GW - 23

MONITORING REPORTS

DATE:

1988 - 1986

PHILLIPS 66 NATURAL GAS COMPANY
A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

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,

L. L. Frantz
Manager, Permian Basin Region

LLF:MDF

Attachments

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, 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

Michael D. Ford
Environmental Analyst

MDF

Attachments

PHILLIPS 66 NATURAL GAS COMPANY
A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

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.

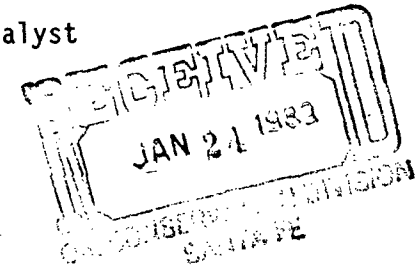
Very truly yours,

Michael D. Ford

Michael D. Ford
Environmental Analyst

MDF

Attachments



RADIAN CORPORATION

Page 1 RAS Perimeter REPORT Work Order # P8-05-035

Received: 05/12/88 06/13/88 16:14:44

REPORT TO: Mike Selke
Geoscience Consultants, Ltd.
Albequerque, NM 87102

ATTEN: Mike Selke

CLIENT: GEOSCIENCE SAMPLES 14
COMPANY: Geoscience Consultants, Ltd.
FACILITY: 500 Copper NW
Albequerque, NM 87102

WORK ID: PHILLIPS
TAKEN: W.S. Dubuk
TRANS: Fed Ex (see file for #'s)
TYPE: Aqueous
P.O. #: 88-0190-700
INVOICE: under separate cover

PREPARED BY: Radian Analytical Services
Bldg. 900 Perimeter Park
Morrisville, NC 27560

ATTEN:
PHONE: 919-481-0212

CERTIFIED BY

CONTACT M DAY

* = Matrix interference

SAMPLE IDENTIFICATION

01	8805121239	ARTESIA MW-1
02	8805121041	ARTESIA MW-2
03	8805111655	ARTESIA MW-3
04	8805111811	ARTESIA MW-4
05	8805110955	LUSK MW-1
06	8805110851	LUSK MW-2
07	8805110920	LUSK MW-3
08	8805110936	LUSK MW-4
09	8805121843	LEE MW-3
10	8805130902	LEE MW-2
11	8805130948	LEE MW-4
12	8805131420	LEE MW-1
13	Trip Blank	
16	Method Blank	

TEST CODES and NAMES used on this report

8080	Pesticides/PCBs.
EXT GC	Extraction for GC

May 88 - 1st Quarter

RADIAN CORPORATION

RAS Perimeter REPORT Work Order # P8-05-033

Received: 05/12/88

Results by Sample

SAMPLE ID 8805121239 FRACTION 01A TEST CODE 8080 NAME Pesticides/PCBs.

Date & Time Collected 05/12/88 Category

ORGANICS ANALYSIS DATA SHEET
PESTICIDES by METHOD 8080

ANALYST BLACKLEY EXTRCTD 05/16/88 FILE # VERIFIED HK

INSTRMT GC1 INJECTD 06/05/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
319-84-6	alpha-BHC	1.7	0.010
58-89-9	gamma-BHC (lindane)	2.6	0.010
319-85-7	beta-BHC	3.9	0.010
76-44-8	heptachlor	ND	0.010
319-86-8	delta-BHC	ND	0.010
309-00-02	aldrin	ND	0.010
1024-57-3	heptachlor epoxide	ND	0.010
959-98-8	endosulfan I	ND	0.010
72-55-9	4,4'-DDE	ND	0.010
60-57-1	dieldrin	ND	0.010
72-20-8	endrin	ND	0.010
72-54-8	4,4'-DDD	ND	0.010
33213-65-9	endosulfan II	ND	0.030
50-29-3	4,4'-DDT	ND	0.020
7421-93-4	endrin aldehyde	ND	0.020
1031-07-8	endosulfan sulphate	ND	0.050
57-74-9	chlordane	ND	0.050
8001-35-2	toxaphene	ND	0.50
12674-11-2	PCB-1016	NR	0.10
11104-28-2	PCB-1221	NR	0.20
11141-16-5	PCB-1232	NR	0.20
53469-21-9	PCB-1242	NR	0.10
12672-29-6	PCB-1248	NR	0.10
11097-69-1	PCB-1254	NR	0.20
11096-82-5	PCB-1260	NR	0.20

RADIAN CORPORATION

RAS Perimeter REPORT

Work Order # P8-05-035

Received: 05/12/88

Results by Sample

Continued From Above

SAMPLE ID 8805121239 FRACTION 01A TEST CODE 8080 NAME Pesticides/PCBs.

Date & Time Collected 05/12/88 Category

SURROGATE RECOVERY

COMPOUND	RECOVERY
dibutyl chlorendate	84 %
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.

RADIAN CORPORATION

RAS Perimeter REPORT

Received: 05/12/88

Results by Sample

SAMPLE ID 8805121041 FRACTION 02A TEST CODE 8080 NAME Pesticides/PCBs.

Date & Time Collected 05/12/88 Category

ORGANICS ANALYSIS DATA SHEET
PESTICIDES by METHOD 8080

ANALYST BLACKLEY EXTRCTD 05/16/88 FILE # VERIFIED HK

INSTRMT GC1 INJECTD 06/05/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT	
319-84-6	alpha-BHC	ND	0.010	
58-89-9	gamma-BHC (lindane)	2.5	0.010	?
319-85-7	beta-BHC	ND	0.010	
76-44-8	heptachlor	ND	0.010	
319-86-8	delta-BHC	5.9	0.010	?
309-00-02	aldrin	ND	0.010	
1024-57-3	heptachlor epoxide	ND	0.010	
959-98-8	endosulfan I	ND	0.010	
72-55-9	4,4'-DDE	ND	0.010	
60-57-1	dieldrin	ND	0.010	
72-20-8	endrin	ND	0.010	
72-54-8	4,4'-DDD	ND	0.010	
33213-65-9	endosulfan II	ND	0.030	
50-29-3	4,4'-DDT	ND	0.020	
7421-93-4	endrin aldehyde	ND	0.020	
1031-07-8	endosulfan sulphate	ND	0.050	
57-74-9	chlordane	ND	0.050	
8001-35-2	toxaphene	ND	0.50	
12674-11-2	PCB-1016	NR	0.10	
11104-28-2	PCB-1221	NR	0.20	
11141-16-5	PCB-1232	NR	0.20	
53469-21-9	PCB-1242	NR	0.10	
12672-29-6	PCB-1248	NR	0.10	
11097-69-1	PCB-1254	NR	0.20	
11096-82-5	PCB-1260	NR	0.20	

SAMPLE ID 8805121041 FRACTION 02A TEST CODE 8080 NAME Pesticides/PCBs.
Date & Time Collected 05/12/88 Category

SURROGATE RECOVERY

COMPOUND	RECOVERY
dibutyl chlorendate	* %
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.

RADIAN CORPORATION

RAS Perimeter REPORT

Work Order # P8-05-055

Received: 05/12/88

Results by Sample

SAMPLE ID 8805111655 FRACTION 03A TEST CODE 8080 NAME Pesticides/PCBs.

Date & Time Collected 05/11/88 Category

ORGANICS ANALYSIS DATA SHEET
PESTICIDES by METHOD 8080

ANALYST BLACKLEY EXTRCTD 05/16/88 FILE # VERIFIED HK

INSTRMT GC1 INJECTD 06/05/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
319-84-6	alpha-BHC	ND	0.010
58-89-9	gamma-BHC (lindane)	1.8	0.010
319-85-7	beta-BHC	ND	0.010
76-44-8	heptachlor	ND	0.010
319-86-8	delta-BHC	ND	0.010
309-00-02	aldrin	ND	0.010
1024-57-3	heptachlor epoxide	ND	0.010
959-98-8	endosulfan I	ND	0.010
72-55-9	4,4'-DDE	ND	0.010
60-57-1	dieldrin	ND	0.010
72-20-8	endrin	ND	0.010
72-54-8	4,4'-DDD	ND	0.010
33213-65-9	endosulfan II	ND	0.030
50-29-3	4,4'-DDT	ND	0.020
7421-93-4	endrin aldehyde	ND	0.020
1031-07-8	endosulfan sulphate	ND	0.050
57-74-9	chlordane	ND	0.050
8001-35-2	toxaphene	ND	0.50
12674-11-2	PCB-1016	NR	0.10
11104-28-2	PCB-1221	NR	0.20
11141-16-5	PCB-1232	NR	0.20
53469-21-9	PCB-1242	NR	0.10
12672-29-6	PCB-1248	NR	0.10
11097-69-1	PCB-1254	NR	0.20
11096-82-5	PCB-1260	NR	0.20

SAMPLE ID 8805111655 FRACTION 03A TEST CODE 8080 NAME Pesticides/PCBs.
Date & Time Collected 05/11/88 Category

SURROGATE RECOVERY

COMPOUND	RECOVERY
dibutyl chlorendate	* %
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.

RADIAN CORPORATION

RAS Perimeter REPORT

Work Order # P8-05-033

Received: 05/12/88

Results by Sample

SAMPLE ID 8805111811 FRACTION 04A TEST CODE 8080 NAME Pesticides/PCBs.

Date & Time Collected 05/11/88 Category

ORGANICS ANALYSIS DATA SHEET
PESTICIDES by METHOD 8080

ANALYST BLACKLEY EXTRCTD 05/16/88 FILE # VERIFIED HK

INSTRMT GC1 INJECTD 06/05/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
319-84-6	alpha-BHC	2.3	0.010
58-89-9	gamma-BHC (lindane)	3.1	0.010
319-85-7	beta-BHC	ND	0.010
76-44-8	heptachlor	ND	0.010
319-86-8	delta-BHC	2.9	0.010
309-00-02	aldrin	ND	0.010
1024-57-3	heptachlor epoxide	ND	0.010
959-98-8	endosulfan I	ND	0.010
72-55-9	4,4'-DDE	ND	0.010
60-57-1	dieldrin	ND	0.010
72-20-8	endrin	ND	0.010
72-54-8	4,4'-DDD	ND	0.010
33213-65-9	endosulfan II	ND	0.030
50-29-3	4,4'-DDT	ND	0.020
7421-93-4	endrin aldehyde	ND	0.020
1031-07-8	endosulfan sulphate	ND	0.050
57-74-9	chlordane	ND	0.050
8001-35-2	toxaphene	ND	0.50
12674-11-2	PCB-1016	NR	0.10
11104-28-2	PCB-1221	NR	0.20
11141-16-5	PCB-1232	NR	0.20
53469-21-9	PCB-1242	NR	0.10
12672-29-6	PCB-1248	NR	0.10
11097-69-1	PCB-1254	NR	0.20
11096-82-5	PCB-1260	NR	0.20

SAMPLE ID 8805111811 FRACTION 04A TEST CODE 8080 NAME Pesticides/PCBs.
Date & Time Collected 05/11/88 Category

SURROGATE RECOVERY

COMPOUND	RECOVERY
dibutyl chlorendate	95 %
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.

RADIAN CORPORATION

Page 1 RAS Perimeter REPORT Work Order # PB-05-036

Received: 05/12/88 06/14/88 14:02:48

REPORT TO: Mike Selke
Geoscience Consultants, Ltd.
Albequerque, NM 87102

ATTEN: W.S. Dubuk

CLIENT: GEOSCIENCE SAMPLES 15
COMPANY: Geoscience Consultants, Ltd.
FACILITY: 500 Copper NW
Albequerque, NM 87102

WORK ID: Geosciences
TAKEN: W.S. Dubuk
TRANS: Fed Ex (see file for #'s)
TYPE: Aqueous
P.O. #: 88-0190-700
INVOICE: under separate cover

PREPARED BY: Radian Analytical Services
Bldg. 900 Perimeter Park
Morrisville, NC 27560

ATTEN
PHONE: 919-481-0212

CERTIFIED BY

CONTACT M DAY

Previously Reported on 06/13/88.

SAMPLE IDENTIFICATION

01	8805121240	ARTESIA	MW-1
02	8805121042	ARTESIA	MW-2
03	8805111656	ARTESIA	MW-3
04	8805111812	ARTESIA	MW-4
05	8805110958	LUSK	MW-1
06	8805110852	LUSK	MW-2
07	8805110922	LUSK	MW-3
08	8805110938	LUSK	MW-4
09	8805121844	LEE	MW-3
10	8805130903	LEE	MW-2
11	8805130949	LEE	MW-4
12	8805131420	LEE	MW-1
13	Method Blank #2		
15	Method Blank #1		
16	Trip Blank		

TEST CODES and NAMES used on this report

509B	GC of Herbicides
EXT GC	Extraction for GC

May 88 - 1st Quarter

Received: 05/12/88 Results by Sample

SAMPLE ID 8805121240 FRACTION 01A TEST CODE 509B NAME GC of Herbicides
Date & Time Collected 05/12/88 Category

ORGANICS ANALYSIS DATA SHEET
HERBICIDES

ANALYST BLACKLEY EXTRCTD 05/18/88 FILE # VERIFIED HK
INSTRMT GC1 INJECTD 05/26/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET. LIMIT
94-75-7	2,4-D	ND	0.50
93-72-1	2,4,5-TP (Silvex)	ND	0.10
93-76-5	2,4,5-T	1.1	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.
J = estimated value less than 3 x minimum detection limit.

Received: 05/12/88 Results by Sample

SAMPLE ID 8805121042 FRACTION 02A TEST CODE 5098 NAME GC of Herbicides
Date & Time Collected 05/12/88 Category

ORGANICS ANALYSIS DATA SHEET
HERBICIDES

ANALYST BLACKLEY EXTRCTD 05/18/88 FILE # VERIFIED HK
INSTRMT GC1 INJECTD 05726/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET. LIMIT
94-75-7	2,4-D	6.5	0.50 ?
93-72-1	2,4,5-TP (Silvex)	ND	0.10
93-76-5	2,4,5-T	1.9	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.
J = estimated value less than 3 x minimum detection limit.

