GW - _____

MONITORING REPORTS

DATE: JAMES JAMES UP ODESSA, TEXAS 79762 4001 PENBROOK

April 5, 1989

Groundwater Monitoring Analyses
Artesia, Eunice, Lee and Lusk Plants

Mr. Dave Boyer Environmental Bureau Chief New Mexico Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Boyer:

Per your request, attached please find copies of the fourth quarter groundwater monitoring analyses for the above referenced plants.

If you should have any questions regarding this information, please contact me at (915) 367-1316.

Very truly yours,

Michael D. Ford

Environmental Analyst

Milael D. Ford

MDF

Attachments

CORPORATION

Paga 1 Received: 02/03/89	1	Austin REPORT 03/01/89 09:06:44	Work Order # 89-02-057
REPORT <u>Radian</u> TO <u>Bl. 1</u> Austin		PREPARED <u>Radian Analytical Ser</u> BY <u>8501 Mo-pac Bl.</u> PO Box 201088 Austin, TX 78720-1088	Services OBB OBB OBB OBB OBB OBB OBB O
ATIEN <u>Linda Bendele</u> CLIENT <u>PHILLIPS P</u> COMPANY <u>Phillips Petroleum</u> FACILITY Odessa, TX	is ia	1-4797	CONTACT
1		Unknown compounds present in (GC samples O1 and O2
TAKEN MF		Previously Reported on 02/27/89 Footnotes and Comments	39.
		* Indicates a value less than Potential error for such low v	5 times the detection limit. values ranges between 50 and 100%.
		@ Indicates that spike recovery specific matrix was not within an interferent present.	y for this analysis on the acceptable limits indicating
SAMPLE		TEST CODES and NAME	used
102 Eunice MW-2 S VCK bemaent 03 reagent blank	CD AS G	Arsenic, graphite AA Barium, ICPES Cadmium, ICPES	PHEN Total phenolics SE G Selenium, graphite AA SO4 IC Sulfate, IC
4 M Queer to	CDL IC	liform TCPES	Total org
784	DG3020	Digestion, method 3020 Digestion, method 6010	XYLENE Xulenes, EPA 602
	TE E	Iron, ICPES	
	HG C	1	
	M M	in In	
	NO3 E	Sodium, ICPES Nitrate, colorimetric	
	P B G	ai	

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Austin REPORT
Results By Test

RAS

Work Order # 89-02-057

SAMPLE Id	Test: AG E	Test: AS G	Test: BA E	Test: CD E	Test: CL IC
01	(0.03	0. 037	0.05	<0.005	180
	6	0.13	1.2	⟨0, 005	540
	m. sa.arri e marri e izilinga reke kalekta mith kalaksassassaga kikita kalekta mitosak keketa sa.arri em.	Amerikan un der bereicht der	en como de Laboración desta	om derrigensstelle begrößen bestellt be	

SAMPLE		Test: COLI T	Test: CR E	Test: DG3020	Test: DG6010	Test: FE E
Sample Id	colon	ies/100 mL	uq/ml	date complete	date complete	uq/ml
(21	40	<0.03	02/06/89	02/09/89	ယ ထ
Eunice MM-1	02 	€20	<0, 03	02/06/89	02/09/89	6.2
Eunice MW-2						

Sample Id	F	1850. F 16	umhos/cm	uq/ml	uq/ml	mq/L as N
	2	μα Na	3200	2.3	380	0.360
			3100			
			3200			
			3200			
	2 	5.0	2900	<u>,, , 0,</u> 10	270	0. 28
TODION TWICE			3000			



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Austin REPORT
Results By Test

RAS

Work Order # 89-02-057 Continued From Above

	Aice MW-2	01 Eunice MW-1	SAMPLE Id	SAMPLE Sample Id
	(0.002	<0.002	Test: PB G	Test: F IC mg/L
6. 88 6. 89	6, 92 6, 90 6, 93	6, 94 6, 90 6, 89	Test: DH units	Test: MHU 1000 3000 3000
	0.013*	0.006*	Test: PHEN	Test: MN E
	<0.005	<0.005	Test: SE G	Test: NA E
	. 28	1200	Test: <u>504</u> IC	Test: NO3

RADIAN

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Austin REPORT Results By Test

RAS

Work Order # 89-02-057

		יי דיי דיי דיי דיי דיי דיי דיי דיי דיי	02			ב מיינים ביארים ביא	01	SAMPLE Id
69	70	74	2 71	44	41			E Test: IOC mg/1
0.13	0.14	0.06	0. 11	0. 13	0. 11	0.11	0. 13	Test: TOX
								and the state of t
- 								

Page 5 Received: 02/03/89

SAMPLE ID Eunice MW-1

RAS Austin

REPORT

Work Order # 89-02-057

Results by Sample

FRACTION OIJ TEST CODE EPA602 NAME EPA method 602

Date & Time Collected 02/02/89 Category Category

VER1F1ED 2

INJECTED 02/03/82

ANALYST

FILE #

SLINO

CAS#

COMPOUND RESULT DET LIMIT

108-88-3

71-43-2

Benzene

1.6

0.20

100-41-4

Toluene

0. 七*

0.20

3.9

0.30

k-thylbenzene

N 0.30

E 0.30

E 0.40

95-50-1

1,2-Dichlorobenzene

541-73-1

106-46-7

108-90-7

1,3-Dichlorobenzene

1,4-Dichlorobenzene

Chlorobenzene-A

3

0.40

SURROGATES

a, a, a-Trifluorotoluene

8-08-8

99% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

not detected at detection limit

analyzed

less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

Page:6 Received: 02/03/89 SAMPLE ID Eunice MW-1

Austin

RAS

REPORT

Results by Sample

Work Order # 89-02-057 Continued From Above

FRACTION OIJ TEST CODE EPA602 NAME EPA method 602

Date % Time Collected 02/02/89 Category

A-Chlorobenzene and otherwise noted. Quantitated as chloropenzene unless xylene co-elute.

Page:7 Received: 02/03/89	RAS - Austin REPORT Results by Sample	Work Order # 89-02-057
SAMPLE ID Eunice MW-1	FRACTION OIL TEST CODE HG C Date % Time Collected 02/02/89	NAME Mercury, cold vapor Category
	VERIFIED	RHH
ANALYST KCP	ANALYZED 02/10/89	UNITS ug/ml
	ANALYTE RESULT DET LIMIT	
	MercuryND0.0002	
NOTES AND DEFINITIONS F DET LIMIT = DETECT ND = not detected NA = not analyzed * = less than 5 ti NNA = not availabl	IONS FOR THIS REPORT. DETECTION LIMIT ected at detection limit lyzed n 5 times the detection limit ailable	
SAMPLE ID <u>Eunice MW-1</u>	Pate % Time Collected 02/02/89	NAME Turbidity Category
	VERIFIED	
INSTRMT HACH	ANALYZED 02/03/89	UNITS NTU
	ANALYTE RESULT DET LIMIT	
	Turbidity 54 1.0	



Page:8 Received: 02/03/89	RAS - Austin REPORT Results by Sample	Work Order # 89-02-057 Continued From Above
SAMPLE ID Eunice MW-1	FRACTION O1A TEST CODE TURB Date & Time Collected 02/02/89	NAME Turbidity Category
NOTES AND DEFINITIONS FOR THIS R DET LIMIT = DETECTION LIMIT ND = not detected at detect NA = not analyzed * = less than 5 times the d N\A = not available	THIS REPORT. detection limit the detection limit	
SAMPLE ID Eunice MW-1	FRACTION 01J TEST CODE XYLENE Date & Time Collected 02/02/89	NAME Xulenes, EPA 602 Category
ANALYST BM INSTRMT G	VERIFIED FILE #UN	EDCL UNITSug/L
CAS # 106-42-3 108-38-3 95-47-6	COMPOUND RESULT DET LIMIT p-Xylene	
8-80-86	SURROGATES a, a, a-Trifluorotoluene 99% recovery	£
ND DEFINITIONS FOR T LIMIT = DETECTION = not detected at	THIS REPORT. LIMIT detection limit	
analyzed than 5 tim t available olumn confi	the detection limit ation NOT performed	
ss other		

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Received: 02/03/89

SAMPLE ID Eunice MW-1

RAS Austin

REPORT

Results by Sample

Work Order # 89-02-057 Continued From Above

Category

FRACTION 01J TEST CODE XYLENE NAME Xylenes, EPA 602

Date & Time Collected 02/02/89

Category

Chlorobenzene and p-xylene co-elute = daily EPA standard recovery outside 95% confidence interval.

otherwise noted Quantitated as chlorobenzene unless



Page, 10 SAMPLE ID Eunice MW-2 Received: 02/03/89

RAS

Austin

REPORT

Work Order # 89-02-057

Results by Sample

FRACTION 02J TEST CODE EPA602
Date & Time Collected 02/02/89 NAME EPA method 602 Category

ANALYST

FILE #

VERIFIED

2

SLING

INJECTED 02/06/89

COMPOUND RESULT DET LIMIT

108-88-3 71-43-2

CAS#

Benzene 480

50

100-41-4

Toluene 130

5.0

Ethylbenzene 110

Chlorobenzene-A

ND

1,4-Dichlorobenzene 台

ND

10

95-50-i

541-73-1

106-45-7

108-90-7

1,2-Dichlorobenzene

1,3-Dichlorobenzene

SURROGATES

a, a, a-Trifluorotoluene 105% recovery

8-60-86

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at datection limit

NA = not analyzed

than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed

unless otherwise noted

Page:11 Received: 02/03/89 SAMPLE ID Eunice MW-2

> RAS Austin

Results by Sample

REPORT

Work Order # 89-02-057 Continued From Above

FRACTION 02J TEST CODE EPA602 Date % Time Collected 02/02/89

NAME EPA method 602

Category

A-Chlorobenzene and otherwise noted. Quantitated as chionobenzene unless -xylene co-elute

SAMPLE ID Eunice MW-2 Page: 12 Received: 02/03/89 SAMPLE ID Eunice MU-2 ANALYST INSTRMT ANALYST I TRMT NOTES AND DEFINITIONS FOR THIS REPORT. N\A = not available NA = not DET LIMIT = DETECTION LIMIT mot detected at detection limit less than 5 times the detection limit analyzed Turbidity ANALYTE ANALYTE Mercury ANIALYZED 02/03/89 ANALYZED 02/10/87 RAS RESULT DET LIMIT RESULT 95 FRACTION <u>02A</u> TEST CODE TURB Date & Time Collected <u>02/02/89</u> FRACTION <u>021</u> TEST CODE <u>HG C</u>
Date % Time Collected <u>02/02/89</u> Austin E Results by Sample DET LIMIT 0.0002 REPORT VERIFIED VERIFIED SLINO SLINA NAME Turbidity NAME Mercury, cold vapor RHI 5 Work Order # 89-02-057 uq/ml NIC Category Category



Page: 13 Received: 02/03/89	RAS - Austin REPORT Results by Sample	Work Order # 89-02-05 Continued From Above
SAMPLE ID Eunice MW-2	FRACTION O2A TEST CODE TURB Date & Time Collected 02/02/89	NAME Turbidity Category
NOTES AND DEFINITIONS FO DET LIMIT = DETECTI ND = not detected a NA = not analyzed * = less than 5 tim N\A = not available	TON THIS REPORT at detection limes the detect	
SAMPLE ID Eunice MW-2	FRACTION 02J TEST CODE XYLENE Date % Time Collected 02/02/89	NAME Xylenes, EPA 602 Category
ANALYST BM INSTRMT D	VERIFIED INJECTD 02/06/89 FILE #UN	ED <u>CL</u> UNITS <u>ug/L</u>
CAS # 106-42-3 108-38-3 95-47-6	COMPOUND RESULT DET LIMIT 2-3 p-Xylene-A 83 5.0 3-3 m-Xylene 120 5.0 0-Xylene 120 2.5	
8-80-86	SURROGATES -8 a,a,a-Trifluorotoluene 105% recovery	
AND DEFINIT ET LIMIT = D = not det A = not ana	FOR THIS REPORT. TION LIMIT at detection limit	
ot avai		
7	e noted.	

Page 14 SAMPLE ID Eunice MW-2

Received: 02/03/89

RAS Austin

REPORT

Results by Sample

Work Order # 89-02-057 Continued From Above

Date & Time Collected 02/02/89 NAME Xylenes, EPA 602

Category

= daily EPA standard 95% confidence interval. recovery outside

Chlorobenzene and progrene co-elute Quantitated as chlorobenzene unless otherwise noted

Page:15 Received: 02/03/89 ™ E ID reagent blank

> Austin Results by Sample

RAS

REPORT

Work Order # 89-02-057

FRACTION 03A TEST CODE EPA602 NAME EPA method 602

Date & lime Collected not specified Category

95-50-1	541-73-1	106-46-7	108-90-7	100-41-4	108-88-3	71-43-2		CL_	
jO−i 1,2-Dichlorobenzene	73-1 1,3-Dichlorobenzene	6-7 1,4-Dichlorobenzene	70-7 Chlorobenzene-A	µ1−4 Ethylbenzene			CAS# COMF	INJECTED 02/06/89	
ND NE ND	nzene <u>ND</u>	nzene <u>ND</u>	ne-A ND	izene Ni	Toluene ND	Benzene ND	COMPOUND RESULT	# #	
0.40	0. 40	0.30	0.30	0. 30	0. 20	0. 20	RESULT DET LIMIT	UNITS _	VERIFIED
								ug/L	CL

SURROGATES

98-08-€ a, a, a-Trifluorotoluene N/A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

SAMPLE ID reagent blank Page: 16 Received: 02/03/89

> RAS Austin

> > REPORT

Results by Sample

Work Order # 89-02-057 Continued From Above

FRACTION 03A TEST CODE EPA602 NAME EPA method 602
Date % Time Collected not specified Category

Category

A-Chlorobenzene and otherwise noted Quantitated as chlorobenzene unless p-xylene co-elute

Page-17 Received: 02/03/89

SAMPLE ID reagent blank

RAS Austin

Work Order # 89-02-057

Category

FRACTION OBA TEST CODE XYLENE NA Results by Sample TEST CODE XYLENE NAME Xylenes, EPA 602

VERIFIED C

INJECTD 02/06/89

ANALYST

106-42-3 108-38-3 95-47-6 CAS # p-Xylene-A COMPOUND m-Xylene o-Xylene RESULT B DET LIMIT 0. <u>20</u> 0. 20 0. 10

UNITS

SURROGATES

a, a, a-Trifluorotoluene N/A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

98-08-8

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute

Quantitated as chlorobenzene unless

Paga Received: 02/03/89

70 72 00

Stin REPORT 03/01/89 15:42:55

Work Order # 89-02-058

TYPE	TRANS UPS	TAKEN ME	WORK ID Eunice	FACILITY Odessa, TX		CLIENT PHILLIPS P	ATTEN Linda Bendele	Austin	BI	TO Radian	
			er og de	TX	Phillips Petroleum	S P SAMPLES 5	endele		al der i er en	in against a septiment and the second	

HONE	AT TEN			fear are i	PREPARED
512-454-4797		Austin, TX 78720-1088	PU Box 201088	8-01 Mo-pac Bl.	Redian Analytical Services

and Ville

CONTACT BENDELE

Footnotes and Comments

Potential error Indicates a value less for such than 5 low values times ranges the detection limit. between 50 and 100%

an interferent present. specific matrix was not within acceptable limits indicating Indicates that spike recovery for this analysis on the

의의의의의 CAMDI T INCATTETEATION

INVOICE P. D. #

under separate cover

10000 07070

2097

PA method 602

igestion, method 6010

igestion, method

3020

1.011

ICPES

luoride,

C

otal coliform

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ICPES

aum Lum,

11 1 111111

hloride,

PHEN

otal phenolics

ead, graphite AA itrate, colorimetric langanese,

ICPES

od i um,

1CPES

ercury, cold vapor

presinc conductance

EST CODES and NAMES used on this report

SILVET Arsenic,

m

Page 2 Received: 02/03/89

- Austin REPORT
Results By Test

RAG

Work Order # 89-02-058

RADIAN

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RAS -- Austin REPORT Results By Test

Work Order # 89-02-058 Continued From Above

3200 3200	SAMPLE !	Test: F IC	Test: MHO	Test: MN E	Test: NA E	Test: NO3
	·		3200			
3200			3200			
			3200			

SAMPLE	Test: PB G	Test:PH	Test: PHEN	Test: SE G	Test: 504 IC mg/L as 504
01	<0.001R	6. 92	(0.005	<0.02E	600
EUNICE SE		6. 90			
		6. 91			
		6. 90			
02	<0.001	7. 10	<0.005	<0.02E	1200
Eunice MW-4		7. 02			
		7. 02			
		7.06			

Page 4 Received: 02/03/89

RAS - Austin REPORT Results By Test

Work Order # 89-02-058

		1	02					SAMPLE I	
ĵ	15	16	14	20	21	N.	200	Test: ICC mg/1	
0. 11	0. 10	0. 10	0. 11	0. 19	0. 24	0. 23	0. 23	[est: IDX	

SAMPLE ID Eunice MW-3 Page 5 Received: 02/03/89

> RAS Austin

> > REPORT

Work Order # 89-02-058

Results by Sample

FRACTION <u>01J</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>

Date % Time Collected <u>02/02/89</u> Category

			Ç _E	VERIFIED	은
HETRMT D	INJECTED	FILE # _		ONITS _	ug/L
	CAS#	COMPOUND	RESULT I	DET LIMIT	
	71-43-2	Benzene	1.6	0. 20	
	108-88-3	Toluene	UU	0. 20	
	100-41-4	Ethylbenzene	0.6*	0. 30	
	108-90-7	Chlorobenzene-A	NÜ	0.30	
	106-46-7	1,4-Dichlorobenzene	NID	0. 30	
	541-73-1	1,3-Dichlorobenzene	NO	0.40	
	95-50-1	1,2-Dichlorobenzene	ND	0.40	

NOTES AND DEFINITIONS FOR THIS REPORT.

8-80-86

a, a, a-Trifluorotoluene

99% recovery

SURROGATES

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

Page 6

SAMPLE ID Eunice MW-3 Received: 02/03/89

> RAS Austin

REPORT

Work Order # 89-02-058 Continued From Above

Results by Sample

FRACTION <u>Old</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>

Date & Time Collected <u>02/02/89</u> Category Category

A-Chlorobenzene and Quantitated as chi otherwise noted. yylene comelute

T,		ANALYST LKM INSTRMT HACH		SAMPLE ID Eunice MW-3	NOTES AND DEFINITIONS FO DET LIMIT = DETECTI ND = not detected a NA = not analyzed * = less than 5 tim N\A = not available			ANALYST KCP		SAMPLE ID Eunice MW-3	Page 7 Received: 02/03/89
Turbidity <u>320</u> 1.0	ANALYTE RESULT DET LIMIT	ANALYZED 02/03/89		Date % Time Collected (IONS FOR THIS REPORT. DETECTION LIMIT ected at detection limit lyzed n 5 times the detection limit ailable	Mercury ND 0.0002	ANALYTE RESULT DET LIMIT	ANALYZED 02/15/89		FRACTION OIL TEST CODE HG C Date % Time Collected 02/02/89	RAS - Austin REPORT Results by Sample
		UNITSUTU	VERIFIED LM	d 02/02/89 NAME Turbidity Category				UNITSuq/ml	VERIFIED RHH	DE HG C NAME Mercury, cold vapor)2/02/89 Category	\T



Page 8 Received: 02/03/89	RAS - Austin REPORT Results by Sample	Work Order # 89-02-058 Continued From Above
SAMPLE ID Eunice MW-3	FRACTION OIA TEST CODE TURB	NAME Turbidity Category
NOTES AND DEFINITIONS FOR DET LIMIT = DETECTION ND = not detected at NA = not analyzed	FOR THIS REPORT. TION LIMIT at detection limit imes the detection limit	
SAMPLE ID Eunice MW-3	FRACTION OID TEST CODE XYLENE Date % Time Collected 02/02/89	NAME Xylenes, EPA 602 Category
	VERIF1ED	CL
ANALYST BM INSTRMT D	INJE(TD 02/06/89 FILE #U	UNITSug/L
CAS # 106-42-3 108-38-3 95-47-6	COMMUND RESULT DET LIMIT p-Xulenc A	
8-80-85	SURROGATES a,a,a-Trifluorotoluene <u>59%</u> recovery	, g
ND DEFINITIONS T LIMIT = DETEC	FOR THIS REPORT. TION LIMIT at detection limit	
not a less t	the detection limit	
N\A = not available Second column confirmation unless otherwise noted.	rmation NOT performed	
010010150		

Page 9 SAMPLE ID Eunice MU-3 Received: 02/03/89

Austin

RAS

Results by Sample REPORT

Work Order # 89-02-058 Continued From Above

FRACTION 01J TEST CODE XYLENE NAME Xylenes, EPA 602

Date % Time Collected 02/02/89 Category

Chlorobenzene and p-xylene co-elute = daily EPA standard recovery outside Quantitated as chlorobenzene unless 95% confidence interval. otherwise noted



Page 10 Received: 02/03/89 SAMPLE ID Eunice MW-4

RAS - Austin

REPORT

Work Order # 89-02-058

Results by Sample

FRACTION 02J TEST CODE EPA602
Date % Time Collected 02/02/89

602 NAME EPA method 602

INJECTED 02/07/89 FILE #

ANAL YST INSTRMT

5

UNITS ug/L

VERIF1ED

6

COMPOUND RESULT DET LIMIT

Benzene 0.5* 0.20

71-43-2

CAS#

108-88-3 Toluene <u>ND 0.20</u>

Ethulbenzene <u>0.4*</u> 0.30

Chlorobenzene-A ND 0.30

1,4-Dichlorobenzene <u>ND</u> 0.30

1,3-Dichlorobenzene ND 0.40

541-73-1

95-50-1

106-46-7

108-90-7

100-41-4

SURROCATES

98-08-8 a.a.a.Trifluorotoluene 100% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

Page 11 Received: 02/03/89 SAMPLE ID Eunice MN-4

Austin

REPORT

Work Order # 89-02-058 Continued From Above

Results by Sample

Category

FRACTION 02J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 02/02/89 Category

A-Chlorobenzene and Quantitated as chio otherwise noted. -xylene co-elute robenzene unless



Page 12 Received: 02/03/89	RAS - Austin REPORT Results by Sample	Work Order # 89-02-058
SAMPLE ID Eunice MW-4	PRACTION <u>021</u> TEST CODE HG C Date & Time Collected <u>02/02/89</u>	G C NAME Mercury, cold vapor /89 Category
	∨ E	VERIF1ED RHH
INSTRMT 403	ANALYZED 02/15/89	UNITSug/ml
	ANALYTE RESULT DET LIMIT	
	Mercury ND 0.0002	
NOTES AND DEFINITIONS DET LIMIT = DETEC ND = not detected NA = not analyzed * = less than 5 t N\A = not availab	IONS FOR THIS REPORT. DETECTION LIMIT ected at detection limit lyzed n 5 times the detection limit ailable	
SAMPLE ID Eunice MW-4	FRACTION 02A TEST CODE TURB Date & Time Collected 02/02/89	VRB NAME Turbidity Category
	V. F. C. F. F. C. F. C. F. C. F. C. F. F. C. F. C. F.	VERIFIEDLM
ANALYST LKM INSTRMT HACH	ANALYZED <u>02/03/89</u>	UTN STINU
	ANALYTE RESULT DET LIMIT	
1,1	Turbidity 77 10	

RADIAN

Page 13 SAMPLE 1D Eunice MW-4 SAMPLE ID Eunice MW-4 Received: 02/03/89 NOTES AND DEFINITIONS FOR THIS REPORT ANALYS'I NOTES AND DEFINITIONS FOR INSTRMT NA = not analyzed NA = not analyzed NI) = not detected ND = not detected at detection limit NIA = not available DET LIMIT = DETECTION LIMIT Second column confirmation NOT performed N\A = not available * == less than 5 times the detection limit DET LIMIT = DETECTION LIMIT unless otherwise noted. less than 5 times the detection limit 108-38-3 106-42-3 95-47-6 CAS # 98-08-8 at detection limit THIS REPORT INJECTD 02/07/89 p-Xylene-A RAS COMPOUND m-Xylene o-Xylene a, a-Trifluorotoluene FRACTION <u>02J</u> TEST CODE XYLE Date & Time Collected <u>02/02/89</u> FRACTION <u>O2A</u> TEST CODE <u>TURB</u>
Date & Time Collected <u>O2/O2/89</u> Austin Results by Sample RESULT SURROGATES FILE # DET LIMIT 0. 20 TEST CODE XYLENE REPORT 100% recovery VER IF 1ED UNITS NAME Xylenes, EPA 602 NAME Turbidity Work Order # 89-02-058 Continued From Above Category Category

1000 SAMPLE ID Funice MW-4 Received: 02/03/89

> RAS Austin

> > REPORT

Continued From Above Work Order # 89-02-058

Results by Sample

FRACTION <u>02J</u> TEST CODE XYLENE Date & Time Collected <u>02/02/89</u> NAME Xylenes, EPA 602 Category

0 = daily EPA standard recovery outside Chlorobenzene and prillene co-elute 95% confidence interval. Quantitated as chlorobenzene unless otherwise noted.



