AP - 2

STAGE 1 & 2 REPORTS

(1998 Lab Results)

DATE:

July 1999

WESTGATE SUBDIVISION, GRIMES BATTERY and TASKER ROAD

STAGE 1 ABATEMENT PLAN

UPDATED 1998 LABORATORY ANALYTICAL RESULTS

RECEIVED
JUL 0 8 1999
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

July 1999

Shell Exploration and Production Company
Houston, Texas

Prepared by

BBC International, Incorporated
ARCADIS Geraghty & Miller

WORLD-WIDE ENVIRONMENTAL / BIOREMEDIATION SPECIALISTS

BBC INTERNATIONAL
INCORPORATED

PHONE (505) 397-6388 · FAX (505) 397-0397 · 1324 W. MARLAND · P.O. BOX 297 · HOBBS, NM 88241-0297
E-MAIL: bbc@bbcinternational.com

July 6, 1999

Mr. William C. Olson
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

SUBJECT: WESTGATE SUBDIVISION, GRIMES BATTERY AND TASKER ROAD STAGE 1 ABATEMENT PLAN UPDATED 1998 LABORATORY ANALYTICAL RESULTS

Dear Mr. Olson:

On behalf of Shell Exploration and Production Company, BBC International, Inc. and Arcadis Geraghty & Miller respectfully submit the above referenced data notebook.

This data represents an updated version of the previously submitted data on November 6, 1998. The analytical results have not changed, but some laboratory comments, flags, and explanations have been clarified for a clearer understanding of these comments.

If you have any questions concerning this data, please contact Wayne Hamilton at 281-544-2322 or myself at 505-397-6388.

Sincerely,
BBC International, Inc.

Cliff P. Brunson

Cliff P. Brunson
President

cc: Chris Williams-OCD Hobbs District

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Corrected

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
103637	Trip Blank			7/30/98
103638	Field Blank	7/28/98	15:30	7/30/98
103639	CSS #1	7/28/98	14:30	7/30/98
103640	CSS #2	7/28/98	14:39	7/30/98
103641	CSS #3	7/28/98	14:46	7/30/98
103642	CSS #4	7/28/98	14:25	7/30/98
103643	CSS #5	7/28/98	15:00	7/30/98
103644	CSS #7	7/28/98	15:06	7/30/98
103645	CSS #6	7/28/98	15:15	7/30/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Data meets all quality control criteria with exceptions:
103645 Semivolatile surrogates out of limits due to sample matrix

Corrections:
1) Dichlorobenzene and 1,1-dichloroethylene blank results corrected.
2) Surrogate results corrected for sample 103645, originally reported results divided by 10.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 2

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518
Sample Number: 103637

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/3/98	AG		4726	5
Acrylonitrile		<5	ug/L	S-8260B		8/3/98	AG		4726	5
Benzene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Chlorobenzene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Chloroform		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Dichlorobenzene		<2	ug/L	S-8260B		8/3/98	AG		4726	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Dichloropropenes		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Ethylbenzene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Bromodichloromethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Bromomethane		<5	ug/L	S-8260B		8/3/98	AG		4726	5
Chloromethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Dichloromethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Toluene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Trichloroethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Vinyl chloride		<1	ug/L	S-8260B		8/3/98	AG		4726	1
m,p-xylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
o-xylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Ethylene dibromide		<1	ug/L	S-8260B		8/3/98	AG		4726	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Methylene chloride		<5	ug/L	S-8260B		8/3/98	AG		4726	5
Surr. Dibromofluoromethane		85	%	S-8260B		8/3/98	AG		4726	72-130
Surr. Toluene-d8		100	%	S-8260B		8/3/98	AG		4726	77-127
Surr. 4-Bromofluorobenzene		95	%	S-8260B		8/3/98	AG		4726	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518
Sample Number: 103638

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/3/98	AG		4726	5
Acrylonitrile		<5	ug/L	S-8260B		8/3/98	AG		4726	5
Benzene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Chlorobenzene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Chloroform		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Dichlorobenzene		<2	ug/L	S-8260B		8/3/98	AG		4726	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Dichloropropenes		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Ethylbenzene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Bromodichloromethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Bromomethane		<5	ug/L	S-8260B		8/3/98	AG		4726	5
Chloromethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Dichloromethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Toluene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Trichloroethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Vinyl chloride		<1	ug/L	S-8260B		8/3/98	AG		4726	1
m,p-xylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
o-xylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Ethylene dibromide		<1	ug/L	S-8260B		8/3/98	AG		4726	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/3/98	AG		4726	1
Methylene chloride		<5	ug/L	S-8260B		8/3/98	AG		4726	5
Surr. Dibromofluoromethane		87	%	S-8260B		8/3/98	AG		4726	72-130
Surr. Toluene-d8		99	%	S-8260B		8/3/98	AG		4726	77-127
Surr. 4-Bromofluorobenzene		96	%	S-8260B		8/3/98	AG		4726	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518
Sample Number: 103639

Sample Description: CSS #1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Toluene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Ethylbenzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Total xylenes		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
TRPHC		460	mg/Kg	E 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518
Sample Number: 103640

Sample Description: CSS #2

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Toluene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Ethylbenzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Total xylenes		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
TRPHC		222	mg/Kg	E 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 6

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518
Sample Number: 103641

Sample Description: CSS #3

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Toluene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Ethylbenzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Total xylenes		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
TRPHC		39.8	mg/Kg	E 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518
Sample Number: 103642

Sample Description: CSS #4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Toluene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Ethylbenzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Total xylenes		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
TRPHC		24.7	mg/Kg	E 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518
Sample Number: 103643

Sample Description: CSS #5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Toluene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Ethylbenzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Total xylenes		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
TRPHC		19.2	mg/Kg	E 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518
Sample Number: 103645

Sample Description: CSS #6

Parameter	Flag	Result	Units	Method	Prepared	Analyzed	Analyst	Batch #	Batch #	Limit
Acrolein		<340	ug/Kg	S 8260B		7/31/98	AG		4719	340
Acrylonitrile		<340	ug/Kg	S 8260B		7/31/98	AG		4719	340
Benzene		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Carbon tetrachloride		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Chlorobenzene		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
1,2-dichloroethane		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
1,1,2,2-tetrachloroethane		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
1,1,1-trichloroethane		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
1,1,2-trichloroethane		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
1,1,2-trichloroethylene		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Chloroform		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Dichlorobenzene		<136	ug/Kg	S 8260B		7/31/98	AG		4719	136
1,1-dichloroethylene		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Dichloropropenes		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Ethylbenzene		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Bromodichloromethane		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Bromomethane		<340	ug/Kg	S 8260B		7/31/98	AG		4719	340
Chloromethane		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Dichlorodifluoromethane		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Dichloromethane		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Trichlorofluoromethane		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Tetrachloroethylene		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Toluene		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Trichloroethylene		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Vinyl chloride		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
m,p-xylene		190	ug/Kg	S 8260B		7/31/98	AG		4719	68
o-xylene		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
1,1-dichloroethane		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Ethylene dibromide		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
cis-1,2-dichlorethylene		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
trans-1,2-dichloroethylene		<68	ug/Kg	S 8260B		7/31/98	AG		4719	68
Methylene chloride		<340	ug/Kg	S 8260B		7/31/98	AG		4719	340
Surr. Dibromofluoromethane		97	%	S 8260B		7/31/98	AG		4719	71-132
Surr. Toluene-d8		90	%	S 8260B		7/31/98	AG		4719	82-124
Surr. 4-Bromofluorobenzene		102	%	S 8260B		7/31/98	AG		4719	76-126
Benzidine		<500	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	500
Pentachlorobenzene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
1,2,4,5-tetrachlorobenzene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Hexachloroethane		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 9

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518
Sample Number: 103644

Sample Description: CSS #7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Toluene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Ethylbenzene		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
Total xylenes		<0.050	mg/Kg	S 8021B		8/4/98	JG		4730	0.05
TRPHC		55.0	mg/Kg	E 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518
Sample Number: 103645

Sample Description: CSS #6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
2,4,5-trichlorophenol		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
2,4,6-trichlorophenol		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
bis (2-chloroethl) ether		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
bis (2-chloroisopropyl) ether		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
bis (chloromethyl) ether		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
3,3-dichlorobenzidine		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
2,4-dinitrotoluene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Diphenylhydrazine		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
Hexachlorobutadiene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Hexachlorocyclopentadiene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Isophorone		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
Nitrobenzene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
2,4-dinitro-o-cresol		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
2,4-dinitrophenols		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
i-nitrosodiethylamine		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
N-nitrosodimethylamine		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
N-nitrosodibutylamine		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
N-nitrosodiphenylamine		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
N-nitrosopyrrolidine		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Pentachlorophenol		<250	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	250
Phenol		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Dibutyl phthalate		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
bis(2-ethylhexyl) phthalate		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Diethyl phthalate		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Dimethyl phthalate		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Anthracene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Benzo(b)fluoranthene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Benzo(k)fluoranthene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Fluoranthene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Fluorene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Phenanthrene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Pyrene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Naphthalene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
1-methylnaphthalene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
2-methylnaphthalene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Benzo-a-pyrene		<50	mg/Kg	S 8270C	7/31/98	8/13/98	DG	4590	4860	50
Surr. 2-Fluorophenol	*	0	%	S 8270C	7/31/98	8/13/98	DG	4590	4860	25-121
Surr. Phenol-d6		46	%	S 8270C	7/31/98	8/13/98	DG	4590	4860	24-113
Surr. Nitroobenzene-d5	*	6	%	S 8270C	7/31/98	8/13/98	DG	4590	4860	23-120
Surr. 2-Fluorobiphenyl		62	%	S 8270C	7/31/98	8/13/98	DG	4590	4860	30-115
Surr. 2,4,6-Tribromophenol	*	0	%	S 8270C	7/31/98	8/13/98	DG	4590	4860	19-122
Surr. Terphenyl-d14	*	148	%	S 8270C	7/31/98	8/13/98	DG	4590	4860	28-137

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518
Sample Number: 103645

Sample Description: CSS #6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S-8082	8/10/98	8/10/98	RC	4691	4801	0.1
Arsenic		<0.50	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Barium		95	mg/Kg	S 6010B	8/3/98	8/10/98	RR	4643	4795	0.5
Cadmium		0.31	mg/Kg	S 6010B	8/3/98	8/10/98	RR	4643	4795	0.50
Chromium		12	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.50
Lead		7.2	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Total Mercury		0.32	mg/Kg	S 6010B	8/3/98	8/6/98	HC	4325	4737	0.25
Selenium		<0.50	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.50
Silver		<0.50	mg/Kg	S 6010B	8/3/98	8/10/98	RR	4643	4795	0.5
Uranium		<1.0	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	1.0
Copper		5.4	mg/Kg	S 6010B	8/3/98	8/10/98	RR	4643	4795	1
Iron		11,000	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	1.0
Manganese		180	mg/Kg	S 6010B	8/3/98	8/10/98	RR	4643	4795	1
Zinc		38	mg/Kg	S 6010B	8/3/98	8/10/98	RR	4643	4795	1.0
Aluminum		13,000	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	10.0
Boron		20	mg/Kg	S 6010B	8/3/98	8/10/98	RR	4643	4795	10
Cobalt		11	mg/Kg	S 6010B	8/3/98	8/10/98	RR	4643	4795	1.0
Molybdenum		3.7	mg/Kg	S 6010B	8/3/98	8/10/98	RR	4643	4795	0.50
Nickel		11	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Cyanide		<0.01	mg/Kg	SM 4500 C,E		8/11/98	RC		4815	0.01
Fluoride		0.54	mg/Kg	E 300.0		8/5/98	JS		4731	0.2
Nitrate		7.2	mg/Kg	E 300.0		8/5/98	JS		4731	0.2
Chloride		43	mg/Kg	E 300.0		8/5/98	JS		4731	1
Sulfate		120	mg/Kg	E 300.0		8/5/98	JS		4731	1
TDS		850	mg/Kg	E 160.1		8/12/98	RS		4835	---
pH		7.9	s.u.	E 150.1		7/31/98	BP		4715	---
TRPHC		12,900	mg/Kg	E 418.1	8/21/98	8/22/98	SR	4743	5045	10
Total Phenols		1.5	mg/Kg	S 5530 A,D		8/11/98	RC		4813	0.25
Total Radium		1.67	pCi/gm	E 901.1M		8/18/98	DS	---	---	---

* Surrogate out of standard limits.