Received: 05/12/88 Results by Sample

SAMPLE ID 8805111656 FRACTION 03A TEST CODE 509B NAME GC of Herbicides
Date & Time Collected 05/11/88 Category

ORGANICS ANALYSIS DATA SHEET
HERBICIDES

ANALYST BLACKLEY EXTRCTD 05/17/88 FILE # VERIFIED HK
INSTRMT GCI INJECTD 05/26/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET. LIMIT
94-75-7	2,4-D	ND	0.50
93-72-1	2,4,5-TP (Silvex)	ND	0.10
93-76-5	2,4,5-T	1.8	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.
J = estimated value less than 3 x minimum detection limit.

Received: 05/12/88 Results by Sample

SAMPLE ID 8805111812 FRACTION 04A TEST CODE 509B NAME GC of Herbicides
Date & Time Collected 05/11/88 Category

ORGANICS ANALYSIS DATA SHEET
HERBICIDES

ANALYST BLACKLEY EXTRCTD 05/17/88 FILE # VERIFIED HK
INSTRMT GC1 INJECTD 05/26/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET. LIMIT
94-75-7	2,4-D	ND	0.50
93-72-1	2,4,5-TP (Silvex)	ND	0.10
93-76-5	2,4,5-T	0.69	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.
J = estimated value less than 3 x minimum detection limit.

CORPORATION

RAS - Austin REPORT Work Order # 88-[illegible]-057

Received: 05/13/88 06/29/88 09:15:49

REPORT TO: Geoscience Consultants, Ltd.
500 Copper NW
Suite 200
Albuquerque, NM 87102
ATTEN: Mike Selke

CLIENT: GEOSCIENCE SAMPLES: 5
COMPANY: Geoscience Consultants, Ltd.
FACILITY:

WORK ID: Phillips
TAKEN: WSD
TRANS: Fed Ex
TYPE:
P.O. #: 88-0190-700
INVOICE: under separate cover

PREPARED BY: Radian Analytical Services
8501 Mo-pac Bl.
PO Box 201088
Austin, TX 78720-1088
ATTEN:
PHONE: 512-454-4797

CERTIFIED BY: [signature]

CONTACT: GIBSON

Unknown compounds present in -01 and -02.

Footnotes and Comments

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

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

SAMPLE IDENTIFICATION

01	Artesia #1
02	Artesia #2
03	Artesia #1 dup (no sed)
04	trip blank
05	reagent blank

TEST CODES and NAMES used on this report

AG E	Silver, ICPES
ALPHA	Gross alpha radiation
AS G	Arsenic, graphite AA
BA E	Barium, ICPES
BETA	Gross beta radiation
CD E	Cadmium, ICPES
CL IC	Chloride, IC
COLI T	Total coliform
CR E	Chromium, ICPES
DG3020	Digestion, method 3020
DG6010	Digestion, method 6010
EPA602	EPA method 602
FE E	Iron, ICPES
F IC	Fluoride, IC
HG C	Mercury, cold vapor
MHO	Specific conductance
MN E	Manganese, ICPES
NA E	Sodium, ICPES
NO3	Nitrate, colorimetric
PB G	Lead, graphite AA
PH	pH
PHEN	Total phenolics
SE G	Selenium, graphite AA
SO4 IC	Sulfate, IC
TOC	Total organic carbon
TOX	Total organic halides
TURB	Turbidity
XYLENE	Xylenes, EPA 602

May 88 - 1st Quarter

SAMPLE Sample Id	Test: AG E ug/ml	Test: ALPHA pCi/	Test: AS G ug/ml	Test: BA E ug/ml	Test: BETA pCi/
01 Artesia #1	<0.003	21.1(5.3) pCi/L	0.014	0.11	25.7(7.3) pCi/L
02 Artesia #2	<0.003	8.1 (3.8) pCi/L	0.049	1.6	20.6(7.1) pCi/L

SAMPLE Sample Id	Test: CD E ug/ml	Test: CL IC mg/L	Test: COLI T colonies/100 mL	Test: CR E ug/ml	Test: DG3020 date complete
01 Artesia #1	<0.003	160	>24,000	<0.003	05/16/88
02 Artesia #2	<0.003	790	>24,000	<0.003	05/16/88

SAMPLE Sample Id	Test: DG6010 date complete	Test: FE E ug/ml	Test: F IC mg/L	Test: MHO umhos/cm	Test: MN E ug/ml
01 Artesia #1	05/23/88	0.003*	2.1	1390	0.70
				1370	
				1350	
				1360	
02 Artesia #2	05/23/88	0.074	4.1	3450	2.4
				3450	

SAMPLE Sample Id	Test: DG6010 date complete	Test: FE E ug/ml	Test: F IC mg/L	Test: MHO umhos/cm	Test: MN E ug/ml
				3370	
				3440	

SAMPLE Sample Id	Test: NA E ug/ml	Test: NO3 mg/L as N	Test: PB G ug/ml	Test: PH pH units	Test: PHEN mg/L
01 Artesia #1	110	<0.1	<0.002	7.16	<0.005
				7.41	
				7.16	
				7.14	
02 Artesia #2	350	<0.1	0.006*	7.32	<0.005
				7.23	
				7.20	
				7.21	

SAMPLE Sample Id	Test: SE G ug/ml	Test: SO4 IC mg/L	Test: TOC mg/L	Test: TOX mg/L
01 Artesia #1	<0.003	92	87	0.04*
			92	0.04*
			61	0.04*
			65	0.05*
02 Artesia #2	<0.003	24	83	0.11
			88	0.06*
			84	0.14
			94R	0.09*

SAMPLE ID Artesia #1 FRACTION 01J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/12/88 Category

VERIFIED CL

ANALYST CL
INSTRMT LG INJECTED 05/13/88 FILE # UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT	
71-43-2	Benzene	17	0.2	←
108-88-3	Toluene	1.8	0.2	←
100-41-4	Ethylbenzene	ND	0.3	
108-90-7	Chlorobenzene-A	ND	0.3	
106-46-7	1,4-Dichlorobenzene	ND	0.3	
541-73-1	1,3-Dichlorobenzene	ND	0.4	
95-50-1	1,2-Dichlorobenzene	ND	0.4	

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
un[illegible]s otherwise noted.

SAMPLE ID Artesia #1 FRACTION 01J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/12/88 Category

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

SAMPLE ID Artesia #1 FRACTION 01I TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 05/12/88 Category

VERIFIED DMC

ANALYST KCP
INSTRMT 403 ANALYZED 05/13/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND	0.00012

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 Artesia #1 FRACTION 01A TEST CODE TURB NAME Turbidity
Date & Time Collected 05/12/88 Category

VERIFIED LM

ANALYST MJS
INSTRMT 2100A ANALYZED 05/14/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	4.2	1.0

SAMPLE ID Artesia #1 FRACTION 01A TEST CODE TURB NAME Turbidity
Date & Time Collected 05/12/88 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 Artesia #1 FRACTION 01J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/12/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT G INJECTD 05/13/88 UNITS ug/L

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

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
un s otherwise noted.

SAMPLE ID Artesia #1 FRACTION 01J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/12/88 Category

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

CORPORATION

Page 10 RAS - Austin REPORT Work Order # 88-05-057
Received: 05/13/88 Results by Sample

SAMPLE ID Artesia #2 FRACTION 02J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/12/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTED 05/13/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	15	1
108-88-3	Toluene	ND	1
100-41-4	Ethylbenzene	46	2
108-90-7	Chlorobenzene-A	ND	2
106-46-7	1,4-Dichlorobenzene	ND	2
541-73-1	1,3-Dichlorobenzene	ND	2
95-50-1	1,2-Dichlorobenzene	ND	2

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	98% 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
un s otherwise noted.

SAMPLE ID Artesia #2 FRACTION 02J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/12/88 Category

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

SAMPLE ID Artesia #2 FRACTION 021 TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 05/12/88 Category

VERIFIED DMC

ANALYST KCP
INSTRMT 403 ANALYZED 05/13/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND	0.00012

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 Artesia #2 FRACTION 02A TEST CODE TURB NAME Turbidity
Date & Time Collected 05/12/88 Category

VERIFIED LM

ANALYST MJS
INSTRMT 2100A ANALYZED 05/14/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	3.8	1.0

SAMPLE ID Artesia #2 FRACTION 02A TEST CODE TURB NAME Turbidity
Date & Time Collected 05/12/88 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 Artesia #2 FRACTION 02J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/12/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTD 05/13/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene	ND@	1
108-38-3	m-Xylene-A	ND@	1
95-47-6	o-Xylene	ND	0.5

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	98% 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
un s otherwise noted.

SAMPLE ID Artesia #2 FRACTION 02J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/12/88 Category

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

SAMPLE ID Artesia #1 dup (no sed) FRACTION 03A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/12/88 Category

VERIFIED CL

ANALYST CL
INSTRMT G INJECTED 05/13/88 FILE # UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	ND	0.2
108-88-3	Toluene	ND	0.2
100-41-4	Ethylbenzene	ND	0.3
108-90-7	Chlorobenzene-A	ND	0.3
106-46-7	1,4-Dichlorobenzene	ND	0.3
541-73-1	1,3-Dichlorobenzene	ND	0.4
95-50-1	1,2-Dichlorobenzene	ND	0.4

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
ug/L unless otherwise noted.

SAMPLE ID Artesia #1 dup (no sed) FRACTION 03A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/12/88 Category

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

SAMPLE ID Artesia #1 dup (no sed) FRACTION 03A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/12/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT G INJECTD 05/13/88 UNITS ug/L

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

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

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

VERIFIED CL

ANALYST CL
INSTRMT D INJECTED 05/13/88 FILE # UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	ND	0.2
108-88-3	Toluene	ND	0.2
100-41-4	Ethylbenzene	ND	0.3
108-90-7	Chlorobenzene-A	ND	0.3
106-46-7	1,4-Dichlorobenzene	ND	0.3
541-73-1	1,3-Dichlorobenzene	ND	0.4
95-50-1	1,2-Dichlorobenzene	ND	0.4

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	105% 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
un s otherwise noted.

SAMPLE ID trip blank FRACTION Q4A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected not specified Category

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

SAMPLE ID trip blank FRACTION Q4A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected not specified Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTD 05/13/88 UNITS ug/L

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

SURROGATES

98-08-8 a,a,a-Trifluorotoluene 105% 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.

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

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTED 05/13/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	ND	0.2
108-88-3	Toluene	ND	0.2
100-41-4	Ethylbenzene	ND	0.3
108-90-7	Chlorobenzene-A	ND	0.3
106-46-7	1,4-Dichlorobenzene	ND	0.3
541-73-1	1,3-Dichlorobenzene	ND	0.4
95-50-1	1,2-Dichlorobenzene	ND	0.4

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
un s otherwise noted.

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

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

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

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTD 05/13/88 UNITS ug/L

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

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

TEST CODE ALPHA NAME Gross alpha radiation

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% confidence level.

TEST CODE BETA NAME Gross beta radiation

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% confidence level.

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01N	:	SPARE	01K	:	SPR602
02N	:	SPARE	02K	:	SPR602
03B	:	SPR602			
04B	:	SPR602			

CORPORATION

Page 1 RAS - Austin REPORT Work Order # 88-05-058
Received: 05/13/88 06/29/88 09:00:47

REPORT TO: Geoscience Consultants, Ltd.
500 Copper NW
Suite 200
Albuquerque, NM 87102
ATTEN: Mike Selke

CLIENT: GEOSCIENCE SAMPLES: 5
COMPANY: Geoscience Consultants, Ltd.
FACILITY:

WORK ID: Phillips
TAKEN: WSD
TRANS: Fed Ex
TYPE:
P.O. #: 88-0190-700
INVOICE: under separate cover

PREPARED BY: Radian Analytical Services
8501 Mo-pac Bl.
PO Box 201088
Austin, TX 78720-1088
ATTEN:
PHONE: 512-454-4797

Carl Scott
CERTIFIED BY

CONTACT GIBSON

Unknown copounds present in Artesia #3 and Artesia #3 dup in EPA602 analyses. ** Possible interference.

Footnotes and Comments

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

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

SAMPLE IDENTIFICATION

01	Artesia #3
02	Artesia #4
03	Artesia #3 dup
04	trip blank
05	reagent blank

May 88 - 1st Quarter

TEST CODES and NAMES used on this report

AG E	Silver, ICPES
ALPHA	Gross alpha radiation
AS G	Arsenic, graphite AA
BA E	Barium, ICPES
BETA	Gross beta radiation
CD E	Cadmium, ICPES
CL IC	Chloride, IC
COLI T	Total coliform
CR E	Chromium, ICPES
DG3020	Digestion, method 3020
DG6010	Digestion, method 6010
EPA602	EPA method 602
FE E	Iron, ICPES
F IC	Fluoride, IC
HG C	Mercury, cold vapor
MHO	Specific conductance
MN E	Manganese, ICPES
NA E	Sodium, ICPES
NO3	Nitrate, colorimetric
PB G	Lead, graphite AA
PH	pH
PHEN	Total phenolics
SE G	Selenium, graphite AA
SO4 IC	Sulfate, IC
TOC	Total organic carbon
TOX	Total organic halides
TURB	Turbidity
XYLENE	Xylenes, EPA 602

SAMPLE Sample Id	Test: AG E ug/ml	Test: ALPHA pCi/	Test: AS G ug/ml	Test: BA E ug/ml	Test: BETA pCi/
01 Artesia #3	<0.003	12.0(4.4) pCi/L	0.042	0.61	17.3(6.1) pCi/L
02 Artesia #4	<0.003	4.5 (1.7) pCi/L	0.017	0.036	10.1(3.5) pCi/L

SAMPLE Sample Id	Test: CD E ug/ml	Test: CL IC mg/L	Test: COLI T colonies/100 mL	Test: CR E ug/ml	Test: DG3020 date complete
01 Artesia #3	0.012*	450	<3	<0.003	05/16/88
02 Artesia #4	<0.003	270	23	<0.003	05/16/88
03 Artesia #3 dup				<0.003	

SAMPLE Sample Id	Test: DG6010 date complete	Test: FE E ug/ml	Test: F IC mg/L	Test: MHO umhos/cm	Test: MN E ug/ml
01 Artesia #3	05/23/88	0.42	4.5	2450	1.7
				2440	
				2440	
				2460	
02 Artesia	05/23/88	<0.003	2.8	2040	0.14

SAMPLE Sample Id	Test: DG6010 date complete	Test: FE E ug/ml	Test: F IC mg/L	Test: MHO umhos/cm	Test: MN E ug/ml
				2020	
				2020	
				2030	
03 Artesia #3 dup	05/16/88				

SAMPLE Sample Id	Test: NA E ug/ml	Test: NO3 mg/L as N	Test: PB G ug/ml	Test: PH pH units	Test: PHEN mg/L
01 Artesia #3	220	<0.1	<0.002	7.23	<0.005
				7.10	
				7.13	
				7.10	
02 Artesia #4	130	<0.1	<0.002	7.73	<0.005
				7.68	
				7.68	

SAMPLE Sample Id	Test: NA E ug/ml	Test: NO3 mg/L as N	Test: PB G ug/ml	Test: PH pH units	Test: PHEN mg/L
				7.68	

SAMPLE Sample Id	Test: SE G ug/ml	Test: SO4 IC mg/L	Test: TOC mg/L	Test: TOX mg/L
01	<0.003	77	80	0.11
Artesia #3			72	0.08*
			77	0.08*
			64	0.09*
02	<0.003	500	62	0.07*
Artesia #4			71	0.05*
			74	0.12
			82@	0.08*

SAMPLE ID Artesia #3 FRACTION 01J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/11/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTED 05/17/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	2.1	0.2
108-88-3	Toluene	0.7*	0.2
100-41-4	Ethylbenzene	2.2	0.3
108-90-7	Chlorobenzene-A	ND	0.3
106-46-7	1,4-Dichlorobenzene	ND	0.3
541-73-1	1,3-Dichlorobenzene	ND	0.4
95-50-1	1,2-Dichlorobenzene	ND	0.4

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	125**% 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
un s otherwise noted.