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> RAS Austin

> > REPORT

Work Order # 89-02-058

Kesults by Sample

SAMPLE ID Eunice MW-4 duplicate

FRACTION 03B TEST CODE EPA602 NAME EPA method 602 Date % Time Collected 02/02/89 Category

95-50-1	541-73-1	106-46-7	108-90-7	100-41-4	108-88-3	71-43-2	CAS#	ANALYST CL INSTRMT D IN	
1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Chlorobenzene-A	Ethylbenzene	Toluene	Benzene	COMPOUND	INJECTED 02/07/89 FILE # _	
ND 0.40	ND 0.40	0. 30	ND 0. 30	0. 6* 0. 30	ND 0. 20	0.84 0.20	RESULT DET LIMIT	UNITS	VERIFIEDCL
								ug/L	I

SURROGATES

8-80-86 a, a, a-Trifluorotoluene

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* - less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

Page 16 Received: 02/03/89

RAS S

REPORT

Work Order # 89-02-058 Continued From Above

SAMPLE ID Eunice MW-4 duplicate

Austin Results by Sample

FRACTION 03B TEST CODE EPA602 NAME EPA method 602
Date % Time Collected 02/02/89 Category

A-Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless

otherwise noted.

Page 17 SAMPLE ID Eunice MW-4 duplicate Received: 02/03/89

RAS Austin

REPORT

Work Order # 89-02-058

Results by Sample

FRACTION <u>03B</u> TEST CODE XYLENE NAME Xylenes, EPA 602

Date & Time Collected <u>02/02/89</u>

Category Category

VERIFIED

ANALYST INSTRMT

INJECTD 02/07/89 FILE #

SLINA

108-38-3 106-42-3 95-47-6 CAS # p-Xylene-A COMPOUND m-Xylene o-Xylene RESULT 0.5* DET LIMIT 0 20

a, a, a-Trifluorotoluene SURROGATES 77% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

98-08-8

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

= daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless

otherwise noted

Page 18 Received: 02/03/89

SAMPLE ID trip blank

RAS Austin

REPURT

Work Order # 89-02-058

Results by Sample

FRACTION 04A TEST CODE EPA602 NA
Date & Time Collected not specified TEST CODE EPA602 NAME EPA method 602

Category

VEK IF IED

2

INJECTED 02/07/89

ANALYST INSTRMT

FILE

SLING

CAS#

71-43-2

COMPOUND RESULT DET LIMIT

108-88-3

Benzene

N ļ 0.20

100-41-4

108-90-7

Ethylbenzene Toluene H

0.20

N 0.30

106-46-7

3 0.30

Chlorobenzene-A

1,4-Dichlorobenzene

0.30

541-73-1

95-50-1

1,2-Dichlorobenzene

E

1,3-Dichlorobenzene B

0.40

B 0.40

SURROGATES

98-08-B a, a, a-Trifluorotoluene 100% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

SAMPLE ID trip blank Pagé 19 Received: 02/03/89

> RAS Austin

REPORT

Work Order # 89-02-058 Continued From Above

otherwise noted.

Quantitated as chlorobenzene unless

Results by Sample

A-Chlorobenzene and p_xylene co-elute FRACTION 04A TEST CODE EPA602 NAME EPA method 602
Date % Time Collected not specified Category

Page 20 Received: 02/03/89

SAMPLE ID trip blank

RAS Austin

REPORT

Work Order # 89-02-058

Category

Results by Sample

FRACTION O4A Date & Time Collected not specified TEST CODE XYLENE NAME Xylenes, EPA 602

VERIFIED 임

ANAL YST INSTRMT 2

INJECTD 02/07/89

FILE #

UNITS

p-Xylene-A COMPOUND m-Xylene o-Xylene RESULT DET LIMIT 388 0. 20 0. 20 0. 10

105-42-3 108-38-3 CAS #

95-47-6

98-08-8

SURROGATES

a, a, a-Trifluorotoluene

100% recovery

NOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

Q = daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute

Quantitated as chlorobenzene unless otherwise noted.

Page 21 Received: 02/03/89

SAMPLE ID reagent blank

Austin

帝民

Work Order # 89-02-058

Results by Sample

FRACTION <u>O5A</u> TEST CODE <u>EPA602</u> NA Date & Time Collected not <u>specified</u> TEST CODE EPA602 NAME EPA method 602 Category

ANALYST INSTRMT 6 CAS# INJECTED 02/07/89 COMPOUND FILE

> VERIFIED CL

UNITS

RESULT DET LIMIT

71-42-2 Benzene NE 0.20

100-41-4 108-86-3 Toluene 3 0.20

108-90-7 Chlorobenzene-A thylbenzene 20 Q. 0.30 0.30

541-73-1 106-46-7 1,3-Dichlorobenzene 1,4-Dichlorobenzene Z. 3 0.40 0.30

1,2-Dichlorobenzene GR 0.40

95-50-1

SUKROGATES

98-08-8 a, a, a-Trifluorotoluene N/A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT - DETECTION LIMIT

ND = not detected at detection limit

analyzed

less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

SAMPLE ID reagent blank Page 22 Received: 02/03/89

RAS

Work Order # 89-02-058 Continued From Above

Austin REPORT Results by Sample

FRACTION 05A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected not specified Category

A-Chlorobenzene and paxylene co-elute. otherwise noted. Quantitated as childrobenzene unless

Page 23 SAMPLE ID reagent blank Received: 02/03/89

> RAS Austin

Work Order # 89-02-058

Results by Sample

VERIFIED

FRACTION 05A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected not specified Category

INJECTD 02/07/89 FILE #

SLINA

106-42-3 108-38-3 95-47-6 p-Xylene-A COMPOUND m-Xylene o-Xylene RESULT DET LIMI'I B S 0. 20 0. 10

CAS #

SURROGATES

a, a, a-Trifluorotoluene

N/A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

Second column confirmation NOT performed N\A = not available

Q = daily EPA standard recovery outside unless otherwise noted

Chlorobenzene and p-xylene co-elute 95% confidence interval.

Quantitated as chlorobenzene unless

REPORT FLAGS

- R Indicates that the matrix spike recovery for this analysis is not within acceptable limits indicating an interferent present.
- + Indicates that the RPD between the percent recoveries of the MS and MSD is not within acceptable limits.
- @ Indicates that the analytical spike recovery for this analysis is not within acceptable limits indicating an interferent present.
- B Sample result was greater than four times the spike added concentration, therefore the spike recovery should not be considered.
- Indicates the RFD of the duplicate analysis is not within acceptable limits.
- * Indicates that the value obtained is less than five times the detection limit. Potential error for such low values range between 50 % and 100 %.
- E Indicates that the reported value is estimated due to the presence of an interference.
- s Indicates that a value is determined by Method of Standard Addition.
- Q Daily EFA QC recovery outside 95% confidence limit.
- ** Surrogate recovery is not within acceptable limits. This indicates that a possible interference is present.



4th questes	SAMPLE IDENTIFICATION O1 Lee MW-1 O2 Lee MW-2 O3 Lee MW-3 O4 Lee MW-1 O5 Eunice MW-1 O6 Unice MW-2 O7 Eunice MW-3 O8 Eunice MW-4		WORK ID Lee and Eunice radiochemistry TAKEN MF TRANS UPS	ATTEN Linda Bendele CLIENT PHILLIPS P COMPANY Phillips Petroleum FACILITY Odessa, TX	RAS - Phillips Petroleum
	TEST CODES and NAMES used on this report Gross alpha radiation Gross beta radiation Radium 226	ndicates that spike recovery for cific matrix was not within accep interferent present.	Footnotes and Comments * Indicates a value less than 5 times Potential error for such low values r	PO Box 201088 AUSTIN, TX 78720-1088 ATTEN PHONE 512-454-4797	REPORT Redian Analytical Services
	on this report	analysis on the limits indicatir	s the detection limit.	CERTIFIED BY CONTACT BENDELE	Work Order # 89-02-208

RADIAN

age 2 eceived: 02/03/89 Austin REPORT REPORT

Work Order # 89-02-208

Eunice MW-4 Eunice MW-3 Eunice MW-2 Eunice MW-1 Lee MW-4 Sample Id Lee MW-3 Les MW-2 SAMPLE 11 (2) 12 pci/L 8.9 (1.2) Test: ALPHA BC1/ 15 (2) PCi/L 11 (2) 17 (3) 7 (2) 7 (2) 7 (2) 7 (2) Test: BETA 28 (3) 45 (4) pci/L 15 (3) pci/L 12 (1) pci/L (3) PC1/L PC1/L (2) 0.24(.03) 0.35(.03) 0.57(.04) 0.45(.04) 0.80(.05) pci/L 1.62(.07) Test: RA 226 0.93(.05)

Received: 02/03/89

RAS Austin

REPORT

Test Methodology

Work Order # 89-02-208

TEST CODE ALPHA NAME Gross alpha radiation

confidence level. The value in parentheses is a + or - one sigma value. Results are thus expressed as: value (+ or - 1 sigma). One sigma = one standard deviation, 68%

TEST CODE BETA NAME Gross beta radiation

confidence level. expressed as: value (+ or - 1 sigma). One sigma = one standard deviation, 68% The blue in parentheses is a + or - one sigma value. Results are thus

TEST CODE RA 226 NAME Radium 226

68% confidence level. expressed as: The value in parentheses is a + or - one sigma value. value (+ or - one sigma). One sigma = one standard deviation, Results are

	adian l.l ustin	02B 03B	MW=1 EUN MW=2 EUN MW-3 EUN MW-4 EUN	IÇE	•	
EPA METHO	D 8080	Lab 1	No: 89-02	-048		
		RESUI	LTS IN ug	/L		
CAS #	COMPOUND	01B	02B	03B	04B	
58-89-9 72-20-8 8001-35-5 72-43-5	gamma-BHC,(Lindane) Endrin Toxaphene Methoxychlor	<0.038 <0.038 <1.9 <0.19	<0.019 <0.95	<0.009 <0.009 <0.45 <0.045	<0.009 <0.45	
	SURROGATE RECOVERIES	(result	ts in % r	ecovery)		

57

55

102

112

135

114

99

85

NOTES AND DEFINITIONS FOR THIS REPORT.

2,4,5,6-Tetrachloro-m-xylene

OC = OUTSIDE CONTROL LIMITS.

Dibutylchlorendate

* = LESS THAN 5 TIMES THE DETECTION LIMIT.

B = DETECTED IN REAGENT BLANK; BACKGROUND SUBTRACTION NOT PERFORMED.

ND = NOT DETECTED AT DETECTION LIMIT.

NA = NOT ANALYZED.

 $N\setminus A = NOT AVAILABLE.$

NS = NOT SPIKED.

J = DETECTED AT LESS THAN THE SPECIFIED DETECTION LIMIT.

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RADIAN

05A REAGENT BLANK

Client: Radian

Bl.1 Austin

EPA METHOD 8080

Lab No: 89-02-048

RESULTS IN ug/L

CAS #	COMPOUND	05A
58-89-9	gamma-BHC, (Lindane)	<0.002
72-20-8	Endrin	<0.002
8001-35-2	Toxaphene	<0.10
72-43-5	Methoxychlor	<0.010

SURROGATE RECOVERIES (results in % recovery)

results in a recovery

Dibutylchlorendate 103 2,4,5,6-Tetrachloro-m-xylene 89

NOTES AND DEFINITIONS FOR THIS REPORT.

QC = OUTSIDE CONTROL LIMITS.

* = LESS THAN 5 TIMES THE DETECTION LIMIT.

B = DETECTED IN REAGENT BLANK; BACKGROUND SUBTRACTION NOT PERFORMED.

ND = NOT DETECTED AT DETECTION LIMIT.

NA = NOT ANALYZED.

N A = NOT AVAILABLE.

NS = NOT SPIKED.

J = DETECTED AT LESS THAN THE SPECIFIED DETECTION LIMIT.

Client: Radian

B1.1

Austin

01A MW-1 EUNICE 02A MW-2 EUNICE

03A MW-3 EUNICE

04A MW-4 EUNICE

EPA METHOD 8150

Lab No: 89-02-048

RESULTS IN ug/L

CAS	COMPOUND	01A	02A	03A	04A
94-75-7	2,4-D	<0.48	<0.48	<0.48	18 C
93-72-1	2,4,5-TP (Silvex)	<0.14	<0.14	<0.14	<0.14

SURROGATE RECOVERIES

(results in % recovery)

2,4-Dichlorophenyl acetic acid

114 98

B 13QC

109

NOTES AND DEFINITIONS FOR THIS REPORT.

QC = OUTSIDE CONTROL LIMITS.

* = LESS THAN 5 TIMES THE DETECTION LIMIT.

C = RESULT CONFIRMED BY SECOND COLUMN ANALYSIS.

ND = NOT DETECTED AT DETECTION LIMIT.

NA = NOT ANALYZED.

 $N\setminus A = NOT AVAILABLE.$

NS = NOT SPIKED.

05B REAGENT BLANK

Client: Radian

B1.1 Austin

EPA METHOD 8150

Lab No: 89-02-048

RESULTS IN ug/L

CAS # COMPOUND 05B

94-75-7 2,4-D <0.50

93-72-1 2,4,5-TP (Silvex)

SURROGATE RECOVERIES (results in % recovery)

2,4-Dichlorophenyl acetic acid 102

NOTES AND DEFINITIONS FOR THIS REPORT.

QC = OUTSIDE CONTROL LIMITS.

* = LESS THAN 5 TIMES THE DETECTION LIMIT.

C = RESULT CONFIRMED BY SECOND COLUMN ANALYSIS.

ND = NOT DETECTED AT DETECTION LIMIT.

NA = NOT ANALYZED.

 $N\setminus A = NOT AVAILABLE.$

NS = NOT SPIKED.

06A RECOVERY CHECK

Client: Radian

B1.1 Austin

EPA METHOD 8150

Lab No: 89-02-048

RESULTS IN %

CAS # COMPOUND 06A

94-75-7 2,4-D 99

93-72-1 2,4,5-TP (Silvex) 98

SURROGATE RECOVERIES (results in % recovery)

2,4-Dichlorophenyl acetic acid 107

NOTES AND DEFINITIONS FOR THIS REPORT.

QC = OUTSIDE CONTROL LIMITS.

* = LESS THAN 5 TIMES THE DETECTION LIMIT.

C = RESULT CONFIRMED BY SECOND COLUMN ANALYSIS.

ND = NOT DETECTED AT DETECTION LIMIT.

NA = NOT ANALYZED.

NA = NOT AVAILABLE.

NS = NOT SPIKED.



ODESSA, TEXAS 79762 4001 PENBROOK

January 19, 1989

Quarterly Groundwater Monitoring Analyses Artesia, Eunice, Lee and Lusk Plants

Mr. Dave Boyer Environmental Bureau Chief New Mexico Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Boyer:

Per your request, attached please find copies of the third quarter groundwater monitoring analyses for the above referenced plants.

If you should have any questions regarding this information, please contact me at (915) 367-1316.

Very truly yours,

Michael D. Ford

Environmental Analyst

Michael P. Food

MDF

Attachments

Received: 11/04/88

RAS Austin

stin REPORI 12/12/88 12:33:51

Work Order # 88-11-024

INVOICE	P. O. #	TYPE	TRANS	TAKEN	WORK ID	•		COMPANY	CLIENT	ATTEN		70	REPORT
under separate cover			UPS	<u>AL</u>	Eunice		Odessa, TX	Phillips Petroleum	PHILLIPS P SAMPLES 5	Linda Bendele	Austin	81. 1	Radian

PHONE	ATTEN			ВҮ	PREPARED
512-454-4797		st	PO Box 201088	8501 Mo-pac Bl.	Radian Analytical Services

CERTIFIED BY

CONTACT BENDELE

Phenolic samples diluted due ** Possible interference Unknown compounds present in Eunice MW-2 for 602 + xulene to colorimetry interference

Footnotes and Comments

Potential error for such Indicates a value less than 5 low values ranges between 50 and times the detection limit 100%

an interferent present. specific matrix was not within acceptable limits indicating Indicates that spike recovery for this analysis on the

EUNICE MW-1 Eunice MW-2 SAMPLE IDENTIFICATION reagent blank unice Equipment unice_MW-2 dup 3 rd QTR- 11/88 B-l'ank BAE AS G ALPHA CR E CD E BETA DG302(COLI =PA602 066010 Silver, Manganese, pecific conductance ercuru, otal coliform adm1 um, arıum, ross alpha radiatio ron, PA method 602 hloride, ross beta radiation rsenic, luoride, igestion, igestion, method nromium, ICPES cold vapor ICPES ICPES graphite ICPES TEST CODES and NAMES used on this report ICPES C method ICPES 0 R

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Page 2 Received: 11/04/88

RAS - Austin REPORT Results By Test

Work Order # 88-11-024

SAMPLE ;	Test: AG E	Test: ALPHA	Test: AS G	Test: BA E	Test: BETA
01	⟨0. 03	20 (4)	0.049	0.074	19 (4)
Eunice MW-1	⟨0, 03	5 (2)	0.012	<u>:</u> -	27 (4)
Eunice MW-2		pCi/L			pCi/L
SAMPLE :	Test: CD E	Test: CL IC	Test: COLI T	Test: CR E	Test: DG3020
01	<0.005	520		<0.03	11/17/88
Eunice MW-1 02	⟨0, 005	580	25000	⟨0. 03	11/17/88
Eunice MW-2 dup 1				<0.03	

02 11/18/88 10	SAMPLE Id O1 Eunice MW-1	E Test: DG6010 date complete	Test: <u>FE E</u> 0. 65	Test: F IC mg/L 3.4	1 1	Test: MHD
11/18/88 10			0. 65		:3 #	
11/18/88 10	·					3900
7::::: 8::-0			10	:	Ω	

Page 3 Received: 11/04/88

Austin REPORT
 Results By Test

RAS

Work Order # 88-11-024 Continued From Above

Eunice MW-2	SAMPLE Sample Id O1 Eunice MW-1	04 Eunice MW-2 dup	SAMPLE Id
	2 F		
320	Test: <u>NA E</u>	11/18/08	Test: DG6010
0. 53	Test: ND3 mq/L as N 0.08*		Test: FE E
<0.002	Test: PB G uq/ml (0.002		Test: F IC
6. 88 6. 90 6. 99 6. 88	Test: PH Units 6. 92 6. 91 6. 90	3100 3200 3400	Test:MHO
0. 05*	Test: PHEN mg/L as phenol 0.04*		Test: MN E

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Page 4 Received: 11/04/88

Austin REPORT
Results By Test

RAS

Work Order # 88-11-024 Continued From Above

Eunice MW-2	Eunice MW-1	SAMPLE Id SAMPLE	
_ව		fm	
2.06(.08) pci/L	0.58(.06) pci/L	Test: NA E	
<0.004	<0.004	Test: NO3 mg/L as N Test: SE G	
44	720	Test: PB G	
70 74@ 90 66	69 72 84 76	Test: PH 6.88 Test: TOC mg/L	
		Test: PHEN	

RADIAN

2

Received: 11/04/88

RAS - Austin

stin Results by Sample

Work Order # 88-11-024

SAMPLE ID Eunice MW-1

FRACTION OIJ TEST CODE EPA602
Date & Time Collected 11/03/88

NAME EPA method 602

Category

ANALYST INSTRMT 541-73-1 106-46-7 108-90-7 100-41-4 108-88-3 95-50-i 71-43-2 CAS# INJECTED 11/07/88 1,4-Dichlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene Chlorobenzene-A Ethylbenzene COMPOUND FILE # Benzene Toluene RESULT DET LIMIT 0.9* N ON ND F NO 8 VERIFIED 0. 20 0.20 0.40 0.40 0.30 0.30 0.30 SLINO C

SURROGATES

98-08-8 a, a, a-Trifluorotoluene 97% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

Received: 11/04/88

SAMPLE ID Eunice MW-1

REPORT

RAS

Austin REPO

Work Order # 88-11-024 Continued From Above

FRACTION <u>01J</u> TEST CODE <u>EPA602</u>
Date % Time Collected <u>11/03/88</u>

NAME EPA method 602 Category

A-Chlorobenzene and p-xylene co-elute otherwise noted. Quantitated as chlorobenzene unless

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RAS

Austin

REPORT

Work Order # 88-11-024

Page 7 SAMPLE ID Eunice MW-1 Received: 11/04/88 SAMPLE ID Eunice MW-1 ANALYST INSTRMT ANALYST INSTRMT NOTES AND DEFINITIONS FOR THIS REPORT. ND = not detected at detection limit NA = not analyzed N\A = not available DET LIMIT = DETECTION LIMIT less than 5 times the detection limit HACH KCP TAM Turbidity ANALYTE ANALYTE Mercury ANALYZED 11/20/88 ANALYZED 11/04/88 RESULT RESULT DET LIMIT 30 FRACTION <u>01A</u> TEST CODE TURB Date & Time Collected <u>11/03/88</u> FRACTION O11 TEST CODE HG C Date & Time Collected 11/03/88 B Results by Sample DET LIMIT 0.0002 VERIFIED VERIFIED UNITS UNITS NAME Turbidity NAME Mercury, cold vapor RH uq/ml NTU Category Category

RADIAN

Page 8 Received: 11/04/88	RAS - Austin REPORT Results by Sample	Work Order # 88-11-02 Continued From Above
SAMPLE ID Eunice MW-1	FRACTION O1A TEST CODE TURB Date & Time Collected 11/03/88	NAME Turbidity Category
NOTES AND DEFINITIONS FOR THIS R DET LIMIT = DETECTION LIMIT ND = not detected at detect NA = not analyzed * = less than 5 times the d N\A = not available	THIS REPORT. LIMIT detection limit the detection limit	
SAMPLE ID Eunice MW-1	FRACTION OLD TEST CODE XYLENE Date & Time Collected 11/03/88	NAME Xulenes, EPA 602 Category
ANALYST BM	VERIF1ED	EDCL
CAS # 106-42-3 108-38-3 95-47-6	COMPOUND RESULT DET LIMIT p-Xylene-A ND 0.20 m-Xylene ND 0.20 0-Xulene ND 0.10	
8-80-8	SURROGATES a,a,a-Trifluorotoluene <u>97</u> % recovery	g
ND DEFINITIONS FOR T LIMIT = DETECTION	THIS REPORT. LIMIT detection limit	
NA = not analyzed * = less than 5 times the c N\A = not available Second column confirmation	the detection limit ation NOT performed ted	

Page 9 Received: 11/04/88 SAMPLE ID Eunice MW-1

> RAS Austin

REPORT

Continued From Above Work Order # 88-11-024

Results by Sample

FRACTION 01J TEST CODE XYLENE NAME Xylenes, EPA 602

Date & Time Collected 11/03/88 Category Category

Q = daily EPA standard recovery outside Chlorobenzene and p-xylene co-elute. otherwise noted Quantitated as chlorobenzene unless 95% confidence interval.

. .

Page 10 Received: 11/04/88 SAMPLE ID Eunice MW-2

> Austin Results by Sample

RAS

Work Order # 88-11-024

FRACTION 02J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 11/03/88 Category

NALYST BM NSTRMT D	INJECTE CAS# 71-43-2	FILE #	VERIFIED	VERIFIEDUNITSDET LIMIT	na /r
	/1-43-2 108-89-3	Benzene Toluene	62	1.0	
	100-41-4	Ethylbenzene	(120)	1.5	
	108-90-7	Chlorobenzene-A	MD	1. 5	
	106-46-7	1,4-Dichlorobenzene	GN	1. 5	
	541-73-1	1,3-Dichlorobenzene	GIN	2.0	
	95-50-1	1,2-Dichlorobenzene	ND	2.0	

SURROGATES

98-08-8 a, a, a-Trifluorotoluene 167**% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

. .

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

Page 11 Received: 11/04/88 SAMPLE ID Eunice MW-2

> RAS Austin

REPORT

Work Order # 88-11-024 Continued From Above

Results by Sample

Category

FRACTION <u>02J</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>

Date % Time Collected <u>11/03/88</u> Category

A-Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless otherwise noted.