Quality Control Report
Blanks

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date:06-14-99

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<125	ug/Kg	125	7/31/98		4719
Acrylonitrile		<125	ug/Kg	125	7/31/98		4719
Benzene		<25	ug/Kg	25	7/31/98		4719
Carbon tetrachloride		<25	ug/Kg	25	7/31/98		4719
Chlorobenzene		<25	ug/Kg	25	7/31/98		4719
1,2-dichloroethane		<25	ug/Kg	25	7/31/98		4719
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	7/31/98		4719
1,1,1-trichloroethane		<25	ug/Kg	25	7/31/98		4719
1,1,2-trichloroethane		<25	ug/Kg	25	7/31/98		4719
1,1,2-trichloroethylene		<25	ug/Kg	25	7/31/98		4719
Chloroform		<25	ug/Kg	25	7/31/98		4719
Dichlorobenzene		<50	ug/Kg	**50	7/31/98		4719
1,1-dichloroethylene		<25	ug/Kg	**25	7/31/98		4719
Dichloropropenes		<25	ug/Kg	25	7/31/98		4719
Ethylbenzene		<25	ug/Kg	25	7/31/98		4719
Bromodichloromethane		<25	ug/Kg	25	7/31/98		4719
Bromomethane		<125	ug/Kg	125	7/31/98		4719
Chloromethane		<25	ug/Kg	25	7/31/98		4719
Dichlorodifluoromethane		<25	ug/Kg	25	7/31/98		4719
Dichloromethane		<25	ug/Kg	25	7/31/98		4719
Trichlorofluoromethane		<25	ug/Kg	25	7/31/98		4719
Tetrachloroethylene		<25	ug/Kg	25	7/31/98		4719
Toluene		<25	ug/Kg	25	7/31/98		4719
Trichloroethylene		<25	ug/Kg	25	7/31/98		4719
Vinyl chloride		<25	ug/Kg	25	7/31/98		4719
m,p-xylene		<25	ug/Kg	25	7/31/98		4719
o-xylene		<25	ug/Kg	25	7/31/98		4719
1,1-dichloroethane		<25	ug/Kg	25	7/31/98		4719
Ethylene dibromide		<25	ug/Kg	25	7/31/98		4719
cis-1,2-dichlorethylene		<25	ug/Kg	25	7/31/98		4719
trans-1,2-dichloroethylene		<25	ug/Kg	25	7/31/98		4719
Methylene chloride		<125	ug/Kg	125	7/31/98		4719
Surr. Dibromofluoromethane		86	%	71-132	7/31/98		4719
Surr. Toluene-d8		99	%	82-124	7/31/98		4719
Surr. 4-Bromofluorobenzene		97	%	76-126	7/31/98		4719

** Reporting limits corrected.

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	8/3/98		4726
Acrylonitrile		<5	ug/L	5	8/3/98		4726
Benzene		<1	ug/L	1	8/3/98		4726
Carbon tetrachloride		<1	ug/L	1	8/3/98		4726
Chlorobenzene		<1	ug/L	1	8/3/98		4726
1,2-dichloroethane		<1	ug/L	1	8/3/98		4726
1,1,2,2-tetrachloroethane		<1	ug/L	1	8/3/98		4726
1,1,1-trichloroethane		<1	ug/L	1	8/3/98		4726
1,1,2-trichloroethane		<1	ug/L	1	8/3/98		4726
1,1,2-trichloroethylene		<1	ug/L	1	8/3/98		4726
Chloroform		<1	ug/L	1	8/3/98		4726
Dichlorobenzene		<2	ug/L	2	8/3/98		4726
1,1-dichloroethylene		<1	ug/L	1	8/3/98		4726
Dichloropropenes		<1	ug/L	1	8/3/98		4726
Ethylbenzene		<1	ug/L	1	8/3/98		4726
Bromodichloromethane		<1	ug/L	1	8/3/98		4726
Bromomethane		<5	ug/L	5	8/3/98		4726
Chloromethane		<1	ug/L	1	8/3/98		4726
Dichlorodifluoromethane		<1	ug/L	1	8/3/98		4726
Dichloromethane		<1	ug/L	1	8/3/98		4726
Trichlorofluoromethane		<1	ug/L	1	8/3/98		4726
Tetrachloroethylene		<1	ug/L	1	8/3/98		4726
Toluene		<1	ug/L	1	8/3/98		4726
Trichloroethylene		<1	ug/L	1	8/3/98		4726
Vinyl chloride		<1	ug/L	1	8/3/98		4726
m,p-xylene		<1	ug/L	1	8/3/98		4726
o-xylene		<1	ug/L	1	8/3/98		4726
1,1-dichloroethane		<1	ug/L	1	8/3/98		4726
Ethylene dibromide		<1	ug/L	1	8/3/98		4726
cis-1,2-dichlorethylene		<1	ug/L	1	8/3/98		4726
trans-1,2-dichloroethylene		<1	ug/L	1	8/3/98		4726
Methylene chloride		<5	ug/L	5	8/3/98		4726
Fluoride		<0.1	mg/Kg	0.1	8/5/98		4731
Nitrate		<0.1	mg/Kg	0.1	8/5/98		4731
Chloride		<0.5	mg/Kg	0.5	8/5/98		4731
Sulfate		<0.5	mg/Kg	0.5	8/5/98		4731
Total Mercury		<0.1	mg/Kg	0.1	8/6/98	4625	4737
Cadmium		<0.10	mg/Kg	0.10	8/10/98	4643	4795
Silver		<0.50	mg/Kg	0.50	8/10/98	4643	4795
Barium		<0.50	mg/Kg	0.50	8/10/98	4643	4795
Cobalt		<0.50	mg/Kg	0.50	8/10/98	4643	4795
Copper		<1.0	mg/Kg	1.0	8/10/98	4643	4795
Manganese		<1.0	mg/Kg	1.0	8/10/98	4643	4795

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Molybdenum		<1.0	mg/Kg	1.0	8/10/98	4643	4795
Zinc		<2.0	mg/Kg	2.0	8/10/98	4643	4795
Boron		<10	mg/Kg	10	8/10/98	4643	4795
PCB		<0.1	mg/Kg	0.1	8/10/98	4691	4801
Cyanide		<0.01	mg/Kg	0.01	8/11/98		4815
Benzidine		<2.5	mg/Kg	2.5	8/13/98	4590	4860
Hexachlorobenzene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Pentachlorobenzene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Hexachloroethane		<0.25	mg/Kg	0.25	8/13/98	4590	4860
2,4-dichlorophenol		<1.25	mg/Kg	1.25	8/13/98	4590	4860
2,4,5-trichlorophenol		<1.25	mg/Kg	1.25	8/13/98	4590	4860
2,4,6-trichlorophenol		<1.25	mg/Kg	1.25	8/13/98	4590	4860
bis (2-chloroethl) ether		<1.25	mg/Kg	1.25	8/13/98	4590	4860
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	1.25	8/13/98	4590	4860
bis (chloromethyl) ether		<1.25	mg/Kg	1.25	8/13/98	4590	4860
3,3-dichlorobenzidine		<1.25	mg/Kg	1.25	8/13/98	4590	4860
2,4-dinitrotoluene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Diphenylhydrazine		<1.25	mg/Kg	1.25	8/13/98	4590	4860
Hexachlorobutadiene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Hexachlorocyclopentadiene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Isophorone		<1.25	mg/Kg	1.25	8/13/98	4590	4860
Nitrobenzene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
2,4-dinitro-o-cresol		<0.25	mg/Kg	0.25	8/13/98	4590	4860
2,4-dinitrophenols		<1.25	mg/Kg	1.25	8/13/98	4590	4860
i-nitrosodiethylamine		<0.25	mg/Kg	0.25	8/13/98	4590	4860
N-nitrosodimethylamine		<0.25	mg/Kg	0.25	8/13/98	4590	4860
N-nitrosodibutylamine		<1.25	mg/Kg	1.25	8/13/98	4590	4860
N-nitrosodiphenylamine		<0.25	mg/Kg	0.25	8/13/98	4590	4860
N-nitrosopyrrolidine		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Pentachlorophenol		<1.25	mg/Kg	1.25	8/13/98	4590	4860
Phenol		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Dibutyl phthalate		<0.25	mg/Kg	0.25	8/13/98	4590	4860
bis(2-ethylhexyl) phthalate		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Diethyl phthalate		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Dimethyl phthalate		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Anthracene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Fluoranthene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Fluorene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Phenanthrene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Pyrene		<0.25	mg/Kg	0.25	8/13/98	4590	4860

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Naphthalene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
1-methylnaphthalene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
2-methylnaphthalene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Benzo-a-pyrene		<0.25	mg/Kg	0.25	8/13/98	4590	4860
monomethylnaphthalenes		<0.25	mg/Kg	0.25	8/13/98	4590	4860
Surr. 2-Fluorophenol		51	%	25-121	8/13/98	4590	4860
Surr. Phenol-d6		59	%	24-113	8/13/98	4590	4860
Surr. Nitroobenzene-d5		55	%	23-120	8/13/98	4590	4860
Surr. 2-Fluorobiphenyl		61	%	30-115	8/13/98	4590	4860
Surr. 2,4,6-Tribromophenol		80	%	19-122	8/13/98	4590	4860
Surr. Terphenyl-d14		77	%	28-137	8/13/98	4590	4860
Arsenic		<0.50	mg/Kg	0.5	8/18/98	4645	4955
Selenium		<0.50	mg/Kg	0.5	8/18/98	4645	4955
Chromium		<0.50	mg/Kg	0.5	8/18/98	4645	4955
Lead		<0.50	mg/Kg	0.5	8/18/98	4645	4955
Aluminum		<10	mg/Kg	10	8/18/98	4645	4955
Iron		<2.0	mg/Kg	2	8/18/98	4645	4955
Nickel		<0.50	mg/Kg	0.5	8/18/98	4645	4955
Uranium		<1.0	mg/Kg	1	8/18/98	4645	4955
Benzene		<0.050	mg/Kg	0.05	8/4/98		4730
Toluene		<0.050	mg/Kg	0.05	8/4/98		4730
Ethylbenzene		<0.050	mg/Kg	0.05	8/4/98		4730
m,p,o-xylene		<0.050	mg/Kg	0.05	8/4/98		4730
TRPHC		<10	mg/Kg	10	8/22/98	4743	5045
TRPHC		<10	mg/Kg	10	8/30/98	4810	5168
Total Phenols		<0.25	mg/Kg	0.25	8/11/98		4813

Quality Control Report
Continuing Calibration Verification Standard

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	107	107	7/31/98	4719
1,1-Dichloroethene		100	ug/L	113	113	7/31/98	4719
Chloroform		100	ug/L	113	113	7/31/98	4719
1,2-Dichloropropane		100	ug/L	113	113	7/31/98	4719
Toluene		100	ug/L	116	116	7/31/98	4719
Chlorobenzene		100	ug/L	112	112	7/31/98	4719
Ethylbenzene		100	ug/L	119	119	7/31/98	4719
Fluoride		2.5	mg/L	2.515	101	8/5/98	4731
Nitrate		5.0	mg/L	4.08	82	8/5/98	4731
Chloride		12.5	mg/L	12.07	97	8/5/98	4731
Sulfate		12.5	mg/L	12.45	100	8/5/98	4731
Total Mercury		5.000	mg/L	5.100	102	8/6/98	4737
Cadmium		1.0	mg/L	1.0	100	8/10/98	4795
Silver		0.20	mg/L	0.20	100	8/10/98	4795
Barium		1.0	mg/L	1.0	100	8/10/98	4795
Cobalt		1.0	mg/L	1.0	100	8/10/98	4795
Copper		1.0	mg/L	1.0	100	8/10/98	4795
Manganese		1.0	mg/L	1.0	97	8/10/98	4795
Molybdenum		1.0	mg/L	1.0	100	8/10/98	4795
Zinc		1.0	mg/L	1.0	100	8/10/98	4795
Boron		1.0	mg/L	1.0	100	8/10/98	4795
PCB		0.40	mg/Kg	0.42	105	8/10/98	4801
Cyanide		0.12	mg/L	0.12	100	8/11/98	4815
Phenol		80	mg/L	72	90	8/13/98	4860
1,4-Dichlorobenzene		80	mg/L	75	94	8/13/98	4860
2-nitrophenol		80	mg/L	81	101	8/13/98	4860
2,4-Dichlorophenol		80	mg/L	82	103	8/13/98	4860
Hexachlorobutadiene		80	mg/L	79	98	8/13/98	4860
4-Chloro-3-methylphenol		80	mg/L	78	98	8/13/98	4860
2,4,6-Trichlorophenol		80	mg/L	80	100	8/13/98	4860
Acenaphthene		80	mg/L	75	94	8/13/98	4860
n-Nitrosodiphenylamine		80	mg/L	73	91	8/13/98	4860
Pentachlorophenol		80	mg/L	86	108	8/13/98	4860
Fluoranthene		80	mg/L	77	96	8/13/98	4860
Di-n-octylphthalate		80	mg/L	76	95	8/13/98	4860
Benzo(a)pyrene		80	mg/L	79	99	8/13/98	4860

Order ID Number: 9807000518

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Arsenic		1.0	mg/L	1.0	100	8/18/98	4955
Selenium		1.0	mg/L	1.0	100	8/18/98	4955
Chromium		1.0	mg/L	0.99	99	8/18/98	4955
Lead		1.0	mg/L	1.0	100	8/18/98	4955
Aluminum		1.0	mg/L	1.0	100	8/18/98	4955
Iron		1.0	mg/L	0.99	99	8/18/98	4955
Nickel		1.0	mg/L	0.98	98	8/18/98	4955
Uranium		1.0	mg/L	1.0	100	8/18/98	4955
Benzene		0.100	mg/L	0.097	97	8/4/98	4730
Toluene		0.100	mg/L	0.097	97	8/4/98	4730
Ethylbenzene		0.100	mg/L	0.099	99	8/4/98	4730
m,p,o-xylene		0.300	mg/L	0.292	97	8/4/98	4730
TRPHC		100	mg/L	104	104	8/22/98	5045
TRPHC		100	mg/L	99	99	8/30/98	5168
TDS		1,000	mg/L	1,004	100	8/12/98	4835
Total Phenol		0.8	mg/L	0.81	101	8/11/98	4813