SAMPLE ID Artesia #3 FRACTION 01J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/11/88 Category

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

SAMPLE ID Artesia #3 FRACTION 01I TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 05/11/88 Category

VERIFIED DMC

ANALYST KCP
INSTRMT 403 ANALYZED 05/13/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND,R	0.00012

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 Artesia #3 FRACTION 01A TEST CODE TURB NAME Turbidity
Date & Time Collected 05/11/88 Category

VERIFIED LM

ANALYST MJS
INSTRMT 2100A ANALYZED 05/14/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	4.9	1.0

SAMPLE ID Artesia #3 FRACTION Q1A TEST CODE TURB NAME Turbidity
Date & Time Collected 05/11/88 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 Artesia #3 FRACTION Q1J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/11/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTD 05/17/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene	1.3	0.2
108-38-3	m-Xylene-A	0.8*	0.2
95-47-6	o-Xylene	1.8	0.1

SURROGATES

98-08-8 a,a,a-Trifluorotoluene 125**% 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
un s otherwise noted.

SAMPLE ID Artesia #3 FRACTION 01J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/11/88 Category

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

SAMPLE ID Artesia #4 FRACTION 02J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/11/88 Category

VERIFIED CL

ANALYST CL
INSTRMT D INJECTED 05/13/88 FILE # UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	5.0	0.2
108-88-3	Toluene	ND	0.2
100-41-4	Ethylbenzene	ND	0.3
108-90-7	Chlorobenzene-A	ND	0.3
106-46-7	1,4-Dichlorobenzene	ND	0.3
541-73-1	1,3-Dichlorobenzene	ND	0.4
95-50-1	1,2-Dichlorobenzene	ND	0.4

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	113% 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
un s otherwise noted.

SAMPLE ID Artesia #4 FRACTION Q2J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/11/88 Category

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

SAMPLE ID Artesia #4 FRACTION Q2I TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 05/11/88 Category

VERIFIED DMC

ANALYST KCP
INSTRMT 403 ANALYZED 05/13/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND	0.00012

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 Artesia #4 FRACTION Q2A TEST CODE TURB NAME Turbidity
Date & Time Collected 05/11/88 Category

VERIFIED LM

ANALYST MJS
INSTRMT 2100A ANALYZED 05/14/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	3.7	1.0

SAMPLE ID Artesia #4 FRACTION 02A TEST CODE TURB NAME Turbidity
Date & Time Collected 05/11/88 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 Artesia #4 FRACTION 02J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/11/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTD 05/13/88 UNITS ug/L

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

SURROGATES

98-08-8 a,a,a-Trifluorotoluene 113% 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
un s otherwise noted.

SAMPLE ID Artesia #4 FRACTION 02J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/11/88 Category

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

SAMPLE ID Artesia #3 dup FRACTION 03A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/11/88 Category

VERIFIED CL

ANALYST CL
INSTRMT D INJECTED 05/17/88 FILE # UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	2.5	0.2
108-88-3	Toluene	0.6*	0.2
100-41-4	Ethylbenzene	2.6	0.3
108-90-7	Chlorobenzene-A	ND	0.3
106-46-7	1,4-Dichlorobenzene	ND	0.3
541-73-1	1,3-Dichlorobenzene	ND	0.4
95-50-1	1,2-Dichlorobenzene	ND	0.4

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	124**% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.
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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
un s otherwise noted.

SAMPLE ID Artesia #3 dup FRACTION 03A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 05/11/88 Category

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

SAMPLE ID Artesia #3 dup FRACTION 03A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 05/11/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTD 05/17/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene	1.6	0.2
108-38-3	m-Xylene-A	1.2	0.2
95-47-6	o-Xylene	1.6	0.1

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	124**% 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.

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

VERIFIED CL

ANALYST CL
INSTRMT G INJECTED 05/13/88 FILE # UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	ND	0.2
108-88-3	Toluene	ND	0.2
100-41-4	Ethylbenzene	ND	0.3
108-90-7	Chlorobenzene-A	ND	0.3
106-46-7	1,4-Dichlorobenzene	ND	0.3
541-73-1	1,3-Dichlorobenzene	ND	0.4
95-50-1	1,2-Dichlorobenzene	ND	0.4

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	103% 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
un s otherwise noted.

SAMPLE ID trip blank FRACTION Q4A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected not specified Category

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

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

VERIFIED CL

ANALYST CL FILE #
INSTRMT G INJECTD 05/13/88 UNITS ug/L

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

SURROGATES

98-08-8 a,a,a-Trifluorotoluene 103% 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.

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

VERIFIED CL

ANALYST CL
INSTRMT D INJECTED 05/17/88 FILE # UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	ND	0.2
108-88-3	Toluene	ND	0.2
100-41-4	Ethylbenzene	ND	0.3
108-90-7	Chlorobenzene-A	ND	0.3
106-46-7	1,4-Dichlorobenzene	ND	0.3
541-73-1	1,3-Dichlorobenzene	ND	0.4
95-50-1	1,2-Dichlorobenzene	ND	0.4

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
un s otherwise noted.

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

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

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

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTD 05/17/88 UNITS ug/L

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

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

TEST CODE ALPHA NAME Gross alpha radiation

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% confidence level.

TEST CODE BETA NAME Gross beta radiation

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% confidence level.

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01N	SPARE	01K	SPR602
02N	SPARE	02K	SPR602
03B	SPR602		

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, 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

Michael D. Ford
Environmental Analyst

MDF

Attachments

RADIAN CORPORATION

Page 1 RAS - Austin REPORT Work Order # 88-09-045

Received: 09/09/88 09/15/88 10:14:59

REPORT Radian
TO Bl. 1
Austin

ATTEN Linda Bendele

CLIENT PHILLIPS P SAMPLES 7
COMPANY Phillips Petroleum
FACILITY Odessa, TX

WORK ID ~~Eunice~~ Artesia, BTEX
TAKEN MF
TRANS UPS
TYPE
P.O. #
INVOICE under separate cover

PREPARED Radian Analytical Services
BY 8501 Mo-pac Bl.
PO Box 201088
Austin, TX 78720-1088
ATTEN
PHONE 512-454-4797

CERTIFIED BY

CONTACT BENDELE

Unknown compounds present in Artesia MW-1, Artesia MW-2, and Artesia MW-3.

Footnotes and Comments

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

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

SAMPLE IDENTIFICATION

01 Artesia MW-1
02 Artesia MW-2
03 Artesia MW-3
04 Artesia MW-4
05 Artesia MW-4 duplicate
06 trip blank
07 reagent blank

TEST CODES and NAMES used on this report

EPA602 EPA method 602
XYLENE Xylenes, EPA 602

Sept 88 - 2nd Quarter

RADIAN CORPORATION

RAS - Austin REPORT

Work Order # 88-09-045

Received: 09/09/88

Results by Sample

SAMPLE ID Artesia MW-1 FRACTION 01A TEST CODE EPA602 NAME EPA method 602

Date & Time Collected 09/08/88 Category

VERIFIED CL

ANALYST BM

FILE #

DILUTN/TRMT D INJECTED 09/12/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	15	0.20
108-88-3	Toluene	0.5*	0.20
100-41-4	Ethylbenzene	1.7	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	116% 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 Artesia MW-1 FRACTION 01A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 09/08/88 Category

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

RADIAN CORPORATION

 RAS - Austin REPORT Work Order # 88-09-045

Received: 09/09/88 Results by Sample

SAMPLE ID Artesia MW-1 FRACTION 01A TEST CODE XYLENE NAME Xylenes, EPA 602

Date & Time Collected 09/08/88 Category

VERIFIED CL

ANALYST BM FILE #

STRMT D INJECTD 09/12/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene	1.5Q	0.20
108-38-3	m-Xylene-A	ND	0.20
95-47-6	o-Xylene	ND	0.10

SURROGATES

98-08-8 a,a,a-Trifluorotoluene 116% 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.

RADIAN CORPORATION

Received: 09/09/88
Results by Sample

SAMPLE ID Artesia MW-2 FRACTION 02A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 09/08/88 Category

VERIFIED CL

ANALYST BM FILE #
STRMT D INJECTED 09/12/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	2.8	0.20
108-88-3	Toluene	ND	0.20
100-41-4	Ethylbenzene	8.3	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	109% 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.

RADIAN CORPORATION

SAMPLE ID Artesia MW-2 FRACTION 02A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 09/08/88 Category

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

RADIAN CORPORATION

RAS - Austin REPORT Work Order # 88-09-045

Received: 09/09/88

Results by Sample

SAMPLE ID Artesia MW-2 FRACTION 02A TEST CODE XYLENE NAME Xylenes, EPA 602

Date & Time Collected 09/08/88 Category

VERIFIED CL

ANALYST BM FILE #

STRMT D INJECTD 09/12/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene	ND, Q	0.20
108-38-3	m-Xylene-A	ND	0.20
95-47-6	o-Xylene	ND	0.10

SURROGATES

98-08-8 a,a,a-Trifluorotoluene 109% recovery

NOTES AND DEFINITIONS FOR THIS REPORT.

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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.

RADIAN CORPORATION

 RAS - Austin REPORT Work Order # 88-09-045
Received: 09/09/88 Results by Sample

SAMPLE ID Artesia MW-3 FRACTION 03A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 09/08/88 Category

VERIFIED CL

ANALYST BM FILE #
TRMT D INJECTED 09/12/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	1.0	0.20
108-88-3	Toluene	ND	0.20
100-41-4	Ethylbenzene	0.8*	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

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 Artesia MW-3 FRACTION 03A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 09/08/88 Category

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

RADIAN CORPORATION

Received: 09/09/88 Results by Sample

SAMPLE ID Artesia MW-3 FRACTION 03A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 09/08/88 Category

VERIFIED CL

ANALYST BM FILE #
INSTRMT D INJECTD 09/12/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene	0.6*,Q	0.20
108-38-3	m-Xylene-A	ND	0.20
95-47-6	o-Xylene	0.4*	0.10

SURROGATES

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

NOTES AND DEFINITIONS FOR THIS REPORT.
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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.

RADIAN CORPORATION

Received: 09/09/88 Results by Sample

SAMPLE ID Artesia MW-4 FRACTION 04A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 09/08/88 Category

VERIFIED CL

ANALYST CL FILE #
STRMT D INJECTED 09/13/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	2.0	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	95% 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 Artesia MW-4 FRACTION 04A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 09/08/88 Category

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

RADIAN CORPORATION

Received: 09/09/88

RAS - Austin REPORT
Results by Sample

Work Order # 88-09-045

SAMPLE ID Artesia MW-4 FRACTION 04A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 09/08/88 Category

VERIFIED CL

ANALYST CL
TRMT D
FILE #
INJECTD 09/13/88
UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene	0.6*,Q	0.20
108-38-3	m-Xylene-A	ND	0.20
95-47-6	o-Xylene	ND	0.10

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	95% 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.

RADIAN CORPORATION

RAS - Austin REPORT Work Order # 88-09-045
Results by Sample

Received: 09/09/88

SAMPLE ID Artesia MW-4 duplicate FRACTION 05A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 09/08/88 Category

VERIFIED CL

ANALYST CL FILE #
DILUTN TRMT D INJECTED 09/13/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	2.0	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	98% 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 Artesia MW-4 duplicate FRACTION 05A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 09/08/88 Category

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

RADIAN CORPORATION

 RAS - Austin REPORT Work Order # 88-09-045
Received: 09/09/88 Results by Sample

SAMPLE ID Artesia MW-4 duplicate FRACTION 05A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 09/08/88 Category

VERIFIED CL

ANALYST CL FILE #
STRMT D INJECTD 09/13/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene	0.4*,Q	0.20
108-38-3	m-Xylene-A	ND	0.20
95-47-6	o-Xylene	ND	0.10

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	98% 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.

RADIAN CORPORATION

Received: 09/09/88

RAS - Austin REPORT
Results by Sample

Work Order # 88-09-045

SAMPLE ID trip blank FRACTION 06A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected not specified Category

VERIFIED CL

ANALYST CL
TRMT D
INJECTED 09/13/88
FILE #
UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	ND	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	95% 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 FRACTION 06A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected not specified Category

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

RADIAN CORPORATION

RAS - Austin REPORT Work Order # 88-09-045

Received: 09/09/88

Results by Sample

SAMPLE ID trip blank FRACTION 06A TEST CODE XYLENE NAME Xylenes, EPA 602

Date & Time Collected not specified Category

VERIFIED CL

ANALYST CL FILE #

TRMT D INJECTD 09/13/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene	ND,Q	0.20
108-38-3	m-Xylene-A	ND	0.20
95-47-6	o-Xylene	ND	0.10

SURROGATES

98-08-8 a,a,a-Trifluorotoluene 95% 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.