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Page 12 SAMPLE ID Eunice MW-2 SAMPLE ID Eunice MW-2 Received: 11/04/88 ANALYST INSTRMT ANALYST INSTRMT NOTES AND DEFINITIONS FOR THIS REPORT N\A = not available NA = not analyzed ND = not detected at detection limit DET LIMIT = DETECTION LIMIT less than 5 times the detection limit HACH КСР 403 Turbidity ANALYTE ANALYTE Mercury ANALYZED 11/04/88 ANALYZED 11/20/88 RAS RESULT RESULT DET LIMIT FRACTION <u>02A</u> TEST CODE TURB Date & Time Collected <u>11/03/88</u> FRACTION <u>O2I</u> TEST CODE <u>HG C</u>

Date & Time Collected <u>11/03/88</u> Austin R Results by Sample DET LIMIT 0.0002 REPORT VERIFIED VERIFIED SLINO SLINO NAME Turbidity NAME Mercury, cold vapor RH Work Order # 88-11-024 uq/ml Category Category

RADIAN

Page 13 SAMPLE ID Eunice MW-2 Received: 11/04/88 SAMPLE ID Eunice MW-2 ANALYST INSTRMT NOTES AND DEFINITIONS FOR THIS REPORT. NOTES AND DEFINITIONS FOR THIS REPORT. N\A = not available NA = not analyzed ND = not detected at detection limit Second column confirmation NOT performed N\A = not available NA = not analyzed ND = not detected at detection limit DET LIMIT = DETECTION LIMIT * = less than 5 times the detection limit DET LIMIT = DETECTION LIMIT less than 5 times the detection limit 표 106-42-3 108-38-3 98-08-8 95-47-6 INJECTD 11/07/88 p-Xylene-A RAS COMPOUND m-Xylene o-Xylene a, a, a-Trifluorotoluene FRACTION 02J TEST CODE XYLENE Date % Time Collected 11/03/88 FRACTION <u>O2A</u> TEST CODE TURB Date % Time Collected <u>11/03/88</u> Austin Results by Sample RESULT SURROGATES 82 FILE # DET LIMIT 0. 50 REPORT 167**% recovery -VERIFIED UNITS NAME Xylenes, EPA 602 NAME Turbidity Work Order # 88-11-024 Continued From Above Category Category

unless otherwise noted

Received: 11/04/88 SAMPLE ID Eunice MW-2

> RAS Austin

REPORT

Work Order # 88-11-024 Continued From Above

Results by Sample

PRACTION 02J TEST CODE XYLENE NAME Xylenes, EPA 602

Date & Time Collected 11/03/88

Category

Category

Q = daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute. Quantitated as chlorobenzene unless otherwise noted.

1

Page 15 SAMPLE ID Eunice Equipment Blank Received: 11/04/88

RAS Austin

REPORT

Work Order # 88-11-024

Results by Sample

FRACTION <u>03A</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>

Date & Time Collected <u>11/03/88</u> Category

	0.40	ND	1,2-Dichlorobenzene	95-50-1	
	0, 40	ND	1,3-Dichlorobenzene	541-73-1	
	0.30	ND	1,4-Dichlorobenzene	106-46-7	
	0, 30	ND	Chlorobenzene-A	108-90-7	
	0.30	ND	Ethylbenzene	100-41-4	
	0.20	ND	Toluene	108-88-3	
	0.20	1. 3	Benzene	71-43-2	
	DET LIMIT	RESULT	COMPOUND	CAS#	
ug/L	ONITS		FILE # _	PNI Ma	NSTRMT
CL	VERIFIED	<			

SURROGATES

98-08-8 a, a, a-Trifluorotoluene 99% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed
* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed

unless otherwise noted.

Page 16 Received: 11/04/88

SAMPLE ID Eunice Equipment Blank

RAS

REPORT

Work Order # 88-11-024 Continued From Above

Austin REPO

FRACTION <u>03A</u> TEST CODE <u>EPA602</u> Date & Time Collected <u>11/03/88</u> NAME EPA method 602 Category

A-Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless otherwise noted.

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Page 17 SAMPLE ID Eunice Equipment Blank Received: 11/04/88 RAS FRACTION <u>03A</u> TEST CODE XYLENDATE & Time Collected 11/03/88 Austin Results by Sample REPORT

Work Order # 88-11-024

TEST CODE XYLENE NAME Xulenes, EPA 602 Category

VER
IFIED .
CL

ANALYST INSTRMT

INJECTD 11/07/88

FILE #

UNITS

106-42-3 108-38-3 95-47-6 CAS # p-Xylene-A COMPOUND m-Xylene o-Xylene RESULT 38 DET LIMIT 0. 20 0. 20 0. 10

SURROGATES

a, a, a-Trifluorotoluene 99% recovery

NOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

98-08-B

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

= daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless otherwise noted

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Page 18 SAMPLE ID reagent blank Received: 11/04/88

Austin

RAS

REPORT

Work Order # 88-11-024

Results by Sample

FRACTION 05A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 11/03/88 Category

			VE	VERIFIEDCL
ANALYSTCL	INJECTE	FILE # _		UNITSUQ/L
	CAS#	COMPOUND	RESULT D	DET LIMIT
	71-43-2	Benzene	ND	0. 20
	108-88-3	Tolvene	ON	0. 20
	100-41-4	Ethylbenzene	ND	0.30
	108-90-7	Chlorobenzene-A	ND	0. 30
	106-46-7	1,4-Dichlorobenzene	ND	0. 30
	541-73-1	1,3-Dichlorobenzene	ND	0. 40
	95-50-1	1,2-Dichlorobenzene	ND	0.40

SURROGATES

8-80-86 a, a, a-Trifluorotoluene N\A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

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Page 19 Received: 11/04/88 SAMPLE ID reagent blank

Austin

RAS

Results by Sample

REPORT

Work Order # 88-11-024 Continued From Above

FRACTION <u>05A</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>

Date % Time Collected <u>11/03/88</u>

Category Category

A-Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless otherwise noted.

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Received: 11/04/88

RAS Austin

器品

Work Order # 88-11-024

Results by Sample

TEST CODE XYLENE

NAME Xulenes, EPA 602

Category

SAMPLE ID reagent blank FRACTION 05A Date & Time Collected 11/03/88

VERIFIED C

ANALYST INSTRMT

INJECTD 11/07/88

FILE #

SLINO

108-38-3 106-42-3 95-47-6 p-Xylene-A COMPOUND m-Xylene o-Xylene RESULT 388 DET LIMIT 0.20

CAS #

SURROGATES

a, a, a-Trifluorotoluene N\A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

8-80-8⁴

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

= daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute

Quantitated as chlorobenzene unless otherwise noted

RAS - Austin

Page 21 Received: 11/04/88

NonReported Work

Work Order # 88-11-024

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

M20 M10

SPR602 SPR602

1

CORPORATION

Ol Eunice MW-4
Old Eunice MW-4
Old Eunice MW-3
Old trip blank
Old beagent blan Page FACILITY Received: WORK ID COMPANY INVOICE ъ. О CLIENT REPORT SAMPLE Eunice MW-3 TRANS TAKEN ATTEN eagent blank TYPE 3 ml MR-11/88 d Linda Bendele Radian Odessa, UPS Phillips Petroleum PHILLIPS P under separate cover Eunice Austin 11/04/88 IDENTIFICATION dup SAMPLES RAS CR E NO3 CD E BAE AS G DG3020 EPA602 COLI BETA ALPHA DG601C Austin specific matrix was not within acceptable limits indicating **6** Potential error for such Footnotes and Comments Phenolic samples diluted due to colorimetry interference PREPARED an interferent present. Silver, Barıum, <u>Gross alpha radiation</u> Arsenic, graphite AA intrate, Indicates a value ron, otal coliform Indicates that spike recovery for this analysis on the anganese, ercuru, cold vapor PA method 602 admium, ross beta radiation pecific conductance igestion, hromium, luoride, igestion, hloride, 12/12/88 12:19:24 ATTEN PHONE ¥Β ICPES Radian Analytical 8501 Mo-pac Bl. PO Box 201088 512-454-4797 ICPES ICPES Austin, TX 78720-1088 I CPES colorimetric ICPES TEST CODES and NAMES used ICPES IC IC method method **ICPES** REPORT 6010 3020 less low values ranges between 50 and 100% than 5 Services PB G PHEN S04 IC SE G RA 226 TURB TOC XYLENE times the detection limit on this report Lead, graphite AA Selenium, graphite AA Radium 226 Work Order # 88-11-026 Xylenes, Sulfate, Total phenolics Turbidity <u> Total organic carbon</u> CERTIFIED BY CONTACT BENDELE EPA 602

RAS Austin REPORT
Results By Test

Page 2 Received: 11/04/88

Work Order # 88-11-026

SAMPLE Id	LE Test: AG E		Test: ALPHA	Test: AS G	Test: BA E	Test: BETA
	01 ; (0	⟨0, 03	₹4	0.045	0.063	8 (3)
Eunice MW-3	02 <0	(c) (c) (c) (c)	pci/L 11 (4)	0.018	0.029*	pci/L 14 (5)
Eunice MW-4			pCi/L			pCi/L

SAMPLE		Test: CD E	Test:CL IC	Test: COLI T	Test: CR E	Test: D63020
Sample Id	-	υq/ml	mq/L	colonies/100 mL	uq/ml	date complete
	01 :	<0.005	150	3300	<0.03	11/17/88
EUNICE MW-3	급 	<0 005	300	400	£0 0.>	11/17/88
Eunice MW-4						
				o de viete e e de companyament de presentation de la companyación de l	mann divinier wereich enseinen war den met die der der der der der der der der der de	

1002	n n					SAMPLE Id
	유 :				01 :	
	11/18/88				11/18/88	Test: DG6010
	8.4				12	Test: FE E
· · · · · · · · · · · · · · · · · · ·	ķΩ				<u>ω</u>	Test: F IC
3700	3700	2400	2400	2400	2400	Test: MHO
	0.44				0. 24	Test: MN E

Page 3
Received: 11/04/88
SAMPLE

Austin REPORT
 Results By Test

RAS

Work Order # 88-11-026 Continued From Above

	02		Sample Id		SAMPLE Id
	450		Test: NA E		Test: DG6010
		0. 27	Test: NO3		Test: FE E
	⟨0. 002	<0.002R	Test: PB G		Test: F IC
6. 95 6. 92 7. 06	6. 94 6. 99 6. 98	7. 04	Test: PH	3600 3700	Test: MHO
	0.02*	0.	Test: PHEN		Test: MN E

Page 4 Received: 11/04/88

Austin REPORT Results By Test

RAS

Work Order # 88-11-026

Eunice MW-4	Eunice MW-3	SAMPLE I
0.52(.06) pci/L	0.44(.05) pci/L	Test: RA 226
⟨0.004	0.005R*	Test: SE G
1300	480	Test: 504 IC
15 14 9 11 12	30 14	Test: TOC

: ele :

c andra SAMPLE ID Eunice MW-3 Received: 11/04/88

> RAS Austin

> REPORT

Work Order # 88-11-026

Results by Sample

FRACTION 01J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 11/03/88 Category

	0.40	QN N	1,2-Dichlorobenzene	95-50-1	
	0.40	ND	1,3-Dichlorobenzene	541-73-1	
	0.30	dN	1,4-Dichlorobenzene	106-46-7	
	0. 30	ND	Chlorobenzene-A	108-90-7	
	0. 30	ND	Ethylbenzene	100-41-4	
	0. 20	ND	Toluene	108-88-3	
	0.20	1. 8	Benzene	71-43-2	
	RESULT DET LIMIT	RESULT	COMPOUND	CAS#	,
ug/L	ONITS	And the second is seen at 1995 to 1995 to 1995 to 1995 to 1995	INJECTED 11/08/88 FILE # _	Б	TRMTD
F	VERIFIED	<u> </u>			

SURROGATES

8-90-86 a, a, a-Trifluorotoluene 102% recovery

NOTES AND DEFINITIONS FOR THIS REPORT

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed

unless otherwise noted

Page 6 SAMPLE ID Eunice MW-3 Received: 11/04/88

RAS

Austin

REPORT

Work Order # 88-11-026 Continued From Above

Results by Sample

FRACTION <u>01J</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>

Date & Time Collected <u>11/03/88</u>

Category

A-Chlorobenzene and p-xylene co-elute otherwise noted. Quantitated as chlorobenzene unless

Page 7 SAMPLE ID Eunice MW-3 SAMPLE ID Eunice MW-3 Received: 11/04/88 ANALYST INSTRMT ANALYST NOTES AND DEFINITIONS FOR THIS REPORT INSTRMT NA = not analyzed ND = not detected at detection limit N\A = not available DET LIMIT = DETECTION LIMIT less than 5 times the detection limit HACH 403 KCP TAM ANALYTE ANALYTE Mercury ANALYZED 11/04/88 ANALYZED 11/16/88 RAS RESULT DET LIMIT RESULT FRACTION <u>OIA</u> TEST CODE <u>TURB</u>
Date & Time Collected <u>11/03/88</u> FRACTION <u>011</u> TEST CODE <u>HG C</u>
Date & Time Collected <u>11/03/88</u> Austin S Results by Sample DET LIMIT 0.0002 REPORT VERIFIED VERIFIED SLING SLINO NAME Turbidity NAME Mercury, cold vapor RH E Work Order # 88-11-026 lw/bn Category Category

Turbidity

	SURROGATES a, a, a-Trifluorotoluene	SURROGATES 78-08-8 a,a,a-Trifluorotoluene 102% INITIONS FOR THIS REPORT. T = DETECTION LIMIT detected at detection limit analyzed than 5 times the detection limit	AND DEFINITIONS FOR THIS REPORT. ND = not detected at detection limit NA = not analyzed * = less than 5 times the detection limit N\A = not available Second column confirmation NOT performed
ANALYST BM INJECTD 11/08/88 CAS # COMPOUND RESULT DET LIMIT 106-42-3 p-Xylene-A ND 0.20 95-47-6 o-Xylene ND 0.10	CAS # COMPOUND RESULT DET LIMIT 106-42-3 p-Xylene ND 0.20 95-47-6 o-Xylene ND 0.20 98-08-8 a,a,a-Trifluorotoluene 102% recovery	VERIFIED CL The standard of times the detection limit VERIFIED CL VERIFIED CL VERIFIED CL VERIFIED CL VERIFIED CL FILE # UNITS	VERIFIED CL ST BM OCAS # COMPOUND RESULT DET LIMIT 106-42-3 p-Xylene-A ND 0.20 108-38-3 m-Xylene ND 0.20 108-38-3 m-Xylene ND 0.20 75-47-6 o-Xylene ND 0.20 75-47-6 o-Xylene ND 0.20 75-47-6 o-Xylene ND 0.20 75-47-6 to o-Xylene ND 0.10 AND DEFINITIONS FOR THIS REPORT. DET LIMIT DETECTION LIMIT ND TOTAL THE STAND OF THE STAND OF THE STAND A TRIP STAND STA
COMPOUND RESULT DET p-Xylene-A ND m-Xylene ND o-Xylene ND	COMPOUND RESULT DET LIMIT p-Xylene ND 0.20 m-Xylene ND 0.20 o-Xylene ND 0.10 SURROGATES a, a, a-Trifluorotoluene 102%	CAS # COMPOUND RESULT DET LIMIT 106-42-3 p-xylene-A ND 0.20 108-38-3 m-xylene ND 0.20 75-47-6 o-xylene ND 0.20 75-47-6 o-xylene ND 0.20 P8-08-8 a,a,a-Trifluorotoluene 102% AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT ND = not detected at detection limit * = less than 5 times the detection limit	CAS # COMPOUND RESULT DET LIMIT 106-42-3 p-Xylene-A ND 0.20 108-38-3 m-Xylene ND 0.20 95-47-6 o-Xylene ND 0.20 95-47-6 o-Xylene ND 0.20 PST LIMIT SPECTION LIMIT ND = not detected at detection limit NA = not analyzed * = less than 5 times the detection limit NA = not available Second column confirmation NOT performed
	SURROGATES a,a,a-Trifluorotoluene 102%	SURROGATES 48-08-8 AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT ND = not detected at detection limit NA = not analyzed * = less than 5 times the detection limit	SURROGATES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT ND = not detected at detection limit NA = not analyzed * = less than 5 times the detection limit N\A = not available Second column confirmation NOT performed

Page 9 SAMPLE ID Eunice MW-3

Received: 11/04/88

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Austin

RAS

Results by Sample

Work Order # 88-11-026 Continued From Above

FRACTION <u>01J</u> TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected <u>11/03/88</u> Category Category

Chlorobenzene and p-xylene co-elute. = daily EPA standard recovery outside Quantitated as chlorobenzene unless 95% confidence interval. otherwise noted

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Page 10 Received: 11/04/88

SAMPLE ID Eunice MW-4

Austin REPORT

RAS

Results by Sample

Work Order # 88-11-026

FRACTION 02J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 11/03/88 Category

Category

ANAL YST INSTRMT 四四 CAS# INJECTED 11/08/88 FILE # VERIFIED SLINO CF

COMPOUND RESULT DET LIMIT

108-88-3 71-43-2 Benzene 0.9* 0.20

Toluene S 0.20

100-41-4 Ethylbenzene 8 0.30

106-46-7 108-90-7 1,4-Dichlorobenzene Chlorobenzene-A B 8 0.30 0.30

541-73-1 95-50-1 1,3-Dichlorobenzene 2-Dichlorobenzene B B 0.40 0.40

SURROGATES

98-08-8 a, a, a-Trifluorotoluene 102% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

3

N\A = not available

Second column confirmation NOT performed

unless otherwise noted.

Page 11 Received: 11/04/88 SAMPLE ID Eunice MW-4

RAS

REPORT

Work Order # 88-11-026 Continued From Above

Austin REFU Results by Sample

FRACTION <u>02J</u> TEST CODE <u>EPA602</u>
Date & Time Collected <u>11/03/88</u> NAME EPA method 602 Category

A-Chlorobenzene and p-xylene co-elute otherwise noted. Quantitated as chlorobenzene unless

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Page 12 Received: 11/04/88 SAMPLE ID Eunice MW-4 SAMPLE ID Eunice MW-4 ANAL YST INSTRMT ANALYST LASTRMT NOTES AND DEFINITIONS FOR THIS REPORT. N\A = not available NA = not analyzed ND = not detected at detection limit * = less than 5 times the detection limit DET LIMIT = DETECTION LIMIT HACH 403 TAM Turbidity ANALYTE ANALYTE Mercury ANALYZED 11/04/88 ANALYZED 11/16/88 RAS RESULT RESULT DET LIMIT FRACTION <u>02A</u> TEST CODE <u>TURB</u>
Date & Time Collected <u>11/03/88</u> Austin FRACTION 021 TEST CODE HG C Date & Time Collected 11/03/88 B Results by Sample DET LIMIT 0.0002 VERIFIED VERIFIED UNITS UNITS NAME Mercury, cold vapor NAME Turbidity Work Order # 88-11-026 uq/ml Category Category

Received: 11/04/88

RAS Austin

Results by Sample

REPORT

Continued From Above Work Order # 88-11-026

SAMPLE ID Eunice MW-4

FRACTION <u>02A</u> TEST CODE <u>TURB</u>
Date & Time Collected <u>11/03/88</u>

NAME Turbidity

Category

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

SAMPLE ID Eunice MW-4

Pate & Time Collected 11/03/88 NAME Xylenes, EPA 602

Category

VERIFIED

ANALYST INSTRMT

INJECTD 11/08/88

FILE #

UNITS

106-42-3 CAS #

95-47-6

o-Xylene

p-Xylene-A COMPOUND m-Xylene

RESULT

DET LIMIT

0.20

SURROGATES

a, a, a-Trifluorotoluene 102% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

8-80-86

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed

unless otherwise noted

Page 14 Received: 11/04/88

SAMPLE ID Eunice MW-4

Austin

RAS

Results by Sample

Work Order # 88-11-026 Continued From Above

FRACTION 02J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 11/03/88 Category Category

Q = daily EPA standard recovery outside

Chlorobenzene and p-xylene co-elute. 95% confidence interval. otherwise noted. Quantitated as chlorobenzene unless

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Received: 11/04/88

SAMPLE ID Eunice MW-3 dup

Austin

RAS

REPORT

Results by Sample

Work Order # 88-11-026

FRACTION <u>03A</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>
Date & Time Collected <u>11/03/88</u> Category

Category

			YE VE	ERIFIED	CL
ANALYSTBM		FILE # _			
INSTRMT D	INJECTE	INJECTED 11/08/88		UNITS	ug/L
	CAS#	COMPOUND	RESULT D	DET LIMIT	
	71-43-2	Benzene	1. 9	0.20	
	108-88-3	Toluene	ND	0.20	
	100-41-4	Ethylbenzene	ND	0. 30	
	108-90-7	Chlorobenzene-A	ND	0. 30	
	106-46-7	1,4-Dichlorobenzene	ND	0. 30	
	541-73-1	1,3-Dichlorobenzene	ND	0.40	
	95-50-1	1,2-Dichlorobenzene	ND	0.40	

SURROGATES

98-08-8 a, a, a-Trifluorotoluene 100% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

Page 16 Received: 11/04/88

SAMPLE ID Eunice MW-3 dup

Austin

RAS

REPORT

Work Order # 88-11-026 Continued From Above

FRACTION <u>03A</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>
Date & Time Collected <u>11/03/88</u> Category Results by Sample

Category

A-Chlorobenzene and p-xylene co-elute otherwise noted Quantitated as chlorobenzene unless

SAMPLE ID Eunice MW-3 dup Received: 11/04/88

Page 17

Austin Results by Sample

RAS

REPORT

Work Order # 88-11-026

FRACTION 03A TEST CODE XYLEI Date & Time Collected 11/03/88 TEST CODE XYLENE NAME Xylenes, EPA 602 Category

VERIFIED

ANALYST

INJECTD 11/08/88

FILE #

UNITS

106-42-3 108-38-3 95-47-6 CAS # p-Xylene-A COMPOUND m-Xylene o-Xylene RESULT DET LIMIT 0. <u>20</u> 0. <u>20</u> 0. 10

SURROGATES

a, a, a-Trifluorotoluene

100% recovery

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT

8-80-86

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

= daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless otherwise noted

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SAMPLE ID trip blank Received: 11/04/88

> RAS Austin Results by Sample

Work Order # 88-11-026

FRACTION 04A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected not specified Category

ANALYST INSTRMT 541-73-1 108-90-7 108-88-3 106-46-7 100-41-4 95-50-1 71-43-2 CAS# INJECTED 11/08/88 1,4-Dichlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene Chlorobenzene-A Ethylbenzene COMPOUND FILE # Benzene Toluene RESULT DET LIMIT ND B 8 8 VERIFIED 0. 20 0.20 0.40 0.40 0.30 0.30 0.30 SLINO 2

SURROGATES

98-08-8 a, a, a-Trifluorotoluene 93% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

•

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

Page 19 Received: 11/04/88 SAMPLE ID trip blank

- Austin

RAS

Results by Sample

REPORT

Work Order # 88-11-026 Continued From Above

FRACTION <u>04A</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>

Date & Time Collected <u>not specified</u> Category _

A-Chlorobenzene and p-xylene co-elute. Quantitated as chlorobenzene unless otherwise noted.

.

Page 20 SAMPLE ID trip blank Received: 11/04/88

> RAS Austin

> > REPORT

Work Order # 88-11-026

Category

FRACTION 04A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected not specified Category Results by Sample

VERIFIED

ANAL YST INSTRMT

INJECTD 11/08/88

SLINO

FILE #

106-42-3 108-38-3 95-47-6 p-Xylene-A COMPOUND m-Xylene o-Xylene RESULT DET LIMIT 0. 20

CAS #

8-80-86

a, a, a-Trifluorotoluene SURROGATES

93% recovery

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

Second column confirmation NOT performed N\A = not available * = less than 5 times the detection limit

= daily EPA standard recovery outside 95% confidence interval. unless otherwise noted.

Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless

;

Page 21 Received: 11/04/88

SAMPLE ID reagent blank

Austin

RAS

REPORT

Work Order # 88-11-026

Results by Sample

FRACTION <u>05A</u> TEST CODE <u>EPA602</u> No Date & Time Collected <u>not specified</u> TEST CODE EPA602 NAME EPA method 602

Category

ANALYST LESTRMT CAS# INJECTED 11/08/88 FILE # VERIFIED UNITS 2

COMPOUND RESULT DET LIMIT

108-88-3 71-43-2 Benzene Toluene 8 E 0.20 0.20

0.30

108-90-7 100-41-4 Chlorobenzene-A Ethylbenzene E 0.30

106-46-7 1,4-Dichlorobenzene 8 0.30

541-73-1 95-50-1 1,3-Dichlorobenzene 1,2-Dichlorobenzene S 0.40 0.40

SURROGATES

98-08-8 a, a, a-Trifluorotoluene N\A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

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Page 22 SAMPLE ID reagent blank Received: 11/04/88

RAS - Austin

REPORT

Results by Sample

Work Order # 88-11-026 Continued From Above

FRACTION <u>O5A</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>

Date & Time Collected <u>not specified</u> Category Category

A-Chlorobenzene and p-xylene co-elute. otherwise noted. Quantitated as chlorobenzene unless

=

Page 23 Received: 11/04/88

SAMPLE ID reagent blank

RAS Austin

Work Order # 88-11-026

Results by Sample

PRACTION 05A TEST CODE XYLENE NATION OF TIME Collected not specified TEST CODE XYLENE NAME Xylenes, EPA 602

Category

VERIFIED

ANALYST INSTRMT

INJECTD 11/08/88

FILE #

SLIM

p-Xylene-A COMPOUND m-Xylene o-Xylene RESULT DET LIMIT 0. 20 0. 20 0. 10

108-38-3 95-47-6 106-42-3

CAS #

SURROGATES

a, a, a-Trifluorotoluene

98-08-8

N\A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute otherwise noted. Quantitated as chlorobenzene unless

Page 24 Received: 11/04/88

RAS - Austin

NonReported Work

Work Order # 88-11-026

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

02K SPR602

÷ :

SAMPLE IDENTIFICATION Lee MW-2 Lee MW-3 Lee MW-4 Eunice MW-2 Eunice MW-3 Soll Eunice MW-3 Soll Eunice MW-4 37. Eunice MW-4 38. Eunice MW-4 37. Eunice MW-4 38. Eunice MW-4		TAKEN TAKEN TYPE	WORK ID Lee & Eunice, TOX	CLIENT PHILLIPS P COMPANY Phillips Petroleum ILITY Odessa, IX	REPORT Radian TO B1 1 Austin ATTEN Linda Bendele	ege 1 Ecalved 12/21/88
TEST CODES and NAMES (@ Indicates that spike recovery specific matrix was not within . an interferent present.	* Indicates a value less than 5 Potential error for such low va	tnotes and Comments	Analyses performed by Gasconne	FIREFARED Madian Analytical Services 117 3501 Morpac H1 110 Box 201038 At II II PHIGH: 512-454-4797	- Austria REPORT 12727/88 09:36:04
d NAMES used on this report	for this analysis on the acceptable limits indicating	than 5 times the detection limit. low values ranges between 50 and 100%.		Laboratories	CERT (FIED BY	Work Order # 88-12-146

ecelved: 12/21/88	RAS - Austin REPORT Results By Test	Work Order # 88-12-146 Continued From Above
Sample (d SAMPLE	Test: UX	
	0.07	
	0.01*	
05	0 39	
EUNICE NW-1	0.04*	
	0.06	
	0.19	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.14	
	0.05	
•	0. 07	
07	0 47	
100 TO 10	0.54	
	0.34	
	0.68	

Sample Id age 4 eceived: 12/21/88 Eunice MW-4 8 Test: TOX 02 0.40 0.12 0.26 mq /1. POSTI tin Results By Test Work Order # 88-12-146 Continued From Above

Pertudes/Herbuiles
3rd 9th, Eunice

Data Flags:

TERMS USED IN THIS REPORT:

EPA method and QC specifications. Analyte - A chemical for which a sample is to be analyzed. The analysis will meet

Compound - See Analyte.

concentration factor. (Refer to Factor, below) specified by EPA. Note, the detection limit may vary from that specified by EPA by the quantitation specified by EPA for a method. Radian staff regularly assess their Detection Limit - The method specified detection limit, which is the lower limit laboratories' method detection limits to verify that they meet or are lower than those

specified. analyses and accompanying QC tests in conformance with EPA methods unless otherwise standard methods for analysis of environmental samples. Radian will perform its EPA Method - The EPA specified method used to perform an analysis.

of the method will have a factor of 1. A sample diluted 10 times to bring the analytes within the instrument calibration range will have a factor of 10. Conversely, a sample differs from that specified by a given EPA method. A sample prepared to the specifications Factor - The concentration or dilution factor by which the sample extract or digestate is concentrated 10 times more than specified will have a factor of 0.1. Conversely, a sample which

waste. Matrix - The sample material. Generally, it will be soil, water, air, oil, or solid

the analytical summary. Radian Work Order -The unique Radian identification code assigned to the samples reported in

Units -

NTU	ml/hr	soumn	&	mg/Kg	mg/L	ug/M3	ug/Kg	л/6n
turbidity unit; nephelometric turbidity unit	milliliters per hour; rate of settlement of matter in water	conductance unit; microohms/centimeter	percent; usually used for percent recovery of QC standards	milligrams per kilogram (parts per million);soils/solids	milligrams per liter (parts per million); liquids/water	micrograms per cubic meter; air samples	micrograms per kilogram (parts per billion); soils/solids	micrograms per liter (parts per billion); liquids/water

NAIGAS

Notes and Definitions

Data Flags:

- approximate. detection limit is approached. These results should be considered uncertainty of the analysis will increase exponentially as the method the method specified detection limit. Studies have shown that the The asterisk(*) is used to flag results which are less than five times
- extraction or digestion step. digestion spike. These spikes have not been subjected to the This flag indicates that a spike is an analytical and/or post-
- ₿ sample, the sample results are not corrected from the amount in the Since traces of the background contaminant will vary from sample to flag indicates that the analyte was detected in the reagent blank
- C terferences that may occur and for analyte confirmation. column of dissimilar phase to resolve compounds of interest from in-Most methods of gas chromatography recommend reanalysis on a second indicates that the analyte has been confirmed on a second column. This flag
- The reported value is estimated because of the presence of interone at the concentration of some of the analytes, and a second with bration range of the instrument. Therefore two analyses are performed, dilution factor. In an analysis some compounds can exceed the calithe sample diluted so that higher levels fall into calibration range. This flag identifies analytes identified in analysis at a secondary The potential source of the interference is included in the

D

Data Flags:

- compounds have a response greater than full scale, the sample or calibration range for that specific analysis. Usually if one or more This flag identifies a GC/MS result whose concentration exceeds the extract is diluted and re-analyzed.
- d A result or value is not available for this parameter, usually a detection limit. criteria but the result is less than the sample quantitation limit. data indicate the presence of a compound that meets the identification where a response factor of 1 is assumed, or when the mass spectral when estimating a concentration for tentatively identified compounds Indicates an estimated value for GC/MS data. This flag is used either
- A This analyte was not analyzed.
- S spike added concentration is considered insignificant. detection limit. A spike recovery is not calculated when the result ence (RPD) is not calculated when a result is less than five times the Applies to RPD and spike recovery results. The relative percent differ is greater than four times the spike added concentration because the
- ND at or above the specified detection limit. The value to the right of This flag (or <) is used to denote analytes which are not detected the < symbol is the method specified detection limit for the sample.

Notes and Definitions

Data Flags:

NR This analyte was not requested by the client.

This analyte or surrogate was not added (spiked) to the sample for this analysis.

Ø This quality control standard is outside method or laboratory specterferences that may occur and for analyte confirmation. column of dissimilar phase to resolve compounds of interest from in-Most methods of gas chromatography recommend reanalysis on a second is applicable for samples from a regular sampling program. indicates that the analyte has been confirmed previously. This flag This flag

spike duplicate result. difference) values for duplicate analyses and matrix spike/matrix tical QC spike, and surrogate recoveries; and to RPD(relative percent ified control limits. This flag is applied to matrix spike, analy-

ຜ been obtained using the Method of Standard Addition. This flag indicates that a specific result from a metals analysis has

terferences that may occur and for analyte confirmation. column of dissimilar phase to resolve compounds of interest from in-Most methods of gas chromatography recommend reanalysis on a second indicates that second column was not requested. This flag

C

NAIGAR

Client: PHILLIPS 66

PHILLIPS 66

ODESSA, TEXAS 77480

01A EUNICE MW-4 02A EUNICE MW-1

CO3A_EUNICE_MW-3

CO3B EUNICE MW-3 DUP

EPA METHOD 8080

Lab No: A8-11-018

RESULTS IN ug/L

CAS #	COMPOUND	01 A	02A	03A	03B
58-89-9	gamma-BHC, (Lindane)	<0.094	<0.17	<0.18	<0.18
72-20-8	Endrin	<0.094	0.07 J	0.02 J	0.02 J
8001-35-2	Toxaphene	<0.47	<0.87	<0.89	<0.89
72-43-5	Methoxychlor	<4.7	<8.7	<8.9	<8.9

SURROGATE RECOVERIES	(results	in % re	covery)	
Dibutylchlorendate	93	93	94	93
2.4.5.6-Tetrachloro-m-xvlene	100	100	102	100

NOTES AND DEFINITIONS FOR THIS REPORT.

QC = OUTSIDE CONTROL LIMITS.

* = LESS THAN 5 TIMES THE DETECTION LIMIT.

B = DETECTED IN REAGENT BLANK; BACKGROUND SUBTRACTION NOT PERFORMED.

ND = NOT DETECTED AT DETECTION LIMIT.

NA = NOT ANALYZED.

 $N\setminus A = NOT AVAILABLE.$

NS = NOT SPIKED.

J = DETECTED AT LESS THAN THE SPECIFIED DETECTION LIMIT.

Client: PHILLIPS 66

PHILLIPS 66

ODESSA, TEXAS 77480

04A EUNICE MW-2 05A REAGENT BLANK

EPA METHOD 8080

Lab No: A8-11-018

RESULTS IN ug/L

CAS #	COMPOUND	04A	05A
58-89-9	gamma-BHC, (Lindane)	0.32 *	<0.010
72-20-8	Endrin	<0.094	<0.010
8001-35-2	Toxaphene	<0.47	<0.050
72-43-5	Methoxychlor	<4.7	<0.50

SURROGATE RECOVERIES (results in % recovery)

Dibutylchlorendate 94 90
2,4,5,6-Tetrachloro-m-xylene 119 74

NOTES AND DEFINITIONS FOR THIS REPORT.

QC = OUTSIDE CONTROL LIMITS.

* = LESS THAN 5 TIMES THE DETECTION LIMIT.

B = DETECTED IN REAGENT BLANK; BACKGROUND SUBTRACTION NOT PERFORMED.

ND = NOT DETECTED AT DETECTION LIMIT.

NA = NOT ANALYZED.

N A = NOT AVAILABLE.

NS = NOT SPIKED.

J = DETECTED AT LESS THAN THE SPECIFIED DETECTION LIMIT.

06A RECOVERY CHECK

Client: PHILLIPS 66

PHILLIPS 66

ODESSA, TEXAS 77480

Eunie

EPA METHOD 8080

Lab No: A8-11-018

RESULTS IN %

CAS #	COMPOUND	06A
58-89-9	gamma-BHC, (Lindane)	91
72-20-8	Endrin	NS
8001-35-2	Toxaphene	ns
72-43-5	Methoxychlor	100

SURROGATE RECOVE	IES (results	in	ક્ર	recovery)
Dibutylchlorendate 2,4,5,6-Tetrachloro-m-xylend	93 2 73			

NOTES AND DEFINITIONS FOR THIS REPORT.

QC = OUTSIDE CONTROL LIMITS.

* = LESS THAN 5 TIMES THE DETECTION LIMIT.

B = DETECTED IN REAGENT BLANK; BACKGROUND SUBTRACTION NOT PERFORMED.

ND = NOT DETECTED AT DETECTION LIMIT.

NA = NOT ANALYZED.

N A = NOT AVAILABLE.

NS = NOT SPIKED.

J = DETECTED AT LESS THAN THE SPECIFIED DETECTION LIMIT.

ANALYTICAL DATA SUMMARY

PHILLIPS 66
Associate Laboratory Data for Radian Work Order: 8901039

Method: EPA 8150 Herbicides	Matrix: water	er er		
Results in: Sample ID:	ug/L Eunice ∰W≥1—	ug/L <u>⊂Euni</u> ce≈ MW-2	ug/L Eunice MW=3	ug/L Eunice MW-4
2,4-D	<0.5	<0. 5	<0.5	<0.5
2,4,5-TP (Silvex)	<0.2	<0.2	<0.2	<0.2

For a detailed description of flags and technical terms in this report refer to the glossary.

NAIGAS

PHILLIPS 66 NATURAL GAS COMPANY

A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

ODESSA, TEXAS 79762 4001 PENBROOK

December 8, 1988

Quarterly Groundwater Monitoring Analyses Artesia, Eunice, the and Lusk Plants

Mr. Dave Boyer Environmental Bureau Chief New Mexico Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Boyer:

Per your request, attached please find copies of the second quarter groundwater monitoring analyses for the above referenced plants. I have also included additional information on the Lee Plant water supply wells for your reference.

If you should have any questions regarding this information, please contact me at (915) 367-1316.

Very truly yours,

Michael D. Ford

Environmental Analyst

Mihael D. Ford

MDF

Attachments

CORPORATION

	RAS	1	Austin	Work Order # 88-09-017
Received: 09/02/88			04/88 07:15	
REPORT TO	Radian Bl. 1		PREPARED <u>Radian Analytical Se</u> BY <u>8501 Mo-pac Bl.</u>	Services /
	Austin		PO Box 201088 Austin, TX 78720-1088	B CERVICIED BY
ATTEN	Linda Bendele		1-4797	CONTACT
COMPANY	PHILLIPS P SAMPLES	5		
	Odessa, TX			
			Chloride by titration, Fluoride nephelometry due to organic int	ide by SIE, and Sulfate by interferences.
WORK ID	Eunice		Enotrotes and Comments	
	<u>UPS</u>			
P. O. #			Potential error for such low	values the detection limit.
INVOICE	under separate cover			
			specific matrix was not within	n acceptable limits indicating
			an interferent present.	
SAMPLE	IDENTIFICATION		TEST CODES and NAMES	S used on this report
OP-EUNICE MW-2	35-0		AA	SE G Selenium, graphite AA SG4 IC Sulfate, IC
03 Eunice	MW-3		ICPES	Total orq
OS Eunice	MW-3 duplicate	CC E	Chloride, IC	TOX Total organic halides TURB Turbiditu
		CR E	Chromium, ICPES	
ز	: 0 M - 9/20	D66010	O Digestion, method 6010	
Į.	20 / (1X) BW	FEE	·	
		HO C	Mercuru, cold vapor	
		1	ondu	
		NA Z	Sodium, ICPES	
		1144	Nitrate, colorimetric	
		PB G	Lead, graphite AA	
		PH PH	Total phenolics	

Page 2 Received: 09/02/88

Austin REPORT REPORT

RAS

Work Order # 88-09-017

			02 <0.03	01 (0.03	SAMPLE Test: CR E		03 <0.03		01 (0.03	Sample Id : Test: AG E
	09/09/88	09/09/88	09/09/88	09/09/88	Test: DG3020	0. 026	0.049	0. 10	0.074	Test: AS G
09/09/88	09/21/88	09/21/88	09/21/88	09/21/88	Test: DG6010	0.028*	0. 065	. . а	0. 33	Test: BA E
_	16	13	œ œ	3.7	Test: FE E	<0.005	⟨0.005	⟨0.005	<0.005	Test: CD E
	0.87	2.0	3.9	1.8	Test: F IC	350	190	640	920	Test: CL IC

Sample

SAMPLE

Test: MHO

est: ME

est: NA E

Test: NO3

Test: PB G

mg/L as N

4280

5

520

0. 13

<0.002

Eunice MW-1

Page 3 Received: 09/02/88 Eunice MW-4 Eunice MW-3 Eunice MW-2 ස ව Test: 語 umhos/cm 3990 3870 2550 2480 2570 2510 3400 3350 3360 3360 4280 4000 4330 4380 RAS Austin est: ME Results By Test 0.44 0.30 0.17 est: NA E 480 300 330 Test: NO3 Work Order # 88-09-017 Continued From Above mq/L as N 0.45 0.60 0.28 est: PB G <0.002 <0.002 <0.002

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RAS 3 - Austin REPORT Results By Test

Work Order # 88-09-017 Continued From Above

Eunice MW-3				n and a second			4	TI STATE OF MELLI	Sample Id	1	Sample Id
 				02					SAMPLE		SAMPLE :
7. 00 7. 00	6. 96	6. 93	6. 93	6. 94	6. 94	6. 93	6. 93	6. 92	Test: PH units	4000	Test: MHO
<0.005	-			0. 025				0.022*	Test: PHEN	1	Test: MN E
<0.002				<0.002			-	<0.002	Test: SE G		Test: NA E
510				40*				300	Test: <u>504 IC</u>		Test: NO3
27 1	600	58	59	57	. 61	60	64	50	Test: TOC		Test: PB &

			<i>J</i>		
Page 5 Received: 09/02/88	RAS .	- Austin REI Results By Test	REPORT Test	Work Order # 88-09-017 Continued From Above	88-09-017)m Above
SAMPLE	Test: PH units	Test: PHEN	Test: SE G	Test: 504 IC	Test: TOC
	7.00			-	18
	6. 99		_		17
04	7. 03	⟨0, 005	<0.002	1400	13
1000 11 CO	7.15				. 18
	6. 97				15
	6. 99				16
Sample Id	Test: TOX				
2	0 07				

Sample Id	IEST. IUX
01	0.07
conice MM-1	0.06
	0.07
u us no m	0.07
500 in Marco 02 i	0. 10

Page 6 Received: 09/02/88

RAS - Austin REPORT Results By Test

Work Order # 88-09-017 Continued From Above

Samole Id SAMPLE ;	Test: TOX		
	0. 11		
	0. 13		
	0. 12		
03	0.40		
ECUTION TW-3	0.42		
	0.40		
	0. 37		
04	0. 15	·	
Equitor Limits	0.17		
	0.15		
	0.14		

ANALYTE	ANALYST LKM INSTRMT 2100A		SAMPLE ID Eunice MW-1	NOTES AND DEFINITIONS FOR T DET LIMIT = DETECTION ND = not detected at d NA = not analyzed * = less than 5 times N\A = not available	Mercury	ANALYTE	TRMT 403		SAMPLE ID Eunice MW-1	Page 7 Received: 09/02/88	CORPORATION
TE RESULT DET LIMIT	ANALYZED <u>09/02/88</u> Ut	VERIFIED	FRACTION O1A TEST CODE TURB Date & Time Collected 09/01/88	THIS REPORT. LIMIT detection limit the detection limit	บาบ <u>ND 0. 00018</u>	TE RESULT DET LIMIT	ANALYZED <u>09/12/88</u>	VERIFIED	Date % Time Collected 09/01/88	RAS - Austin REPORT Results by Sample	
	UTIN BTINU		NAME Turbidity Category				UNITS ug/ml	D RHH	NAME Mercury, cold vapor Category	Work Order # 88-09-017	:

NOTES AND DEFINITIONS FOR THIS REDET LIMIT = DETECTION LIMIT ND = not detected at detection and = not analyzed * = less than 5 times the de N\A = not available	Mercury	ANALYTE	ANALYST KCP INSTRMT 403 ANALYZ		SAMPLE ID Eunice MW-2	<pre>NA = not analyzed * = less than 5 times the de N\A = not available</pre>	ND DEFINITIONS FOR THIS I LIMIT = DETECTION LIMI		SAMPLE ID Eunice MW-1	Page 8 Received: 09/02/88
THIS REPORT. LIMIT detection limit the detection limit	ND 0. 00018	RESULT DET LIMIT	ANALYZED 09/12/88	VERIFIED	FRACTION 021 TEST CODE HG C	detection limit	REPORT. T tion limit	Date & Time Collected 09/01/88	FRACTION OIA TEST CODE TURB	S - Austin REPORT REPORT
			UNITSuq/ml	RHH	NAME Mercuru, cold vapor			Category	NAME Turbiditu	Work Order # 88-09-017 Continued From Above

Work Order # 88-09-017

-	D	INSTRMT 403		SAMPLE ID Eunice MW-3	NOTES AND DEFINITIONS FO DET LIMIT = DETECTI ND = not detected a NA = not analyzed * = less than 5 tim N\A = not available	Tur	TRMT 2100A		SAMPLE ID Eunice MW-2	Page 9 Received: 09/02/88	CORPORATION
Mercury ND 0.00018	ANALYTE RESULT DET LIMIT	ANALYZED 09/12/88		Date & Time Collected 09/01/88	IONS FOR THIS REPORT. DETECTION LIMIT ected at detection limit lyzed n 5 times the detection limit ailable	5	ANALYZED <u>09/02/88</u> ANALYTE RESULT DET LIMIT		FRACTION <u>OZA</u> TEST CODE TURB Date & Time Collected <u>O9/01/88</u>	RAS - Austin REPORT Results by Sample	
		UNITSUq/ml	VERIFIED RHH	O9/01/88 NAME Mercury, cold vapor			UNITS NTU	VERIFIEDLM	O9/01/88 NAME Turbidity Category)RT Work Order # 88-09-	

CORPORATION	う	į
Page 10 RAS - Received: 09/02/88	 Austin REPORT Results by Sample 	Work Order # 88-09-017 Continued From Above
SAMPLE ID Eunice MW-3	FRACTION <u>OSI</u> TEST CODE HG C Date & Time Collected <u>O9/O1/88</u>	NAME Mercury, cold vapor Category
NOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT ND = not detected at detection limit NA = not analyzed * = less than 5 times the detection N\A = not available	REPORT: T tion limit detection limit	
SAMPLE ID Eunice MW-3	FRACTION <u>O3A</u> TEST CODE TURB Date & Time Collected <u>O9/O1/88</u>	NAME Turbidity Category
	VERIFIED	L
ANALYST LKM INSTRMT 2100A ANALYZED	ANALYZED 09/02/88	UTIN STINU
ANALYTE RESU	RESULT DET LIMIT	
Turbidity	27 1.0	
D DEFINITIONS FOR THIS LIMIT = DETECTION LIMI = not detected at detected at detected analyzed less than 5 times the	REPORT. T tion limit detection limit	
t available		

	INSTRMT 2100A		SAMPLE ID Eunice MW-4	NOTES AND DEFINITIONS FO DET LIMIT = DETECTI ND = not detected a NA = not analyzed * = less than 5 tim N\A = not available		AMALYST KCP	SAMPLE ID Eunice MW-4	Page 11 Received: 09/02/88
ANALYTE RESULT DET LIMIT Turbidity 32 1.0	ANALYZED <u>09/02/88</u>		FRACTION 04A TEST CODE TURB Date % Time Collected 09/01/88	IONS FOR THIS REPORT. DETECTION LIMIT ected at detection limit lyzed n 5 times the detection limit ailable		ANAI Y7ED 09/12/88	Date & Time Collected 09/01/88	RAS - Austin REPORT Results by Sample
	UNITSNTU	VERIFIEDLM	DE TURB NAME Turbidity		ONT 13	ヱ	DE HG C NAME Mercury, cold vapor 9/01/88 Category	Work Order # 88-09-017

Page 12 Received: 09/02/88

Work Order # 88-09-017 Continued From Above

SAMPLE ID Eunice MW-4

Austin REPO FRACTION <u>04A</u> TEST CODE TURB Date & Time Collected <u>09/01/88</u>

NAME Turbidity
Category

NOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

N\A = not available

FACILITY Received: 09/02/88 COMPANY WORK ID PHYDICE REPORT Radian CLIENT Eunice MW-2 Eunice MW-1 ATTEN Linda Bendele reagent blank Eunice MW-2 TRANS TAKEN TYPE unice MW-4 unice MW-3 UPS Odessa, TX PHILLIPS P under separate cover Eunice, Phillips Petroleum Austin IDENTIFICATION 20/5-40 June duplicate BIEX Brack. SAMPLES RAS EPA602 XYLENE Austin REPORT 09/15/88 10:05:15 an interferent present. specific matrix was not within acceptable limits indicating @ Indicates that spike recovery for this analysis on the Potential error for such low values ranges between Footnotes and Comments PREPARED <u>Radian Analytical Services</u>
BY 8501 Mo-pac Bl. Eunice MW-2 duplicate. Unknown compounds present in Eunice MW-1, EPA method 602 Xylenes, EPA 602 Indicates a value less PHONE ATTEN 512-454-4797 Austin, TX 78720-1088 PO Box 201088 IEST CODES and NAMES used on this report ** Possible interference. than 5 times the detection limit Work Order # 88-09-019 CERTIFIED BY Eunice MW-2, CONTACT BENDELE

50 and

10 10 10

Received: 09/02/88

Austin REPORT

RAS

Work Order # 88-09-019

Results by Sample

SAMPLE ID Eunice MN-1 FRACTION <u>01A</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>
Date & Time Collected <u>09/01/88</u> Category FILE # VERIFIED Category

CAS# INJECTED 09/12/88 COMPOUND RESULT DET LIMIT SLINO ug/L

108-88-3 71-43-2 Benzene Toluene 0.5* ري دع 0.20 0.20

Ethylbenzene 0.30

Chlorobenzene-A 3 0.30

108-90-7

100-41-4

541-73-1 106-46-7 1,4-Dichlorobenzene 1,3-Dichlorobenzene E 3 0.30 0.40

1,2-Dichlorobenzene E 0.40

95-50-1

SURROGATES

98-08-8 a, a, a-Trifluorotoluene 125**% recovery

BOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

NNA = not available

Second column confirmation NOT performed unless otherwise noted.

Received: 09/02/88

SAMPLE ID Eunice MW-1

RAS

REPORT

Work Order # 88-09-019 Continued From Above

Austin REPO

FRACTION OIA TEST CODE EPA602 NAME EPA method 602
Date % Time Collected 09/01/88 Category

Category

A-Chlorobenzene and p-xylene co-elute. Quantitated as chlorobenzene unless otherwise noted.

Received: 09/02/88

SAMPLE ID Eunice MW-1

RAS Austin Results by Sample

FRACTION OIA TEST CODE XYLENDATE % Time Collected 09/01/88

TEST CODE XYLENE

NAME Xylenes, EPA 602

Category

Work Order # 88-09-019

VERIFIED

ANALYST

INJECTD 09/12/88

FILE

UNITS

108-38-3 106-42-3 CAS # 95-47-6 m-Xylene-A COMPOUND p-Xylene o-Xylene 5. 40 DET LIMIT 0. 20

98-08-8

a, a, a-Trifluorotoluene SURROGATES 125**% recovery

MOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

N\A = not available * = less than 5 times the detection limit

Second column confirmation NOT performed unless otherwise noted

Q = daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute

Quantitated as chlorobenzene, unless otherwise noted.