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 19

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	81	81	100	81	81	0	7/31/98		4719
Benzene		ug/L	<1	100	105	105	100	105	105	0	7/31/98		4719
Trichloroethene		ug/L	<1	100	89	89	100	89	89	0	7/31/98		4719
Toluene		ug/L	<1	100	95	95	100	95	95	0	7/31/98		4719
Chlorobenzene		ug/L	<1	100	86	86	100	86	86	0	7/31/98		4719
Fluoride		mg/Kg	1.7	2.5	4.00	92	2.5	4.22	101	9.3	8/5/98		4731
Nitrate		mg/Kg	3.1	5.0	7.95	97	5.0	8.06	99	2	8/5/98		4731
Chloride		mg/Kg	93.8	12.5	104.37	85	12.5	100.57	54	4.0	8/5/98		4731
Sulfate		mg/Kg	192	12.5	206.36	115	12.5	197.84	46	4.0	8/5/98		4731
Total Mercury		mg/Kg	0.1	2.5	2.8	108	2.5	2.7	104	3.8	8/6/98	4625	4737
Cadmium		mg/Kg	0.31	200	171	85	200	166	83	2.4	8/10/98	4643	4795
Silver		mg/Kg	<0.50	100	90	90	100	91	91	1.1	8/10/98	4643	4795
Barium		mg/Kg	95	200	277	91	200	271	88	3.4	8/10/98	4643	4795
Cobalt		mg/Kg	11	200	178	84	200	176	83	1.2	8/10/98	4643	4795
Copper		mg/Kg	5.4	200	188	91	200	182	88	3.4	8/10/98	4643	4795
Manganese		mg/Kg	180	200	360	90	200	370	95	5.4	8/10/98	4643	4795
Molybdenum		mg/Kg	3.7	200	180	88	200	180	88	0	8/10/98	4643	4795
Zinc		mg/Kg	38	200	226	94	200	226	94	0	8/10/98	4643	4795
Boron		mg/Kg	20	200	184	82	200	184	82	0	8/10/98	4643	4795
PCB		mg/Kg	<0.1	0.50	0.44	88	0.50	0.47	94	6.6	8/10/98	4691	4801
Cyanide		mg/Kg	<0.01	0.12	0.12	100	0.12	0.12	100	0	8/11/98		4815
Phenol		mg/Kg	<0.25	10.00	7.69	77	10.00	7.01	70	9.5	8/13/98	4590	4860
2-Chlorophenol		mg/Kg	<1.25	10.00	7.69	77	10.00	7.14	71	8.1	8/13/98	4590	4860
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	7.47	72	10.00	7.07	71	1.4	8/13/98	4590	4860
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	7.28	73	10.00	7.08	71	2.8	8/13/98	4590	4860
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	8.64	86	10.00	8.14	81	6	8/13/98	4590	4860
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	9.36	94	10.00	8.56	86	8.9	8/13/98	4590	4860
Acenaphthene		mg/Kg	<0.25	10.00	8.88	89	10.00	8.41	84	5.8	8/13/98	4590	4860
4-Nitrophenol		mg/Kg	<1.25	10.00	7.68	77	10.00	6.87	69	11	8/13/98	4590	4860
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	8.9	89	10.00	8.76	88	1.1	8/13/98	4590	4860
Pentachlorophenol		mg/Kg	<1.25	10.00	5.94	59	10.00	6.73	67	13	8/13/98	4590	4860
Pyrene		mg/Kg	<0.25	10.00	9.78	98	10.00	9.4	94	4.2	8/13/98	4590	4860

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9807000518

Parameter		Sample	Spike Amount	Matrix Spike	MS Percent	Duplicate Spike Amount	MSD	MSD Percent	MS/MSD	Date	Prep	Run
Arsenic	mg/Kg	<0.50	200	153	77	200	155	78	1.3	8/18/98	4645	4955
Selenium	mg/Kg	<0.50	200	166	83	200	158	79	4.9	8/18/98	4645	4955
Chromium	mg/Kg	12	200	177	83	200	176	82	1.2	8/18/98	4645	4955
Lead	mg/Kg	7.2	200	171	82	200	168	80	2.5	8/18/98	4645	4955
Aluminum	mg/Kg	<1.0	200	180	90	200	182	91	1.1	8/18/98	4645	4955
Iron	mg/Kg	<2.0	200	192	96	200	191	96	0	8/18/98	4645	4955
Nickel	mg/Kg	11	200	167	78	200	167	75	3.9	8/18/98	4645	4955
Uranium	mg/Kg	<1.0	100	108	108	100	108	18	0	8/18/98	4645	4955
Benzene	mg/Kg	<0.050	5	4.97	99	5	4.97	99	0	8/4/98		4730
Toluene	mg/Kg	<0.050	5	4.95	99	5	4.97	99	0	8/4/98		4730
Ethylbenzene	mg/Kg	<0.050	5	5.05	101	5	5.12	102	1	8/4/98		4730
m,p,o-xylene	mg/Kg	<0.050	15	15.1	101	15	15.4	103	2	8/4/98		4730
TRPHC	mg/Kg	<10	250	252	101	250	231	92	9.3	8/22/98	4743	5045
TRPHC	mg/Kg	<10	250	231	92	250	220	88	4.4	8/30/98	4810	5168

Quality Control Report
Duplicate

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Order ID Number: 9807000518

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	8	8	0	7/31/98		4715
TDS		mg/Kg	2,500	2,450	2.0	8/12/98		4835

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0769	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	103645	**ARS Sample I.D.:**	ARS-98-2764
Date Sampled:	N/A	**Date Received:**	08/04/98
Time Sampled:	N/A	**Time Received**	1145
Type of Sample:	Solid	**Date of Report**	8/26/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	4.81	2.06	pCi/gm	0.178	0.076	Bq/gm	EPA 901.1M	8/05/98 1636	DC
Ra-228	0.99	0.32	pCi/gm	0.037	0.012	Bq/gm	EPA 901.1M	8/05/98 1636	DC
Pb-210	<1.18	N/A	pCi/gm	<0.044	N/A	Bq/gm	EPA 901.1M	8/05/98 1636	DC
Total Activity	21.06	N/A	pCi/gm	0.779	N/A	Bq/gm	EPA 901.1M	8/05/98 1636	DC

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.
1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Ste. 9
Lubbock, TX 79424
Phone: 800-378-1296
Fax: (806) 794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 517/518

Company Name: Phillip Services Corporation
Phone #: 1-915 - 563-0118
Address: 7904 IH 20 West Midland, Tx 79706
Fax #: 1-915 - 563-9526.
Contact Person: Jeff Kindley / Sharon Hall
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, N.M.
Sampler Signature: Jeffry Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
103637	Trip Blank 339A+339B	2	40ml VOA	✓							✓		07/28/98	
38	Field Blank	2	40ml VOA	✓				✓					07/28/98	1530
39	CSS #1	1	4oz		✓						✓		07/28/98	1430
40	CSS #2	1	4oz		✓						✓		07/28/98	1439
41	CSS #3	1	4oz		✓						✓		07/28/98	1446
42	CSS #4	1	4oz		✓						✓		07/28/98	1425
43	CSS #5	1	4oz		✓						✓		07/28/98	1500
44	CSS #7	1	4oz		✓						✓		07/28/98	1506
45	CSS #6	5	4oz		✓						✓		07/28/98	1515
46 (MS 8-1-98)	CSS #6 (DUP)	1	40ml VOA		✓							✓	07/28/98	1515

ANALYSIS REQUEST (Circle or Specify Method No.)	
MTBE 8020/602	
BTEX 8020/602	✓
TPH	✓
PAH 8270	
Total Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Volatiles	
TCLP Semi Volatiles	
RCI	
GC.MS Vol. 8240/8260/624	
GC/MS Semi. Vol. 8270/625	
PCB's 8080/608	
Pest. 8080/608	
BOD, TSS, PH	
See Attached	✓
VOC	✓
Turn Around Time if different from standard	
Hold	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffry Kindley	07/28/98	1700			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			[illegible] Wrather	7-30-98	9:30 am

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY

Intact (Y) / N
Headspace Y / N
Temp 2 °
Log-in Review NH

REMARKS: Normal

Carrier # Bus 901984 615 4

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
103762	Field Blank	7/29/98	15:50	7/31/98
103763	Trip Blank			7/31/98
103764	MW-2 62-64D	7/29/98	15:40	7/31/98
103765	MW-2 58-60'	7/29/98	15:30	7/31/98
103766	MW-2 13-15'	7/29/98	15:30	7/31/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548
Sample Number: 103762

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		8/3/98	AG		4726	5
Acrylonitrile		<5	ug/L	S 8260B		8/3/98	AG		4726	5
Benzene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Carbon tetrachloride		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Chlorobenzene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,2-dichloroethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Chloroform		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Dichlorobenzene		<2	ug/L	S 8260B		8/3/98	AG		4726	2
1,1-dichloroethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Dichloropropenes		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Ethylbenzene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Bromodichloromethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Bromomethane		<5	ug/L	S 8260B		8/3/98	AG		4726	5
Chloromethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Dichloromethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Trichlorofluorometane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Tetrachloroethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Toluene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Trichloroethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Vinyl chloride		<1	ug/L	S 8260B		8/3/98	AG		4726	1
m,p-xylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
o-xylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,1-dichloroethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Ethylene dibromide		<1	ug/L	S 8260B		8/3/98	AG		4726	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Methylene chloride		<5	ug/L	S 8260B		8/3/98	AG		4726	5
Surr. Dibromofluoromethane		88	%	S 8260B		8/3/98	AG		4726	72-130
Surr. Toluene-d8		99	%	S 8260B		8/3/98	AG		4726	77-127
Surr. 4-Bromofluorobenzene		95	%	S 8260B		8/3/98	AG		4726	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 3

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548
Sample Number: 103763

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		8/3/98	AG		4726	5
Acrylonitrile		<5	ug/L	S 8260B		8/3/98	AG		4726	5
Benzene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Carbon tetrachloride		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Chlorobenzene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,2-dichloroethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Chloroform		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Dichlorobenzene		<2	ug/L	S 8260B		8/3/98	AG		4726	2
1,1-dichloroethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Dichloropropenes		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Ethylbenzene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Bromodichloromethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Bromomethane		<5	ug/L	S 8260B		8/3/98	AG		4726	5
Chloromethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Dichloromethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Trichlorofluorometane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Tetrachloroethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Toluene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Trichloroethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Vinyl chloride		<1	ug/L	S 8260B		8/3/98	AG		4726	1
m,p-xylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
o-xylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
1,1-dichloroethane		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Ethylene dibromide		<1	ug/L	S 8260B		8/3/98	AG		4726	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		8/3/98	AG		4726	1
Methylene chloride		<5	ug/L	S 8260B		8/3/98	AG		4726	5
Surr. Dibromofluoromethane		95	%	S 8260B		8/3/98	AG		4726	72-130
Surr. Toluene-d8		96	%	S 8260B		8/3/98	AG		4726	77-127
Surr. 4-Bromofluorobenzene		97	%	S 8260B		8/3/98	AG		4726	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548
Sample Number: 103764

Sample Description: MW-2 62-64D

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S 8260B		8/4/98	AG		4727	125
Acrylonitrile		<125	ug/Kg	S 8260B		8/4/98	AG		4727	125
Benzene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Carbon tetrachloride		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Chlorobenzene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,2-dichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,1-trichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,2-trichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,2-trichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Chloroform		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichlorobenzene		<50	ug/Kg	S 8260B		8/4/98	AG		4727	50
1,1-dichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichloropropenes		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Ethylbenzene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Bromodichloromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Bromomethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Chloromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichlorodifluoromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichloromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Trichlorofluorometane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Tetrachloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Toluene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Trichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Vinyl chloride		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
m,p-xylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
o-xylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1-dichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Ethylene dibromide		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
cis-1,2-dichlorethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
trans-1,2-dichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Methylene chloride		<125	ug/Kg	S 8260B		8/4/98	AG		4727	125
Surr. Dibromofluoromethane		95	%	S 8260B		8/4/98	AG		4727	72-130
Surr. Toluene-d8		105	%	S 8260B		8/4/98	AG		4727	77-127
Surr. 4-Bromofluorobenzene		105	%	S 8260B		8/4/98	AG		4727	72-131

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548
Sample Number: 103764

Sample Description: MW-2 62-64D

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzidine		<2.5	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	2.5
Hexachlorobenzene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Pentachlorobenzene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Hexachloroethane		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Diphenylhydrazine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Isophorone		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
Nitrobenzene		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4-dinitro-o-cresol		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
2,4-dinitrophenols		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
i-nitrosodiethylamine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
N-nitrosodimethylamine		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
N-nitrosodiphenylamine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Pentachlorophenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
Phenol		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Dibutyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Diethyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Dimethyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Anthracene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Fluoranthene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Fluorene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Phenanthrene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Pyrene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Naphthalene		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
1-methylnaphthalene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
2-methylnaphthalene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548
Sample Number: 103764

Sample Description: MW-2 62-64D

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzo-a-pyrene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Surr. 2-Fluorophenol		79	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	25-121
Surr. Phenol-d6		90	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	24-113
Surr. Nitroobenzene-d5		84	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	23-120
Surr. 2-Fluorobiphenyl		87	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	30-115
Surr. 2,4,6-Tribromophenol		97	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	19-122
Surr. Terphenyl-d14		83	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	28-137
Aldrin		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Chlordane		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
DDT		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Endrin		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/4/98	8/4/98	RC	4628	4728	0.10
Arsenic		0.79	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.50
Barium		64	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.50
Cadmium		0.15	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.1
Chromium		5.4	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Lead		2.1	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Total Mercury		<0.25	mg/Kg	S 7471	8/3/98	8/4/98	HC	4626	4729	0.25
Selenium		<0.50	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Silver		<0.50	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.5
Uranium		<1.0	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	1.0
Copper		1.3	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	1.0
Iron		3,600	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	2.0
Manganese		25	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	1.0
Zinc		11	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	2.0
Aluminum		2,700	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	10.0
Boron		<10	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	10
Cobalt		3.4	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.5
Molybdenum		1.7	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	1.0
Nickel		3.3	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Cyanide		0.02	mg/Kg	SM 4500 C,E		8/11/98	RC		4815	0.01
Fluoride		0.84	mg/Kg	E 300.0		8/5/98	JS		4730	0.1
Nitrate		1.5	mg/Kg	E 300.0		8/5/98	JS		4730	0.1
Chloride		35	mg/Kg	E 300.0		8/5/98	JS		4730	0.5
Sulfate		36	mg/Kg	E 300.0		8/5/98	JS		4730	0.5
TDS		570	mg/Kg	E 160.1		8/12/98	RS		4835	---
pH		8.7	s.u.	E 150.1		7/31/98	BP		4715	
TRPHC		10.6	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenols		3.8	mg/Kg	SM 5530 A,D		8/11/98	RC		4813	0.25
Total Radium		11.48	pCi/gm	E 901.1M		8/5/98	DS	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548
Sample Number: 103765

Sample Description: MW-2 58-60

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S 8260B		8/4/98	AG		4727	125
Acrylonitrile		<125	ug/Kg	S 8260B		8/4/98	AG		4727	125
Benzene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Carbon tetrachloride		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Chlorobenzene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,2-dichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,1-trichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,2-trichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,2-trichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Chloroform		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichlorobenzene		<50	ug/Kg	S 8260B		8/4/98	AG		4727	50
1,1-dichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichloropropenes		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Ethylbenzene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Bromodichloromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Bromomethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Chloromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichlorodifluoromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichloromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Trichlorofluorometane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Tetrachloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Toluene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Trichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Vinyl chloride		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
m,p-xylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
o-xylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1-dichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Ethylene dibromide		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
cis-1,2-dichlorethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
trans-1,2-dichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Methylene chloride		<125	ug/Kg	S 8260B		8/4/98	AG		4727	125
Surr. Dibromofluoromethane		97	%	S 8260B		8/4/98	AG		4727	72-130
Surr. Toluene-d8		106	%	S 8260B		8/4/98	AG		4727	77-127
Surr. 4-Bromofluorobenzene		104	%	S 8260B		8/4/98	AG		4727	72-131