RADIAN CORPORATION

RAS - Austin REPORT Work Order # 88-09-045

Received: 09/09/88

Results by Sample

SAMPLE ID reagent blank FRACTION 07A TEST CODE EPA602 NAME EPA method 602

Date & Time Collected not specified Category

VERIFIED CL

ANALYST CL FILE #

TRMT D INJECTED 09/13/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	ND	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	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 FRACTION 07A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected not specified Category

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

RADIAN CORPORATION

RAS - Austin REPORT Work Order # 88-09-045
Received: 09/09/88
Results by Sample

SAMPLE ID reagent blank FRACTION 07A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected not specified Category

VERIFIED CL

ANALYST CL FILE #
PRMT D INJECTD 09/13/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene	ND, Q	0.20
108-38-3	m-Xylene-A	ND	0.20
95-47-6	o-Xylene	ND	0.10

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

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	SPR602
02B	:	SPR602
03B	:	SPR602
04B	:	SPR602
06B	:	SPR602

RADIAN CORPORATION

Page 1 RAS - Austin REPORT Work Order # 88-09-044

Received: 09/09/88 10/11/88 13:00:15

REPORT TO: Radian
Bl. 1
Austin

ATTEN: Linda Bendele

CLIENT: PHILLIPS P SAMPLES: 5
COMPANY: Phillips Petroleum
FACILITY: Odessa, TX

PREPARED BY: Radian Analytical Services
8501 Mo-pac Bl.
PO Box 201088
Austin, TX 78720-1088

ATTEN:
PHONE: 512-454-4797

CERTIFIED BY

CONTACT BENDELE

WORK ID: Artesia
TAKEN: MF
TRANS: UPS
TYPE:
P.O. #:
INVOICE: under separate cover

Footnotes and Comments

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

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

SAMPLE IDENTIFICATION

01 Artesia MW-1
02 Artesia MW-2
03 Artesia MW-3
04 Artesia MW-4
05 Artesia MW-2 duplicate

Sept 88 - 2nd Quarter

TEST CODES and NAMES used on this report

AG E	Silver, ICPES
AS G	Arsenic, graphite AA
BA E	Barium, ICPES
CD E	Cadmium, ICPES
CL IC	Chloride, IC
CR E	Chromium, ICPES
DG3020	Digestion, method 3020
DG6010	Digestion, method 6010
FE E	Iron, ICPES
F IC	Fluoride, IC
HG C	Mercury, cold vapor
MHO	Specific conductance
MN E	Manganese, ICPES
NA E	Sodium, ICPES
NO3	Nitrate, colorimetric
PB G	Lead, graphite AA
PH	pH
PHEN	Total phenolics
SE G	Selenium, graphite AA
SO4 IC	Sulfate, IC
TOC	Total organic carbon
TOX	Total organic halides
TURB	Turbidity

RADIAN CORPORATION

Received: 09/09/88 Results By Test

SAMPLE Sample Id	Test: AG E ug/ml	Test: AS G ug/ml	Test: BA E ug/ml	Test: CD E ug/ml	Test: CL IC mg/L
01 Artesia MW-1	<0.03	0.015	0.05	<0.005	160
02 Artesia MW-2	<0.03	0.080	0.60	<0.005	850
03 Artesia MW-3	<0.03	0.082	0.06	<0.005	84
04 Artesia MW-4	<0.03	0.034	0.03*	<0.005	300

SAMPLE Sample Id	Test: CR E ug/ml	Test: DG3020 date complete	Test: DG6010 date complete	Test: FE E ug/ml	Test: F IC mg/L
01 Artesia MW-1	<0.03	09/23/88	09/27/88	<0.04	2.8
02 Artesia MW-2	<0.03	09/23/88	09/27/88	1.9	4.1
03 Artesia MW-3	<0.03	09/23/88	09/27/88	2.3	3.3
04 Artesia MW-4	<0.03	09/23/88	09/27/88	0.12*	3.0
05 Artesia MW-2 du	<0.03		09/27/88		

SAMPLE Sample Id	Test: MHO umhos/cm	Test: MN E ug/ml	Test: NA E ug/ml	Test: NO3 mg/L as N	Test: PB G ug/ml
01 Artesia MW-1	1403	0.10	100	0.2*	<0.002

RADIAN CORPORATION

SAMPLE Sample Id	Test: MHO umhos/cm	Test: MN E ug/ml	Test: NA E ug/ml	Test: NO3 mg/L as N	Test: PB G ug/ml
	1403				
	1376				
	1395				
02	3730	2.7	340	0.3*	<0.002
Artesia MW-2	3670				
	3650				
	3640				
03	1866	3.6	120	0.2*	<0.002
Artesia MW-3	1873				
	2020				
	1893				
04	2340	0.12	140	0.35	<0.002
Artesia MW-4	2400				
	2360				

RADIAN CORPORATION

SAMPLE Sample Id	Test: MHO umhos/cm	Test: MN E ug/ml	Test: NA E ug/ml	Test: NO3 mg/L as N	Test: PB G ug/ml
	2380				

SAMPLE Sample Id	Test: PH pH units	Test: PHEN mg/L as phenol	Test: SE G ug/ml	Test: SO4 IC mg/L as SO4	Test: TOC mg/L
01	7.44	0.008*	<0.002	100	8
Artesia MW-1	7.19				12
	7.03				11
	7.00				12
02	7.14	0.015*	<0.002	35	26
Artesia MW-2	6.95				29
	7.00				29
	6.96				28
03	6.94	<0.005	<0.002	560	15
Artesia MW-3	6.98				13

RADIAN CORPORATION

SAMPLE Sample Id	Test: PH pH units	Test: PHEN mg/L as phenol	Test: SE G ug/ml	Test: SO4 IC mg/L as SO4	Test: TOC mg/L
	7.31				14
	7.07				13
04 Artesia MW-4	7.28	<0.005	<0.002	580	8
	7.10				10
	7.33				9
	7.11				9

SAMPLE Sample Id	Test: TOX mg/L
01 Artesia MW-1	0.03*
	0.03*
	0.03*
	0.03*
02 Artesia MW-2	0.08

RADIAN CORPORATION

RAS - Austin REPORT
Results By Test

Work Order # 88-09-044
Continued From Above

SAMPLE Sample Id	Test: TOX mg/L
	0.06
	0.06
	0.08
03 Artesia MW-3	0.15
	0.06
	0.08
	0.09
04 Artesia MW-4	0.10
	0.08
	0.11
	0.11

RADIAN CORPORATION

Received: 09/09/88
Results by Sample

SAMPLE ID Artesia MW-1 FRACTION 01I TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 09/08/88 Category

VERIFIED RHH

ANALYST KCP
INSTRMT 403 ANALYZED 09/16/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND	0.00018

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 Artesia MW-1 FRACTION 01A TEST CODE TURB NAME Turbidity
Date & Time Collected 09/08/88 Category

VERIFIED LM

ANALYST TAM
INSTRMT 2100A ANALYZED 09/09/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	17	1.0

RADIAN CORPORATION

SAMPLE ID Artesia MW-1 FRACTION 01A TEST CODE TURB NAME Turbidity
Date & Time Collected 09/08/88 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 Artesia MW-2 FRACTION 02I TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 09/08/88 Category

VERIFIED RHH

ANALYST KCP
INSTRMT 403 ANALYZED 09/16/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND	0.00018

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

RADIAN CORPORATION

Received: 09/09/88 Results by Sample

SAMPLE ID Artesia MW-2 FRACTION 02A TEST CODE TURB NAME Turbidity
Date & Time Collected 09/08/88 Category

VERIFIED LM

ANALYST TAM
INSTRMT 2100A ANALYZED 09/09/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	8	1.0

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 Artesia MW-3 FRACTION 03I TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 09/08/88 Category

VERIFIED RHH

ANALYST KCP
INSTRMT 403 ANALYZED 09/16/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND	0.00018

SAMPLE ID Artesia MW-3 FRACTION 03I TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 09/08/88 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 Artesia MW-3 FRACTION 03A TEST CODE TURB NAME Turbidity
Date & Time Collected 09/08/88 Category

VERIFIED LM

ANALYST TAM
INSTRMT 2100A ANALYZED 09/09/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	11	1.0

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

RADIAN CORPORATION

RAS - Austin REPORT Work Order # 88-09-044

Received: 09/09/88

Results by Sample

SAMPLE ID Artesia MW-4 FRACTION 04I TEST CODE HG C NAME Mercury, cold vapor

Date & Time Collected 09/08/88 Category

VERIFIED RHH

ANALYST KCP
TRMT 403 ANALYZED 09/16/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND	0.00018

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 Artesia MW-4 FRACTION 04A TEST CODE TURB NAME Turbidity

Date & Time Collected 09/08/88 Category

VERIFIED LM

ANALYST TAM
INSTRMT 2100A ANALYZED 09/09/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	32	1.0

RADIAN CORPORATION

SAMPLE ID Artesia MW-4 FRACTION 04A TEST CODE TURB NAME Turbidity
Date & Time Collected 09/08/88 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

RADIAN CORPORATION

Page 1 RAS - Austin REPORT Work Order # 88-09-046

Received: 09/09/88 10/21/88 14:16:25

REPORT Radian
TO Bl. 1
Austin

ATTEN Linda Bendele

CLIENT PHILLIPS P SAMPLES 4
COMPANY Phillips Petroleum
FACILITY Odessa, TX

WORK ID ~~Eunice~~ Artesia, radiochemistry
TAKEN MF
TRANS UPS
TYPE
P.O. #
INVOICE under separate cover

PREPARED Radian Analytical Services
BY 8501 Mo-pac Bl.
PO Box 201088
Austin, TX 78720-1088

ATTEN
PHONE 512-454-4797

CERTIFIED BY

CONTACT BENDELE

Footnotes and Comments

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

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

SAMPLE IDENTIFICATION

01 Artesia MW-1
02 Artesia MW-2
03 Artesia MW-3
04 Artesia MW-4

TEST CODES and NAMES used on this report

ALPHA	Gross alpha radiation
BETA	Gross beta radiation
RA 226	Radium 226

Sept 88 - 2nd Qtr

RADIAN CORPORATION

RAS - Austin REPORT

Work Order # 88-09-046

Received: 09/09/88

Results By Test

SAMPLE Sample Id	Test: ALPHA pCi/	Test: BETA pCi/	Test: RA 226 pCi/
01 Artesia MW-1	7 (2) pCi/L	9 (3) pCi/L	0.3 (0.1) pCi/L
02 Artesia MW-2	22 (5) pCi/L	32 (7) pCi/L	0.9 (0.1) pCi/L
03 Artesia MW-3	12 (3) pCi/L	11 (4) pCi/L	0.1 (0.1) pCi/L
04 Artesia MW-4	14 (2) pCi/L	20 (3) pCi/L	0.4 (0.1) pCi/L

TEST CODE ALPHA NAME Gross alpha radiation

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% confidence level.

TEST CODE BETA NAME Gross beta radiation

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% confidence level.

TEST CODE RA 226 NAME Radium 226

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

RADIAN CORPORATION

Page 1 RAS - Austin REPORT Work Order # 88-09-039

Received: 09/08/88 10/12/88 07:20:23

REPORT TO: Radian
Bl. 1
Austin

ATTEN: Linda Bendele

CLIENT: PHILLIPS P SAMPLES: 4
COMPANY: Phillips Petroleum
FACILITY: Odessa, TX

WORK ID: Artesia - coliform
TAKEN: MF
TRANS: UPS
TYPE:
P.O. #:
INVOICE: under separate cover

PREPARED BY: Radian Analytical Services
8501 Mo-pac Bl.
PO Box 201088
Austin, TX 78720-1088

ATTEN:
PHONE: 512-454-4797

Barbara Hayes
CERTIFIED BY

CONTACT: BENDELE

Footnotes and Comments

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

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

SAMPLE IDENTIFICATION

01 Artesia MW-1
02 Artesia MW-2
03 Artesia MW-3
04 Artesia MW-4

TEST CODES and NAMES used on this report

COLI T Total coliform

Sept 88 - 2nd Qtr

RADIAN CORPORATION

RAS - Austin REPORT

Work Order # 88-09-039

Received: 09/08/88

Results By Test

SAMPLE Sample Id	Test: COLI T colonies/100 mL
01 Artesia MW-1	200
02 Artesia MW-2	9000
03 Artesia MW-3	<10
04 Artesia MW-4	<10

Pesticides/Herbicides
2nd QTR - Dr Toxic

Notes and Definitions

RADIAN CORPORATION

Data Flags:

TERMS USED IN THIS REPORT:
Analyte - A chemical for which a sample is to be analyzed. The analysis will meet EPA method and QC specifications.

Compound - See Analyte.

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

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

Factor - The concentration or dilution factor by which the sample extract or digestate 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 is concentrated 10 times more than specified will have a factor of 0.1.

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

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

Units -

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

Notes and Definitions

Data Flags:

* The asterisk(*) is used to flag results which are less than five times the method specified detection limit. Studies have shown that the uncertainty of the analysis will increase exponentially as the method detection limit is approached. These results should be considered approximate.

A This flag indicates that a spike is an analytical and/or post-digestion spike. These spikes have not been subjected to the extraction or digestion step.

B This flag indicates that the analyte was detected in the reagent blank Since traces of the background contaminant will vary from sample to sample, the sample results are not corrected from the amount in the blank.

C Most methods of gas chromatography recommend reanalysis on a second column of dissimilar phase to resolve compounds of interest from interferences that may occur and for analyte confirmation. This flag indicates that the analyte has been confirmed on a second column.

D This flag identifies analytes identified in analysis at a secondary dilution factor. In an analysis some compounds can exceed the calibration range of the instrument. Therefore two analyses are performed, one at the concentration of some of the analytes, and a second with the sample diluted so that higher levels fall into calibration range.

E The reported value is estimated because of the presence of interference. The potential source of the interference is included in the report narrative.

RADIAN CORPORATION

Notes and Definitions

Data Flags:

G This flag identifies a GC/MS result whose concentration exceeds the calibration range for that specific analysis. Usually if one or more compounds have a response greater than full scale, the sample or extract is diluted and re-analyzed.

J Indicates an estimated value for GC/MS data. This flag is used either when estimating a concentration for tentatively identified compounds where a response factor of 1 is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit.