TO BU IDD IDD CUII

SAMPLE ID Eunice MW-2 Received: 09/02/88

> Austin

Work Order # 88-09-019

Results by Sample

FRACTION <u>O2A</u> TEST CODE <u>EPA60</u>
Date % Time Collected <u>O9/01/88</u>

TEST CODE EPA602 NAME EPA method 602 Category

ANALYST INJECTED 09/12/88 FILE VERIFIED UNITS C

CAS# COMPOUND RESULT DET LIMIT

108-88-3 71-43-2 Benzene 510

100-41-4 Ethylbenzene Toluene 130 90

Chlorobenzene-A 3

1,3-Dichlorobenzene 1,4-Dichlorobenzene 3 3

541-73-1

95-50-1

1, 2-Dichlorobenzene

E

106-46-7

108-90-7

SURROGATES

98-08-8 a, a, a-Trifluorotoluene 127**% recovery

NOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

SAMPLE ID Eunice MW-2 Received: 09/02/88

> RAS Austin Results by Sample

REPORT

FRACTION <u>02A</u> TEST CODE <u>EPA602</u>
Date % Time Collected <u>09/01/88</u>

NAME EPA method 602

Category

Work Order # 88-09-019 Continued From Above

A-Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless otherwise noted.

SAMPLE ID Eunice MW-2 Received: 09/02/88 FRACTION <u>O2A</u> TEST CODE XYLENE Date % Time Collected <u>O9/O1/88</u> Results by Sample REPORT NAME Xylenes, EPA 602 Work Order # 88-09-019 Category

VERIF
TED _
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SLINA

106-42-3 108-38-3 CAS # m-Xylene-A COMPOUND p-Xylene RESULT DET LIMIT 600

INJECTD 09/12/88

FILE

69 0. 50 1.0

98-08-8

95-47-6

o-Xylene

a, a, a-Trifluorotoluene 127**% recovery SURROGATES

MOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

Q = daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute

Quantitated as chlorobenzene unless otherwise noted

Received: 09/02/88

RAS Austin

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Work Order # 88-09-019

NAME EPA method 602

Category

SAMPLE ID Eunice MW-2 duplicate FRACTION <u>03A</u> TEST CODE <u>EPA602</u>
Date & Time Collected <u>09/01/88</u> Results by Sample

RMTD	
INJECTED 09/12/88	
FILE # UNITSUq/L	VERIFIEDCL

71-43-2 CAS# COMPOUND Benzene RESULT DET LIMIT

108-90-7 100-41-4 108-88-3 Ethylbenzene Toluane 130 91

1,4-Dichlorobenzene 1,3-Dichlorobenzene Chlorobenzene-A 3

95-50-1 1,2-Dichlorobenzene 8

541-73-1

106-46-7

SURROGATES

8-80-86 a, a, a-Trifluorotoluene 120**% recovery

MOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

SAMPLE ID Eunice MW-2 duplicate Page 9 Seceived: 09/02/88

RAS Austin

REPORT

Results by Sample

Work Order # 88-09-019 Continued From Above

A-Chlorobenzene and p-xylene co-elute otherwise noted. Quantitated as chlorobenzene unless FRACTION 03A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 09/01/88 Category

SAMPLE ID Eunice MW-2 duplicate Received: 09/02/88

RAS

Work Order # 88-09-019

FRACTION <u>O3A</u> TEST CODE XYLEI Date % Time Collected <u>O9/01/88</u> Results by Sample TEST CODE XYLENE NAME Xulenes, EPA 602

VERIFIED

Category

INJECTD 09/12/88

SLING

FILE

106-42-3 108-38-3 95-47-6 CAS # m-Xylene-A COMPOUND o-Xylene p-Xylene RESULT 610 DET LIMIT 0. 50 1.0

a, a, a-Trifluorotoluene SURROGATES 120**% recovery

MOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

Second column confirmation NOT performed N\A = not available * = less than 5 times the detection limit unless otherwise noted.

Q = daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless

otherwise noted

Received: 09/02/88

RAS

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Work Order # 88-09-019

SAMPLE ID EUNICE MW-3

Results by Sample

FRACTION 04A TEST CODE EPA602 NAME EPA method 602
Date % Time Collected 09/01/88 Category Category _

VERIFIED

ALYST CL	INJECT	INJECTED 09/12/88 FILE # _		UNITS	uq/L
	CAS#	COMPOUND	RESULT	RESULT DET LIMIT	
	71-43-2	Benzene	1.6	0, 20	
	108-88-3	Toluene	1. 1	0, 20	
	100-41-4	Ethylbenzene	ND	0.30	
	108-90-7	Chlorobenzene-A	ND	0, 30	
	106-46-7	1,4-Dichlorobenzene	ND	0.30	
	541-73-1	1,3-Dichlorobenzene	ND	0.40	
	95-50-1	1,2-Dichlorobenzene	ND	0.40	

SURROGATES

98-08-8 a, a, a-Trifluorotoluene 94% recovery

WOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

Page 12 Pereived: 09/02/88

SAMPLE ID Eunice MN-3

RAS

Results by Sample

FRACTION 04A TEST CODE EPA502 NAME EPA method 602
Date & Time Collected 09/01/88 Category

Work Order # 88-09-019 Continued From Above

A-Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless otherwise noted.

Received: 09/02/88

RAS - Austin

REPORT

Work Order # 88-09-019

SAMPLE ID Eunice MW-3

Results by Sample

FRACTION <u>04A</u> TEST CODE XYLEI Date % Time Collected <u>09/01/88</u> TEST CODE XYLENE NAME Xylenes, EPA 602 Category

VERIFIED ____CL

ANALYST CL.

INJECTD 09/12/88

FILE

UNITS Ug/

106-42-3 108-38-3 CAS # 95-47-6 98-08-8 m-Xylene-A COMPOUND o-Xylene p-Xylene a, a, a-Trifluorotoluene ND, @, Q RESULT SURROGATES DET LIMIT 0. 20 94% recovery

MOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit
N\A = not available
Second column confirmation NOT performed

unless otherwise noted.

Q = daily EPA standard recovery outside

95% confidence interval.

Chlorobenzene and p-xylene co-elute. Quantitated as chlorobenzene unless

--.

Received: 09/02/88

SAMPLE ID Eunice MW-4

RAS Austin

REPORT

Work Order # 88-09-019

NAME EPA method 602

facedord

FRACTION <u>05A</u> TEST CODE <u>EPA602</u>
Date % Time Collected <u>09/01/88</u> Results by Sample

ANALYST TRMT 541-72-1 106-46-7 108-90-7 108-88-3 100-41-4 95-50-1 71-43-2 CAS# INJECTED 09/12/88 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene Chlorobenzene-A Ethylbenzene COMPOUND FILE Benzene Toluene RESULT DET LIMIT 0.4* B 8 R R D. B VERIFIED 0.20 0.20 0.40 0.40 0.30 0.30 0.30 SLINA P

8-80-86 a, a, a-Trifluorotoluene 97% recovery

SURROGATES

MOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

Received: 09/02/88

SAMPLE ID Eunice MW-4

RAS - Austi

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Work Order # 88-09-019 Continued From Above

Results by Sample

FRACTION 05A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 09/01/88 Category

A-Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless otherwise noted.

Received: 09/02/88

RAS

Work Order # 88-09-019

NAME Xulenes, EPA 602

SAMPLE ID Eunice MW-4

Results by Sample TEST CODE XYLENE

FRACTION 05A TEST CODE XYLEI Date & Time Collected 09/01/88 Category

VERIFIED

INJECTD 09/12/88

FILE

STINO

108-38-3 106-42-3 95-47-6 CAS # m-Xylene-A COMPOUND p-Xylene o-Xylene RESULT ND, Q DET LIMIT 0. 20 0. 20 0. 10

3-80-8

a, a, a-Trifluorotoluene SURROGATES 97% recovery

MOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

Second column confirmation NOT performed N\A = not available * = less than 5 times the detection limit

Q = daily EPA standard recovery outside unless otherwise noted. 95% confidence interval.

Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless

otherwise noted.

SAMPLE ID trip blank Received: 09/02/88

> RAS - Austin

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Work Order # 88-09-019

Results by Sample

PRACTION 06A TEST CODE EPA602 NA Date & Time Collected not specified TEST COUE EPA602 NAME EPA method 602

Category

VERIFIED

UQ/L

ANALYST E M 541-73-1 106-46-7 108-90-7 100-41-4 108-88-3 95-50-1 71-43-2 CAS# INJECTED 09/12/88 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Chlorobenzene-A Ethylbenzene COMPOUND Toluene Benzene FILE # RESULT DET LIMIT S S 8 8 8 B N 0.20 0.40 0.30 0.20 0.40 0.30 0.30 UNITS

SURROGATES

a, a, a-Trifluorotoluene 93% recovery

8-80-86

MOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted.

SAMPLE ID trip blank

Received: 09/02/88

RAS Austin

Results by Sample

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Work Order # 88-09-019 Continued From Above

A-Chlorobenzene and p-xylene co-elute otherwise noted Quantitated as chlorobenzene unless

FRACTION <u>O6A</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>
Date & Time Collected <u>not specified</u> Category

Category

Received: 09/02/88

SAMPLE ID trip blank

RAS

REPORT

Work Order # 88-09-019

Results by Sample

VERIFIED

FRACTION <u>O6A</u> TEST CODE XYLENE NAME Xylenes, EPA 602

Date % Time Collected not specified Category

Category

E

INJECTD 09/12/88

FILE #

SLINA

m-Xylene-A COMPOUND o-Xylene p-Xylene RESULT ND, Q DET LIMIT 0. 20 0. 20 0. 10

108-38-3 106-42-3

CAS #

95-47-6

98-09-8

a, a, a-Trifluorotoluene 93% recovery

SURROGATES

WOITES AND DEFINITIONS FOR THIS REPORT

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

Q = daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and p-xylene co-elute

Quantitated as chlorobenzene unless otherwise noted.

Received: 09/02/88

SAMPLE ID reagent blank

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REPORT

Work Order # 88-09-019

Results by Sample FRACTION <u>O7A</u> TEST :

FRACTION 07A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected not specified Category

TRMTD	INJECTED	ED <u>09/12/88</u> FILE # _			vq/L
	CAS#	COMPOUND	RESULT DET	DET LIMIT	
	71-45-2	Benzene	GN	0.20	
	108-88-3	Toluene	ND	0.20	
	100-41-4	Ethylbenzene	ND	0.30	
	108-90-7	Chlorobenzene-A	UN	0. 30	
	106-46-7	1,4-Dichlorobenzene	ND	0, 30	
	541-73-1	1,3-Dichlorobenzene	UD	0.40	
	95-50-1	1,2-Dichlorobenzene	ND	0.40	

SURROGATES

)8-8 a.a.a-Trifluorotoluene N\A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed

unless otherwise noted.

Received: 09/02/88

SAPPLE ID reagent blank

RAS

Results by Sample

REPORT

FRACTION <u>07A</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>

Date % Time Collected <u>not specified</u> Category

Work Order # 88-09-019 Continued From Above

A-Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless otherwise noted.

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Beceived: 09/02/88

RAS

Work Order # 88-09-019

SAMPLE ID reagent blank

FRACTION OTA Results by Sample

Date & Time Collected not specified TEST CODE XYLENE NAME Xylenes, EPA 602 Category

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ANALYST

INJECTD 09/12/88

FILE

UNITS uq/L

108-38-3 106-42-3 CAS # 95-47-6 m-Xylene-A COMPOUND p-Xylene o-Xylene RESULT DET LIMIT ND, O 0. 20

POTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

98-08-8

a, a, a-Trifluorotoluene

N\A% recovery

SURROGATES

ND = not detected at detection limit

NA = not analyzed

N\A = not available * = less than 5 times the detection limit

Second column confirmation NOT performed unless otherwise noted.

Q = daily EPA standard recovery outside 95% confidence interval

Chlorobenzene and p-xylene co-elute Quantitated as chlorobenzene unless

otherwise noted

Page 23

SPR602 SPR602 SPR602 SPR602 SPR602

Received: 09/02/88

RAS

Work Order # 88-09-019

Austin REPORT

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

RADIAN

30/12- UD June	SAMPLE IDENTIFICATION ALPHA BETA Samice MW-2 Samice MW-3 Samice MW-3 Samice MW-4 Samice MW-4	P.O. # INVOICE under separate cover	WORK ID <u>Eunice</u> , <u>radiochemistry</u> TAKEN <u>MF</u> TRANS <u>UPS</u> TYPE	CLIENT PHILLIPS P SAMPLES 4 COMPANY Phillips Petroleum FACLITY Odessa, TX	REPORT Radian TO 81.1 Austin	Received: 09/02/88
	TEST CODES and NAMES used Gross alpha radiation Gross beta radiation Radium 226	@ Indicates that spike recovery for this specific matrix was not within acceptable an interferent present.	* Indicates a value less than 5 times Potential error for such low values r	ATTEN 512-454-4797	Analytical)-pac Bi. 201088	Austin REPORT 10/21/88 14:18:24
	on this report	this analysis on the table limits indicating	ranges between 50 and 100%.	CONTACT BENDELE	- luk Starter	Work Order # 88-09-021

Page 2 Received: 09/02/88

RAS Austin REPORT RESUlts By Test

Work Order # 88-09-021

SAMPLE I	Test: ALPHA PCi/	Test: BETA	Test: RA 226
01	24 (6)	22 (9)	0.4 (0.1)
Eunice MW-1	pCi/L	pCi/L	pCi/L
02	16 (4)	36 (7)	2.4 (0.1)
Eunice MW-2	pCi/L		pCi/L
03 -	10 (3)	22 (4)	0.1 (0.1)
Eunice MW-3	pCi/L	pCi/L	pCi/L
04	36 (7)	30 (7)	0.3 (0.2)
Eunice MW-4	pCi/L	pCi/L	pCi/L

Received: 09/02/88

RAS

Test Methodology

Work Order # 88-09-021

TEST CODE ALPHA NAME Gross alpha radiation

confidence level. expressed as: value (+ or - 1 sigma). The value in parentheses is a + or - one sigma value. One sigma = one standard deviation, 68% Results are thus

IEST CODE BETA NAME Gross beta radiation

confidence level. expressed as: value (+ or - 1 sigma). Value in parentheses is a + or - one sigma value. One sigma = one standard deviation, 68% Results are thus

TEST CODE RA 226 NAME Radium 226

expressed as: value (+ or - one sigma). 68% confidence level. The value in parentheses is a + or - one sigma value. One sigma — one standard deviation, Results are thus

RADIAN

SAMPLE IDENTIFICATION OE MW-1 OE MW-2 COLI T	P.O. # INVOICE under separate cover	WORK ID Eunice, coliform samples TAKEN MF TRANS UPS TYPE	CLIENT PHILLIPS P SAMPLES 4 COMPANY Phillips Petroleum FACILITY Odessa, TX	REPORT <u>Radian</u> TO <u>Bl. 1</u> Austin ATTEN <u>Linda Bendele</u>	Page 1 RAS - Received: 09/01/88
TEST CODES and NAMES used	@ Indicates that spike recovery for specific matrix was not within accept an interferent present.	62 G	Footnotes and Comments		Austin REPORT 11/28/88 15:19:38
on this report	for this analysis on the acceptable limits indicating	es the detection limit. ranges between 50 and 100%.		(7)	Work Order # 88-11-164

Page 2 Received: 09/01/88

Austin REPORT REPORT

RAS

Work Order # 88-11-164

01 4600 02 24,000 03 49,000 MM-3 13,000	SAMPLE Id	Test: COLI T
04 02		4600
04		24, 000
04		49, 000
		13, 000

ons and other times

Data Flags:

TERMS USED IN THIS REPORT:

Analyte - A chemical for which a sample is to be analyzed. EPA method and QC specifications. The analysis will meet

Compound - See Analyte.

specified by EPA. Note, the detection limit may vary from that specified by EPA by the quantitation specified by EPA for a method. Radian staff regularly assess their concentration factor. (Refer to Factor, below) Detection Limit - The method specified detection limit, which is the lower limit laboratories' method detection limits to verify that they meet or are lower than those

specified. analyses and accompanying QC tests in conformance with EPA methods unless otherwise standard methods for analysis of environmental samples. EPA Method - The EPA specified method used to perform an analysis. Radian will perform its EPA has specified

differs from that specified by a given EPA method. A sample prepared to the specifications of the method will have a factor of 1. A sample diluted 10 times to bring the analytes within the instrument calibration range will have a factor of 10. Conversely, a sample which Factor - The concentration or dilution factor by which the sample extract or digestate is concentrated 10 times more than specified will have a factor of 0.1. Conversely, a sample which

Matrix - The sample material. Generally, it will be soil, water, air, oil, or solid

the analytical summary. Radian Work Order - The unique Radian identification code assigned to the samples reported in

Units -

NTU	ml/hr	soumn	æ	mg/Kg	mg/L	ug/M3	ug/Kg	ug/L
turbidity unit; nephelometric turbidity unit	milliliters per hour; rate of settlement of matter in water	conductance unit; microohms/centimeter	percent; usually used for percent recovery of QC standards	milligrams per kilogram (parts per million);soils/solids	milligrams per liter (parts per million); liquids/water	micrograms per cubic meter; air samples	micrograms per kilogram (parts per billion); soils/solids	micrograms per liter (parts per billion); liquids/water

NAIGAS

Notes and Definitions

Data Flags:

- uncertainty of the analysis will increase exponentially as the method The asterisk(*) is used to flag results which are less than five times approximate. detection limit is approached. These results should be considered the method specified detection limit. Studies have shown that the
- extraction or digestion step. digestion spike. These spikes have not been subjected to the This flag indicates that a spike is an analytical and/or post-
- B sample, the sample results are not corrected from the amount in the Since traces of the background contaminant will vary from sample to This flag indicates that the analyte was detected in the reagent blank
- 0 column of dissimilar phase to resolve compounds of interest from inindicates that the analyte has been confirmed on a second column. terferences that may occur and for analyte confirmation. Most methods of gas chromatography recommend reanalysis on a second This flag

D

The reported value is estimated because of the presence of interthe sample diluted so that higher levels fall into calibration range. one at the concentration of some of the analytes, and a second with bration range of the instrument. Therefore two analyses are performed, dilution factor. In an analysis some compounds can exceed the cali-This flag identifies analytes identified in analysis at a secondary report narrative. The potential source of the interference is included in the

Data Flags:

- extract is diluted and re-analyzed. compounds have a response greater than full scale, the sample or calibration range for that specific analysis. Usually if one or more This flag identifies a GC/MS result whose concentration exceeds the
- ч A result or value is not available for this parameter, usually a data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit. where a response factor of 1 is assumed, or when the mass spectral when estimating a concentration for tentatively identified compounds Indicates an estimated value for GC/MS data. This flag is used either
- A This analyte was not analyzed.

detection limit.

- KC spike added concentration is considered insignificant. detection limit. A spike recovery is not calculated when the result Applies to RPD and spike recovery results. The relative percent differ is greater than four times the spike added concentration because the ence (RPD) is not calculated when a result is less than five times the
- ND the < symbol is the method specified detection limit for the sample. at or above the specified detection limit. The value to the right of This flag (or <) is used to denote analytes which are not detected

Data Flags:

NR This analyte was not requested by the client.

this analysis. This analyte or surrogate was not added (spiked) to the sample for

Most methods of gas chromatography recommend reanalysis on a second terferences that may occur and for analyte confirmation. This flag column of dissimilar phase to resolve compounds of interest from inis applicable for samples from a regular sampling program. indicates that the analyte has been confirmed previously. This flag

O spike duplicate result. difference) values for duplicate analyses and matrix spike/matrix This quality control standard is outside method or laboratory spectical QC spike, and surrogate recoveries; and to RPD(relative percent ified control limits. This flag is applied to matrix spike, analy-

S This flag indicates that a specific result from a metals analysis has been obtained using the Method of Standard Addition.

terferences that may occur and for analyte confirmation. column of dissimilar phase to resolve compounds of interest from in-Most methods of gas chromatography recommend reanalysis on a second indicates that second column was not requested. This flag

C

MAIGAS

ANALYTICAL DATA SUMMARY

Phillips 66 Associate Laboratory Data for Radian Work Order: 8811001

Method: EPA 608 Pesticides		Matrix: water	ř		
Factor: Results in: Sample ID:	1.0 ug/L Method Blank	1.0 ug/L Eunice MW-1	1.0 ug/L Eunice MW-2	1.0 ug/L Eunice MW-3	1.0 ug/L Eunice MW-4
Lindane	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Endrin	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Toxaphene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

For a detailed description of flags and technical terms in this report refer to the glossary.

ANALYTICAL DATA SUMMARY

Phillips 66
Associate Laboratory Data for Radian Work Order: 8811001

Method: EPA 8150 Herbicides		Matrix: water	ter			
Factor: Results in: Sample ID:	ug/L Method Blank	20.0 ug/L Eunice	20.0 ug/L Eunice	5.0 ug/L Bunice	1.0 ug/L Eunice	
2,4-D	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
2,4,5-TP (Silvex)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	

For a detailed description of flags and technical terms in this report refer to the glossary.

NAIGAS



SAMPLE O1 Eunice O2 Eunice O3 Eunice O4 Eunice O5 Spiked O7 Method	WORK ID TAKEN TRANS TYPE P.O. # INVOICE	CLIENT CLIENT CANY FACILITY	REPORT	Page 1 Received:
#1-0900 mW-1 #2-1400 mW-3 #3-1700 mW-3 #4-1112 mW-4 Method Blank Dup Blank	Geosciences W.S. Dubyk Fed Ex#768/5387/785 Water 88-0190-700 under separate cover	GEOSCIENCE SAMPLES Geoscience Consultants, Lt 500 Copper NW Albuquerque, NM 87102	Mike Selke <u>Geoscience Consultants,</u> Albuquerque, NM 87102	Page 1 Received: 05/28/88
BOBO EXT L		d /	Ltd.	RAS Perimeter 07
TEST CODES and NAMES used on this report Pesticides/PCBs Extraction for liquid	Previously Reported on 07/01/88.	ATTEN PHONE 919-481-0212 * Matrix Interference	PREPARED <u>Radian Analytical Services</u> BY <u>Bldq. 900 Perimeter Park</u> Morrisville, NC 27560	REPORT 07/05/88 11:57:02
on th:			21	Eo 1 ★
is report		CONTACT M DAY	A.	Work Order # P8-06-002

1st Qb-5/88



Page 2 Received: 05/28/88

RAS Perimeter REPORT
Results By Test

Work Order # P8-06-002

TEST CODE	(entered units)	(entered units)	(entered units)	Sample 04 (entered units)	Sample 05 (entered units)
EXT L	06/02/88	06/02/88	06/02/88	06/02/88	06/02/88
TEST CODE	Sample 06	Sample 07 (entered units)			
EXT L	06/02/88	06/02/88			

Page 3 Received: 05/28/88

RAS Perimeter REPORT
Results By Test

Work Order # P8-06-002

SAMPLE	Test: EXT L		
Sample Id	date completed		
01	06/02/88		
Eunice #1-0900 !			
₽ 22 	06/02/88		
Eunice #2-1400 :			
03	06/02/88		
Eunice #3-1700			
04 -	06/02/88		
Eunice #4-1112 :			
05	06/02/88		
Spiked Method B. I			
06	06/02/88		
Spiked Method B :			
	06/02/88		
Method Blank :			

RADIAN

Page 4 Received: 05/28/88

RAS Perimeter
Results by Sample

Work Order # P8-06-002

SAMPLE ID Eunice #1-0900 EXT L 06/02/88 SAMPLE # 01 FRACTIONS: A Date & Time Collected 05/27/88 Category

Page 5 SAMPLE ID Eunice #1-0900 Received: 05/28/88 ANALYST

> RAS Perimeter REPORT

Results by Sample

Work Order # P8-06-002

FRACTION <u>OIA</u> TEST CODE <u>8080</u>
Date & Time Collected <u>05/27/88</u> NAME Pesticides/PCBs. Category

BLACKLEY GC1 INJECTD 06/02/88 PESTICIDES by METHOD 8080 FILE # 17 62288 VERIFIED UNITS 돚

INSTRMT

319-85-7 76-44-8 319-86-8 319-86-8 309-00-02 1024-57-3 959-98-8 72-55-9 60-57-1 72-20-8 7421-93-4 1031-07-8 57-74-9 8001-35-2 11104-28-2 111141-16-5 53469-21-9 112672-29-6 11097-69-1	58-89-9	319-84-6	CAS #
heptachlor delta-BHC aldrin delta-BHC aldrin heptachlor epoxide endosulfan I 4,4'-DDE dieldrin endrin endrin aldehyde endosulfan II 4,4'-DDT endrin aldehyde chlordane toxaphene PCB-1232 PCB-1242 PCB-1248 PCB-1254	gamma-BHC (lindane)	alpha-BHC	COMPOUND
	QN.	ND	RESULT
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.010	0.010	DET LIMIT

SAMPLE ID Eunice #1-0900 Received: 05/28/88 RAS Perimeter FRACTION <u>O1A</u> TEST CODE <u>8080</u>
Date & Time Collected <u>05/27/88</u> Results by Sample REPORT NAME Pesticides/PCBs. Work Order # P8-06-002 Continued From Above Category

SURROGATE RECOVERY

COMPOUND RECOVERY

dibutyl chlorendate * %

tetrachlorometaxylene 173 %

NOTES AND DEFINITIONS FOR THIS REPORT:
DET LIMIT = detection limit

ND = not detected at specified detection limit.