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548
Sample Number: 103765

Sample Description: MW-2 58-60

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzidine		<2.5	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	2.5
Hexachlorobenzene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Pentachlorobenzene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Hexachloroethane		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Diphenylhydrazine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Isophorone		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
Nitrobenzene		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4-dinitro-o-cresol		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
2,4-dinitrophenols		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
i-nitrosodiethylamine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
N-nitrosodimethylamine		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
N-nitrosodiphenylamine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Pentachlorophenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
Phenol		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Dibutyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Diethyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Dimethyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Anthracene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Fluoranthene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Fluorene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Phenanthrene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Pyrene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Naphthalene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
1-methylnaphthalene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
2-methylnaphthalene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548
Sample Number: 103765

Sample Description: MW-2 58-60

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzo-a-pyrene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Surr. 2-Fluorophenol		71	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	25-121
Surr. Phenol-d6		80	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	24-113
Surr. Nitroobenzene-d5		76	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	23-120
Surr. 2-Fluorobiphenyl		81	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	30-115
Surr. 2,4,6-Tribromophenol		91	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	19-122
Surr. Terphenyl-d14		77	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	28-137
Aldrin		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Chlordane		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
DDT		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Endrin		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/4/98	8/4/98	RC	4628	4728	0.10
Arsenic		<0.50	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.50
Barium		7.4	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.50
Cadmium		0.14	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.1
Chromium		4.4	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Lead		1.8	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Total Mercury		<0.25	mg/Kg	S 7471	8/3/98	8/4/98	HC	4626	4729	0.25
Selenium		<0.50	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Silver		<0.50	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.5
Uranium		<1.0	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	1.0
Copper		<1.0	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	1.0
Iron		2,600	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	2.0
Manganese		20	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	1.0
Zinc		11	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	2.0
Aluminum		2,200	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	10.0
Boron		<10	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	10
Cobalt		2.8	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.5
Molybdenum		1.1	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	1.0
Nickel		2.7	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Cyanide		<0.01	mg/Kg	SM 4500 C,E		8/11/98	RC		4815	0.01
Fluoride		0.78	mg/Kg	E 300.0		8/5/98	JS		4730	0.1
Nitrate		1.4	mg/Kg	E 300.0		8/5/98	JS		4730	0.1
Chloride		28	mg/Kg	E 300.0		8/5/98	JS		4730	0.5
Sulfate		26	mg/Kg	E 300.0		8/5/98	JS		4730	0.5
TDS		400	mg/Kg	E 160.1		8/12/98	RS		4835	---
pH		8.6	s.u.	E 150.1		7/31/98	BP		4715	
TRPHC		<10.0	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenols		11	s.u.	SM 5530 A,D		8/11/98	RC		4813	0.25
Total Radium		40.61	pCi/gm	E 901.1M		8/18/98	DS	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548
Sample Number: 103766

Sample Description: MW-2 13-15'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S 8260B		8/4/98	AG		4727	125
Acrylonitrile		<125	ug/Kg	S 8260B		8/4/98	AG		4727	125
Benzene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Carbon tetrachloride		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Chlorobenzene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,2-dichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,1-trichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,2-trichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1,2-trichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Chloroform		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichlorobenzene		<50	ug/Kg	S 8260B		8/4/98	AG		4727	50
1,1-dichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichloropropenes		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Ethylbenzene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Bromodichloromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Bromomethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Chloromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichlorodifluoromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Dichloromethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Trichlorofluorometane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Tetrachloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Toluene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Trichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Vinyl chloride		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
m,p-xylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
o-xylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
1,1-dichloroethane		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Ethylene dibromide		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
cis-1,2-dichlorethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
trans-1,2-dichloroethylene		<25	ug/Kg	S 8260B		8/4/98	AG		4727	25
Methylene chloride		<125	ug/Kg	S 8260B		8/4/98	AG		4727	125
Surr. Dibromofluoromethane		97	%	S 8260B		8/4/98	AG		4727	71-132
Surr. Toluene-d8		105	%	S 8260B		8/4/98	AG		4727	82-124
Surr. 4-Bromofluorobenzene		105	%	S 8260B		8/4/98	AG		4727	76-126
Benzidine		<2.5	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	2.5

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548
Sample Number: 103766

Sample Description: MW-2 13-15'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachlorobenzene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Pentachlorobenzene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Hexachloroethane		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Diphenylhydrazine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Isophorone		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
Nitrobenzene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
i-nitrosodiethylamine		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Pentachlorophenol		<1.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	1.25
Phenol		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Dibutyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Diethyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Dimethyl phthalate		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Anthracene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Fluoranthene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Fluorene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Phenanthrene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Pyrene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Naphthalene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
1-methylnaphthalene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
2-methylnaphthalene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S 8270C	7/31/98	8/14/98	DG	4592	4892	0.25

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548
Sample Number: 103766

Sample Description: MW-2 13-15'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Surr. 2-Fluorophenol		69	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	25-121
Surr. Phenol-d6		77	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	24-113
Surr. Nitroobenzene-d5		69	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	23-120
Surr. 2-Fluorobiphenyl		73	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	30-115
Surr. 2,4,6-Tribromophenol		88	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	19-122
Surr. Terphenyl-d14		74	%	S 8270C	7/31/98	8/14/98	DG	4592	4892	28-137
Aldrin		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Chlordane		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
DDT		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Endrin		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S 8082	8/10/98	9/18/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/4/98	8/4/98	RC	4628	4728	0.10
Arsenic		<0.50	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.50
Barium		65	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.50
Cadmium		0.16	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.1
Chromium		2.3	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Lead		1.0	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Total Mercury		<0.25	mg/Kg	S 7471	8/3/98	8/4/98	HC	4626	4729	0.25
Selenium		0.93	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Silver		<0.50	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.5
Uranium		<1.0	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	1.0
Copper		1.8	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	1.0
Iron		1,800	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	2.0
Manganese		25	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	1.0
Zinc		11	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	2.0
Aluminum		2,400	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	10.0
Boron		<10	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	10
Cobalt		5.0	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	0.5
Molybdenum		2.5	mg/Kg	S 6010B	8/3/98	8/8/98	RR	4641	4761	1.0
Nickel		5.1	mg/Kg	S 6010B	8/3/98	8/18/98	RR	4645	4955	0.5
Cyanide		0.08	mg/Kg	SM 4500 C,E		8/11/98	RC		4815	0.01
Fluoride		3.4	mg/Kg	E 300.0		8/5/98	JS		4730	0.1
Nitrate		6.2	mg/Kg	E 300.0		8/5/98	JS		4730	0.1
Chloride		170	mg/Kg	E 300.0		8/5/98	JS		4730	0.5
Sulfate		340	mg/Kg	E 300.0		8/5/98	JS		4730	0.5
TDS		2500	mg/Kg	E 160.1		8/12/98	RS		4835	---
pH		8.3	s.u.	E 150.1		7/31/98	BP		4715	
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		0.25	mg/Kg	SM 5530 A,D		8/11/98	RC		4813	0.25
Total Radium		13.32	pCi/gm	E 901.1M		8/18/98	DS	---	---	---

Quality Control Report
Blanks

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 13

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	8/3/98		4726
Acrylonitrile		<5	ug/L	5	8/3/98		4726
Benzene		<1	ug/L	1	8/3/98		4726
Carbon tetrachloride		<1	ug/L	1	8/3/98		4726
Chlorobenzene		<1	ug/L	1	8/3/98		4726
1,2-dichloroethane		<1	ug/L	1	8/3/98		4726
1,1,2,2-tetrachloroethane		<1	ug/L	1	8/3/98		4726
1,1,1-trichloroethane		<1	ug/L	1	8/3/98		4726
1,1,2-trichloroethane		<1	ug/L	1	8/3/98		4726
1,1,2-trichloroethylene		<1	ug/L	1	8/3/98		4726
Chloroform		<1	ug/L	1	8/3/98		4726
Dichlorobenzene		<2	ug/L	2	8/3/98		4726
1,1-dichloroethylene		<1	ug/L	1	8/3/98		4726
Dichloropropenes		<1	ug/L	1	8/3/98		4726
Ethylbenzene		<1	ug/L	1	8/3/98		4726
Bromodichloromethane		<1	ug/L	1	8/3/98		4726
Bromomethane		<5	ug/L	5	8/3/98		4726
Chloromethane		<1	ug/L	1	8/3/98		4726
Dichlorodifluoromethane		<1	ug/L	1	8/3/98		4726
Dichloromethane		<1	ug/L	1	8/3/98		4726
Trichlorofluoromethane		<1	ug/L	1	8/3/98		4726
Tetrachloroethylene		<1	ug/L	1	8/3/98		4726
Toluene		<1	ug/L	1	8/3/98		4726
Trichloroethylene		<1	ug/L	1	8/3/98		4726
Vinyl chloride		<1	ug/L	1	8/3/98		4726
m,p-xylene		<1	ug/L	1	8/3/98		4726
o-xylene		<1	ug/L	1	8/3/98		4726
1,1-dichloroethane		<1	ug/L	1	8/3/98		4726
Ethylene dibromide		<1	ug/L	1	8/3/98		4726
cis-1,2-dichlorethylene		<1	ug/L	1	8/3/98		4726
trans-1,2-dichloroethylene		<1	ug/L	1	8/3/98		4726
Methylene chloride		<5	ug/L	5	8/3/98		4726
Surr. Dibromofluoromethane		85	%	72-130	8/3/98		4726
Surr. Toluene-d8		99	%	77-127	8/3/98		4726
Surr. 4-Bromofluorobenzene		96	%	72-131	8/3/98		4726

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<125	ug/Kg	125	8/4/98		4727
Acrylonitrile		<125	ug/Kg	125	8/4/98		4727
Benzene		<25	ug/Kg	25	8/4/98		4727
Carbon tetrachloride		<25	ug/Kg	25	8/4/98		4727
Chlorobenzene		<25	ug/Kg	25	8/4/98		4727
1,2-dichloroethane		<25	ug/Kg	25	8/4/98		4727
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	8/4/98		4727
1,1,1-trichloroethane		<25	ug/Kg	25	8/4/98		4727
1,1,2-trichloroethane		<25	ug/Kg	25	8/4/98		4727
1,1,2-trichloroethylene		<25	ug/Kg	25	8/4/98		4727
Chloroform		<25	ug/Kg	25	8/4/98		4727
Dichlorobenzene		<50	ug/Kg	50	8/4/98		4727
1,1-dichloroethylene		<25	ug/Kg	25	8/4/98		4727
Dichloropropenes		<25	ug/Kg	25	8/4/98		4727
Ethylbenzene		<25	ug/Kg	25	8/4/98		4727
Bromodichloromethane		<25	ug/Kg	25	8/4/98		4727
Bromomethane		<25	ug/Kg	25	8/4/98		4727
Chloromethane		<25	ug/Kg	25	8/4/98		4727
Dichlorodifluoromethane		<25	ug/Kg	25	8/4/98		4727
Dichloromethane		<25	ug/Kg	25	8/4/98		4727
Trichlorofluoromethane		<25	ug/Kg	25	8/4/98		4727
Tetrachloroethylene		<25	ug/Kg	25	8/4/98		4727
Toluene		<25	ug/Kg	25	8/4/98		4727
Trichloroethylene		<25	ug/Kg	25	8/4/98		4727
Vinyl chloride		<25	ug/Kg	25	8/4/98		4727
m,p-xylene		<25	ug/Kg	25	8/4/98		4727
o-xylene		<25	ug/Kg	25	8/4/98		4727
1,1-dichloroethane		<25	ug/Kg	25	8/4/98		4727
Ethylene dibromide		<25	ug/Kg	25	8/4/98		4727
cis-1,2-dichlorethylene		<25	ug/Kg	25	8/4/98		4727
trans-1,2-dichloroethylene		<25	ug/Kg	25	8/4/98		4727
Methylene chloride		<125	ug/Kg	125	8/4/98		4727
Surr. Dibromofluoromethane		85	%	71-132	8/4/98		4727
Surr. Toluene-d8		99	%	82-124	8/4/98		4727
Surr. 4-Bromofluorobenzene		96	%	76-126	8/4/98		4727
PCB's		<0.1	mg/Kg	0.1	8/4/98	4628	4728
Total Mercury		<0.25	mg/Kg	0.25	8/4/98	4626	4729
Fluoride		<0.1	mg/Kg	0.1	8/5/98		4730
Nitrate		<0.1	mg/Kg	0.1	8/5/98		4730
Chloride		<0.5	mg/Kg	0.5	8/5/98		4730
Sulfate		<0.5	mg/Kg	0.5	8/5/98		4730
Cadmium		<0.10	mg/Kg	0.10	8/8/98	4641	4761
Silver		<0.50	mg/Kg	0.50	8/8/98	4641	4761
Barium		<0.50	mg/Kg	0.50	8/8/98	4641	4761
Cobalt		<0.50	mg/Kg	0.50	8/8/98	4641	4761
Copper		<1.0	mg/Kg	1.0	8/8/98	4641	4761