N/A A result or value is not available for this parameter, usually a detection limit.

NA This analyte was not analyzed.

NC Applies to RPD and spike recovery results. The relative percent difference (RPD) is not calculated when a result is less than five times the detection limit. A spike recovery is not calculated when the result is greater than four times the spike added concentration because the spike added concentration is considered insignificant.

ND This flag (or <) is used to denote analytes which are not detected at or above the specified detection limit. The value to the right of the < symbol is the method specified detection limit for the sample.

RADIAN CORPORATION

Notes and Definitions

Data Flags:

NR This analyte was not requested by the client.

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

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

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

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

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

RADIAN CORPORATION

RADIAN CORPORATION

ANALYTICAL DATA SUMMARY

Phillips 66
Associate Laboratory Data for Radian Work Order: 8811001

Method: EPA 608 Pesticides — Matrix: water

Factor:	1.0	1.0	1.0	1.0	1.0
Results in:	ug/L	ug/L	ug/L	ug/L	ug/L
Sample ID:	Method Blank	Artesia MW-1	Artesia MW-2	Artesia MW-3	Artesia 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.

RADIAN CORPORATION

ANALYTICAL DATA SUMMARY

Phillips 66
Associate Laboratory Data for Radian Work Order: 8811001

Method: EPA 8150 Herbicides Matrix: water

Factor:	1.0	20.0	20.0	5.0	20.0
Results in:	ug/L	ug/L	ug/L	ug/L	ug/L
Sample ID:	Method Blank	Artesia MW-1	Artesia MW-2	Artesia MW-3	Artesia MW-4
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.

PHILLIPS 66 NATURAL GAS COMPANY
A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY

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

Michael D. Ford
Environmental Analyst

MDF

Attachments

RADIAN CORPORATION

Page 1 RAS - Austin REPORT Work Order # 88-10-151

Received: 10/28/88 12/01/88 11:38:15

REPORT TO: Radian
B1.1
Austin

ATTEN: Linda Bendele

CLIENT: PHILLIPS P SAMPLES: 4
COMPANY: Phillips Petroleum
FACILITY: Odessa, TX

WORK ID: Artesia
TAKEN: MF
TRANS: UPS
TYPE:
P.O. #:
INVOICE: under separate cover

PREPARED BY: Radian Analytical Services
8501 Mo-pac Bl.
PO Box 201088
Austin, TX 78720-1088

ATTEN:
PHONE: 512-454-4797

CERTIFIED BY

CONTACT BENDELE

Unknown compounds present in Artesia MW-1, Artesia MW-2, and Artesia MW-2 duplicate for 602 + xylene.
** Possible interference.

Footnotes and Comments

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

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

SAMPLE IDENTIFICATION

01	Artesia MW-1
02	Artesia MW-2
03	Artesia MW-2 duplicate
04	Reagent blank

10/88 - 3rd Qtr

TEST CODES and NAMES used on this report

AG E	Silver, ICPES
ALPHA	Gross alpha radiation
AS G	Arsenic, graphite AA
BA E	Barium, ICPES
BETA	Gross beta radiation
CD E	Cadmium, ICPES
CL IC	Chloride, IC
COLI T	Total coliform
CR E	Chromium, ICPES
DG3020	Digestion, method 3020
DG6010	Digestion, method 6010
EPA602	EPA method 602
FE E	Iron, ICPES
F IC	Fluoride, IC
HG C	Mercury, cold vapor
MHO	Specific conductance
MN E	Manganese, ICPES
NA E	Sodium, ICPES
NO3	Nitrate, colorimetric
PB G	Lead, graphite AA
PH	pH
PHEN	Total phenolics
RA 226	Radium 226
SE G	Selenium, graphite AA
SO4 IC	Sulfate, IC
TOC	Total organic carbon
TURB	Turbidity
XYLENE	Xylenes, EPA 602

RADIAN CORPORATION

Received: 10/28/88 Results By Test

SAMPLE Sample Id	Test: AG E ug/ml	Test: ALPHA pCi/	Test: AS G ug/ml	Test: BA E ug/ml	Test: BETA pCi/
01 Artesia MW-1	<0.03	21(3) pCi/L	0.012	0.05*	17(3) pCi/L
02 Artesia MW-2	<0.03	43(7) pCi/L	0.054	0.90	17(3) pCi/L

SAMPLE Sample Id	Test: CD E ug/ml	Test: CL IC mg/L	Test: COLI T colonies/100 mL	Test: CR E ug/ml	Test: DG3020 date complete
01 Artesia MW-1	<0.005	160	176	<0.03	11/02/88
02 Artesia MW-2	<0.005	880	360	<0.03	11/02/88

SAMPLE Sample Id	Test: DG6010 date complete	Test: FE E ug/ml	Test: F IC mg/L	Test: MHO umhos/cm	Test: MN E ug/ml
01 Artesia MW-1	11/04/88	<0.04	2.7	1460	0.08
				1440	
				1460	
				1420	
02 Artesia MW-2	11/04/88	2.1	3.8	3810	2.4
				3820	

RADIAN CORPORATION

SAMPLE Sample Id	Test: DG6010 date complete	Test: FE E ug/ml	Test: F IC mg/L	Test: MHO umhos/cm	Test: MN E ug/ml
				3650	
				3700	

SAMPLE Sample Id	Test: NA E ug/ml	Test: NO3 mg/L as N	Test: PB G ug/ml	Test: PH pH units	Test: PHEN mg/L as phenol
01 Artesia MW-1	110	0.16	<0.001	6.82	<0.005
				6.82	
				6.84	
				6.82	
02 Artesia MW-2	350	0.32	<0.001	6.70	0.008*
				6.70	
				6.71	
				6.70	

RADIAN CORPORATION

Received: 10/28/88 Results By Test

SAMPLE Sample Id	Test: RA 226 pCi/	Test: SE G ug/ml	Test: SO4 IC mg/L as SO4	Test: TOC mg/L
01 Artesia MW-1	0.38(.05) pCi/L	<0.004	98	11
				13
				12
				12
02 Artesia MW-2	1.45(.09) pCi/L	<0.004	27	31
				31
				35
				42

RADIAN CORPORATION

Page 5 RAS - Austin REPORT Work Order # 88-10-151
Received: 10/28/88 Results by Sample

SAMPLE ID Artesia MW-1 FRACTION 01J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST CL FILE #
I TRMT D INJECTED 11/03/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	15	0.20
108-88-3	Toluene	1.1	0.20
100-41-4	Ethylbenzene	2.1	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	125**% 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.

RADIAN CORPORATION

SAMPLE ID Artesia MW-1 FRACTION 01J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

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

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

SAMPLE ID Artesia MW-1 FRACTION 01I TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 10/27/88 Category

VERIFIED RHH

ANALYST KCP
INSTRMT 403 ANALYZED 11/14/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND	0.0002

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 Artesia MW-1 FRACTION 01A TEST CODE TURB NAME Turbidity
Date & Time Collected 10/27/88 Category

VERIFIED LM

ANALYST TAM
INSTRMT HACH ANALYZED 10/28/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	11	1.0

SAMPLE ID Artesia MW-1 FRACTION Q1A TEST CODE TURB NAME Turbidity
Date & Time Collected 10/27/88 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 Artesia MW-1 FRACTION Q1J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTD 11/03/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene-A	1.0	0.20
108-38-3	m-Xylene	ND	0.20
95-47-6	o-Xylene	ND	0.10

SURROGATES

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

RADIAN CORPORATION

SAMPLE ID Artesia MW-1 FRACTION 01J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 10/27/88 Category

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

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

SAMPLE ID Artesia MW-2 FRACTION 02J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST CL FILE #
TRMT D INJECTED 11/03/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	17	1.0
108-88-3	Toluene	4.6*	1.0
100-41-4	Ethylbenzene	59	1.5
108-90-7	Chlorobenzene-A	ND	1.5
106-46-7	1,4-Dichlorobenzene	ND	1.5
541-73-1	1,3-Dichlorobenzene	ND	2.0
95-50-1	1,2-Dichlorobenzene	ND	2.0

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	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
N\A = not available
Second column confirmation NOT performed
unless otherwise noted.

RADIAN CORPORATION

SAMPLE ID Artesia MW-2 FRACTION 02J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

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

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

SAMPLE ID Artesia MW-2 FRACTION 02I TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 10/27/88 Category

VERIFIED RHH

ANALYST KCP
INSTRMT 403 ANALYZED 11/14/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND	0.0002

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 Artesia MW-2 FRACTION 02A TEST CODE TURB NAME Turbidity
Date & Time Collected 10/27/88 Category

VERIFIED LM

ANALYST TAM
INSTRMT HACH ANALYZED 10/28/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	12	1.0

SAMPLE ID Artesia MW-2 FRACTION 02A TEST CODE TURB NAME Turbidity
Date & Time Collected 10/27/88 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 Artesia MW-2 FRACTION 02J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTD 11/03/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene-A	ND	1.0
108-38-3	m-Xylene	ND	1.0
95-47-6	o-Xylene	ND	0.50

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	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
N\A = not available
Second column confirmation NOT performed
unless otherwise noted.

RADIAN CORPORATION

SAMPLE ID Artesia MW-2 FRACTION 02J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 10/27/88 Category

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

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

SAMPLE ID Artesia MW-2 duplicate FRACTION 03A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST CL FILE #
STRMT D INJECTED 11/03/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	17	1.0
108-88-3	Toluene	4.6*	1.0
100-41-4	Ethylbenzene	64	1.5
108-90-7	Chlorobenzene-A	ND	1.5
106-46-7	1,4-Dichlorobenzene	ND	1.5
541-73-1	1,3-Dichlorobenzene	ND	2.0
95-50-1	1,2-Dichlorobenzene	ND	2.0

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	119**% 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.

RADIAN CORPORATION

SAMPLE ID Artesia MW-2 duplicate FRACTION 03A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

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

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

SAMPLE ID Artesia MW-2 duplicate FRACTION 03A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST BM FILE #
INSTRMT D INJECTD 11/03/88 UNITS ug/L

CAS #	COMPOUND	RESULT	DET LIMIT
106-42-3	p-Xylene-A	ND	1.0
108-38-3	m-Xylene	ND	1.0
95-47-6	o-Xylene	ND	0.50

SURROGATES

98-08-8 a,a,a-Trifluorotoluene 119% 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.

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

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

VERIFIED CL

ANALYST CL FILE #
TRMT D INJECTED 11/03/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	ND	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	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 FRACTION 04A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected not specified Category

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

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

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

VERIFIED CL

ANALYST CL FILE #
TRMT D INJECTD 11/03/88 UNITS ug/L

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	0.10

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

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01K	:	SPR602
02K	:	SPR602

RADIAN CORPORATION

Page 1 RAS - Austin REPORT Work Order # 88-10-152
Received: 10/28/88 12/02/88 12:27:29

REPORT TO: Radian
Bl. 1
Austin

ATTEN: Linda Bendele

CLIENT: PHILLIPS P SAMPLES: 5
COMPANY: Phillips Petroleum
FACILITY: Odessa, TX

WORK ID: Artesia
TAKEN: MF
TRANS: UPS
TYPE:
P.O. #:
INVOICE: under separate cover

PREPARED BY: Radian Analytical Services
8501 Mo-pac Bl.
PO Box 201088
Austin, TX 78720-1088

ATTEN:
PHONE: 512-454-4797

CERTIFIED BY

CONTACT BENDELE

Unknown compounds present in Artesia MW-3 for 602 + xylene. R-matrix spike recovery for this analysis was not within acceptance limits indicating an interferent present.

Previously Reported on 12/01/88.

Footnotes and Comments

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

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

SAMPLE IDENTIFICATION

01	Artesia MW-3
02	Artesia MW-4
03	Artesia MW-3 duplicate
04	trip blank
05	reagent blank

10/88 - 3rd QTr

TEST CODES and NAMES used on this report

AG E	Silver, ICPES
ALPHA	Gross alpha radiation
AS G	Arsenic, graphite AA
BA E	Barium, ICPES
BETA	Gross beta radiation
CD E	Cadmium, ICPES
CL IC	Chloride, IC
COLI T	Total coliform
CR E	Chromium, ICPES
DG3020	Digestion, method 3020
DG6010	Digestion, method 6010
EPA602	EPA method 602
FE E	Iron, ICPES
F IC	Fluoride, IC
HG C	Mercury, cold vapor
MHO	Specific conductance
MN E	Manganese, ICPES
NA E	Sodium, ICPES
NO3	Nitrate, colorimetric
PB G	Lead, graphite AA
PH	pH
PHEN	Total phenolics
RA 226	Radium 226
SE G	Selenium, graphite AA
SO4 IC	Sulfate, IC
TOC	Total organic carbon
TURB	Turbidity
XYLENE	Xylenes, EPA 602

RADIAN CORPORATION

Received: 10/28/88 Results By Test

SAMPLE Sample Id	Test: AG E ug/ml	Test: ALPHA pCi/	Test: AS G ug/ml	Test: BA E ug/ml	Test: BETA pCi/
01 Artesia MW-3	<0.03	38(5) pCi/L	0.048R	0.08	21(4) pCi/L
02 Artesia MW-4	<0.03	43(6) pCi/L	0.011	0.03*	22(4) pCi/L

SAMPLE Sample Id	Test: CD E ug/ml	Test: CL IC mg/L	Test: COLI T colonies/100 mL	Test: CR E ug/ml	Test: DG3020 date complete
01 Artesia MW-3	0.005*	42	900	<0.03	11/02/88
02 Artesia MW-4	<0.005	300	32	<0.03	11/02/88
03 Artesia MW-3 du				<0.03	

SAMPLE Sample Id	Test: DG6010 date complete	Test: FE E ug/ml	Test: F IC mg/L	Test: MHO umhos/cm	Test: MN E ug/ml
01 Artesia MW-3	11/04/88	2.4	3.0	1960	4.0
				1900	
				1850	
				1890	
02 Artesia MW-4	11/04/88	<0.04	2.9	2500	0.90

RADIAN CORPORATION

SAMPLE Sample Id	Test: DG6010 date complete	Test: FE E ug/ml	Test: F IC mg/L	Test: MHO umhos/cm	Test: MN E ug/ml
				2440	
				2400	
				2420	
03 Artesia MW-3 du	11/17/88				

SAMPLE Sample Id	Test: NA E ug/ml	Test: NO3 mg/L as N	Test: PB G ug/ml	Test: PH pH units	Test: PHEN mg/L as phenol
01 Artesia MW-3	100	0.41	<0.001R	6.80	<0.005
				6.78	
				6.76	
				6.76	
02 Artesia MW-4	150	0.05*	<0.001	6.82	<0.005
				6.82	
				6.81	

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SAMPLE Sample Id	Test: NA E ug/ml	Test: NO3 mg/L as N	Test: PB G ug/ml	Test: PH pH units	Test: PHEN mg/L as phenol
				6.80	

SAMPLE Sample Id	Test: RA 226 pCi/	Test: SE G ug/ml	Test: SO4 IC mg/L as SO4	Test: TOC mg/L
01	0.38(.05)	<0.004R	640	16
Artesia MW-3	pCi/L			18
				23
				19
02	0.36(.05)	<0.004	580	12
Artesia MW-4	pCi/L			15
				14
				14

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

SAMPLE ID Artesia MW-3 FRACTION 01J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST BM FILE #
INSTRMT D INJECTED 11/03/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	0.9*	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	101% 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

RADIAN CORPORATION

SAMPLE ID Artesia MW-3 FRACTION 01J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

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

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

SAMPLE ID Artesia MW-3 FRACTION 011 TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 10/27/88 Category

VERIFIED RHH

ANALYST KCP
INSTRMT 403 ANALYZED 11/14/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND	0.0002

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 Artesia MW-3 FRACTION 01A TEST CODE TURB NAME Turbidity
Date & Time Collected 10/27/88 Category

VERIFIED LM

ANALYST TAM
INSTRMT HACH ANALYZED 10/28/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	16	1.0

RADIAN CORPORATION

SAMPLE ID Artesia MW-3 FRACTION 01A TEST CODE TURB NAME Turbidity
Date & Time Collected 10/27/88 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 Artesia MW-3 FRACTION 01J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST BM FILE #
INSTRMT D INJECTD 11/03/88 UNITS ug/L

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	0.10

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	101% 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.