NR = not required for analysis. S = compound peak saturated.

estimated value less than 3 x minimum detection limit

Page 7 Received: 05/28/88

RAS Perimeter
Results by Sample

Work Order # P8-06-002

EXT L 06/02/88	SAMPLE ID Eunice #2-1400
	SAMPLE # 02 FRACTIONS: A Date & Time Collected 05/26/88
	Category

Page 8 SAMPLE ID Eunice #2-1400 Received: 05/28/88

RAS Perimeter

Results by Sample REPORT

NAME Pesticides/PCBs.

Category

Work Order # P8-06-002

FRACTION <u>OZA</u> TEST CODE <u>8080</u> Date & Time Collected <u>05/26/88</u>

INSTRMT BLACKLEY GC1 EXTRCTD 06/02/88 INJECTD 06/22/88 DRGANICS ANALYSIS DATA SHEET PESTICIDES by METHOD 8080 FILE # 19 62288 VERIFIED ONITS 1/01

<u> </u>
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0



Page 9 Received: 05/28/88 SAMPLE ID Eunice #2-1400 RAS Perimeter FRACTION <u>O2A</u> TEST CODE <u>8080</u> Date & Time Collected <u>05/26/88</u> Results by Sample REPORT NAME Pesticides/PCBs. Work Order # P8-06-002 Continued From Above Category

SURROGATE RECOVERY

RECOVERY

dibutyl chlorendate

tetrachlorometaxylene 101 %

NOTES AND DEFINITIONS FOR THIS REPORT: DET LIMIT = detection limit

NR = not required for analysis ND = not detected at specified detection limit

S = compound peak saturated.

estimated value less than 3 minimum detection limit.

Page 10 Received: 05/28/88

RAS Perimeter
Results by Sample

Work Order # P8-06-002

SAMPLE ID Eunice #3-1700 EXT L 06/02/88 SAMPLE # 03 FRACTIONS: A Date & Time Collected 05/26/88 Category

Page SAMPLE ID Eunice #3-1700 Received: 05/28/88 ANALYST INSTRMT 53469-21-9 11141-16-5 33213-65-9 11104-28-2 12674-11-2 8001-35-2 1031-07-8 7421-93-4 1024-57-3 309-00-02 959-98-8 319-86-8 319-85-7 319-84-6 57-74-9 50-29-3 58-89-9 BLACKLEY 72-20-8 60-57-1 76-44-8 72-54-8 72-55-9 CAS **GC1** EXTRCTD INJECTD endosulfan sulphate gamma-BHC heptachior epoxide endrin aldehyde RAS Perimeter endosulfan II 06/22/88 endosulfan I heptachlor (lindane) delta-BHC alpha-BH(chlordane toxaphene 4, 4 (-DD) dieldrin 4, 4 '-DDE PCB-1248 PCB-1242 PCB-1232 PCB-1221 PCB-1016 COMPOUND 4, 4'-DDD beta-BHC FRACTION 03A TEST CODE 8080 Date & Time Collected 05/26/88 ORGANICS ANALYSIS DATA SHEET endrin aldrin PESTICIDES by METHOD 8080 Results by Sample RESULT FILE # REPORT 곱급 믕 33 DET LIMIT 21 62288 0.060 0.030 0.060 0.060 0.060 VER IF IED SA MA SLINO Work Order # P8-06-002 Pesticides/PCBs Category 됫

12672-29-6

11097-69-1

PCB-1254

PCB-1260

11096-82-5

SAMPLE ID Eunice #3-1700 Received: 05/28/88 RAS Perimeter FRACTION <u>03A</u> TEST CODE <u>8080</u>
Date & Time Collected <u>05/26/88</u> Results by Sample REPORT NAME Pesticides/PCBs. Work Order # P8-06-002 Continued From Above Category

SURROGATE RECOVERY

COMPOUND

dibutyl chlorendate

RECOVERY

tetrachlorometaxylene 7. 66

NOTES AND DEFINITIONS FOR THIS REPORT: NR = not required for analysis. ND = not detected at specified detection limit S = compound peak saturated. DET LIMIT = detection limit less than 3 minimum detection limit

Page 13 Received: 05/28/88

RAS Perimeter
Results by Sample

Work Order # P8-06-002

EXT L 06/02/88	SAMPLE ID Eunice #4-1112
	SAMPLE # 04 FRACTIONS: A Date & Time Collected 05/26/88
	Category

Page 14 SAMPLE ID Eunice #4-1112 Received: 05/28/88 RAS Perimeter FRACTION 04A TEST CODE 8080 Date & Time Collected 05/26/88 Results by Sample REPORT

Work Order # P8-06-002

系統

Pesticides/PCBs

Category

INSTRMT BLACKLEY EXTRCTD INJECTD) <u>06/02/88</u>) <u>06/22/88</u> DRGANICS ANALYSIS DATA SHEET PESTICIDES by METHOD BOBO FILE # 23 62288 VERIFIED SLINO 7/60 F

309-00-02 1024-57-3 959-98-8 319-86-8 319-85-7 319-84-6 76-44-8 CAS # gamma-BHC (lindane) heptachlor epoxide endosulfan heptachlor delta-BHO alpha-BHO beta-BHC COMPOUND aldrin RESULT DET LIMIT 0.020 0.020 0.020 0.020 0.010 0.010 0.010 0.010 0.010 0.010 0.010 0.010

12672-29-6

53469-21-9 11141-16-5 11104-28-2 12674-11-2 8001-35-2

11096-82-5 11097-69-1

PCB-1260 PCB-1254 PCB-1248 PCB-1242 PCB-1232 33213-65-9

72-54-8 72-20-8 60-57-1 72-55-9

7421-93-4 1031-07-B

57-74-9

endosulfan sulphate

chlordane toxaphene

PCB-122: PCB-1016

0 030 0 030 0 030 0 030 0 030 0 030

endrin aldehyde

금

8 3 3

endosulfan Il

4, 4'-DDD

endrin

dieldrin 4, 4 '-DDE

4, 4 '-DD'

50-29-3



SAMPLE ID Eunice #4-1112	Page 15 Received: 05/28/88
FRACTION <u>04A</u> Date & Time Co	RAS Perimeter Results by Sample
FRACTION 04A TEST CODE 8080 Date & Time Collected 05/26/88	REPORT Sample
NAME Pesticides/PCBs. Category	Work Order # P8-06-002 Continued From Above

SURROGATE RECOVERY

COMPOUND RECOVERY

dibutyl chlorendate

*

7 96

tetrachlorometaxylene

NOTES AND DEFINITIONS FOR THIS REPORT:
DET LIMIT = detection limit ND = not detected at specified detection limit.

NR = not required for analysis.

S = compound peak saturated.

J = estimated value less than 3

x minimum detection limit.

Page 16 Received: 05/28/88

RAS Perimeter
Results by Sample

Work Order # P8-06-002

SAMPLE ID Spiked Method Blank EXT L 06/02/88 SAMPLE # 05 FRACTIONS: A

Date & Time Collected not specified Category

Page 17 SAMPLE ID Spiked Method Blank Received: 05/28/88

RAS Perimeter REPORT

Results by Sample

FRACTION 05A TEST CODE 8080 NA
Date & Time Collected not specified NAME Pesticides/PCBs.

Category

Work Order # P8-06-002

DRGANICS ANALYSIS DATA SHEET PESTICIDES by METHOD 8080 FILE # VERIFIED 돚

25 62288

INSTRMT GC1

INJECTD 06/02/88

UNITS % recov

19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80 19-80	CAS #
יוום מין ליו ליום מין מין מין ליום מין ליום מין ליום מין ליום מין מין ליום מין	COMPOUND
1 1 28 1 1 28 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	RESULT
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	DET LIMIT

SAMPLE ID Spiked Method Blank Received: 05/28/88 RAS Perimeter FRACTION 05A TEST CODE 8080 No. Date & Time Collected not specified Results by Sample

Work Order # P8-06-002 Continued From Above

NAME Pesticides/PCBs. Category

SURROGATE RECOVERY

COMPOUND

RECOVERY

dibutyl chlorendate

tetrachlorometaxylene 87 %

NOTES AND DEFINITIONS FOR THIS REPORT:

DET LIMIT = detection limit

ND = not detected at specified detection limit

NR = not required for analysis.

compound peak saturated.

estimated value less than 3 x minimum detection limit.

CORPORATION

Page 19 Received: 05/28/88

RAS Perimeter

REPORT REPORT

Work Order # P8-06-002

SAMPLE ID Spiked Method Blank Dup SAMPLE # 06 FRACTIONS: A
Date % Time Collected not specified

EXT_L 06/02/88

Category

Page 20 Received: 05/28/88

> RAS Perimeter Results by Sample

REPORT

Work Order # P8-06-002

SAMPLE ID Spiked Method Blank Dup

Pesticides/PCBs

Category

PRACTION 06A TEST CODE 8080 No Date & Time Collected not specified AA AA

DRGANICS ANALYSIS DATA SHEET PESTICIDES by METHOD 8080

FILE #

ANALYST INSTRMT

BLACKLEY GC1

INJECTO EXTRCTD

06/02/88

27 62288 VERIFIED

ONITS

% recov

309-00-02 1024-57-3 319-86-8 319-85-7 319-84-6 76-44-8 58-89-9 CAS gamma-BHC heptachlor epoxide heptachlor (lindane alpha-BHO delta-BHC beta-BHC COMPOUND aldrin RESULT DET LIMIT

endosulfan

endrin aldehyde endosulfan Il 4, 4'-DD dieldrin 4, 4'-DDD endrin 146 150 Ŋ 줅 Z

33213-65-9

72-54-8 72-20-8 60-57-1

50-29-3

959-98-8

72-55-9

4, 4 '-DDE

endosulfan sulphate toxaphene chlordane PCB-1254 PCB-1248 PCB-1242 PCB-1232 PCB-1221 PCB-1016 0 050 0 050 0 050 0 060 0 060 0 030

11097-69-1 12672-29-6 53469-21-9

11096-82-5

PCB-1260

11104-28-2

12674-11-2

8001-35-2

1031-07-8 7421-93-4

57-74-9

11141-16-5

Page 21 Received: 05/28/88 SAMPLE ID Spiked Method Blank Dup RAS Perimeter FRACTION 06A TEST CODE 8080 NA
Date & Time Collected not specified Results by Sample NAME Pesticides/PCBs. Work Order # P8-06-002 Continued From Above Category _

SURROGATE RECOVERY

COMPOUND RECOVERY

dibutyl chlorendate

tetrachlorometaxylene

78 %

NOTES AND DEFINITIONS FOR THIS REPORT: S = compound peak saturated. NR = not required for analysis. ND = not detected at specified detection limit. DET LIMIT = detection limit

J = estimated value less than 3

x minimum detection limit

Page 22 Received: 05/28/88

RAS Perimeter
Results by Sample

Work Order # P8-06-002

SAMPLE ID Method Blank EXT L 06/02/88 SAMPLE # 07 FRACTIONS: A

Date & Time Collected not specified Category

Page Received: 05/28/88 ry S

> RAS Perimeter Results by Sample

REPORT

Work Order # P8-06-002

SAMPLE ID Method Blank

FRACTION 07A TEST CODE 8080 No Date & Time Collected not specified 系統

Pesticides/PCBs.

Category

ORGANICS ANALYSIS DATA SHEET PESTICIDES by METHOD 8080

INSTRMT ANALYST

BLACKLEY GC1

INJECTD EXTRCTD

06/02/88

FILE # 15 62288 VERIFIED 돗

SLINO

חם/ר

11096-82-5	11097-69-1	12672-29-6	53469-21-9	11141-16-5	11104-28-2	12674-11-2	8001-35-2	57-74-9	1031-07-8	7421-93-4	50-29-3	33213-65-9	72-54-8	72-20-8	60-57-1	72-55-9	959-98-8	1024-57-3	309-00-02	319-86-8	76-44-8	319-85-7	58-89-9	319-84-6	CAU #	
PCB-1260	PCB-1254	PCB-1248	PCB-1242	PCB-1232	PCB-1221	PCB-1016	toxaphene	chlordane	endosulfan sulphate	endrin aldehyde	4, 4'-DDT	endosulfan II	4, 4'-DDD	endrin	dieldrin	4, 4'-DDE	endosulfan I	heptachlor epoxide	aldrin	ID.	heptachlor	beta-BHC	gamma-BHC (lindane)	alpha-BHC	COMPCOND	
NR	NR.	NR.	NR.	NR.	NR.	NR.	ND ND	N N	GN	NB	ND	ND ND	ND	NO	ND	ND	ND	ND	ND	ND	ND ND	ND	NB	ND	えたいこと)) : 1
0.060	0.060	0.030	0.030	0.060	0.060	0.030	0. 50	0.050	0.050	0.020	0.020	0.030	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	ב ב ב ב ב	111-11

Page 24 Received: 05/28/88 SAMPLE ID Method Blank

> RAS Perimeter Results by Sample

REPORT

Continued From Above Work Order # P8-06-002

FRACTION 07A TEST CODE 8080 NA
Date & Time Collected not specified NAME Pesticides/PCBs.

Category

SURROGATE RECOVERY

COMPOUND RECOVERY

dibutyl chlorendate

tetrachlorometaxylene

78 ×

NOTES AND DEFINITIONS FOR THIS REPORT: DET LIMIT = detection limit

NR = not required for analysis. ND = not detected at specified detection limit

S = compound peak saturated.

J = estimated value less than 3 x minimum detection limit.

CORPERNION

Page 1

RAS Perimeter REPORT 07/11/88 10:07:55

Work Order # P8-06-003

Received: 05/28/88 REPORT Mike Selke
TO Geoscience Consultants, Ltd.
Albuquerque, NM 87102

PREPARED <u>Radian Analytical Services</u>
BY <u>Bldg. 900 Perimeter Park</u>

Morrisville, NC 27560

CERTIFIED B CONTACT M DAY

Previously Reported on 07/08/88

FACILITY

500 Copper NW

Albequerque,

Z

87102

Geoscience Consultants, Ltd.

SAMPLES

PHONE

919-481-0212

COMPANY

CLIENT

GEOSCIENCE

ATTEN

INVOICE

7. O. #

88-0190-700

under separate cover

Water

TAKEN TRANS TYPE

Geosciences

Dubuk

Fed Ex #768/5387/785

Eunice #3-1700 Eunice #1-0900 Eunice #2-1400 Method Blank Eunice #4-1112 A-MW

> GC of Herbicides EST CODES and NAMES used on this report

EXT L Extraction for liquid

151 QTR-5/88

RAS Perimeter
Results By Test

Page 2 Received: 05/28/88

Work Order # P8-06-003

default units	(entered units)	(entered units)	(entered units)	(entered units)	Sample U6 (entered units)
EXT L	06/02/88	06/02/88	06/02/88	06/02/88	06/02/88

Work Order # P8-06-003

Page 3 Received: 05/28/88	88/8	RAS Perimeter Results By Test
SAMPLE Id		Test: EXT L
	20	06/02/88
	ි _ස ි	06/02/88
00 == 1700 00 == 1700	3 3 3 3	06/02/88
1 Emice #3-1/00 1 04	04	06/02/88
Eunice #4-11	06 -	06/02/88

Method Blank

Page 4 Received: 05/28/88

RAS Perimeter

REPORT

Results by Sample

Work Order # P8-06-003

SAMPLE ID Eunice #1-0900	OI FRACTIONS	
	Date & Time Collected 05/27/88	Categoryi
EXT L 06/02/88		

Page 5

Received: 05/28/88

RAS Perimeter

REPORT

Work Order # P8-06-003

SAMPLE ID Eunice #1-0900

Results by Sample

FRACTION 01A TEST CODE 509B

Date & Time Collected 05/27/88

NAME GC of Herbicides Category

ORGANICS ANALYSIS DATA SHEET HERBICIDES

BLACKLEY GC1 EXTRCTD 06/02/88
INJECTD 06/28/88 FILE VERIFIED UNITS

93-76-5 93-72-1 94-75-7 CAS # 2, 4, 5-TP (Silvex) COMPOUND 2, 4, 5-T 2, 4-D RESULT S DET. LIMIT 0.10 0.50

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = detection limit.

ND = not detected at specified detection limit.

= not required for analysis.

compound peak saturated.

estimated value less than 3 x minimum detection limit.

Page 6 Received: 05/28/88

REPORT

Work Order # P8-06-003

SAMPLE ID Eunice #2-1400

EXT L 06/02/88

RAS Perimeter Results by Sample SAMPLE # 02 FRACTIONS: A
Date & Time Collected 05/26/88

Category

Page 7

Received: 05/28/88

RAS Perimeter

Work Order # P8-06-003

SAMPLE ID Eunice #2-1400

Results by Sample

FRACTION <u>O2A</u> TEST CODE <u>5098</u>
Date & Time Collected <u>05/26/88</u>

NAME GC of Herbicides Category

DRGANICS ANALYSIS DATA SHEET HERBICIDES

ANALYST BLACKLEY
I JRMT GC1 INJECTD 06/28/88 FILE VERIFIED ¥ SLINA

93-76-5 93-72-1 94-75-7 CAS # 2, 4, 5-TP (Silvex) COMPOUND 2, 4, 5-T 2, 4-D RESULT 9.8 K DET. LIMIT 0.10 0.10 0.50

NOTES AND DEFINITIONS FOR THIS REPORT

DET LIMIT = detection limit.

ND = not detected at specified detection limit

NR = not required for analysis. compound peak saturated.

= estimated value less than 3 x minimum detection limit.

Page 8
Received: 05/28/88

RAS Perimeter

REPORT

Results by Sample

Work Order # P8-06-003

EXT_L_06/02/88	SAMPLE ID Eunice #3-1700	SAMPLE # 03 FRACTIONS: A Date & Time Collected 05/26/88	Category
EXT_L_06/02/88		07/20	rate of or
	EXT L 06/02/88		

CORPORATION

Page 9
Received: 05/28/88

RAS Perimeter

REPORT

Work Order # P8-06-003

Results by Sample

SAMPLE ID Eunice #3-1700

FRACTION 03A TEST CODE 509B Date & Time Collected 05/26/88

NAME GC of Herbicides

DRGANICS ANALYSIS DATA SHEET HERBIÇIDES

BLACKLEY GC1 EXTRCTD 06/02/88
INJECTD 06/28/88 FILE VERIFIED SLINA

93-76-5 93-72-1 94-75-7 CAS # 2,4,5-TP (Silvex) COMPOUND 2, 4, 5-T 2, 4-D RESULT R DET. LIMIT 0.50 0.10

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = detection limit.

ND = not detected at specified detection limit

NR = not required for analysis.

S = compound peak saturated. estimated value less than 3 x minimum detection limit.

Page 10 Received: 05/28/88

RAS Perimeter
Results by Sample

Work Order # P8-06-003

SAMPLE ID Eunice #4-1112 SAMPLE # 04 FRACTIONS: A Date & Time Collected 05/26/88

EXT_L 06/02/88

Category

Page 11

Received: 05/28/88

RAS Perimeter

REPURT

Wark Order # P8-06-003

SAMPLE ID Eunice #4-1112

Results by Sample

FRACTION <u>04A</u> TEST CODE <u>509B</u>
Date & Time Collected <u>05/26/88</u>

NAME GC of Herbicides Category

ORGANICS ANALYSIS DATA SHEET HERBICIDES

BLACKLEY GC1 EXTRCTD 06/02/88
INJECTD 06/28/88 FILE VERIFIED SLIND

ANALYST I FRMT

93-76-5 93-72-1 94-75-7 CAS # 2, 4, 5-TP (Silvex) COMPOUND 2, 4, 5-T 2, 4-D RESULT 8.2 B DET. LIMIT 0.10 0.10 0.50

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = detection limit.

ND = not detected at specified detection limit

= not required for analysis.

compound peak saturated.

estimated value less than 3 x minimum detection limit

REPORT

Work Order # P8-06-003

Page 12 Received: 05/28/88 SAMPLE ID Method Blank RAS Perimeter Results by Sample

EXT L 06/02/88

SAMPLE # 06 FRACTIONS: A

Date & Time Collected not specified Category

SAMPLE ID Method Blank Page 13 Received: 05/28/88

RAS Perimeter

REPORT

Work Order # P8-06-003

Results by Sample

FRACTION <u>O6A</u> TEST CODE <u>509B</u> NADate & Time Collected <u>not specified</u> NAME GC of Herbicides Category

ORGANICS ANALYSIS DATA SHEET HERBICIDES

ANALYST BLACKLEY
IN RMT GC1 EXTRCTD 06/02/88
INJECTD 06/28/88 FILE VERIFIED STINO

93-76-5 93-72-1 94-75-7 CAS # 2, 4, 5-TP (Silvex) COMPOUND 2, 4, 5-T 2, 4-D RESULT DET. LIMIT 0.10 0.10 0.50

NOTES AND DEFINITIONS FOR THIS REPORT

DET LIMIT = detection limit.

ND = not detected at specified detection limit

not required for analysis.

compound peak saturated.

estimated value less than 3 x minimum detection limit.

Ţ

07/11/88 14:47:16

Worl Drien # 88-05-145

CCLIENT COMPANY	ATTEN	REPORT
GEOSCIENCE Consultants, Ltd.	Albuquerque, NM 87102 Mike Seike	Geostiente Consultants. Ltd. 500 Copper NW Suite 200

CONTACT GIBSON

Unknown compounds present in GC analysis of -01, -02, -03

Footnotes and Comments Duplicate of report of 06/27/88

WORK ID

Phillips

TRANS TAKEN

USM Fed Ex

TYPE

88-0190-700

11837

Potential error for Indicates a value less SUCH low values ranges than 5 times the detection limit between 50 and 100%

specific matrix was not within acceptable Indicates that spike recovery for this analysis on the pecific matrix was not within acceptable limits indicating

自然 医对对电子感觉性电话的 医对角切开口的 TEST CODES and NAMES used on this report

Unice #3/dup unice #3 eq Unice #O eagent blank rip blank 15/ QNR-988 IDENTIFICATION b lank

										1 41 15 1
XYLENE	TURB	XOT	TOC	504 IC	SE G	PHEZ	T	PB G	SON	THE CUME
Xylenes, EPA 602	Turbiditu	10	Total prospic carbon	Sulfate, IC	Selenium, graphite AA	Total phenolics	PH	ead craphite AA	Nitrate, colorimetric	(元) (水) (水

70.60 Austin
Results By Test

Work Orset # 88-05-145

Sample Id	#1 #1	Up/mi	POM /	og/ml	- a b s - (a)	1834, 251
	2	<0.003	9.4 (3.7)	0.078	0	33.1(7.0)
Monice #1	요 	<0.003	S. 501/C	0,066	0 3	9.7+1-2.9
munice #O			pCi/L			

Sample Id	SAME	Test: CD E	Test: CL IC	colonies/100 mL	Test CR m	Test: D63020
	2	<0,003	930	<u>>24, 000</u>	(0.003	06/03/88
Eunice #1	8 	(D, D03	360	>24,000	0.003*	06/03/88
Montion to	ධ 				KO, 003	
Eunice #3 dup	TÖ					

menice #0			## ## ## ## ## ##		Cample Id
6	* ******			<u></u>	SE
06/09/88				587.607.90	date complete
0.36				P.J.	est. FE E
(LJ				# <u>*</u>	Test: FIC
100 48 03 03	#3 193 193 103	b 1000	# # P P P P P P P P P	- 100 - 100	Umhos/cm
0, 58				O in	Test: MN E

CORPO .	RATION				
Rage 3 Received: 05/28/88	200 200 100	Description To the total	######################################	Control Contro	# 88-05-145 From Above
SAMPLE I	date complete	TO T	Test: F IC	Test: MH2	Test: MN E
				19 19 19 19 19 19 19 19 19 19 19 19 19 19 19	
		,		2400	
				24 20	
Eunice #3 dup	06/09/88		,		
	Test No. E	Test: NOS	Testi PB &		Test: PHEN
	5705	6	CO. 002	(78.3 179.3	0.016%
## ##				54 (3)	• ••••
				in-	
				74 60	
	300	(O. 1	<0.00≥	7.47	<0.005
m c π c π c π c π c π c π c π c π c π c π				in in th	
				mad Arr Cor	.

Results By Test

Work Order # 88-05-145 Continued From Above

SAMPLE Id	est: NA E	mg/L as N	Test: PB @	PATE OF STREET
SAMPLE	Test: SE &	Test: <u>504_10</u>	Test: TOC	Test: TO)
	<0.003	430	71	0.74
#1 #1			70	0.59
			71	(D)
			0° *0	ල ල ම
	© 003	200	မွှာ	0.04%
# G			.0 C)	0
			JESS Land	0.04%
*********			#A	0 03*

Received: 05/28/88

SAMPLE ID EUNICE #1

Postin

四男

Work Dider # 88-05-145

Results by Sample

Date & Time Collected 05/27/88 TEST CODE EPAGOS **三** EPA method 602

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istagony

ANALYST 541-73-1 106-46-7 108-90-7 100-41-4 108-88-3 95-50-1 71-43-2 CAS# INJECTED 06/01/88 1,2-Dichlorobenzene 1. G-Bichlorobenzene 1,4-Dichlorobenzene Oblorobenzenel-A Ethylbenzene COMPOUND Benzene FILE Toluene RESULT DET LIMIT 0.7* 15 D. 0.4 0 0.23 0.23 0.4 0 0 3 STIND 13

NOTES AND DEFINITIONS FOR THIS REPORT.