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Manganese		<1.0	mg/Kg	1.0	8/8/98	4641	4761
Molybdenum		<1.0	mg/Kg	1.0	8/8/98	4641	4761
Zinc		<2.0	mg/Kg	2.0	8/8/98	4641	4761
Boron		<10	mg/Kg	10	8/8/98	4641	4761
Cyanide		<0.01	mg/Kg	0.01	8/11/98		4815
Benzidine		<2.5	mg/Kg	2.5	8/14/98	4832	4892
Hexachlorobenzene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Pentachlorobenzene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Hexachloroethane		<0.25	mg/Kg	0.25	8/14/98	4832	4892
2,4-dichlorophenol		<1.25	mg/Kg	1.25	8/14/98	4832	4892
2,4,5-trichlorophenol		<1.25	mg/Kg	1.25	8/14/98	4832	4892
2,4,6-trichlorophenol		<1.25	mg/Kg	1.25	8/14/98	4832	4892
bis (2-chloroethl) ether		<1.25	mg/Kg	1.25	8/14/98	4832	4892
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	1.25	8/14/98	4832	4892
bis (chloromethyl) ether		<1.25	mg/Kg	1.25	8/14/98	4832	4892
3,3-dichlorobenzidine		<1.25	mg/Kg	1.25	8/14/98	4832	4892
2,4-dinitrotoluene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Diphenylhydrazine		<1.25	mg/Kg	1.25	8/14/98	4832	4892
Hexachlorobutadiene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Hexachlorocyclopentadiene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Isophorone		<1.25	mg/Kg	1.25	8/14/98	4832	4892
Nitrobenzene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
2,4-dinitro-o-cresol		<1.25	mg/Kg	1.25	8/14/98	4832	4892
2,4-dinitrophenols		<1.25	mg/Kg	1.25	8/14/98	4832	4892
N-nitrosodiethylamine		<0.25	mg/Kg	0.25	8/14/98	4832	4892
N-nitrosodimethylamine		<0.25	mg/Kg	0.25	8/14/98	4832	4892
N-nitrosodibutylamine		<1.25	mg/Kg	1.25	8/14/98	4832	4892
N-nitrosodiphenylamine		<0.25	mg/Kg	0.25	8/14/98	4832	4892
N-nitrosopyrrolidine		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Pentachlorophenol		<1.25	mg/Kg	1.25	8/14/98	4832	4892
Phenol		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Dibutyl phthalate		<0.25	mg/Kg	0.25	8/14/98	4832	4892
bis(2-ethylhexyl) phthalate		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Diethyl phthalate		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Dimethyl phthalate		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Anthracene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Fluoranthene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Fluorene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Phenanthrene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Pyrene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Naphthalene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
1-methylnaphthalene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
2-methylnaphthalene		<0.25	mg/Kg	0.25	8/14/98	4832	4892

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Benzo-a-pyrene		<0.25	mg/Kg	0.25	8/14/98	4832	4892
Surr. 2-Fluorophenol		52	%	25-121	8/14/98	4832	4892
Surr. Phenol-d6		61	%	24-113	8/14/98	4832	4892
Surr. Nitroobenzene-d5		55	%	23-120	8/14/98	4832	4892
Surr. 2-Fluorobiphenyl		62	%	30-115	8/14/98	4832	4892
Surr. 2,4,6-Tribromophenol		86	%	19-122	8/14/98	4832	4892
Surr. Terphenyl-d14		67	%	28-137	8/14/98	4832	4892
Arsenic		<0.50	mg/Kg	0.5	8/18/98	4645	4955
Selenium		<0.50	mg/Kg	0.5	8/18/98	4645	4955
Chromium		<0.50	mg/Kg	0.5	8/18/98	4645	4955
Lead		<0.50	mg/Kg	0.5	8/18/98	4645	4955
Aluminum		<10	mg/Kg	10	8/18/98	4645	4955
Iron		<2.0	mg/Kg	2	8/18/98	4645	4955
Nickel		<0.50	mg/Kg	0.5	8/18/98	4645	4955
Uranium		<1.0	mg/Kg	1	8/18/98	4645	4955
TRPHC		<10.0	mg/Kg	10.0	8/22/98	4743	5045
TRPHC		<10.0	mg/Kg	10.0	8/30/98	4810	5168
Total Phenols		<0.25	mg/Kg	0.25	8/11/98		4813

Quality Control Report
Continuing Calibration Verification Standard

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	117	117	8/3/98	4726
1,1-Dichloroethene		100	ug/L	112	112	8/3/98	4726
Chloroform		100	ug/L	116	116	8/3/98	4726
1,2-Dichloropropane		100	ug/L	119	119	8/3/98	4726
Toluene		100	ug/L	116	116	8/3/98	4726
Chlorobenzene		100	ug/L	116	116	8/3/98	4726
Ethylbenzene		100	ug/L	117	117	8/3/98	4726
Vinyl chloride		100	ug/L	108	108	8/4/98	4727
1,1-Dichloroethene		100	ug/L	106	106	8/4/98	4727
Chloroform		100	ug/L	111	111	8/4/98	4727
1,2-Dichloropropane		100	ug/L	117	117	8/4/98	4727
Toluene		100	ug/L	113	113	8/4/98	4727
Chlorobenzene		100	ug/L	107	107	8/4/98	4727
Ethylbenzene		100	ug/L	113	113	8/4/98	4727
PCB's		0.40	mg/L	0.42	105	8/4/98	4728
Total Mercury		5.0	mg/L	5.1	102	8/4/98	4729
Fluoride		2.5	mg/L	2.515	101	8/5/98	4730
Nitrate		5.0	mg/L	4.08	82	8/5/98	4730
Chloride		12.5	mg/L	12.07	97	8/5/98	4730
Sulfate		12.5	mg/L	12.45	100	8/5/98	4730
Cadmium		1.0	mg/L	1.0	100	8/8/98	4761
Silver		0.20	mg/L	0.20	100	8/8/98	4761
Barium		1.0	mg/L	1.0	100	8/8/98	4761
Cobalt		1.0	mg/L	1.0	100	8/8/98	4761
Copper		1.0	mg/L	1.0	100	8/8/98	4761
Manganese		1.0	mg/L	1.0	100	8/8/98	4761
Molybdenum		1.0	mg/L	1.0	100	8/8/98	4761
Zinc		1.0	mg/L	1.0	100	8/8/98	4761
Boron		1.0	mg/L	1.0	100	8/8/98	4761
Cyanide		0.12	mg/L	0.12	100	8/11/98	4815
Phenol		80	mg/L	66	83	8/14/98	4892
1,4-Dichlorobenzene		80	mg/L	75	94	8/14/98	4892
2-nitrophenol		80	mg/L	84	105	8/14/98	4892
2,4-Dichlorophenol		80	mg/L	78	98	8/14/98	4892
Hexachlorobutadiene		80	mg/L	81	101	8/14/98	4892

Order ID Number: 9807000548

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
4-Chloro-3-methylphenol		80	mg/L	81	101	8/14/98	4892
2,4,6-Trichlorophenol		80	mg/L	83	104	8/14/98	4892
Acenaphthene		80	mg/L	76	95	8/14/98	4892
n-Nitrosodiphenylamine		80	mg/L	68	85	8/14/98	4892
Pentachlorophenol		80	mg/L	82	103	8/14/98	4892
Fluoranthene		80	mg/L	92	101	8/14/98	4892
Di-n-octylphthalate		80	mg/L	94	118	8/14/98	4892
Benzo(a)pyrene		80	mg/L	77	96	8/14/98	4892
Arsenic		1.0	mg/L	1.0	100	8/18/98	4955
Selenium		1.0	mg/L	1.0	100	8/18/98	4955
Chromium		1.0	mg/L	0.99	99	8/18/98	4955
Lead		1.0	mg/L	1.0	100	8/18/98	4955
Aluminum		1.0	mg/L	1.0	100	8/18/98	4955
Iron		1.0	mg/L	0.99	99	8/18/98	4955
Nickel		1.0	mg/L	0.98	98	8/18/98	4955
Uranium		1.0	mg/L	1.0	100	8/18/98	4955
TDS		1,000	mg/L	1,004	100	8/12/98	4835
TRPHC		100	mg/L	101	101	8/22/98	5045
TRPHC		100	mg/L	99	99	8/30/98	5168

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	92	92	100	92	92	0	8/3/98		4726
Benzene		ug/L	<1	100	119	119	100	118	118	0.84	8/3/98		4726
Trichloroethene		ug/L	<1	100	111	111	100	113	113	1.8	8/3/98		4726
Toluene		ug/L	<1	100	115	115	100	118	118	2.6	8/3/98		4726
Chlorobenzene		ug/L	<1	100	108	108	100	109	109	0.92	8/3/98		4726
1,1-Dichloroethene		ug/Kg	<25	100	81	81	100	82	82	1.2	8/4/98		4727
Benzene		ug/Kg	<25	100	98	98	100	98	98	0	8/4/98		4727
Trichloroethene		ug/Kg	<25	100	85	85	100	87	87	2.3	8/4/98		4727
Toluene		ug/Kg	<25	100	84	84	100	86	86	2.4	8/4/98		4727
Chlorobenzene		ug/Kg	<25	100	85	85	100	86	86	1.2	8/4/98		4727
PCB's		mg/Kg	<0.1	0.50	0.49	98	0.50	0.50	100	2.0	8/4/98		4728
Fluoride		mg/Kg	1.7	2.5	4.00	92	2.5	4.22	101	9.3	8/5/98		4730
Nitrate		mg/Kg	3.1	5.0	7.95	97	5.0	8.06	99	2.0	8/5/98		4730
Chloride		mg/Kg	93.8	12.5	104.37	85	12.5	100.57	54	4.0	8/5/98		4730
Sulfate		mg/Kg	192	12.5	206.36	115	12.5	197.84	46	4.0	8/5/98		4730
Cadmium		mg/Kg	0.19	200	174	87	200	178	89	2.3	8/8/98		4761
Silver		mg/Kg	<0.50	100	78	78	100	98	98	23	8/8/98		4761
Barium		mg/Kg	27	200	214	94	200	206	90	4.3	8/8/98		4761
Cobalt		mg/Kg	7.1	200	183	88	200	188	90	2.2	8/8/98		4761
Copper		mg/Kg	1.6	200	186	82	200	192	95	15	8/8/98		4761
Manganese		mg/Kg	55	200	238	92	200	237	91	1.1	8/8/98		4761
Molybdenum		mg/Kg	2.7	200	185	91	200	196	97	6.4	8/8/98		4761
Zinc		mg/Kg	20	200	210	95	200	212	96	1	8/8/98		4761
Boron		mg/Kg	13	200	178	83	200	182	84	1.2	8/8/98		4761
Cyanide		mg/Kg	<0.01	0.12	0.12	100	0.12	0.12	100	0	8/11/98		4815
Phenol		mg/Kg	<0.25	10.00	7.69	77	10.00	7.01	70	9.5	8/14/98	4592	4892
2-Chlorophenol		mg/Kg	<1.25	10.00	7.69	77	10.00	7.14	71	8.1	8/14/98	4592	4892
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	7.47	75	10.00	7.07	71	5.5	8/14/98	4592	4892
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	7.28	73	10.00	7.08	71	2.8	8/14/98	4592	4892
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	8.64	84	10.00	8.14	81	3.6	8/14/98	4592	4892
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	9.36	94	10.00	8.56	86	8.9	8/14/98	4592	4892
Acenaphthene		mg/Kg	<0.25	10.00	8.88	89	10.00	8.41	84	5.8	8/14/98	4592	4892
4-Nitrophenol		mg/Kg	<1.25	10.00	7.68	77	10.00	6.87	69	11	8/14/98	4592	4892

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	8.9	89	10.00	8.76	88	1.1	8/14/98	4592	4892
Pentachlorophenol		mg/Kg	<1.25	10.00	5.94	59	10.00	6.73	67	13	8/14/98	4592	4892
Pyrene		mg/Kg	<0.25	10.00	9.78	98	10.00	9.4	94	4.2	8/14/98	4592	4892
Arsenic		mg/Kg	<0.50	200	153	77	200	155	78	1.3	8/18/98	4645	4955
Selenium		mg/Kg	<0.50	200	166	83	200	158	79	4.9	8/18/98	4645	4955
Chromium		mg/Kg	12	200	177	83	200	176	82	1.2	8/18/98	4645	4955
Lead		mg/Kg	7.2	200	171	82	200	168	80	2.5	8/18/98	4645	4955
Aluminum		mg/Kg	<1.0	200	180	90	200	182	91	1.1	8/18/98	4645	4955
Iron		mg/Kg	<2.0	200	192	96	200	191	96	0	8/18/98	4645	4955
Nickel		mg/Kg	11	200	167	78	200	167	75	3.9	8/18/98	4645	4955
Uranium		mg/Kg	<1.0	100	108	108	100	108	18	0	8/18/98	4645	4955
TRPHC		mg/Kg	<10.0	250	276	110	250	235	94	16	8/22/98	4743	5045
TRPHC		mg/Kg	<10.0	250	231	92	250	220	88	4.4	8/30/98	4810	5168

Quality Control Report
Duplicate

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9807000548

Parameter	Flag	Units	Sample	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	8.3	8.3	0	7/31/98		4715
TDS		mg/Kg	2,500	2,450	2.0	8/12/98		4835

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Ste. 9
Lubbock, TX 79424
Phone: 800-378-1296
Fax: (806) 794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
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ARS Tracking Number:	ARS-98-0769	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	103764	**ARS Sample I.D.:**	ARS-98-2765
Date Sampled:	N/A	**Date Received:**	08/04/98
Time Sampled:	N/A	**Time Received**	1145
Type of Sample:	Solid	**Date of Report**	8/26/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.49	1.33	pCi/gm	0.055	0.049	Bq/gm	EPA 901.1M	8/05/98 1659	DC
Ra-228	0.50	0.19	pCi/gm	0.019	0.007	Bq/gm	EPA 901.1M	8/05/98 1659	DC
Pb-210	1.38	1.31	pCi/gm	0.051	0.048	Bq/gm	EPA 901.1M	8/05/98 1659	DC
Total Activity	11.48	N/A	pCi/gm	0.425	N/A	Bq/gm	EPA 901.1M	8/05/98 1659	DC

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0769	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	103765	**ARS Sample I.D.:**	ARS-98-2766
Date Sampled:	N/A	**Date Received:**	08/04/98
Time Sampled:	N/A	**Time Received**	1145
Type of Sample:	Solid	**Date of Report**	8/26/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.47	1.71	pCi/gm	0.091	0.063	Bq/gm	EPA 901.1M	8/06/98 0902	DC
Ra-228	<0.12	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	8/06/98 0902	DC
Pb-210	2.74	2.08	pCi/gm	0.101	0.077	Bq/gm	EPA 901.1M	8/06/98 0902	DC
Total Activity	40.61	N/A	pCi/gm	1.502	N/A	Bq/gm	EPA 901.1M	8/06/98 0902	DC