RADIAN CORPORATION

SAMPLE ID Artesia MW-3 FRACTION 01J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 10/27/88 Category

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

RADIAN CORPORATION

Page 10 RAS - Austin REPORT Work Order # 88-10-152
Received: 10/28/88 Results by Sample

SAMPLE ID Artesia MW-4 FRACTION 02J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTED 11/03/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	2.1	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	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.

RADIAN CORPORATION

SAMPLE ID Artesia MW-4 FRACTION 02J TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

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

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

SAMPLE ID Artesia MW-4 FRACTION 02I TEST CODE HG C NAME Mercury, cold vapor
Date & Time Collected 10/27/88 Category

VERIFIED RHH

ANALYST KCP
INSTRMT 403 ANALYZED 11/14/88 UNITS ug/ml

ANALYTE	RESULT	DET LIMIT
Mercury	ND	0.0002

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 Artesia MW-4 FRACTION 02A TEST CODE TURB NAME Turbidity
Date & Time Collected 10/27/88 Category

VERIFIED LM

ANALYST TAM
INSTRMT HACH ANALYZED 10/28/88 UNITS NTU

ANALYTE	RESULT	DET LIMIT
Turbidity	9	1.0

SAMPLE ID Artesia MW-4 FRACTION 02A TEST CODE TURB NAME Turbidity
Date & Time Collected 10/27/88 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 Artesia MW-4 FRACTION 02J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST CL FILE #
INSTRMT D INJECTD 11/03/88 UNITS ug/L

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	0.10

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

RADIAN CORPORATION

SAMPLE ID Artesia MW-4 FRACTION 02J TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 10/27/88 Category

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

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

SAMPLE ID trip blank FRACTION 04A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST BM FILE #
I TRMT D INJECTED 11/03/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	ND	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	101% 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.

RADIAN CORPORATION

SAMPLE ID trip blank FRACTION Q4A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected 10/27/88 Category

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

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

SAMPLE ID trip blank FRACTION 04A TEST CODE XYLENE NAME Xylenes, EPA 602
Date & Time Collected 10/27/88 Category

VERIFIED CL

ANALYST BM FILE #
INSTRMT D INJECTD 11/03/88 UNITS ug/L

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	0.10

SURROGATES

98-08-8	a,a,a-Trifluorotoluene	101% 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.

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

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

VERIFIED CL

ANALYST CL FILE #
I TRMT D INJECTED 11/03/88 UNITS ug/L

CAS#	COMPOUND	RESULT	DET LIMIT
71-43-2	Benzene	ND	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	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 FRACTION 05A TEST CODE EPA602 NAME EPA method 602
Date & Time Collected not specified Category

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

RADIAN CORPORATION

Received: 10/28/88 Results by Sample

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

VERIFIED CL

ANALYST CL FILE #
TRMT D INJECTD 11/03/88 UNITS ug/L

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	0.10

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

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01K : SPR602
02K : SPR602

RADIAN CORPORATION

Page 1 RAS - Austin REPORT Work Order # 88-12-036
Received: 12/07/88 12/08/88 08:29:54

REPORT TO: Radian, Bl.1, Austin
ATTEN: Linda Bendele
CLIENT: PHILLIPS P SAMPLES: 8
COMPANY: Phillips Petroleum
FACILITY: Odessa, TX

WORK ID: Lusk & Artesia, TOX
TAKEN:
TRANS:
TYPE:
P.O. #:
INVOICE: under separate cover

PREPARED BY: Radian Analytical Services, 8501 Mo-pac Bl., PO Box 201088, Austin, TX 78720-1088
ATTEN:
PHONE: 512-454-4797

CERTIFIED BY
CONTACT: BENDELE

Analyses performed by Gascoyne Laboratories, Inc.

Footnotes and Comments

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

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

SAMPLE IDENTIFICATION

01 Lusk MW-1
02 Lusk MW-2
03 Lusk MW-3
04 Lusk MW-4
05 Artesia MW-1
06 Artesia MW-2
07 Artesia MW-3
08 Artesia MW-4

TEST CODES and NAMES used on this report

TOX Total organic halides

12/88 - 3rd QTr.

SAMPLE Sample Id	Test: TOX mg/L
	0.13
	0.20
05 Artesia MW-1	0.06
	0.08
	0.08
	0.11
06 Artesia MW-2	0.09
	0.08
	0.05
	0.07
07 Artesia MW-3	0.05
	0.05
	0.08
	0.14

SAMPLE Sample Id	Test: TOX mg/L
08 Artesia MW-4	0.09
	0.12
	0.12
	0.11

Notes and Definitions

Pesticides/Herbicides
3rd QTR, Artesia

RADIAN CORPORATION

Data Flags:

TERMS USED IN THIS REPORT:
Analyte - A chemical for which a sample is to be analyzed. The analysis will meet EPA method and QC specifications.

Compound - See Analyte.

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

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

Factor - The concentration or dilution factor by which the sample extract or digestate 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 is concentrated 10 times more than specified will have a factor of 0.1.

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

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

Units -

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

Notes and Definitions

RADIAN CORPORATION

Data Flags:

* The asterisk(*) is used to flag results which are less than five times the method specified detection limit. Studies have shown that the uncertainty of the analysis will increase exponentially as the method detection limit is approached. These results should be considered approximate.

A This flag indicates that a spike is an analytical and/or post-digestion spike. These spikes have not been subjected to the extraction or digestion step.

B This flag indicates that the analyte was detected in the reagent blank Since traces of the background contaminant will vary from sample to sample, the sample results are not corrected from the amount in the blank.

C Most methods of gas chromatography recommend reanalysis on a second column of dissimilar phase to resolve compounds of interest from interferences that may occur and for analyte confirmation. This flag indicates that the analyte has been confirmed on a second column.

D This flag identifies analytes identified in analysis at a secondary dilution factor. In an analysis some compounds can exceed the calibration range of the instrument. Therefore two analyses are performed, one at the concentration of some of the analytes, and a second with the sample diluted so that higher levels fall into calibration range.

E The reported value is estimated because of the presence of interference. The potential source of the interference is included in the report narrative.

Notes and Definitions

Data Flags:

G This flag identifies a GC/MS result whose concentration exceeds the calibration range for that specific analysis. Usually if one or more compounds have a response greater than full scale, the sample or extract is diluted and re-analyzed.

J Indicates an estimated value for GC/MS data. This flag is used either when estimating a concentration for tentatively identified compounds where a response factor of 1 is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit.

N/A A result or value is not available for this parameter, usually a detection limit.

NA This analyte was not analyzed.

NC Applies to RPD and spike recovery results. The relative percent difference (RPD) is not calculated when a result is less than five times the detection limit. A spike recovery is not calculated when the result is greater than four times the spike added concentration because the spike added concentration is considered insignificant.

ND This flag (or <) is used to denote analytes which are not detected at or above the specified detection limit. The value to the right of the < symbol is the method specified detection limit for the sample.

RADIAN CORPORATION

Notes and Definitions

Data Flags:

NR This analyte was not requested by the client.

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

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

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

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

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

RADIAN CORPORATION

RADIAN CORPORATION

Client: PHILLIPS 66
PHILLIPS 66
ODESSA, TEXAS 77480

01A ARTESIA MW-1
02A ARTESIA MW-2
03A ARTESIA MW-4
04A ARTESIA MW-3

EPA METHOD 8080

Lab No: A8-10-107

RESULTS IN ug/L

CAS #	COMPOUND	01A	02A	03A	04A
58-89-9	gamma-BHC,(Lindane)	0.25 *	<0.19	<0.19	<0.094
72-20-8	Endrin	<0.19	<0.19	<0.19	0.02 J
8001-35-2	Toxaphene	<0.94	<0.94	<0.94	<0.47
72-43-5	Methoxychlor	<9.4	<9.4	<9.4	<4.7

SURROGATE RECOVERIES	(results in % recovery)			
Dibutylchlorendate	101	83	86	85
2,4,5,6-Tetrachloro-m-xylene	128	97	98	111

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.

RADIAN CORPORATION

05A REAGENT BLANK

Client: PHILLIPS 66
PHILLIPS 66
ODESSA, TEXAS 77480

EPA METHOD 8080

Lab No: A8-10-107

RESULTS IN ug/L

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

SURROGATE RECOVERIES (results in % recovery)

Dibutylchlorendate	76
2,4,5,6-Tetrachloro-m-xylene	64

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		
Results in:	ug/L	ug/L	ug/L	ug/L
Sample ID:	Artesia MW-1	Artesia MW-2	Artesia MW-3	Artesia MW-4
2,4-D	<0.4	<0.4	<0.5	<0.6
2,4,5-TP (Silvex)	<0.4	<0.4	<0.3	<0.3

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

STATE OF NEW MEXICO
HEALTH ENVIRONMENT department

ENVIRONMENTAL IMPROVEMENT DIVISION
P.O. Box 968 Santa Fe, New Mexico 87504
505-984-0020

4/7/86

Dave —

Here is a summary of our results for Phillips Artesia, Eunice, Lee + Lusk. I have the original lab sheets if you want to see them.

— Ann C.

x2931

Copy in each file

[illegible]

RESULTS OF SAMPLING

PHILLIPS PETROLEUM GAS REFINERIES

ARTESIA, EUNICE, LEE AND LUSK

Attached are the results for the New Mexico Environmental Improvement Division's samples taken at the Phillips plants in August 1986. At each plant, samples were taken from each of the RCRA wells (4 wells per plant). At Lusk and Artesia, samples were also taken from surface impoundments. Table 1 identifies each sample.

All samples were collectd by Alice Barr with the assistance of Kelley Crossman. The samples were appropriately preserved and shipped under chain-of-custody to the State Laboratory in Albuquerque for analysis. Table 2 gives the analytical procedure for each parameter. Note that calcium and magnesium are reported under both General Chemistry and Metals. The Gen. Chem results were obtained by the Water Chemistry Section using wet analytical techniques; the Metals results were obtained by the Metals Section using ICAP.

All results are in milligrams per liter (mg/l), except as follows:

pH	pH units
conductivity	micromhos/cm (lab cond. at 25 °C)
temperature	degrees Celcius
organics	parts per billion

Abbreviations and symbols used to report the results are as follows:

Cond.	conductivity
GEN. CHEM.	general chemistry
ND	not detected (see below)
NR	not reported
PPB	parts per billion
Temp.	temperature (in Celcius)
TDS	total dissolved solids (total filterable residue)
TOC	total organic carbon
<	less than
>	greater than
~	approximately
[ ]	tentative identification

The value of many metals is reported as ND (none detected). The detection limits, in mg/l, were as follows:

Arsenic	0.005
Mercury	0.0005
Selenium	0.005
Manganese	0.05
All others	0.1

TABLE 1. SAMPLE IDENTIFICATION, PHILLIPS PETROLEUM PLANTS

NOTE: The designation of a well as upgradient or downgradient is Phillip's designation.

