature) _____ Date/Time _____
Completed by (Signature) _____ Date/Time _____

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)
O - Other
P - Personal
S - Source Sample
U - Urinalysis (ZZ only)

T - Type
F - Full Period Sample
G - Series Grab
L - Full Pd. Consecutive
O - Other
P - Partial Period
S - Single Grab

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

U - Units
B - Percent/Billion
C - Fiber/cm
D - Decibels
J - $\mu\text{g}/100\text{ g blood}$ (ZZ only)
K - $\mu\text{g}/\text{ml}$ (urine ZZ only)
L - $\mu\text{g}/\text{ml}$ (urine ZZ only)
M - Percent/Billion
O - Other
P - Percent
U - $\mu\text{g}/\text{m}^3$
X - $\mu\text{g}/\text{m}^3$

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/Methods
A - Air Supplied Respirator,
Continuous Flow
B - Air Supplied Respirator,
Demand
C - Cover All Goggles
D - Face Shield
E - 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

1B 004915

Dept Insulation
Site Corpus Christi
Area Cordova

KERR MCGEE REFINING CORPORATION
INDUSTRIAL HYGIENE DATA FORM

Accession _____
File No. 93-041
Site Use _____

ID	CAS Registry Code No.	K	Yr.	Mo.	Day	Sheet No.
		0	93	11	18	
1	2	3	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	32	33	34	35
36	37	38	39	40	41	42
43	44	45	46	47	48	49
50	51	52	53	54	55	56
57	58	59	60	61	62	63
64	65	66	67	68	69	70
71	72	73	74	75	76	77
78	79	80	81	82	83	84
85	86	87	88	89	90	91
92	93	94	95	96	97	98
99	100	101	102	103	104	105

FOR SITE USE

Monitoring For: Asbestos Fibers

(Common Chemical Name)

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

DATA/OBSERVATIONS

Protective Equipment Used _____

Sample No. 93366 Avg Temp. 77 Avg Atm Press. 29.97 Predominant Wind Direction SW Avg Speed 10
Sampler _____ Model _____ Ser. No. _____ No. _____
Pump Make _____ Calibration Method _____ Reference _____ By Nancy Logue Date _____

PUMP SETTING		ELAPSED		CALIBRATED FLOW RATE		VOLUME SAMPLED, LITERS	
Start	Stop	Min	Strokes	Vol/Min	Vol/Stroke	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
					0.00	f/cc

CALCULATIONS: (Additional data, remarks, etc.)

Pump Calibration X = 60 sec x # ml

sec

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Investigator (Signature) B. Pope Date 11-19-93
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Completed by (Signature) _____ Date/Time _____

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S - Sample
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U - Urine (Z2 only)

T - Type
F - Full Period Single
G - Series Grab
L - Full Pd. 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
O - Other
R - Filter, Respirable Dust
T - Detector Tube

U - Units
B - Breathing
C - Fiber/cm
D - Decibel
J - $\mu\text{g}/100\text{ g blood (Z2 only)}$
K - $\mu\text{g}/\text{mL (urine Z2 only)}$
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M - Percent
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P - Percent
U - $\mu\text{g}/\text{m}^3$
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G - Geometric Mean and
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H - Air Supplied Respirator,
Pressure Demand
I - Hearing Protection -
Inserts
J - Impermeable 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 - Impermeable Suit -
Air Supplied
V - Power Air Purifying
Respirator
W - Disposable Respirator -
Dust

M - Measured Value
E - Estimated Value
L - Less Than
G - Greater Than