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0769	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	103766	**ARS Sample I.D.:**	ARS-98-2767
Date Sampled:	N/A	**Date Received:**	08/04/98
Time Sampled:	N/A	**Time Received**	1145
Type of Sample:	Solid	**Date of Report**	8/26/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.16	N/A	pCi/gm	<0.043	N/A	Bq/gm	EPA 901.1M	8/06/98 0859	DC
Ra-228	<0.06	N/A	pCi/gm	<0.002	N/A	Bq/gm	EPA 901.1M	8/06/98 0859	DC
Pb-210	<0.85	N/A	pCi/gm	<0.031	N/A	Bq/gm	EPA 901.1M	8/06/98 0859	DC
Total Activity	7.45	N/A	pCi/gm	0.276	N/A	Bq/gm	EPA 901.1M	8/06/98 0859	DC

Notes:

Quality Assurance Review

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1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 548 / 549

Company Name: Phillip Services Corporation
Phone #: 915-563-0118
Address: 7904 I-420 West, Midland, Tx 79706
Fax #: 915-563-9526
Contact Person: Jeff Kindley / Sharon Hall
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
1037 62	Field Blank	2	40ml VOA	✓				✓					07/29/98	1550
44	MW-2 (42-64D)	5	403 Jars		✓					✓			07/29/98	1540
~~45~~	MW-2 (42-64D)	1	40ml VOA		✓							✓	07/29/98	1540
4566	MW-2 (58-60')	5	403 Jars		✓					✓			07/29/98	1530
67	MW-2 (58-60')	1	40ml VOA		✓							✓	07/29/98	1530
6668	MW2 (13-15')	5	402		✓					✓				
6669	~~Trip Blank~~ MW2 (13-15')	1	40 ml		✓							✓		
1037 63	Trip Blank	2	40 ml	✓										

ANALYSIS REQUEST (Circle or Specify Method No.)	
MTBE 8020/602	
BTEX 8020/602	
TPH	
PAH 8270	
Total Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Volatiles	
TCLP Semi Volatiles	
RCI	
GC.MS Vol. 8240/8260/624	
GC/MS Semi. Vol. 8270/625	
PCB's 8080/608	
Pest. 8080/608	
BOD, TSS, PH	
VOCs	✓
See Attached	✓
	✓
	✓
	✓
	✓
	✓
	✓ VW
	✓
Turn Around Time if different from standard	
Hold	

	Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	Jeffrey Kindley	July 30 98	700AM			
	Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
				Vicki Wrather	7-31-98	9:10 AM

LAB USE ONLY

Intact (Y) N
Headspace Y / N
Temp 2 °
Log-in Review ok

REMARKS:

Normal

per Sharon Hall 7-31-98 VW
written MW2 + Trip Bil.

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Corrected

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
104099	MW-4 18-20'	8/3/98	10:20	8/5/98
104100	MW-4 63-65'	8/3/98	14:50	8/5/98
104159	Trip Blank			8/5/98
104160	Field Blank	8/3/98	16:00	8/5/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Dr. Blair Leftwich
Director

Corrections:
1) Phenol result added for samples 104099 and 104100.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 2

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066
Sample Number: 104159

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Acrylonitrile		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Benzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chlorobenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chloroform		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichlorobenzene		<2	ug/L	S-8260B		8/6/98	AG		4735	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloropropenes		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylbenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromodichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromomethane		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Chloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Toluene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Vinyl chloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
m,p-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
o-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylene dibromide		<1	ug/L	S-8260B		8/6/98	AG		4735	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Methylene chloride		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Surr. Dibromofluoromethane		100	%	S-8260B		8/6/98	AG		4735	72-130
Surr. Toluene-d8		104	%	S-8260B		8/6/98	AG		4735	77-127
Surr. 4-Bromofluorobenzene		103	%	S-8260B		8/6/98	AG		4735	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 3

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066
Sample Number: 104160

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Acrylonitrile		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Benzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chlorobenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chloroform		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichlorobenzene		<2	ug/L	S-8260B		8/6/98	AG		4735	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloropropenes		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylbenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromodichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromomethane		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Chloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Toluene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Vinyl chloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
m,p-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
o-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylene dibromide		<1	ug/L	S-8260B		8/6/98	AG		4735	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Methylene chloride		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Surr. Dibromofluoromethane		101	%	S-8260B		8/6/98	AG		4735	72-130
Surr. Toluene-d8		104	%	S-8260B		8/6/98	AG		4735	77-127
Surr. 4-Bromofluorobenzene		103	%	S-8260B		8/6/98	AG		4735	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 4

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066
Sample Number: 104099

Sample Description: MW-4 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		8/6/98	AG		4736	125
Acrylonitrile		<125	ug/Kg	S-8260B		8/6/98	AG		4736	125
Benzene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Chlorobenzene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Chloroform		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Dichlorobenzene		<50	ug/Kg	S-8260B		8/6/98	AG		4736	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Dichloropropenes		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Ethylbenzene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Bromodichloromethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Bromomethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Chloromethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Dichloromethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Toluene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Trichloroethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Vinyl chloride		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
m,p-xylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
o-xylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Ethylene dibromide		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Methylene chloride		<125	ug/Kg	S-8260B		8/6/98	AG		4736	125
Surr. Dibromofluoromethane		97	%	S-8260B		8/6/98	AG		4736	72-130
Surr. Toluene-d8		103	%	S-8260B		8/6/98	AG		4736	77-127
Surr. 4-Bromofluorobenzene		103	%	S-8260B		8/6/98	AG		4736	72-131

Corrected

Date: 05-18-99
Page # 5

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066
Sample Number: 104099

Sample Description: MW-4 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzidine		<2.5	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Phenol		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Surr. 2-Fluorophenol		67	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	25-121

Corrected - Added Phenol result.

Date: 05-18-99
Page # 6
Order ID Number: 9808000066
Sample Number: 104099

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Sample Description: MW-4 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Surr. Phenol-d6		68	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	24-113
Surr. Nitroobenzene-d5		57	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	23-120
Surr. 2-Fluorobiphenyl		65	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	30-115
Surr. 2,4,6-Tribromophenol		76	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	19-122
Surr. Terphenyl-d14		95	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	28-137
Aldrin		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S-8082	8/10/98	8/10/98	RC	4691	4805	0.1
Arsenic		3.0	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Barium		100	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Cadmium		0.52	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.1
Chromium		3.7	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Lead		1.9	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Total Mercury		<0.25	mg/Kg	S 7470	8/6/98	8/11/98	MS	4662	4812	0.25
Selenium		0.78	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Silver		<0.50	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Uranium		<1.0	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Copper		5.6	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Iron		2,300	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	2
Manganese		40	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Zinc		7.3	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	2
Aluminum		3,800	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	10
Boron		9.2	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	10
Cobalt		5.0	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Molybdenum		3.0	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Nickel		4.5	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Cyanide		0.01	mg/Kg	SM 4500 C,E		8/11/98	RC		4815	0.01
Fluoride		2.9	mg/Kg	E 300.0		8/13/98	JS		4861	0.2
Nitrate		2.4	mg/Kg	E 300.0		8/13/98	JS		4861	1
Chloride		85	mg/Kg	E 300.0		8/20/98	JS		5025	1
Sulfate		85	mg/Kg	E 300.0		8/17/98	JS		4930	0.2
TDS		160	mg/Kg	E 160.1		8/13/98	RS		4872	---
pH		8.7	s.u.	E 150.1		8/9/98	BP		4775	---
TRPHC		<10.0	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenols		6.5	mg/Kg	SM 5530 A,D		8/11/98	RC		4813	0.25
Total Radium		1.67	pCi/gm	E 901.1M		8/18/98	DS	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066
Sample Number: 104100

Sample Description: MW-4 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		8/6/98	AG		4736	125
Acrylonitrile		<125	ug/Kg	S-8260B		8/6/98	AG		4736	125
Benzene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Chlorobenzene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Chloroform		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Dichlorobenzene		<50	ug/Kg	S-8260B		8/6/98	AG		4736	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Dichloropropenes		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Ethylbenzene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Bromodichloromethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Bromomethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Chloromethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Dichloromethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Toluene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Trichloroethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Vinyl chloride		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
m,p-xylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
o-xylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Ethylene dibromide		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		8/6/98	AG		4736	25
Methylene chloride		<125	ug/Kg	S-8260B		8/6/98	AG		4736	125
Surr. Dibromofluoromethane		98	%	S-8260B		8/6/98	AG		4736	72-130
Surr. Toluene-d8		102	%	S-8260B		8/6/98	AG		4736	77-127
Surr. 4-Bromofluorobenzene		105	%	S-8260B		8/6/98	AG		4736	72-131

Corrected

Date: 05-18-99
Page # 8

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066
Sample Number: 104100

Sample Description: MW-4 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzidine		<2.5	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Phenol		<0.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	0.25
Surr. 2-Fluorophenol		63	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	25-121

Corrected - Added Phenol result.

Date: 05-18-99
Page # 9
Order ID Number: 9808000066
Sample Number: 104100

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Sample Description: MW-4 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Surr. Phenol-d6		61	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	24-113
Surr. Nitroobenzene-d5		60	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	23-120
Surr. 2-Fluorobiphenyl		65	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	30-115
Surr. 2,4,6-Tribromophenol		78	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	19-122
Surr. Terphenyl-d14		107	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	28-137
Aldrin		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/10/98	9/18/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S-8082	8/10/98	8/10/98	RC	4691	4805	0.1
Arsenic		1.5	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	0.5
Barium		8.2	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	0.5
Cadmium		0.58	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	0.1
Chromium		3.7	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	0.5
Lead		1.7	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	0.5
Total Mercury		<0.25	mg/Kg	S 7470	8/6/98	8/11/98	MS	4662	4812	0.25
Selenium		<0.50	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	0.5
Silver		<0.50	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	0.5
Uranium		<1.0	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	1
Copper		1.6	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	1
Iron		2,600	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	2
Manganese		22	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	1
Zinc		5.2	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	2
Aluminum		2,200	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	10
Boron		6.6	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	10
Cobalt		2.7	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	0.5
Molybdenum		1.6	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	1
Nickel		2.0	mg/Kg	S 6101B	8/10/98	8/20/98	RR	4710	5030	0.5
Cyanide		0.07	mg/Kg	SM 4500 C,E		8/11/98	RC		4815	0.01
Fluoride		0.81	mg/Kg	E 300.0		8/13/98	JS		4861	0.2
Nitrate		1.2	mg/Kg	E 300.0		8/13/98	JS		4861	1
Chloride		29	mg/Kg	E 300.0		8/17/98	JS		4930	1
Sulfate		18	mg/Kg	E 300.0		8/17/98	JS		4930	0.2
TDS		240	mg/Kg	E 160.1		8/13/98	rs		4872	---
pH		8.8	s.u.	E 150.1		8/9/98	BP		4775	---
TRPHC		<10.0	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenols		2.75	mg/Kg	SM 5530 A,D		8/11/98	RC		4813	0.25
Total Radium		13.32	pCi/gm	E 901.1M		8/18/98	DS	---	---	---

Quality Control Report
Blanks

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	8/6/98		4735
Acrylonitrile		<5	ug/L	5	8/6/98		4735
Benzene		<1	ug/L	1	8/6/98		4735
Carbon tetrachloride		<1	ug/L	1	8/6/98		4735
Chlorobenzene		<1	ug/L	1	8/6/98		4735
1,2-dichloroethane		<1	ug/L	1	8/6/98		4735
1,1,2,2-tetrachloroethane		<1	ug/L	1	8/6/98		4735
1,1,1-trichloroethane		<1	ug/L	1	8/6/98		4735
1,1,2-trichloroethane		<1	ug/L	1	8/6/98		4735
1,1,2-trichloroethylene		<1	ug/L	1	8/6/98		4735
Chloroform		<1	ug/L	1	8/6/98		4735
Dichlorobenzene		<2	ug/L	2	8/6/98		4735
1,1-dichloroethylene		<1	ug/L	1	8/6/98		4735
Dichloropropenes		<1	ug/L	1	8/6/98		4735
Ethylbenzene		<1	ug/L	1	8/6/98		4735
Bromodichloromethane		<1	ug/L	1	8/6/98		4735
Bromomethane		<5	ug/L	5	8/6/98		4735
Chloromethane		<1	ug/L	1	8/6/98		4735
Dichlorodifluoromethane		<1	ug/L	1	8/6/98		4735
Dichloromethane		<1	ug/L	1	8/6/98		4735
Trichlorofluoromethane		<1	ug/L	1	8/6/98		4735
Tetrachloroethylene		<1	ug/L	1	8/6/98		4735
Toluene		<1	ug/L	1	8/6/98		4735
Trichloroethylene		<1	ug/L	1	8/6/98		4735
Vinyl chloride		<1	ug/L	1	8/6/98		4735
m,p-xylene		<1	ug/L	1	8/6/98		4735
o-xylene		<1	ug/L	1	8/6/98		4735
1,1-dichloroethane		<1	ug/L	1	8/6/98		4735
Ethylene dibromide		<1	ug/L	1	8/6/98		4735
cis-1,2-dichlorethylene		<1	ug/L	1	8/6/98		4735
trans-1,2-dichloroethylene		<1	ug/L	1	8/6/98		4735
Methylene chloride		<5	ug/L	5	8/6/98		4735
Surr. Dibromofluoromethane		95	%	72-130	8/6/98		4735
Surr. Toluene-d8		105	%	77-127	8/6/98		4735
Surr. 4-Bromofluorobenzene		102	%	72-131	8/6/98		4735
Acrolein		<125	ug/Kg	125	8/6/98		4736
Acrylonitrile		<125	ug/Kg	125	8/6/98		4736
Benzene		<25	ug/Kg	25	8/6/98		4736
Carbon tetrachloride		<25	ug/Kg	25	8/6/98		4736
Chlorobenzene		<25	ug/Kg	25	8/6/98		4736

Date: 9-29-98
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Order ID Number: 9808000066