8-08-8

a, a, a-Trifluorotoluene

114% recovery

SURRUGATES

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

NNA = not available

Second column confirmation NOT performed unless otherwise noted

SAMPLE ID Eunice #1 Received: 05/28/88

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Continued From Above Work Diter # 88-05-145

FRACTION OLD TEST CODE EPA602
Date & Time Collected 05/27/88 NAME EPA method 602

stegory

A-Chlorobenzens and m-xylene co-elute otherwise noted. Quantitated as chlorobenzene unless

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Work Green # 88-05-145

70 TO 00 TO
05/28/88

Results by Sumple

FRACTION 011 TEST CODE HG C Date & Time Collected 05/27/88

NAME Mercal cold vapor

Progery

VERIFIED DMC

ANALYST 403 KCP

AMALYZED 06/06/88

ST (M) 13/5A

ANALYTE Mercury RESULT 占 DET LIMIT 0.00012

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT - DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

NVA = not available * " less then & times the detection limit

SAMPLE ID Eunice #1

NAME TUTOSSITU

Category

FRACTION OIA TEST CODE TURB Date & Time Collected 05/27/88

VER IF LED

ANALYST 21004 73

ANALYZED 05/28/88

UNITS

ANALYTE RESULT DET LIMIT

Turbidity

5

スコ (公 (で) Results by Sample

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Continued From Above Work Order # 88-05-145

Eunice
78 %: P

FRACTION OIA TEST CODE TURB Date & Time Collected 05/27/88

NAME Turbiditu

Category

NOTES AND DEFINITIONS FOR THIS REPORT. ND = not detected at detection limit DET LIMIT - DETECTION LIMIT

NA = not analyzed

less than 5 times the detection limit

N/A # not available

SAMPLE ID Eunice #1

Pate & Time Collected 05/27/88

NAME Xulenss, EPA 602

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VERIFIED - CL

INSTRMT INSTRMT

INJECTO 06/01/88

SLIND

106-42-3 108-38-3 95-47-6 CAS # m-Xylene-A COMPOUND p-Xylene c-Xylene

RESULT DET LIMIT

8-80-84

a, a-Trifluorotoluene 114% recovery

SURROGATES

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

NAA = not available

Second column confirmation NOT performed unless otherwise noted

SAMPLE ID Eunice #1

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Results by Sample

Continued From Above Work Green # 88-05-145

NAME Xulenes, EPA 602

Date & Time Collected 05/27/88

Chlorobenzene and m-xylene co-elute. Ø = daily EPA standard recovery outside 95% confidence interval. Quantitated as chlorobenzene unless otherwise noted.

SAMPLE ID Eunice #3

程明日

Work Order # 88-05-145

Results by Sample

系統 EPA method 602

FRACTION <u>O2V</u> TEST CODE <u>EPA602</u>

Date & Time Collected <u>05/26/88</u> Faces or a

VER1F1ED P

AMALYST P 541-73-1 108-80-7 106-46-7 100-41-4 108-88-3 95-50-1 71-43-2 CAS# INJECTED 06/01/88 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Chlorobenzene-A Ethylbenzene COMPOUND Toluene Benzene FILE # RESULT DET LIMIT 0.4* 1.40 1.44 0.2 0.4 03 0.2 0 þ 0 STIND

SURRDGATES

3-80-B¢ a, a, e-frifluorotoluene 104% recovery

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT

not detected at detection limit

NA = not analgzed

less than 5 times the detection limit

NNA = not available

Second column confirmation NOT performed unless otherwise noted

SAMPLE ID Eunice #3

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Results by Sample REPORT

Work Doder # 88-05-145 Continued From Above

NAME EPA method 602

A-Chlorobenzene and m-xylene co-elute. Quantitated as chlorobenzene unless FRACTION 020 TEST CODE EPA602 Date & Time Collected 05/26/88

otherwise noted.

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REPORT

Work Order # 88-05-145

Results by Sample

SAMPLE ID Eunice #3

Date & Time Collected 05/26/88

系 METCHTA COLD VAPOR Pategory

VER 1F 1ED DMC

AMALYST

ANALYZED 06/06/88

SLING Tw/bn

ANALYTE RESULT DET LIMIT

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0.00012

Mercury

NOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT - DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* # less than 5 times the detection limit

NA = not available

SAMPLE ID Eunice #3

FRACTION <u>O2A</u> TEST CODE TURB Date & Time Collected <u>05/26/88</u>

NAME Turbicity

floodage

VERIFIED

ANALYST 2100A

ANALYZED 05/28/85

SLINN 2

AMALYTE RESULT DET LIMIT

Turbidity

10

Received: 05/28/88

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REPURT

Results by Sample

Continued From Above Work Dider # 88-05-145

SAMPLE ID EUNICE #3

R 100 mm

Category

FRACTION <u>OZA</u> TEST CODE <u>TURB</u>
Date & Time Collected <u>05/26/88</u>

NOTES AND DEFINITIONS FOR THIS REPORT ND = not detected at detection limit DET LIMIT = DETECTION LIMIT

NA = not analyzed

= less than 5 times the detection limit

MNA = not available

SAMPLE ID Eunice #3

TEST CODE XYLENE 孟 XULEDES EPA 602

FRACTION OZU

Date & Time Collected 05/26/88

Category

FILE #

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INJECTO 06/01/88

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RESULT 0.6*@ O 44 0.9 DET LIMIT 000

106-42-3 109-38-3

m-Xylene-A

o-Xylene

95-47-6

CAS #

COMPOUND p-Xylene

3-80-86

a, a, a-Trifluorotoluene 104% recovery

SURRUGATES

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

less than 5 times the detection limit

NA = not analyzed

NNA = not available

Second column confirmation NOT performed unless otherwise noted

Page 14

Received: 05/28/88 SAMPLE ID Eunice #3

> Austin

REPURT

Results by Sample

Work Order # 88-05-145 Continued From Above

NAME Xulenes, EPA 602

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FRACTION <u>021</u> TEST CODE XYLENE Date & Time Collected <u>05/26/88</u>

Chlorobenzene and m-xylene co-elute. Ð = daily EPA standard recovery outside 95% confidence interval.

Quantitated as chlorobenzene unless otherwise noted.



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REPORT

Work Dreen # 88-05-145

SAMPLE ID Eunice #3 dup

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Results by Sample

FRACTION 036 TEST CODE EPA602
Date & Time Collected 05/26/88

3 EPS method 602

estegory.

VERIFIED S

								ANALYST CL
95-50-1	541-73-1	106-46-7	108-90-7	100-41-4	108-88-3	71-43-2	CAS#	INJECT
1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Chlorobenzene-A	Ethylbenzene	To) uene	Benzene	COMPOUND	INJECTED 06/01/88 FILE # _
ND	N. C.	NO	7.00	i.i.	0 88	4.7	RESULT DE	
0.4	0.4	0.8	1 <u> 0</u> <u> 0</u>	0.3	C. 2	0.2	DET LIMIT	UNITSua/_

SURROGATES

8-80-89 a, a, a-Trifluorotoluene 102% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT - DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

less than 5 times the detection limit

NA = not available

Second column confirmation NOT performed unless otherwise noted

SAMPLE ID Eunice #3 dup

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REPORT

Work Order # 88-05-145 Continued From Above

NAME EPA method 602

Category

FRACTION 03A TEST CODE EPA602
Date & Time Collected 05/26/88 Results by Sample

A-Chlorobenzene and m-xylene co-elute otherwise noted. Quantitated as chlorobenzene unless

SAMPLE ID Eunice #3 dup

Received: 05/28/88

Work Diser # 88-05-145

FRACTION 03A TEST CODE XYLENE Date & Time Collected 05/25/88 Results by Sample

系統

Xulenes EPA 602

Category

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ANALYST

INJECTO 06/01/88

UNITS

106-42-3 109-38-3 95-47-6 m-Xylenc-A COMPOUND p-Xylene o-Xylene RESULT 0 0 ¢ 0 0 0 8 DET LIMIT 000 000

SURRIGATES

8-90-86

a, a-Trifiuorotoluene TORK TECOVERY

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT - DETECTION LIMIT

not detected at detection limit

NA = not analyzed

N\A = not available less than 5 times the detection limit

Second column confirmation NOT performed unless otherwise noted.

= daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and m-xylene co-elute Quantitated as chicrobeniene unless

otherwise noted

SAMPLE ID Eunice #3 eq blank

REPORT

Work Order # 88-05-145

Results by Sample

FRACTION 04A TEST CODE EPA602
Date & Time Collected 05/26/88 NAME EPA method 602

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ANALYST 541-73-1 106-46-7 108-90-7 100-41-4 108-88-3 95-50-1 71-43-2 CAS# INJECTED 06/01/88 1.3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene Chlorobenzene-A Ethylbenzene COMPOUND Benzene FILE # Toluene RESULT DET LIMIT 18 0 2 0 4 C (C) 0.3 0.4 0 2 STIND

SURROGATES

3-80-86 a.a.a-Trifluorotoluene 96% recovery

NOTES AND DEFINITIONS FOR THIS REPORT. ND = not detected at detection limit DET LIMIT - DETECTION LIMIT

NA = not analyzed

I less than 5 times the detection limit

NIA = not available

Second column confirmation NOT performed unless otherwise noted

SAMPLE ID Eunice #3 eq blank

REPORT

Work Order # 88-05-145 Continued From Above

Results by Sample

FRACTION 04A TEST CODE EPA602
Date & Time Collected 05/26/88 NAME EPA method 602

A-Chlorobenzene and m-xylene co-elute. Quantitated as chlorobenzene unless otherwise noted.

70 70 70 Results by Sample

REFURT

Work Order # 88-05-145

SAMPLE ID Eunice #3 eg blank

FRACTION <u>04A</u> TEST CODE XYLEI Date & Time Collected <u>05/26/88</u> TEST CODE XYLENE

NAME Xulenes, EPA 602 PLO GESSES

<u> </u>	/01	VERIFIED CL UST
CAS # 106-42-3 109-38-3	COMPOUND RESULT DET LIMIT p-Xylene MD 0.2 m-Xylene ND 0.2	H- (1) (1) H-

ANALYST

NOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

3-80-8¢

a, e-Trifluorotoluene

96% recovery

SURRUGATES

ND m not detected at detection limit

NA = not

N\A = not available A = not analyzed = less than 5 times the detection limit

Second column confirmation NOT performed unless otherwise noted.

= daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and m-xylene comelute otherwise noted. Quantitated as chlorobenzene unless

Page 21 SAMPLE ID trip blank Received: 05/28/88

REPORT

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Work Green # 88-05-145

Results by Sample

NAME EPA method 602

FRACTION 056 TEST CODE EPA602 NA Date & Time Collected not specified ONTER OTH

			VER	RIFIED CL	
TRMT D	INJECTED	FILE # _		ORITS STINU	
	CAS#	COMPOUND	RESULT DE	DET LIMIT	
	71-43-2	Benzene	ND	0.2	
	108-86-3	Toluene	ND	0 13	
	100-41-4	Ethylbenzene	UD	0.3	
	108-90-7	Chlorobenzene-A	GN	0.3	
	106-46-7	1,4-Dichlorobenzene	ND	0.3	
	541-73-1	1,3-Dichlorobenzene	ND	P 0	
	95-50-1	1,2-Dichlorobenzene	ND	0.4	

SURROGATES

a, a, a-Trifluorotoluene 100% recovery

NOTES AND DEFINITIONS FOR THIS REPORT. NA = not analyzed ND = not detected at detection limit DET LIMIT = DETECTION LIMIT

* = less than 5 times the detection limit

NNA = not available

Second column confirmation NOT performed unless otherwise noted

Page 22 Received: 05/28/88

SAMPLE ID trip blank

RAS Austin

Work Order # 88-05-145 Continued From Above

Results by Sample

FRACTION 05A TEST CODE EPA602 NA
Date & Time Collected not specified NAME EPA method 602 Stegory

A-Chlorobenzene and m-xylene co-elute. otherwise noted. Quantitated as chlorobenzene unless

SAMPLE ID trip blank

Received: 05/28/88

Austin

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Work Under # 88-05-145

Results by Sample

Date & Time Collected not specified TEST CODE NAME Xulenes, EPA 602 Category

INJECTO 06/01/88 FILE VERIFIED UNITS

106-42-3 108-38-3 95-47-6 CAS # m-Xylene-A COMPOUND p-Xylene enelyx-a DET LIMIT

SURROGATES

a, a, a-Trifluorotoluene 20% recovery

SOTES DET LIMIT - DETECTION LIMIT AND DEFINITIONS FOR THIS REPORT

8-80-86

not detected at detection limit

not analyzed

N\A = not available less than 5 times the detection limit

Second column confirmation NOT performed unless otherwise noted.

= daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene Quantitated as chlorobenzene unless and m-xylene co-elute

otherwise noted

Page 24

Received: 05/28/88

SAMPLE ID reagent blank

RAS - Austin

REPORT

Work Order # 88-05-145

Results by Sample

Pate & Time Collected not specified NAME EPA method 602

ANALYST 541-73-1 106-46-7 108-90-7 100-41-4 108-88-3 95-50-1 71-43-2 CAS# INJECTED 06/01/88 1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene Chlorobenzene-A Ethylbenzene COMPOUND Benzene FILE Toluene RESULT DET LIMIT E VERIFIED 0.3 0 0 0 0 0.3 0 2 CHILD P

SURROGATES

98-08-8 a.a.a-Trifluorotoluene <u>N/6</u>% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* I less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unlass otherwise noted

SAMPLE ID reagent blank Received: 05/28/88

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Results by Sample

FRACTION OGA TEST CODE EPA602 NA Date & Time Collected not specified

NAME EPA method 602

Category

Work Order # 88-05-145 Continued From Above

A-Chierobenzene and m-xylene co-elute otherwise noted. Guantitated as chlorobenzene unless

ಗಿತ್ತೂಕ ಸಿದ್ದ ID reagent blank

Received: 05/28/88

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Work Order # 88-05-145

Kulenes EPA 602

Catagory

FRACTION OGA Results by Sample TEST CODE XYLENE

Date & Time Collected not specified

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ANALYST

INJECTD 06/01/88

SLIND

106-42-3 108-38-3 95-47-6 CAS # m-Xylene-A COMPOUND p-Xylene o-Xylene RESULT DET LIMIT

8-80-85

a, a, a-Triflugrotoluene SURROGATES N/A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT not detected at detection limit

less than 5 times the detection limit not analyzed

Second column confirmation NOT performed NNA = not available unless otherwise noted.

m daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and m-xylene co-elute

Quantitated as chlorobenzene unless otherwise noted

Page 27 Received: 05/28/88 FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

70,750 Austin

Work Order # 88-05-145

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SPARE X80 X10 SPR602

SPR602 SPR602 SPR602

RAS Austin

Work Order # 88-05-147

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MOO Consist MII	Geoscience Consultants, Ltd.	

ATTEN			TO	REPORT
	Albuquerque, NM 87102	te 200	500 Copper NW	Geoscience Consultants, Ltd.

FACILITY	COMPANY	CLIENT
alle under du principal de participa de servicios per de la constitució de la constitució de la constitució de	Geoscience	GEOSCIENCE
enatore de la primera de la compete desta de cambre de compete de compete de la compete de la compete de compe	Geoscience Consultants, Ltd.	SAMPLES
	Ltd.	LES 4

INVOICE	P.O. #	TYPE	TRANS	TAKEN	MORK ID
under separate cover	88-0190-700	or and the state of the state o	Fed Ex	WSD	Phillips

4		Ì	ĺ	ì	Ì	1	
	PHONE	ATTEN			ΥВ	PREPARED	06/29/8
	512-454-47		Austin, TX	PO Box 201	6501 Mp-pa	Radian An	06/29/88 13:43:29

5	Carrar Character of Arter
ΥB	6501 Mo-pac 81
	PD Box 201088
	Austin, TX 78720-1088
E.	
ř	9

CENTIFIED BY

CONTACT GIBSON

<u>Unknown compounds present in GC analysis of -O1.</u>

Footnotes and Comments

Potential error for such low values ranges between 50 and 100% * Indicates a value less than 5 times the detection limit

an interferent present. specific matrix was not within acceptable limits indicating @ Indicates that spike recovery for this analysis on the

202 Eunice #2 reagent blank SAMPLE IDENTIFICAT trip blank

ST PIR 5/88

PA60

EPA method 602

ICHES

Sodium,

I CPES

Mitrate, colorimetric

Specific conductance

dercury, cold vapor

luoride,

Į C

Manganese, ICPES

DG302 166010

Digestion, method

igestion, method

6010 3020

AS G CR E CD E BETA ALPHA Silver, Gross beta radiation Barium, Arsenic, graphite AA Gross alpha radiation Chromium chloride. Cadmium, otal coliform ICPES ICPES ICPES IC ICPES

TEST CODES and	CODES and NAMES used	on this report
CPES	PB G	Lead, graphite AA
ha radiation	FH	
graphite AA		
CPES	9 3S	
a radiation	S04 IC	Sulfate, IC
ICPES	707	
IC	Tux	
iform	TURB	
ICPES	XYLENE	Xylenes, EPA 602

Page 2 Received: 05/28/88

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Austin REPORT

Work Order # 88-05-147

Eunice #4 02	Eunice #2	SANULE Id	SAMPLE O1 O1 Eunice #4 O2	SAMPLE I OI Eunice #2 02 Eunice #4
06/09/88	06/09/88	Test: DS5010	Test: <u>CD E</u> 	Test: AG E
10	7.00	lest: FE E	Test: <u>CL IC</u> 550 330	Test: ALPHA 5. 9 (2.2) 5. 9 (2.2) pci/L 11. 8(3.9) pci/L
LU M	#200 #200	Test: F IC	Test: COLI [colonies/190 mL }24,000 }24,000	Test: AS G 0.096 0.056
3770 3770	2960 2950 2950	Test: MHD	Test: <u>CR</u> E 0. 016 0. 040*	Test: BA
0.50	0. 28	Test: MN E	Test: <u>DG3020</u> date complete 06/03/88 06/03/88	Test: BETA 10.3(3.9) 10.3(5.6) 21.4(5.6) pci/L

Page 3 Received: 05/28/88

RAS

Austin REPORT
Results By Test

Work Order # 88-05-147 Continued From Above

•	SAMPLE Id SAMPLE Sample Id SAMPLE
450	Test: DG6010 date complete Test: NA E ya/m1
(O. 1	Test: FE E 1/9/m1 Test: NO3 mq/L as N 3 1
<0.002	Test: PB G Test: PB G Va/ml
7. 04 6. 95 7. 18 7. 30 7. 17	Test: MHO 3760 3760 Test: PH Test: PH b. 97
(0.005	Test: MN E Test: PHEN 0.012*

RAS

Austin REPORT Results By Test

Work Order # 88-05-147

SAMPLE Id	Test: SE 6	Test: SO4 IC	Test: TOC	Test: TOX
01	(0)	89	65	0,40
tunice #2			50	0.39
			69	0.44
	e weege an		440	0.47
	<0.030	1300	ry Ca	0.13
			20	0.05
			2	0.06
			r <u>u</u>	0.14

Page 5 Received: 05/28/88

SAMPLE ID Eunice #2

RAS Austin

REP CRI

Work Order # 88-05-147

Results by Sample

FRACTION OIN TEST CODE EPA602
Date & Time Collected 05/26/88 NAME EPA method 602

motion to the contract of the	ND.	1,2-Dichlorobenzene	1-05-56	
F)	ND	1,3-Dichlorobenzene	541-73-1	
2	ND	1,4-Dichlorobenzene	106-46-7	
l ra	ND	Chlorobenzene-A	108-90-7	
N. Inc.	38	Ethylbenzene	100-41-4	
1	45	Toluene	108-88-3	
·	250	Benzene	71-43-2	
RESULT DET LIMIT	RESULT	COMPOUND	CAS#	
UNITSUq/L	king begin menjakakin menjakakin penjakakin penjakakin penjakakin penjakakin penjakakin penjakakin penjakakin	INJECTED 06/01/88 FILE # _		ANALYSTBM
VERIFIED CL	<			

NOTES AND DEFINITIONS FOR THIS REPORT

8-80-86

a, a, a-Trifluorotoluene

118% recovery

SURRUGATES

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

NNA = not available

Second column confirmation NOT performed unless otherwise noted.

Page 6 Received: 05/28/88

Austin

Results by Sample

Work Order # 88-05-147 Continued From Above

NAME EPA method 602 Category

SAMPLE ID Eunice #2 A-Chlorobenzene and m-xylene co-elute. PRACTION OIJ TEST CODE EPA602
Date & Time Collected 05/26/88

otherwise noted.

Quantitated as chlorobeniene unless

SAMPLE ID Eunice #2 SAMPLE ID Eunice #2 Received: 05/28/88 ANALYST NOTES AND DEFINITIONS FOR THIS REPORT N\A = not available * = less than 5 times the detection limit NA = not analyzed ND = not detected at detection limit DET LIMIT = DETECTION LIMIT ANALYTE Mercury ANALYZED 06/06/88 RESULT FRACTION OIA TEST CODE TURB Date & Time Collected 05/26/88 Pate & Time Collected 05/26/88 Austin N Results by Sample DET LIMIT 0.00012 REPORT VERIFIED SLIN NAME Mercury, cold vapor NAME Turbiditu lu/bri Work Order # 88-05-147 Category

CORPORA

ANALYST TOOA

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Turbidity

ANALYTE

RESULT DET LIMIT

ANALYZED 05/28/88

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RAS Austin

Results by Sample

Continued From Above Work Order # 88-05-147

SAMPLE ID Eunice #2

FRACTION OIA TEST CODE TURB Date & Time Collected 05/26/88

NAME Turbidity Category

NOTES AND DEFINITIONS FOR THIS REPORT. DET LIMIT = DETECTION LIMIT

NA = not analyzed ND = not detected at detection limit

NNA = not available

* - less than 5 times the detection limit

SAMPLE ID Eunice #2

FRACTION OID TEST CODE XYLENE Date & Time Collected 05/26/88 NAME Xulenes, EPA 602 Category

VERIFIED

AMALYST INSTRMT

INJECTD 06/01/88

UNITS

106-42-3 108-38-3 95-47-6 m-Xylene-A COMPOUND p-Xylene RESULT DET LIMIT

8-80-BF

a, a, a-Trifluorotoluene SURRIGATES 118% recovery

NOTES AND DEFINITIONS FOR THIS REPORT

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* - less than 5 times the detection limit

NNA = not available

Second column confirmation NOT performed unless otherwise noted

SAMPLE ID Eunice #2

Austin Results by Sample

FRACTION OIJ TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/26/88
Category

Work Order # 88-05-147 Continued From Above

= daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and m-xylene co-elute. Quantitated as chlorobeniene unless otherwise noted.

Page To

Received: 05/28/88

SAMPLE ID Eunice #4

RAS Austin

Work Order # 88-05-147

Results by Sample

FRACTION <u>02J</u> TEST CODE <u>EPA602</u> Date & Time Collected <u>05/26/88</u> NAME EPA method 602 rategory

VERIFIED 2

ANAL YST INSTRMT INJECTED 06/01/88 SIIND

71-43-2 CAS# COMPOUND Benzene RESULT DET LIMIT 0.6* 0.2

100-41-4 108-88-3 Ethylbenzene Taluene 0.5* 0.2 0.3

106-46-7 108-90-7 1,4-Dichlorobenzene Chlorobenzene-A K 0.3 0.3

541-73-1 95-50-1 1, 3-Dichlorobenzene 1,2-Dichlorobenzene H 0.4

SURRUGATES

8-80-86 a, a, a-Trifluorotoluene 104% recovery

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* - less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

Page IT Received: 05/28/88

SAMPLE ID Eunice #4

RAS

REPORT

Work Order # 88-05-147 Continued From Above

Austin REPC Results by Sample

FRACTION 02J TEST CODE EPA602 Date & Time Collected 05/26/88

NAME EPA method 602

A-Chlorobenzene and m-xylene co-elute otherwise noted. Quantitated as chlorobenzene unless

CORTORA

Received: 05/28/88

RAS AUSTIN

REPORT

Work Urder # 88-05-147

	SAPLE
	5
i	Eunice #4

PRACTION 021 TEST CODE HG C Date & Time Collected 05/26/88 Results by Sample

NAME Mercury, cold vapor Category

VERIFIED DMC

ANALYST INSTRMT 403

ANALYZED 06/06/88

SLINN

ANALYTE Mercury RESULT H DET LIMIT

0.00012

NOTES AND DEFINITIONS FOR THIS REPORT. N\A = not available * = less than 5 times the detection limit NA = not analyzed ND = not detected at detection limit DET LIMIT = DETECTION LIMIT

SAMPLE ID EUnice #4

FRACTION OZA Date & Time Collected 05/26/88 TEST CODE TURB

NAME Jurbidity

Category

VERIFIED

ANALYST INSTRMT 2100A

ANALYZED 05/28/88

UNITS

ANALYTE RESULT DET LIMIT

Turbidity 54

RAS Austin

Results by Sample

Work Urder # 88-05-147 Continued From Above

SAMPLE ID Eunice #4

FRACTION 02A TEST CODE TURB Date & Time Collected 05/26/88

NAME Turbidity Category

NOTES AND DEFINITIONS FOR THIS REPORT. ND = not detected at detection limit DET LIMIT = DETECTION LIMIT

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

SAMPLE ID EUnice #4

PRACTION 02J TEST CODE XYLENE Date & Time Collected 05/26/88 NAME Xylenes, EPA 602 Category

VERIFIED

AMALYST INSTRMT

INJECTD 06/01/88

SLINO

102-38-3 106-42-3 CAS # m-Xylene-A COMPOUND o-Xylene p-Xylene RESULT DET LIMIT 000

NOTES AND DEFINITIONS FOR THIS REPORT.