Phillips Petroleum -- Artesia

MW-1	monitoring well 1, downgradient
MW-3	monitoring well 3, upgradient
MW-6	monitoring well 6, downgradient
PND-1,w	first RCRA pond, surface water
PND-4,s	first RCRA pond, sediment
PND-2,s	second pond (middle), sediment
PND-3,,w	third pond, surface water
Blank	Field blank using deionized water

Phillips Petroleum -- Eunice

MW-1	monitoring well 1, upgradient
MW-2	monitoring well 2, downgradient
MW-3	monitoring well 3, downgradient
MW-4	monitoring well 4, downgradient

Phillips Petroleum -- Lee

MW-1	monitoring well 1, upgradient
MW-2	monitoring well 2, downgradient
MW-3	monitoring well 3, downgradient
MW-4	monitoring well 4, downgradient
Blank	Field blank using deionized water

Phillips Petroleum -- Lusk

MW-1	monitoring well 1, upgradient
MW-2	monitoring well 2, downgradient
MW-3	monitoring well 3, downgradient
MW-4	monitoring well 4, downgradient
R-PND,w	RCRA pond, surface water
R-PND,s	RCRA pond, sediment
O-PND,s	Oily pond next to RCRA pond, sludge

TABLE 2. ANALYTICAL METHODS

PARAMETER	PRESERVATION	ANALYTICAL METHOD
Gen. Chem.		
Field pH	none	Hach Mini pH Meter
Field Cond.	none	Yellow Springs S-C-T Meter
Calcium	ice	EPA Method 215.2
Magnesium	ice	EPA Methods 130.2 and 215.2
Sodium	ice	Std. Methods 325(b)
Potassium	ice	Std. Methods 325(b)
Bicarbonate	ice	EPA Method 310.1
Chloride	ice	EPA Method 325.2
Sulfate	ice	EPA Method 375.2
TDS	ice	EPA Method 160.1
Fluoride	ice	EPA Method 340.2
Nitrate-N	ice, H_2SO_4	EPA Method 352.2
TOC	ice, H_2SO_4	EPA Method 415.1
Metals		
Arsenic	HNO_3	EPA Method 206.2
Mercury	HNO_3	EPA Method 245.1
Selenium	HNO_3	EPA Method 270.2
All others (ICAP Scan)	HNO_3	EPA Method 207
Organics		
GC/MS Purgeables	Ice	EPA Method 624

PHILLIPS PETROLEUM -- ARTESIA

	MW-1	MW-3	MW-6	Blank*
GEN CHEM..				
Field pH	6.9	6.9	7.0	-
Field Cond.	2500	2040	1420	-
Field Temp.	23	23	23	-
Lab pH	7.96	7.84	7.67	7.25
Lab Cond.	2172	1983	1437	34
Calcium	270.4	172.0	176.8	6.67
Magnesium	98.6	111.3	67.8	0.33
Sodium	193.2	202.4	71.3	4.6
Potassium	1.56	5.46	0.78	0
Bicarbonate	115	366.1	238.8	8.3
Chloride	378.5	464.8	142.1	4.1
Sulfate	638.4	79.3	424.5	8.0
TDS	1913	1345	1305	25
Fluoride	1.59	2.57	1.89	0.10
Nitrate-N	9.15	0.08	0.3	1.12
TOC	8.08	22.9	13.7	1.1
METALS				
Arsenic	0.018	0.049	0.014	ND
Mercury	ND	ND	ND	ND
Selenium	ND	ND	ND	ND
Aluminum	1.3	1.8	0.4	ND
Barium	ND	0.3	ND	ND
Beryllium	ND	ND	ND	ND
Boron	0.5	0.7	0.4	ND
Cadmium	ND	ND	ND	ND
Calcium	285	160	185	3.5
Chromium	ND	ND	ND	ND
Cobalt	ND	ND	ND	ND
Copper	ND	ND	ND	ND
Iron	0.7	2.5	0.4	ND
Lead	ND	ND	ND	ND
Magnesium	106	79	63	0.3
Manganese	0.37	0.6	0.08	ND
Molybdenum	ND	ND	ND	ND
Nickel	ND	ND	ND	ND
Silicon	28	2.1	25	2.2
Silver	ND	ND	ND	ND
Strontium	5.1	3.3	3.2	ND
Tin	ND	ND	ND	ND
Vanadium	ND	ND	ND	ND
Ytrrium	ND	ND	ND	ND
Zinc	ND	ND	ND	ND

*Sample containers filled in the field, tapping NMEID deionized water container.

PHILLIPS PETROLEUM -- ARTESIA, cont.

	PND-1,w*	PND-4,s*
METALS		
Arsenic	0.020	0.064
Mercury	0.0016	ND
Selenium	ND	ND
Aluminum	0.6	ND
Barium	ND	0.4
Beryllium	ND	ND
Boron	ND	0.5
Cadmium	ND	ND
Calcium	20	200
Chromium	0.3	ND
Cobalt	ND	ND
Copper	ND	ND
Iron	3.7	0.4
Lead	ND	ND
Magnesium	3.5	58
Manganese	ND	ND
Molybdenum	ND	ND
Nickel	ND	ND
Silicon	2.3	1.4
Silver	ND	ND
Strontium	0.1	2.5
Tin	ND	ND
Vanadium	ND	ND
Ytrrium	ND	ND
Zinc	0.6	ND

*"w" denotes a water sample; "s" denotes a sediment or sludge sample.

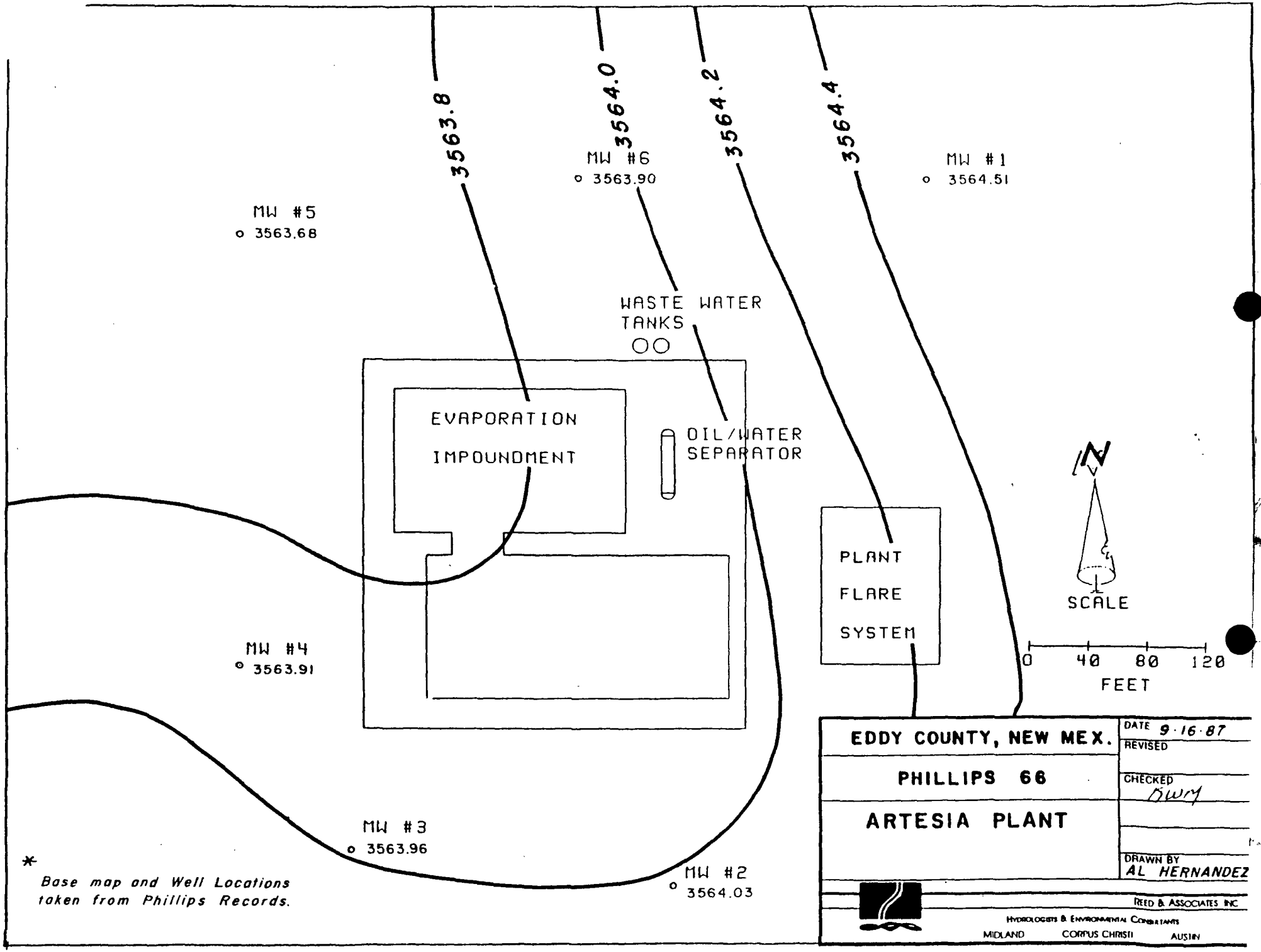
PHILLIPS PETROLEUM -- ARTESIA

Gas Chromatograph/Mass Spectrometer Purgeable Screen

Results in [brackets] are tentative (unconfirmed) results.

SAMPLE	ORGANICS DETECTED	PPB
MW-1	None Detected	
MW-3	Benzene	2
	Tetrahydrofuran	[>200]
MW-6	Benzene	2
	Tetrathydrofuran	[2]
PND-2,s*	None Detected	
PND-3,w*	Benzene	10
	Toluene	5
	Note: This sample had an organic phase floating on top, which was not analyzed.	
Blank	Trichloromethane	19
	Bromodichloromethane	5
	Dibromochloromethane	4
	Bromoform	[1]

*"w" denotes a water sample; "s" denotes a sediment or sludge sample.



* *Base map and Well Locations taken from Phillips Records.*

G.W. File:
Phillips Plants

PHILLIPS PETROLEUM COMPANY
BARTLESVILLE, OKLAHOMA 74004
PHONE: 918 661-6600 CABLE CODE: PHILPETROL TELEX: 49-2455

ENGINEERING AND SERVICES

HAZARDOUS WASTE SECTION

March 21, 1986

Lusk, Lee, Eunice and Artesia Plants
Supplemental Sampling Results

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Jack Ellvinger, Environmental Supervisor
Hazardous Waste Section
New Mexico Environmental Improvement Division
P. O. Box 968
Harold-Runnels Building
Santa Fe, NM 87501-0968

Dear Mr. Ellvinger:

Samples were procured from the Lusk, Lee, Eunice and Artesia Plants' water sampling wells and surface impoundments in the Fall of 1985 during a joint sampling effort by Phillips and the New Mexico Environmental Improvement Division (EID). Each sample that was procured was split between Phillips and the EID. Results of the analysis of Phillips' samples are attached.

Referring to the attached data, please note that for the Lusk, Lee and Eunice Plants, "well #1" corresponds to the "upgradient" well; in the case of the Artesia Plant, "well #3" is the upgradient well. Samples from monitoring wells #1 and #2 at the Eunice Plant were lost because the containers holding these samples froze and broke while being stored in a laboratory refrigerator prior to analysis. Analyses of the samples for metals were performed by Southwestern Laboratories of Midland, Texas. Analyses of the samples for volatile and semivolatile compounds were performed by the Phillips Research Center, located in Bartlesville, Oklahoma.

Phillips requests that EID provide Phillips a copy of all analytical results from the analysis of EID's split samples from the Lusk, Lee, Eunice and Artesia Plants.

It is Phillips' understanding that EID is currently preparing a public notice which, when published by EID in a local newspaper (or broadcast via radio or television), will extend to the public and to Phillips the opportunity to submit comments on the closure plans previously submitted by Phillips for the Lusk, Lee, Eunice and Artesia Plants. The Lusk plan is dated January 23, 1984; the other three plans are dated July 27, 1984. Following the comment period and after any questions are adequately addressed, EID will proceed with the administrative actions necessary to RCRA-close the Lusk, Lee, Eunice and Artesia Plants.

If you have any questions regarding the Lusk, Lee, Eunice or Artesia Plants, please contact either Frank Collis at (918) 661-1063 or W. C. Stoltz at (918) 661-5613.

Very truly yours,

B. F. Ballard

B. F. Ballard, Director
Environment Control
10 D4 Phillips Building

BFB:FPC:tsv/B:002
Enclosure

SwL SOUTHWESTERN LABORATORIES

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

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

Client No. 3355796

File No. C-1950-W

Report No. 36785

Report Date 10-14-85

Report of tests on: Water

Date Received 8-30-85

Client: Phillips Petroleum Company

Delivered By M. Ford

Identification: Artesia Plant, Well No. 3
up gradient

	mg/L
Arsenic	Less than 0.05
Barium	Less than 1
Cadmium	Less than 0.01
Chromium	Less than 0.05
Lead	Less than 0.05
Mercury	Less than 0.002
Selenium	Less than 0.01
Silver	Less than 0.05
Nickel	Less than 0.2
Cyanide	0.005

Technician: JDN, GMB

Copies 3cc Phillips Petroleum Company
Attn: Mike Ford

SOUTHWESTERN LABORATORIES

Gary M. Burch

1199C4

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

Client NO. 3355796

File No. C-1950-W

Report No. 36784

Report Date 10-14-85

Date Received 8-30-85

Delivered By M. Ford

Report of tests on: Water

Client: Phillips Petroleum Company

Identification: Artesia Plant, Well No. 1

		mg/L
Arsenic	Less than	0.05
Barium	Less than	1
Cadmium	Less than	0.01
Chromium	Less than	0.05
Lead	Less than	0.05
Mercury	Less than	0.002
Selenium	Less than	0.01
Silver	Less than	0.05
Nickel	Less than	0.2
Cyanide		0.001

Technician: JDN, GMB

Copies 3cc Phillips Petroleum Company
Attn: Mike Ford

SOUTHWESTERN LABORATORIES

Gary M. Bunch

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

119504

Client No. 3355796

File No. C-1950-W

Report No. 36786

Report Date 10-14-85

Report of tests on: Water

Date Received 8-30-85

Client: Phillips Petroleum Company

Delivered By M. Ford

Identification: Artesia Plant, Well No. 6

	mg/L
Arsenic	Less than 0.05
Barium	Less than 1
Cadmium	Less than 0.01
Chromium	Less than 0.05
Lead	Less than 0.05
Mercury	Less than 0.002
Selenium	Less than 0.01
Silver	Less than 0.05
Nickel	Less than 0.2
Cyanide	0.001

Technician: JDN, GMB

Copies 3cc Phillips Petroleum Company
Attn: Mike Ford

SOUTHWESTERN LABORATORIES

Gary M. Bunch

SwL SOUTHWESTERN LABORATORIES

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

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

Client No. 3355796

File No. C-1950-W

Report No. 36787

Report Date 10-14-85

Report of tests on: Water

Date Received 8-30-85

Client: Phillips Petroleum Company

Delivered By M. Ford

Identification: Artesia Plant, Pit Water

		mg/L
Arsenic	Less than	0.05
Barium	Less than	1
Cadmium	Less than	0.01
Chromium	Less than	0.05
Lead	Less than	0.05
Mercury	Less than	0.002
Selenium	Less than	0.01
Silver	Less than	0.05
Nickel	Less than	0.2
Cyanide		0.003