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,2-dichloroethane		<25	ug/Kg	25	8/6/98		4736
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	8/6/98		4736
1,1,1-trichloroethane		<25	ug/Kg	25	8/6/98		4736
1,1,2-trichloroethane		<25	ug/Kg	25	8/6/98		4736
1,1,2-trichloroethylene		<25	ug/Kg	25	8/6/98		4736
Chloroform		<25	ug/Kg	25	8/6/98		4736
Dichlorobenzene		<50	ug/Kg	50	8/6/98		4736
1,1-dichloroethylene		<25	ug/Kg	25	8/6/98		4736
Dichloropropenes		<25	ug/Kg	25	8/6/98		4736
Ethylbenzene		<25	ug/Kg	25	8/6/98		4736
Bromodichloromethane		<25	ug/Kg	25	8/6/98		4736
Bromomethane		<25	ug/Kg	25	8/6/98		4736
Chloromethane		<25	ug/Kg	25	8/6/98		4736
Dichlorodifluoromethane		<25	ug/Kg	25	8/6/98		4736
Dichloromethane		<25	ug/Kg	25	8/6/98		4736
Trichlorofluoromethane		<25	ug/Kg	25	8/6/98		4736
Tetrachloroethylene		<25	ug/Kg	25	8/6/98		4736
Toluene		<25	ug/Kg	25	8/6/98		4736
Trichloroethylene		<25	ug/Kg	25	8/6/98		4736
Vinyl chloride		<25	ug/Kg	25	8/6/98		4736
m,p-xylene		<25	ug/Kg	25	8/6/98		4736
o-xylene		<25	ug/Kg	25	8/6/98		4736
1,1-dichloroethane		<25	ug/Kg	25	8/6/98		4736
Ethylene dibromide		<25	ug/Kg	25	8/6/98		4736
cis-1,2-dichlorethylene		<25	ug/Kg	25	8/6/98		4736
trans-1,2-dichloroethylene		<25	ug/Kg	25	8/6/98		4736
Methylene chloride		<125	ug/Kg	125	8/6/98		4736
Surr. Dibromofluoromethane		85	%	72-130	8/6/98		4736
Surr. Toluene-d8		99	%	77-127	8/6/98		4736
Surr. 4-Bromofluorobenzene		96	%	72-131	8/6/98		4736
PCB		<0.1	mg/Kg	0.1	8/10/98	4691	4805
Cyanide		<0.01	mg/Kg	0.01	8/11/98		4815
Total Mercury		<0.25	mg/Kg	0.25	8/11/98	4662	4812
Fluoride		<0.2	mg/Kg	0.2	8/13/98		4861
Nitrate		<1.0	mg/Kg	1.0	8/13/98		4861
Chloride		<1.0	mg/Kg	1.0	8/17/98		4930
Chloride		<1.0	mg/Kg	1.0	8/20/98		5025
Sulfate		<0.2	mg/Kg	0.2	8/17/98		4930
Arsenic		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Barium		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Cadmium		<0.1	mg/Kg	0.1	8/20/98	4710	5030
Chromium		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Lead		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Selenium		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Silver		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Uranium		<1.0	mg/Kg	1.0	8/20/98	4710	5030

Date: 9-29-98
Page # 12
Order ID Number: 9808000066

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Copper		<1.0	mg/Kg	1.0	8/20/98	4710	5030
Iron		<2.0	mg/Kg	2.0	8/20/98	4710	5030
Manganese		<1.0	mg/Kg	1.0	8/20/98	4710	5030
Zinc		<2.0	mg/Kg	2.0	8/20/98	4710	5030
Aluminum		<10	mg/Kg	10	8/20/98	4710	5030
Boron		<10	mg/Kg	10	8/20/98	4710	5030
Cobalt		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Molybdenum		<1.0	mg/Kg	1.0	8/20/98	4710	5030
Nickel		<0.05	mg/Kg	0.5	8/20/98	4710	5030
TRPHC		<10.0	mg/Kg	10	8/22/98	4743	5045
Benzidine		<2.5	mg/kg	2.5	8/21/98	4650	5040
Hexachlorobenzene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Pentachlorobenzene		<0.25	mg/kg	0.25	8/21/98	4650	5040
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Hexachloroethane		<0.25	mg/kg	0.25	8/21/98	4650	5040
2,4-dichlorophenol		<1.25	mg/kg	1.25	8/21/98	4650	5040
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	8/21/98	4650	5040
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	8/21/98	4650	5040
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	8/21/98	4650	5040
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	8/21/98	4650	5040
bis (chloromethyl) ether		<1.25	mg/kg	1.25	8/21/98	4650	5040
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	8/21/98	4650	5040
2,4-dinitrotoluene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Diphenylhydrazine		<1.25	mg/kg	1.25	8/21/98	4650	5040
Hexachlorobutadiene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Isophorone		<1.25	mg/kg	1.25	8/21/98	4650	5040
Nitrobenzene		<0.25	mg/kg	0.25	8/21/98	4650	5040
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	8/21/98	4650	5040
2,4-dinitrophenols		<1.25	mg/kg	1.25	8/21/98	4650	5040
n-nitrosodiethylamine		<0.25	mg/kg	0.25	8/21/98	4650	5040
N-nitrosodimethylamine		<0.25	mg/kg	0.25	8/21/98	4650	5040
N-nitrosodibutylamine		<1.25	mg/kg	1.25	8/21/98	4650	5040
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	8/21/98	4650	5040
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	8/21/98	4650	5040
Pentachlorophenol		<1.25	mg/kg	1.25	8/21/98	4650	5040
Dibutyl phthalate		<0.25	mg/kg	0.25	8/21/98	4650	5040
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	8/21/98	4650	5040
Diethyl phthalate		<0.25	mg/kg	0.25	8/21/98	4650	5040
Dimethyl phthalate		<0.25	mg/kg	0.25	8/21/98	4650	5040
Anthracene		<0.25	mg/kg	0.25	8/21/98	4650	5040
3,4-benzofluoranthene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Fluoranthene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Fluorene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Phenanthrene		<0.25	mg/kg	0.25	8/21/98	4650	5040

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Pyrene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Naphthalene		<0.25	mg/kg	0.25	8/21/98	4650	5040
1-methylnaphthalene		<0.25	mg/kg	0.25	8/21/98	4650	5040
2-methylnaphthalene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Benzo-a-pyrene		<0.25	mg/kg	0.25	8/21/98	4650	5040
monomethylnaphthalenes		<0.25	mg/kg	0.25	8/21/98	4650	5040
Surr. 2-Fluorophenol		61	mg/kg	25-121	8/21/98	4650	5040
Surr. Phenol-d6		64	mg/kg	24-113	8/21/98	4650	5040
Surr. Nitrobenzene-d5		48	mg/kg	23-120	8/21/98	4650	5040
Surr. 2-Fluorobiphenyl		73	mg/kg	30-115	8/21/98	4650	5040
Surr. 2,4,6-Tribromophenol		56	mg/kg	19-122	8/21/98	4650	5040
Surr. Terphenyl-d14		56	mg/kg	28-137	8/21/98	4650	5040
Total Phenols		<0.25	mg/kg	0.25	8/11/98		4813

Quality Control Report
Continuing Calibration Verification Standard

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	100	100	8/6/98	4735
1,1-Dichloroethene		100	ug/L	94	94	8/6/98	4735
Chloroform		100	ug/L	97	97	8/6/98	4735
1,2-Dichloropropane		100	ug/L	120	120	8/6/98	4735
Toluene		100	ug/L	97	97	8/6/98	4735
Chlorobenzene		100	ug/L	92	92	8/6/98	4735
Ethylbenzene		100	ug/L	98	98	8/6/98	4735
Vinyl chloride		100	ug/L	100	100	8/6/98	4736
1,1-Dichloroethene		100	ug/L	94	94	8/6/98	4736
Chloroform		100	ug/L	97	97	8/6/98	4736
1,2-Dichloropropane		100	ug/L	120	120	8/6/98	4736
Toluene		100	ug/L	97	97	8/6/98	4736
Chlorobenzene		100	ug/L	92	92	8/6/98	4736
Ethylbenzene		100	ug/L	98	98	8/6/98	4736
PCB		0.40	mg/L	0.42	105	8/10/98	4805
Cyanide		0.12	mg/L	0.12	100	8/11/98	4815
Total Mercury		5.00	mg/L	4.75	95	8/11/98	4812
pH		7.0	mg/L	7.0	100	8/9/98	4775
Fluoride		2.5	mg/L	2.455	98	8/13/98	4861
Nitrate		5.0	mg/L	4.835	97	8/13/98	4861
Chloride		12.5	mg/L	13.085	105	8/17/98	4930
Chloride		12.5	mg/L	11.585	93	8/20/98	5025
Sulfate		12.5	mg/L	13.265	106	8/17/98	4930
TDS		1,000	mg/L	972	97	8/13/98	4872
Arsenic		1.0	mg/L	0.97	97	8/20/98	5030
Barium		1.0	mg/L	0.97	97	8/20/98	5030
Cadmium		1.0	mg/L	0.95	95	8/20/98	5030
Chromium		1.0	mg/L	0.96	96	8/20/98	5030
Lead		1.0	mg/L	0.95	95	8/20/98	5030
Selenium		1.0	mg/L	0.97	97	8/20/98	5030
Silver		0.2	mg/L	0.19	95	8/20/98	5030
Uranium		1.0	mg/L	0.97	97	8/20/98	5030
Copper		1.0	mg/L	0.99	99	8/20/98	5030
Iron		1.0	mg/L	1.0	100	8/20/98	5030
Manganese		1.0	mg/L	0.97	97	8/20/98	5030
Zinc		1.0	mg/L	0.95	95	8/20/98	5030

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Aluminum		1.0	mg/L	0.97	97	8/20/98	5030
Boron		1.0	mg/L	0.97	97	8/20/98	5030
Cobalt		1.0	mg/L	0.98	98	8/20/98	5030
Molybdenum		1.0	mg/L	0.97	97	8/20/98	5030
Nickel		1.0	mg/L	0.99	99	8/20/98	5030
TRPHC		100	mg/L	104	104	8/22/98	5045
Phenol		80	mg/L	83	104	8/21/98	5040
1,4-Dichlorobenzene		80	mg/L	80	100	8/21/98	5040
2-nitrophenol		80	mg/L	86	108	8/21/98	5040
2,4-Dichlorophenol		80	mg/L	84	105	8/21/98	5040
Hexachlorobutadiene		80	mg/L	80	100	8/21/98	5040
4-Chloro-3-methylphenol		80	mg/L	83	104	8/21/98	5040
2,4,6-Trichlorophenol		80	mg/L	83	104	8/21/98	5040
Acenaphthene		80	mg/L	79	99	8/21/98	5040
n-Nitrosodiphenylamine		80	mg/L	83	104	8/21/98	5040
Pentachlorophenol		80	mg/L	96	120	8/21/98	5040
Pyrene		80	mg/L	78	98	8/21/98	5040
Benzo(a)pyrene		80	mg/L	82	103	8/21/98	5040
Total Phenols		0.80	mg/L	0.81	101	8/11/98	4813

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	83	83	100	85	85	2.4	8/6/98		4735
Benzene		ug/L	<1	100	105	105	100	109	109	3.7	8/6/98		4735
Trichloroethene		ug/L	<1	100	86	86	100	91	91	5.6	8/6/98		4735
Toluene		ug/L	<1	100	94	94	100	97	97	3.1	8/6/98		4735
Chlorobenzene		ug/L	<1	100	88	88	100	90	90	2.2	8/6/98		4735
1,1-Dichloroethene		ug/Kg	<25	100	82	82	100	82	82	0	8/6/98		4736
Benzene		ug/Kg	<25	100	105	105	100	105	105	0	8/6/98		4736
Trichloroethene		ug/Kg	<25	100	89	89	100	89	89	0	8/6/98		4736
Toluene		ug/Kg	<25	100	94	94	100	95	95	1.0	8/6/98		4736
Chlorobenzene		ug/Kg	<25	100	88	88	100	88	88	0	8/6/98		4736
PCB		mg/Kg	<0.1	0.50	0.44	88	0.50	0.47	94	6.6	8/10/98	4691	4805
Cyanide		mg/Kg	<0.01	0.12	0.12	100	0.12	0.12	100	0	8/11/98		4815
Total Mercury		mg/Kg	<0.25	2.5	2.2	88	2.5	2.2	88	0	8/11/98	4662	4812
Fluoride		mg/Kg	0.4	12.5	12.52	97	12.5	13.06	101	4.0	8/13/98		4861
Nitrate		mg/Kg	0.6	25	25.99	102	25	26.14	102	0	8/13/98		4861
Chloride		mg/Kg	11.44	12.5	25.09	109	12.5	25.2	110	0.9	8/17/98		4930
Chloride		mg/Kg	38.95	12.5	49.22	82	12.5	49.81	87	5.9	8/21/98		5250
Sulfate		mg/Kg	49.2	12.5	62.38	105	12.5	62.01	102	2.9	8/17/98		4930
Arsenic		mg/Kg	<0.50	200	156	78	200	158	79	1.3	8/20/98	4710	5030
Barium		mg/Kg	24	200	199	88	200	202	89	1.1	8/20/98	4710	5030
Cadmium		mg/Kg	0.51	200	160	80	200	160	80	0	8/20/98	4710	5030
Chromium		mg/Kg	3.8	200	174	85	200	174	85	0	8/20/98	4710	5030
Lead		mg/Kg	2.7	200	168	83	200	171	84	1.2	8/20/98	4710	5030
Selenium		mg/Kg	<0.50	200	156	78	200	161	81	3.8	8/20/98	4710	5030
Silver		mg/Kg	<0.50	100	84	84	100	79	79	6.1	8/20/98	4710	5030
Uranium		mg/Kg	<0.50	200	150	75	200	151	76	1.3	8/20/98	4710	5030
Copper		mg/Kg	2.3	200	177	88	200	177	88	0	8/20/98	4710	5030
Iron		mg/Kg	<0.50	200	154	77	200	150	75	2.6	8/20/98	4710	5030
Manganese		mg/Kg	40	200	212	86	200	212	86	0	8/20/98	4710	5030
Zinc		mg/Kg	9.3	200	176	83	200	180	85	2.4	8/20/98	4710	5030
Aluminum		mg/Kg	<0.50	200	219	110	200	205	103	6.6	8/20/98	4710	5030
Boron		mg/Kg	7.9	200	170	81	200	174	83	2.4	8/20/98	4710	5030
Cobalt		mg/Kg	3.9	200	170	83	200	175	86	3.6	8/20/98	4710	5030
Molybdenum		mg/Kg	1.8	200	173	86	200	175	87	1.2	8/20/98	4710	5030
Nickel		mg/Kg	3.2	200	167	82	200	169	83	1.2	8/20/98	4710	5030
TRPHC		mg/Kg	<10.0	250	276	110	250	234	94	16	22-Aug	4743	5045
Phenol		mg/Kg	<0.25	10.00	8.84	88	10.00	8.71	87	1.1	8/21/98	4650	5040
2-Chlorophenol		mg/Kg	<1.25	10.00	8.7	87	10.00	8.4	84	3.5	8/21/98	4650	5040
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	8.23	82	10.00	7.98	80	2.5	8/21/98	4650	5040
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	7.8	78	10.00	9.06	91	15	8/21/98	4650	5040