98-08-B

a, a, a-Trifluorotoluene

104% recovery

SURROGATES

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

N\A = not available

Second column confirmation NOT performed unless otherwise noted

SAMPLE ID Eunice #4

RAS Austin

Results by Sample

REPORT

FRACTION 02J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/26/88 Category

Work Order # 88-05-147 Continued From Above

Q = daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and m-xylene co-elute. Quantitated as chlorobenzene unless otherwise noted.

CORPORATION

Received: 05/28/88

SAMPLE ID trip blank

RAS Austin

REPURT

Work Order # 88-05-147

NAME EPA method 602

Category

Results by Sample

FRACTION <u>O3A</u> TEST CODE <u>EPA602</u>
Date & Time Collected <u>05/26/88</u>

ANALYST INSTRMT 四四 INJECTED 06/01/88 FILE # VERIFIED SLINA CL

CAS# COMPOUND RESULT DET LIMIT

71-43-2 Benzene 0.2

100-41-4 108-88-3 Ethylbenzene Toluene 0.3 0.2

108-90-7 106-46-7 1,4-Dichlorobenzene Chlorobenzene-A 0.3

541-73-1 95-50-1 1,3-Dichlorobenzene 1,2-Dichlorobenzene S 0.4 0.4 0.3

SURROGATES

8-80-86 a, a, a-Trifluorotoluene 99% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

NVA = not available

Second column confirmation NOT performed unless otherwise noted.

Page T6 Received: 05/28/88

SAMPLE ID trip blank

RAS Austin

REPORT

Results by Sample

Work Order # 88-05-147 Continued From Above

A-Chlorobenzene and m-xylene co-elute. otherwise noted. Quantitated as chlorobenzene unless FRACTION 03A TEST CODE EPA602 NAME EPA method 602 Date & Time Collected 05/26/88 Category

Austin

RAS

Work Order # 88-05-147

Results by Sample

SAMPLE ID trip blank

PRACTION OBA TEST CODE XYLENE Date & Time Collected 05/26/88 NAME Xulenes, EPA 602 Category

VERIFIED F

ANALYST INSTRMT

INJECTD 06/01/88

FILE #

UNITS

108-38-3 106-42-3 8-80-38 95-47-6 CAS # m-Xylene-A COMPOUND p-Xylene o-Xylene a.a.a-Trifluorotoluene RESULT DET LIMIT SURROGATES 0.1 0.2 99% recovery

NOTES AND DEFINITIONS FOR THIS REPORT DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit NA = not analyzed

N\A = not available # = less than 5 times the detection limit

Second column confirmation NOT performed unless otherwise noted

0 = daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and m-xylene co-elute otherwise noted Quantitated as chlorobenzene unless

SAMPLE ID reagent blank

Austin

REPORT

Work Under # 88-05-147

Results by Sample

RAS

FRACTION <u>04A</u> TEST CODE <u>EPA602</u> NAME <u>EPA method 602</u>
Date & Time Collected <u>not specified</u> Category

								INSTRMT D	
95-50-1	541-73-1	106-46-7	108-90-7	100-41-4	108-88-3	71-43-2	CAS#	INJECT	
1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Chlorobenzene-A	Ethylbenzene	Taluene	Benzene	COMPOUND	INJECTED 06/01/88	
ND	ND	ND	ND	ND	ND	ND	RESULT D		VE.
0.4	0.4	0.3	0. 3	0.3	0. 2	0.2	DET LIMIT	UNITS	ERIFIED CL

SURROGATES

98-08-8 a, a, a-Trifluorotoluene N/A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit

NA = not analyzed

* = less than 5 times the detection limit

NNA = not available

Second column confirmation NOT performed unless otherwise noted

Page 19 Received: 05/28/88

SAMPLE ID reagent blank

RAS Austin

REPORT

Work Order # 88-05-147 Continued From Above

Results by Sample

Pate & Time Collected not specified NAME EPA method 602

A-Chlorobenzene and m-xylene co-elute otherwise noted. Guantitated as chlorobenzene unless

Page EU

Received: 05/28/88

SAMPLE ID reagent blank

RAS - Austin

REPOR

Work Order # 88-05-147

Results by Sample

FRACTION 04A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected not specified Category

VERIFIED CL

ANALYST CL

INJECTD 06/01/88

FILE #

UNITS

CAS # COMPOUND RESULT DET LIMIT 106-42-3 p-Xylene ND 0.2 108-38-3 m-Xylene ND 0.1 95-47-6 a-Xylene ND 0.1

8-80-8

SURROGATES

a, a, a-Trifluorotoluene N/A% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

DET LIMIT = DETECTION LIMIT

ND = not detected at detection limit NA = not analyzed

* = less than 5 times the detection limit

N\A = not available Second column confirmation NOT performed unless otherwise noted.

Q = daily EPA standard recovery outside 95% confidence interval.

Chlorobenzene and m-xylene co-elute.
Quantitated as chlorobenzene unless
otherwise noted.

RAS Austin

Test Methodology

Work Order # 88-05-147

TEST CODE ALPHA NAME Gross alpha radiation

confidence level. expressed as: The value in parentheses is a + or - one sigma value. value (+ or - 1 sigma). One sigma = one standard deviation, 68% Results are thus

IEST CODE BETA NAME Gross beta radiation

confidence level. expressed as: The value in parentheses is a + or - one sigma value. value (+ or -1 sigma). One sigma = one standard deviation, 68% Results are thus

Page 22' Received: 05/28/88

RAS

Austin REPORT
NonReported Work

Work Order # 88-05-147

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

SPR602 SPR602

SPARE SPARE SPR602 01K 02K

92N 02N 01N

ODESSA, TEXAS 79762 4001 PENBROOK

August 11, 1988

Notification of Discharge Lee Gasoline Plant

CERTIFIED MAIL
RETURN RECEIPT NO. P-512 089 614

Mr. Dave Boyer Environmental Bureau Chief New Mexico Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Boyer:

In compliance with Section 1-203 of the Water Quality Control Commission regulations, this is to notify you of a discharge of hydrocarbon material to the uppermost aquifer at our Lee Gasoline Plant.

As you are aware, we recently completed installation of new groundwater monitoring well systems at our four southeastern New Mexico plants (Artesia; Eunice; Lee and Lusk). The new systems were installed as a result of a Compliance Order issued by the New Mexico Environmental Improvement Division. The first set of samples from the new wells were taken during the month of May. Analysis results were recently received by this office (copies attached).

You will note from the analyses that water in the No. 4 well at Lee Plant shows some evidence of hydrocarbon contamination. Hydrocarbon contamination was also detected in the original upgradient well located approximately 250 feet north of the No. 4 well. We have requested our consultants on this project (Geoscience Consultants, Ltd. of Albuquerque) provide you with a copy of their document entitled "Report on the Installation of a Ground-Water Monitoring System at Phillips 66 Natural Gas Company Lee Plant" for additional detailed information.

Phillips has contracted GCL to perform a contamination assessment of the Lee Plant site. GCL plans to conduct a soil gas vapor survey as the first step in this project. We would like to schedule a meeting with you and your staff to further discuss our strategies for remediation of this problem. Please contact Mike Ford of this office to schedule a meeting date.

Questions regarding this information should be directed to Mike Ford of this office at (915) 367-1316.

Very truly yours,

Manager, Permian Basin Region

LLF:MDF

Attachments



ODESSA, TEXAS 79762 4001 PENBROOK

December 8, 1988

Quarterly Groundwater Monitoring Analyses Artesia, Eunice, Lee and Lusk Plants

Mr. Dave Boyer Environmental Bureau Chief New Mexico Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Boyer:

Per your request, attached please find copies of the second quarter groundwater monitoring analyses for the above referenced plants. I have also included additional information on the Lee Plant water supply wells for your reference.

If you should have any questions regarding this information, please contact me at (915) 367-1316.

Very truly yours,

Michael D. Ford

Environmental Analyst

MDF

Attachments



ODESSA, TEXAS 79762 4001 PENBROOK

January 19, 1989

Quarterly-Groundwater Monitoring Analyses Artesia, Eunice, Lee and Lusk Plants

Mr. Dave Boyer Environmental Bureau Chief New Mexico Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Boyer:

Per your request, attached please find copies of the third quarter groundwater monitoring analyses for the above referenced plants.

If you should have any questions regarding this information, please contact me at (915) 367-1316.

Very truly yours,

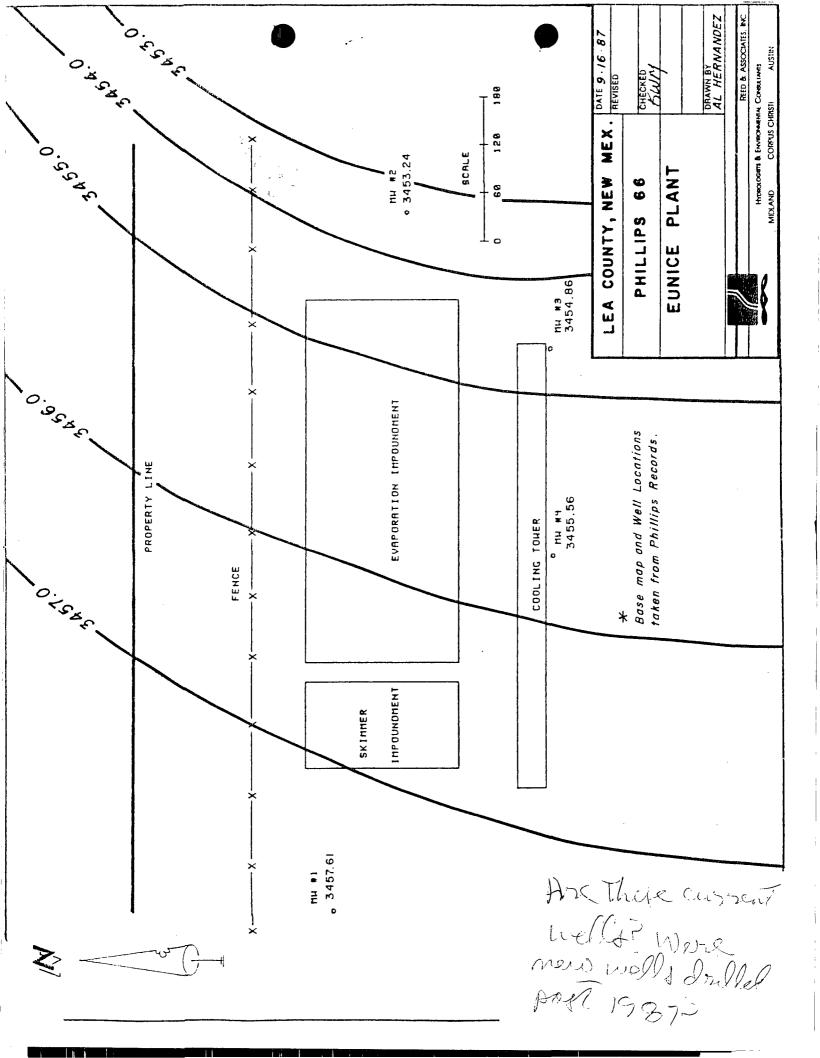
Michael D. Ford

Environmental Analyst

Michael D. Food

MDF

Attachments



10/31/89

SWL

SOL

Materials, environr

ROGER,

ATTACHED ARE COPIES OF
THE SURFACE IMPOUNDMENT
SLUBGE AND SOIL ANALYSES
YOU REQUESTED FOR ARTESIA
AND EUNICE PLANTS.

MIKE FORD

110904

RATORIES

netallurgical and analytical services

io • Midland, Texas 79701



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1703 W. Industrial Avenue [915 - 683-3348] • P.O. Box 2150 • Midland, Texas 79701

File No. C-1950-X
Customer No. 3355796

Report No. 26720

Report Date 1-20-84

Date Received 12-28-83

Report of tests on:

Sludge

Phillips Petroleum Company

Identification:

Client:

Eunice Sludge, Zero (0) to One (1) foot

EP Toxicity Extraction

Detected, mg/L EPA Max. Conc.
Limits, mg/L

Chromium (D007)-----

1.5

5.0

Technician: PCB

3 Copies Phillips Petroleum Company

Attn: Mike Ford

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SWL

SOOTHWESTERN LABORATORIES

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File No. <u>C-1950-X</u>

Customer No. 3355796

Report No. <u>26.720</u>

Report Date ____1_20_84___

Report of tests on: Sludge

Date Received 12-28-83

Client:

Phillips Petroleum Company

Identification:

Eunice Sludge, Zero (0) to One (1) foot

Nitric Acid Digestion

Total Chromium----- 670 p.p.m.

Technician: PCB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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 $\begin{array}{c} \text{File No.} \\ \text{Customer No.} \end{array} \begin{array}{c} \text{C-1950-X} \\ \text{3355796} \end{array}$

Report No. 26721

Report Date 1-20-84

Date Received 12-28-83

Report of tests on: Sludge

Phillips Petroleum Company

Identification:

Client:

Eunice Sludge, Taken at Two (2) foot depth

EP Toxicity Extraction

Detected, mg/L

EPA Max. Conc. Limits, mg/L

Chromium (D007)-----

1.6

5.0

Technician: PCB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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SwL

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File No. C-1950-X
Customer No. 3355796
Report No. 26721

Report Date <u>1-20-84</u>

Date Received 12-28-83

Report of tests on: Sludge

.

Phillips Petroleum Company

Identification:

Client:

Eunice Sludge, Taken at Two (2) foot depth

Nitric Acid Digestion

Total Chromium----- 1331 p.p.m.

Technician: PCB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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Customer No. 3355796

Report No. 26945

Report Date __6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 1, Surface Sample,

Sampled 5-15-84 @ 11:00 a.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.8

5.0

Technician: SAM, KLH, GMB

Copies 3 cc: Phillips Petroleum Company

Attn: Mike Ford

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C-1950-X File No. 3355796 Customer No.

26945 Report No.

6-1-84 Report Date _

Report of tests on: Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 1, Surface Sample,

Sampled 5-15-84 @ 11:00 a.m. by Mike Ford

Total Available Chromium---57 p.p.m.

Technician:

SAM, KLH, GMB

Copies

3 cc:

Phillips Petroleum Co.

Attn: Mike Ford

tested and/or inspected, and are not necessarily indicative of the quantities of apparently identical or similar products.



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File No. C-1950-X
Customer No. 3355796
Report No. 26937

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 1, Shelby Tube Samples,

Sampled 5-15-84 @ 10:30 a.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.4

5.0

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum

Attn: Mike Ford

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1703 W. Industrial Avenue [915 - 683-3348] • P.O. Box 2150 • Midland, Texas 79701

File No. <u>C-1950-X</u>

Customer No. 3355796

Report No. <u>26937</u>

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 1, Shelby Tube Samples,

Sampled 5-15-84 @ 10:30 a.m. by Mike Ford

Total Available Chromium----- 17.9 p.p.m.

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Co.

Attn: Mike Ford

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1703 W. Industrial Avenue [915 - 683-3348] • P.O. Box 2150 • Midland, Texas 79701

File No. <u>C-1950-X</u>
Customer No. 3355796

Report No. 26946

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 2, Surface Sample,

Sampled 5-15-84 @ 11:00 a.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.7

5.0

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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File No. <u>C-1950-X</u>
Customer No. 3355796

Report No. 26946

Report Date __6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 2, Surface Sample,

Sampled 5-15-84 @ 11:00 a.m. by Mike Ford

Total Available Chromium----- 290 p.p.m.

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Co.

Attn: Mike Ford

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1703 W. Industrial Avenue [915 - 683-3348] • P.O. Box 2150 • Midland, Texas 79701

File No. C-1950-X
Customer No. 3355796
Report No. 26938

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 2, Shelby Tube Samples,

Sampled 5-15-84 @ 10:30 a.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.4

5.0

Technician: SAM, KLH, GMB

Copies 3 cc: Phillips Petroleum Co.

Attn: Mike Ford

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C-1950-X File No. 3355796 Customer No.

Report No. ____26938

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 2, Shelby Tube Samples,

Sampled 5-15-84 @ 10:30 a.m. by Mike Ford

69 p.p.m. Total Available Chromium-----

Technician: SAM, KLH, GMB

Copies

Phillips Petroleum Co.

Attn: Mike Ford



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1703 W. Industrial Avenue [915 - 683-3348] • P.O. Box 2150 • Midland, Texas 79701

C-1950-X File No. Customer No. 3355796

Report No. 26947

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 3, Surface Sample,

Sampled 5-15-84 @ 11:00 a.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.2

5.0

*designates "less than"

Technician: SAM, KLH, GMB

Copies

3 cc:

Phillips Petroleum Co.

Attn: Mike Ford

Swl

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1703 W. Industrial Avenue [915 - 683-3348] • P.O. Box 2150 • Midland, Texas 79701

C-1950-X File No. 3355796 Customer No.

26947 Report No.

6-1-84 Report Date _

Report of tests on:

Soil

Date Received _5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 3, Surface Sample,

Sampled 5-15-84 @ 11:00 a.m. by Mike Ford

1020 p.p.m. Total Available Chromium-----

Technician:

SAM, KLH, GMB

Copies

3 cc:

Phillips Petroleum Co.

Attn: Mike Ford



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1703 W. Industrial Avenue [915 - 683-3348] • P.O. Box 2150 • Midland, Texas 79701

File No. <u>C-1950-X</u>

Customer No. 3355796

Report No. 26939

Report Date ___6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 3, Shelby Tube Samples,

Sampled 5-15-84 @ 10:30 a.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.2

5.0

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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File No. <u>C-1950-X</u>
Customer No. 3355796

Report No. 26939

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 3, Shelby Tube Samples,

Sampled 5-15-84 @ 10:30 a.m. by Mike Ford

Total Available Chromium----- 20.6 p.p.m.

Technician: SAM, KLH, GMB

Copies 3 CC:

3 cc: Phillips Petroleum Company

Attn: Mike Ford

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File No. C-1950-X
Customer No. 3355796

Report No. 26948

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 4, Surface Sample,

Sampled 5-15-84 @ 11:00 a.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.4

5.0

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Co.

Attn: Mike Ford

SOUTHWESTERN LABORATORIES

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Materials, environmental and geotechnical engineering, nondestructive, metallurgical and analytical services

1703 W. Industrial Avenue [915 - 683-3348] • P.O. Box 2150 • Midland, Texas 79701

C-1950-X File No. 3355796 Customer No.

Report No. 26948

Report Date <u>6-1-84</u>

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 4, Surface Sample,

Sampled 5-15-84 @ 11:00 a.m. by Mike Ford

Total Available Chromium--3809 p.p.m.

Technician:

SAM, KLH, GMB

Copies

Phillips Petroleum Company

Attn: Mike Ford

Our letters and reports are for the exclusive use of the client to whom they are address tested and/or inspected, and are not necessarily indicative of the quantities of apparently identical or similar products.

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Customer No. 3355796

Report No. 26940

Report Date ___6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 4, Shelby Tube Samples,

Sampled 5-15-84 @ 10:30 a.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

* 0.2

5.0

*designates "less than"

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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File No. C-1950-X
Customer No. 3355796
Report No. 26940

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

East Eunice Plant Pit, Quad No. 4, Shelby Tube Samples,

Sampled 5-15-84 @ 10:30 a.m. by Mike Ford

Total Available Chromium----- 21.7

21.7 p.p.m.

Technician: SAM, KLH, GMB

Copies 3 cc: Phillips Petroleum Company

Attn: Mike Ford

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File No. <u>C-1950-X</u>
Customer No. 3355796

ustomer No. 3355/96 Report No. <u>26941</u>

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 1, Surface Sample,

Sampled 5-15-84 @ 1:30 p.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.7

5.0

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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File No. C-1950-X
Customer No. 3355796

Report No. 26941

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 1, Surface Sample,

Sampled 5-15-84 @ 1:30 p.m. by Mike Ford

Total Available Chromium------ 4179 p.p.m.

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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File No. C-1950-X
Customer No. 3355796

Report No. 26933

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 1, Shelby Tube Samples,

Sampled 5-15-84 @ 1:00 p.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.6

5.0

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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C-1950-X File No. 3355796 Customer No.

Report No. ____26933

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 1, Shelby Tube Samples,

Sampled 5-15-84 @ 1:00 p.m. by Mike Ford

2950 p.p.m. Total Available Chromium----

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Co.

Attn: Mike Ford

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File No. <u>C-1950-X</u>
Customer No. 3355796

Report No. 26942

Report Date ____6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 2, Surface Sample,

Sampled 5-15-84 @ 1:30 p.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.4

5.0

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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C-1950-X 3355796 Customer No. 26942 Report No.

6-1-84

Report Date __

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 2, Surface Sample,

Sampled 5-15-84 @ 1:30 p.m. by Mike Ford

6679 p.p.m. Total Available Chromium-----

Technician:

SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford



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> C-1950-X File No. 3355796 Customer No. 26934 Report No.

6 - 1 - 84Report Date

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 2, Shelby Tube Samples,

Sampled 5-15-84 @ 1:00 p.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.4

5.0

SAM, KLH, GMB Technician:

Copies

3 cc:

Phillips Petroleum Company

Attn: Mike Ford



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File No. C-1950-X Customer No. 3355796

Report No. 26934

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 2, Shelby Tube Samples,

Sampled 5-15-84 @ 1:00 p.m. by Mike Ford

Total Available Chromium----- 94 p.p.m.

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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C-1950-X File No. 3355796 Customer No. 26943

Report No.

Report Date __

6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 3, Surface Sample,

Sampled 5-15-84 @ 1:30 p.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.4

5.0

SAM, KLH, GMB Technician:

Copies

Phillips Petroleum Company

Attn: Mike Ford

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File No. C-1950-X

Customer No. 3355796

Report No. 26943

Report Date <u>6-1-84</u>

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 3, Surface Sample,

Sampled 5-15-84 @ 1:30 p.m. by Mike Ford

Total Available Chromium----- 206 p.p.m.

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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File No. C-1950-X
Customer No. 3355796
Report No. 26935

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 3, Shelby Tube Samples,

Sampled 5-15-84 @ 1:00 p.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.4

5.0

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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 $\begin{array}{ccc} & & & & C-1950-X \\ \text{Customer No.} & & & 3355796 \end{array}$

Report No. _____26935

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 3, Shelby Tube Samples,

Sampled 5-15-84 @ 1:00 p.m. by Mike Ford

Total Available Chromium-----

80 p.p.m.

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Co.

Attn: Mike Ford

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 $\begin{array}{c} \text{File No.} & \text{C-1950-X} \\ \text{Customer No.} & \text{3355796} \end{array}$

Report No. 26944

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 4, Surface Sample,

Sampled 5-15-84 @ 1:30 p.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.3

5.0

Technician: SAM, KLH, GMB

Copies 3 cc

Phillips Petroleum Company

Attn: Mike Ford

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File No. <u>C-1950-X</u>

Customer No. 3355796

Report No. 26944

Report Date <u>6-1-84</u>

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 4, Surface Sample,

Sampled 5-15-84 @ 1:30 p.m. by Mike Ford

Total Available Chromium----- 2939 p.p.m.

Technician:

SAM, KLH, GMB

Copies

3 cc:

Phillips Petroleum Company

Attn: Mike Ford

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1703 W. Industrial Avenue [915 - 683-3348] • P.O. Box 2150 • Midland, Texas 79701

File No. C-1950-X
Customer No. 3355796

Report No. 26936

Report Date 6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 4, Shelby Tube Samples,

Sampled 5-15-84 @ 1:00 p.m. by Mike Ford

EPA Hazardous Waste Number

Contaminant

Detected, mg/L

EPA Max. Conc. Limits, mg/L

D007

Chromium

0.5

5.0

Technician: SAM, KLH, GMB

Copies 3 cc:

Phillips Petroleum Company

Attn: Mike Ford

SOUTHWESTERN LABORATORIES



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1703 W. Industrial Avenue [915 - 683-3348] • P.O. Box 2150 • Midland, Texas 79701

C-1950-X File No. 3355796 Customer No.

Report No. 26936

Report Date ___6-1-84

Report of tests on:

Soil

Date Received 5-16-84

Client:

Phillips Petroleum Company

Identification:

West Eunice Plant Pit, Quad No. 4, Shelby Tube Samples,

Sampled 5-15-84 @ 1:00 p.m. by Mike Ford

Total Available Chromium-----132 p.p.m.

Technician:

SAM, KLH, GMB

Copies

3 cc:

Phillips Petroleum Co.

Attn: Mike Ford