Technician: JDN, GMB

Copies: 3cc Phillips Petroleum Company
Attn: Mike Ford

SOUTHWESTERN LABORATORIES

Gary M. Burch

SWL

SOUTHWESTERN LABORATORIES

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

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

Client No. 3355796

File No. C-1950-X

Report No. 27904

Report Date 10-23-85

Date Received 9-3-85

Delivered By Phillips

Report of tests on: Sludge

Client: Phillips Petroleum Company

Identification: Artesia Plant Pit Sludge

SW-846-Total Metals, Method 3050

		p.p.m.
Arsenic	Less than	0.5
Barium		450
Cadmium	Less than	3
Chromium		593
Lead	Less than	5
Mercury		1.4
Nickel		20
Selenium	Less than	0.1
Silver	Less than	3

Technician: MAW, GMB

Copies 3cc Phillips Petroleum Company
Attn: Mike Ford

SOUTHWESTERN LABORATORIES

Gary W. Bunch

Attachment to Olb-12-86

TABLE I

VOLATILE ORGANIC ANALYSES OF ARTESIA PLANT WATER SAMPLES

Sample received: September 5, 1985

Analysis	Concentration, ppb				
	M.W. #1	M.W. #3 (upgradient)	M.W. #6	Surface Impoundment	Pit Sludge
Chloromethane	<1	2.5	1.2	<1	4.4
Vinyl Chloride	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1
1,1-dichloroethylene	<1	<1	<1	<1	<1
Methylene Chloride	2.5	6.6	7.5	2.8	2.8
trans-1,2-dichloroethylene	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1
Chloroform	1.7	1.7	1.8	1.5	1.4
1,2-dichloroethane	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1
Benzene	<1	<1	3.9	16.7	147
Carbontetrachloride	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1
Trichloroethylene	<1	<1	<1	<1	<1
2-chloroethylvinyl Ether	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1
Toluene	1.0	<1	7.5	9.4	41
Dibromochloromethane	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethylene	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	23
Bromoform	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1
31509-	40-1	40-2	40-3	41-1	41-2

Attachment to Olb-22-86

TABLE I

SEMIVOLATILE ORGANIC ANALYSES OF ARTESIA PLANT WATER SAMPLES

Sample received: September 5, 1985

Analysis	Concentration, ppb				
	M.W. #1	M.W. #3	M.W. #6	Surface Impound-ment	Pit Sludge
Bis(2-chloroethyl)ether	<20	<20	<20	<300	<20
1,3-dichlorobenzene	<20	<20	<20	<300	<20
1,4-dichlorobenzene	<20	<20	<20	<300	<20
1,2-dichlorobenzene	<20	<20	<20	<300	<20
Bis(2-chloroisopropyl)ether	<20	<20	<20	<300	<20
N-nitorsodi-n-propylamine	<20	<20	<20	<300	<20
Nitrobenzene	<20	<20	<20	<300	<20
Hexachloroethane	<20	<20	<20	<300	<20
Isophorone	<20	<20	<20	<300	<20
n-nitrosodimethylamine	<20	<20	<20	<300	<20
Bis-(2-chloroethoxy)methane	<20	<20	<20	<300	<20
1,2,4-trichlorobenzene	<20	<20	<20	<300	<20
Naphthalene	<20	<20	<20	<300	<20
Hexachlorobutadiene	<20	<20	<20	<300	<20
Hexachlorocyclopentadiene	<20	<20	<20	<300	<20
2-chloronaphthalene	<20	<20	<20	<300	<20
2,6-dinitrotoluene	<20	<20	<20	<300	<20
Dimethylphthalate	<20	<20	<20	<300	<20
Acenaphthylene	<20	<20	<20	<300	<20
Acenaphthene	<20	<20	<20	<300	<20
2,4-dinitrotoluene	<20	<20	<20	<300	<20
Diethylphthalate	<20	<20	<20	<300	<20
Fluorene	<20	<20	<20	<300	<20
4-chlorophenylphenylether	<20	<20	<20	<300	<20
N-nitrosodiphenylamine	<20	<20	<20	<300	<20
4-bromophenylphenylether	<20	<20	<20	<300	<20
Hexachlorobenzene	<20	<20	<20	<300	<20
Phenanthrene	<20	<20	<20	<300	<20
Anthracene	<20	<20	<20	<300	<20
Dibutyl phthalate	<20	<20	<20	<300	<20
Fluoranthene	<20	<20	<20	<300	<20
Pyrene	<20	<20	<20	<300	<20
Benzylbutylphthalate	<20	<20	<20	<300	<20
Bis(2-ethylhexyl)phthalate	<20	<20	<20	<300	<20
Benzidine	<20	<20	<20	<300	<20
Di-n-octylphthalate	<20	<20	<20	<300	<20
Benzo(b&k)fluoranthene	<20	<20	<20	<300	<20
Benzo(a)pyrene	<20	<20	<20	<300	<20
3-3'-dichlorobenzidine	<20	<20	<20	<300	<20
Chrysene & benzo(a)anthracene	<20	<20	<20	<300	<20
Indeno(1,2,3-c,d)pyrene	<20	<20	<20	<300	<20
Dibenzo(a,h)anthracene	<20	<20	<20	<300	<20
Benzo(g,h,i)perylene	<20	<20	<20	<300	<20
Phenol	<20	<20	<20	<300	<20
2-chlorophenol	<20	<20	<20	<300	<20
2-nitrophenol	<20	<20	<20	<300	<20
2,4-dimethylphenol	<20	<20	<20	<300	<20
2,4-dichlorophenol	<20	<20	<20	<300	<20
4-chloro-3-methylphenol	<20	<20	<20	<300	<20
2,4,6-trichlorophenol	<20	<20	<20	<300	<20
2,4-dinitrophenol	<20	<20	<20	<300	<20
4-nitrophenol	<20	<20	<20	<300	<20
2-methyl-4,6-dinitrophenol	<20	<20	<20	<300	<20
Pentachlorophenol	<20	<20	<20	<300	<20
31509-	40-1	40-2	40-3	41-1	41-2

PUBLIC NOTICE

NEW MEXICO ENVIRONMENTAL IMPROVEMENT DIVISION
HAZARDOUS WASTE SECTION
P.O.Box 968
Santa Fe, New Mexico 87504

PUBLIC NOTICE NO. 5 March 28,1986

NOTICE OF INTENT TO TERMINATE INTERIM STATUS
AND TO CLOSE THE SURFACE IMPOUNDMENT USED FOR THE DISPOSAL OF
HAZARDOUS WASTE

The State of New Mexico is authorized to operate a hazardous waste management program in lieu of the Federal program for those portions of the Resource Conservation and Recovery Act (RCRA) in effect prior to the enactment of the Hazardous and Solid Waste Amendments of 1984 (HSWA). The HWSA imposes additional requirements on hazardous waste management facilities which will be administered and enforced by the U.S. Environmental Protection Agency (EPA) until the State of New Mexico receives additional authorization for these requirements. Therefore, both the EPA and the New Mexico Environmental Improvement Division (NMEID) of the State Health and Environment Department will determine whether to approve Phillip's Petroleum Artesia Natural Gasoline Plant (Phillip's Artesia Plant) request for termination of interim status and the proposed closure plan.

Under authority of the New Mexico Hazardous Waste Act (§ 74-4-1 et. seq. NMSA 1983 Repl. Pamp.) and the New Mexico Hazardous Waste Management Regulations (HWMR-2), the NMEID proposes to terminate the interim status of Phillip's Artesia Plant, EPA I.D. Number NMD000709667, located ten miles east and four miles south of Artesia, New Mexico (32° 45'N, 104° 12'W) and to approve a closure plan for the surface impoundment used for the disposal of hazardous waste at that site. Phillip's Artesia Plant is involved in the production of natural gasoline and has conducted disposal of hazardous wastes in a surface impoundment associated with those processes.

The decision to terminate interim status is based on Phillip's Artesia Plant's request to withdraw its Part A application for a hazardous waste disposal permit. As a result of changes in its waste management practices, the company will no longer be subject to the requirements of HWMR-2, Section 206.C. for the disposal of hazardous wastes. Termination of interim status is to be accomplished through permit denial as required by EID. The cause for this permit denial is a request by the Company and does not suggest any wrongdoing on the part of the Company.

The proposed closure plan describes the procedures to be used to demonstrate that none of the standing liquids, waste and waste residues, the liner (if any) and underlying and surrounding contaminated soil remaining are hazardous waste. If that demonstration can be made then the surface impoundment is no longer subject to the requirements of HWMR-2 as provided for in Section 206.C.6.f.(2).

Persons wishing to comment upon the proposed termination of interim status or upon the proposed closure plan, or who wish to request a public hearing, should

submit, in writing, comments and requests, along with the requestor's name and address to the New Mexico Health and Environment Department, Environmental Improvement Division, 1190 St. Francis Drive, P.O.Box 968, Santa Fe, New Mexico 87504-0968, ATTENTION: Peter H. Pache. Requests for a public hearing shall state the nature of the issues proposed to be raised in the hearing. These comments and/or requests must be received no later than May 19,1986 to be considered.

The administrative record for these decisions consist of a permit application (Part A), a "notice of intent to terminate interim status", a fact sheet, a closure plan, and related correspondence. The administrative record may be reviewed at either the EID District Office, 200 E. 5th Street, Roswell, New Mexico, or the EID Central Office, Harold Runnels Building, 1190 St. Francis Drive, Santa Fe, New Mexico.

To obtain a copy of the administrative record or any part thereof, please contact:

Peter H. Pache, Program Manager
Hazardous Waste Section
New Mexico Environmental Improvement Division
1190 St. Francis Drive, P.O.Box 968
Santa Fe, New Mexico 87504-0968
(505) 827-2924

All written comments submitted on the proposed termination of interim status and/or the proposed closure plan will be considered in formulating a final decision. The EID will notify Phillip's Artesia Plant and each person who submitted a written comment during the public comment period of the final decisions or of any public hearing which may be scheduled.

If, after consideration of all written comments, these proposed actions become EID's final decisions, EID will issue to Phillip's Artesia Plant a Notice of Termination, immediately terminating the interim status of the Company's facility. The Notice of Termination will require that the Company's closure activities be performed in conformity with applicable State law, as well as within the terms of the Company's closure plan.

FACT SHEET

Intent to Terminate Interim Status and to Close Under the New Mexico Hazardous Waste Act

Activity: Termination of Phillips Petroleum Company's Artesia Natural Gasoline Plant Interim Status and closure of it's surface impoundment.

Facility Name: Artesia Natural Gasoline Plant

EPA I.D. Number: NMD000709667

Location: The plant is located approximately ten miles East and four miles South of Artesia, New Mexico.

Landowner: Phillips Petroleum Company

Facility Operator: Phillips Petroleum Company

Comment Period:

Any person, including the applicant, who wishes to comment on the tentative decisions to terminate the facility's interim status and to approve the proposed closure plan may do so by submitting written comments to the New Mexico Environmental Improvement Division (NMEID), Harold Runnels Building, 1190 St. Francis Drive, P. O. Box 968, Santa Fe, New Mexico 87504-0968, ATTENTION: Peter H. Pache, (505) 827-2924. All such comments must be received by May 19, 1986 to be considered. Note that the termination of interim status is achieved through permit denial, as required by EID regulations; however, no wrongdoing on the part of the facility is to be inferred.

Procedures for Requesting a Hearing:

Any person, including the applicant, who wishes to request a public hearing concerning the proposed actions may do so by submitting a written request to the New Mexico Environmental Improvement Division (NMEID), P. O. Box 968, Harold Runnels Building, 1190 St. Francis Drive, Santa Fe, New Mexico, 87504-0968, ATTENTION: Peter H. Pache. Any request for a hearing shall be submitted in writing and shall state the nature of the issues proposed to be raised in the hearing. All requests must include the requestor's name and address. Requests for a hearing must be received by April 30, 1986 to be considered.

Interim Status Activities:

Since November 19, 1980, Phillips Petroleum Company's Artesia Natural Gasoline Plant has been operating under interim status (defined in N.M. Hazardous Waste Management Regulations) as a hazardous waste disposal facility. Primary industrial activities conducted at the facility include processing raw natural gas for liquid hydrocarbon recovery and processing acid gas for recovery of elemental sulfur. These activities require use of a cooling tower; chemicals containing chromium, a corrosion inhibitor and characteristic toxic waste, were used in the cooling tower until September 26, 1983. On September 26, 1983, the use of chromium at the facility was discontinued. All wastes have been disposed of in an unlined surface impoundment on site.

Reasons Supporting Decision to Terminate Interim Status:

On August 3, 1984, Phillips Petroleum Company submitted a revised closure and post-closure plan for the Artesia Natural Gasoline Plant surface impoundment which was used for disposal of cooling tower blowdown water containing chromium. In the closure plan Phillips states that the use of chromium contained in cooling tower blowdown water has been discontinued and requests that the interim status authorization to operate be withdrawn. NMEID's review of the closure and post-closure plan indicated that the company's request to withdraw interim status and retain their EPA I.D. Number was justified. Therefore NMEID is hereby formally proposing to terminate Artesia Natural Gasoline Plant's interim status by denying a permit.

Closure of the Facility:

The facility is currently operating under interim status. If this tentative decision becomes the final administrative disposition of the permit application, interim status will terminate and closure will begin immediately. Phillip's Artesia Natural Gasoline Plant closure plan has been previously submitted and reviewed by NMEID. A copy is available for public review at the NMEID Central Office, Harold Runnels Building, 1190 St. Francis Drive, Santa Fe, New Mexico and the NMEID District IV Office at 200 East Fifth Street, Roswell, New Mexico. The public notice and this fact sheet include the proposed approval of the closure plan for this facility's surface impoundment. The public is provided an opportunity to submit written comments on the plan, or request a public hearing as previously described elsewhere in this fact sheet. The owner/operator must implement the approved closure plan in accordance with its stipulated time schedule.

If the groundwater has been or will be impacted by a release of hazardous constituents from the surface impoundment, closure of the impoundment shall not relieve Phillips Petroleum Company of remedial liability.

Final Decisions:

All written comments submitted on the proposed termination of interim status and/or the proposed closure plan will be considered in formulating a final decision. The NMEID will notify Phillips Petroleum Company and each person who submitted a written comment during the public comment period of the final decisions made, or of any public hearing which may be scheduled.