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	7.43	74	10.00	7.65	77	4.0	8/21/98	4650	5040
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	8.41	81	10.00	9.32	93	14	8/21/98	4650	5040
Acenaphthene		mg/Kg	<0.25	10.00	9.89	99	10.00	9.96	100	10	8/21/98	4650	5040
4-Nitrophenol		mg/Kg	<1.25	10.00	8.78	88	10.00	7.79	78	12	8/21/98	4650	5040
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	11.1	111	10.00	11.2	112	0.9	8/21/98	4650	5040
Pentachlorophenol		mg/Kg	<1.25	10.00	8.64	86	10.00	6.84	68	23	8/21/98	4650	5040
Pyrene		mg/Kg	<0.25	10.00	11.4	114	10.00	12.6	126	10	8/21/98	4650	5040
Total Phenols		mg/Kg	<0.25	0.80	0.77	96	0.80	0.79	99	3.1	8/11/98		4813

Quality Control Report
Duplicate

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000066

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		mg/Kg	8.2	8.2	0	8/9/98		4775
TDS		mg/Kg	160	144	11	8/13/98		4872

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Ste. 9
Lubbock, TX 79424
Phone: 800-378-1296
Fax: (806) 794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0782	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	104099	**ARS Sample I.D.:**	ARS-98-2825
Date Sampled:	08/03/98	**Date Received:**	08/07/98
Time Sampled:	N/A	**Time Received**	1105
Type of Sample:	Soil	**Date of Report**	8/26/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.86	N/A	pCi/gm	<0.032	N/A	Bq/gm	EPA 901.1M	8/18/98 0827	DC
Ra-228	<0.15	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	8/18/98 0827	DC
Pb-210	<1.03	N/A	pCi/gm	<0.038	N/A	Bq/gm	EPA 901.1M	8/18/98 0827	DC
Total Activity	1.67	N/A	pCi/gm	0.062	N/A	Bq/gm	EPA 901.1M	8/18/98 0827	DC

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ARS
AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0782	**P.O. Number:**	Priject Location: Hobbs, NM
Client I.D.:	104100	**ARS Sample I.D.:**	ARS-98-2826
Date Sampled:	N/A	**Date Received:**	08/07/98
Time Sampled:	N/A	**Time Received**	1105
Type of Sample:	Soil	**Date of Report**	8/26/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.08	2.01	pCi/gm	0.077	0.074	Bq/gm	EPA 901.1M	8/18/98 1051	DC
Ra-228	<0.12	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	8/18/98 1051	DC
Pb-210	2.78	2.58	pCi/gm	0.103	0.095	Bq/gm	EPA 901.1M	8/18/98 1051	DC
Total Activity	13.32	N/A	pCi/gm	0.493	N/A	Bq/gm	EPA 901.1M	8/18/98 1051	DC

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.
1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

66

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeffrey Kindley
Phone #: 915 - 563-0118
FAX #: 915-563-9526

Company Name & Address: Phillips Services Corporation
7904 IH20 West
Midland, TX 79706

Project #: 19349

Project Name: Shell Grimes

Project Location: Grimes Battery, Hobbs, N. M.

Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
104099	MW-4 (18-20')	5	40ml VOA		✓					✓			05/03/98	1020
	MW-4 (18-20')	1	40ml VOA		✓							✓	05/03/98	1020
~~104104159~~	Trip Blank	2	40ml VOA	✓							✓		05/03/98	—
104160	Field Blank	2	40ml VOA	✓				✓					05/03/98	1600
~~104100~~	MW-4 (63-65')	5	4 oz Jar		✓					✓			05/03/98	1450
104100	MW-4 (63-65')	1	40ml VOA		✓							✓	05/03/98	1450

ANALYSIS REQUEST														SPECIAL HANDLING					
BTEX, MTBE	TPH	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240 / 8260	8270	Vocs	See Attached				Turn around # of days	Fax ASAP	Hold			
									✓	✓									
									✓										
									•	✓									
									•	✓									
									✓	✓									
									✓										

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	05/04/98	0700 AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Vicki Windham	5-5-98	10:00 AM

REMARKS

Normal Turnaround

ND

20 Bus 9019846187

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
104142	Trip Blank			8/5/98
104143	Field Blank	7/30/98	17:30	8/5/98
104144	Trip Blank			8/5/98
104145	Field Blank	7/31/98	17:45	8/5/98
104146	CSS #8	7/30/98	13:55	8/5/98
104147	MW-3 53-55'	7/31/98	13:30	8/5/98
104148	MW-3 63-65'	7/31/98	14:25	8/5/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrections:
1) Phenol result added for samples 104147 and 104148.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98
Page # 2

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070
Sample Number: 104142

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Acrylonitrile		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Benzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chlorobenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chloroform		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichlorobenzene		<2	ug/L	S-8260B		8/6/98	AG		4735	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloropropenes		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylbenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromodichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromomethane		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Chloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Toluene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Vinyl chloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
m,p-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
o-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylene dibromide		<1	ug/L	S-8260B		8/6/98	AG		4735	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Methylene chloride		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Surr. Dibromofluoromethane		97	%	S-8260B		8/6/98	AG		4735	72-130
Surr. Toluene-d8		104	%	S-8260B		8/6/98	AG		4735	77-127
Surr. 4-Bromofluorobenzene		105	%	S-8260B		8/6/98	AG		4735	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070
Sample Number: 104143

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Acrylonitrile		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Benzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chlorobenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chloroform		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichlorobenzene		<2	ug/L	S-8260B		8/6/98	AG		4735	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloropropenes		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylbenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromodichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromomethane		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Chloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Toluene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Vinyl chloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
m,p-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
o-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylene dibromide		<1	ug/L	S-8260B		8/6/98	AG		4735	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Methylene chloride		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Surr. Dibromofluoromethane		101	%	S-8260B		8/6/98	AG		4735	72-130
Surr. Toluene-d8		103	%	S-8260B		8/6/98	AG		4735	77-127
Surr. 4-Bromofluorobenzene		104	%	S-8260B		8/6/98	AG		4735	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98
Page # 4

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070
Sample Number: 104144

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Acrylonitrile		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Benzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chlorobenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chloroform		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichlorobenzene		<2	ug/L	S-8260B		8/6/98	AG		4735	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloropropenes		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylbenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromodichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromomethane		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Chloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Toluene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Vinyl chloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
m,p-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
o-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylene dibromide		<1	ug/L	S-8260B		8/6/98	AG		4735	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Methylene chloride		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Surr. Dibromofluoromethane		101	%	S-8260B		8/6/98	AG		4735	72-130
Surr. Toluene-d8		103	%	S-8260B		8/6/98	AG		4735	77-127
Surr. 4-Bromofluorobenzene		105	%	S-8260B		8/6/98	AG		4735	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070
Sample Number: 104145

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Acrylonitrile		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Benzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chlorobenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Chloroform		<1	ug/L	S-8260B		8/6/98	AG		4735	1
chlorobenzene		<2	ug/L	S-8260B		8/6/98	AG		4735	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloropropenes		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylbenzene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromodichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Bromomethane		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Chloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Dichloromethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Toluene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Trichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Vinyl chloride		<1	ug/L	S-8260B		8/6/98	AG		4735	1
m,p-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
o-xylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Ethylene dibromide		<1	ug/L	S-8260B		8/6/98	AG		4735	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/6/98	AG		4735	1
Methylene chloride		<5	ug/L	S-8260B		8/6/98	AG		4735	5
Surr. Dibromofluoromethane		103	%	S-8260B		8/6/98	AG		4735	72-130
Surr. Toluene-d8		103	%	S-8260B		8/6/98	AG		4735	77-127
Surr. 4-Bromofluorobenzene		104	%	S-8260B		8/6/98	AG		4735	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070
Sample Number: 104146

Sample Description: CSS #8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
TRPHC		<10.0	mg/Kg	S 418.1	8/6/98	8/6/98	MS	4663	4738	10
Chloride		51	mg/Kg	E 300.0		8/17/98	JS		4930	1.0

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-12-99
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Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070
Sample Number: 104147

Sample Description: MW-3 53-55'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<2500	ug/Kg	S-8260B		8/6/98	AG		4736	2500
Acrylonitrile		<2500	ug/Kg	S-8260B		8/6/98	AG		4736	2500
Benzene		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Carbon tetrachloride		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Chlorobenzene		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
1,2-dichloroethane		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
1,1,2,2-tetrachloroethane		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
1,1,1-trichloroethane		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
1,1,2-trichloroethane		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
1,1,2-trichloroethylene		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Chloroform		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Dichlorobenzene		<1000	ug/Kg	S-8260B		8/6/98	AG		4736	1000
1,1-dichloroethylene		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Dichloropropenes		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Ethylbenzene		2,000	ug/Kg	S-8260B		8/6/98	AG		4736	500
Bromodichloromethane		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Bromomethane		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Chloromethane		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Dichlorodifluoromethane		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Dichloromethane		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Trichlorofluorometane		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Tetrachloroethylene		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Toluene		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Trichloroethylene		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Vinyl chloride		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
m,p-xylene		8,700	ug/Kg	S-8260B		8/6/98	AG		4736	500
o-xylene		1,400	ug/Kg	S-8260B		8/6/98	AG		4736	500
1,1-dichloroethane		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Ethylene dibromide		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
cis-1,2-dichlorethylene		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
trans-1,2-dichloroethylene		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Methylene chloride		<2500	ug/Kg	S-8260B		8/6/98	AG		4736	2500
Surr. Dibromofluoromethane		98	%	S-8260B		8/6/98	AG		4736	72-130
Surr. Toluene-d8		105	%	S-8260B		8/6/98	AG		4736	77-127
Surr. 4-Bromofluorobenzene		108	%	S-8260B		8/6/98	AG		4736	72-131
Benzidine		<2.5	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	2.5
Hexachlorobenzene		<12.5	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	12.5
Pentachlorobenzene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
1,2,4,5-tetrachlorobenzene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25

Corrected

Date: 05-12-99

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070
Sample Number: 104147

Sample Description: MW-3 53-55'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4-dichlorophenol		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
2,4,5-trichlorophenol		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
2,4,6-trichlorophenol		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
bis (2-chloroethyl) ether		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
bis (2-chloroisopropyl) ether		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
bis (chloromethyl) ether		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
3,3-dichlorobenzidine		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
2,4-dinitrotoluene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Diphenylhydrazine		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
Hexachlorobutadiene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Hexachlorocyclopentadiene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Isophorone		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
Nitrobenzene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4-dinitro-o-cresol		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
2,4-dinitrophenols		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
n-nitrosodiethylamine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
N-nitrosodimethylamine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
N-nitrosodibutylamine		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
N-nitrosodiphenylamine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
N-nitrosopyrrolidine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Pentachlorophenol		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
Dibutyl phthalate		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
di-2-ethylhexyl phthalate		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Diethyl phthalate		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Dimethyl phthalate		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Anthracene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
3,4-benzofluoranthene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Benzo(k)fluoranthene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Fluoranthene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Fluorene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Phenanthrene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Pyrene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Naphthalene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
1-methylnaphthalene		2.90	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2-methylnaphthalene		2.85	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Benzo-a-pyrene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Phenol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Surr. 2-Fluorophenol		70	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	25-121
Surr. Phenol-d6		65	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	24-113
Surr. Nitroobenzene-d5		66	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	23-120
Surr. 2-Fluorobiphenyl		93	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	30-115
Surr. 2,4,6-Tribromophenol		61	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	19-122
Surr. Terphenyl-d14		113	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	28-137

Corrected - Added Phenol result.

Date: 05-12-99
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Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070
Sample Number: 104147

Sample Description: MW-3 53-55'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
Chlordane		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
DDT		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
Dieldrin		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endosulfan		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endrin		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
Heptachlor		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S-8082	8/10/98	8/10/98	RC	4691	4805	0.1
Arsenic		<0.50	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Barium		20	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Cadmium		0.64	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.1
Chromium		3.7	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Lead		2.7	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Total Mercury		<0.25	mg/Kg	S 7470	8/6/98	8/11/98	MS	4662	4812	0.25
Selenium		<0.50	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Silver		<0.50	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Uranium		<1.0	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Copper		2.2	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Iron		2,400	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	2
Manganese		18	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Zinc		7.0	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	2
Aluminum		2,000	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	10
Boron		6.3	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	10
Cobalt		2.5	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Molybdenum		1.3	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Nickel		2.1	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Cyanide		<0.01	mg/Kg	M 4500 Cn,CE		8/11/98	RC		4815	0.01
Fluoride		0.96	mg/Kg	E 300.0		8/13/98	JS		4862	0.2
Nitrate		1.2	mg/Kg	E 300.0		8/13/98	JS		4862	0.2
Chloride		28	mg/Kg	E 300.0		8/13/98	JS		4862	1.0
Sulfate		7.6	mg/Kg	E 300.0		8/13/98	JS		4862	1.0
TDS		330	mg/Kg	E 160.1		8/13/98	RS		4872	---
pH		9.6	s.u.	E 150.1		8/9/98	BP		4775	---
TRPHC		3,000	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenols		9.5	mg/Kg	M 5530 A,D		8/11/98	RC		4813	0.25
Total Radium		4.80	pCi/gm	E 901.1M		8/19/98	DS	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-12-99

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070
Sample Number: 104148

Sample Description: MW-3 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Acrylonitrile		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Benzene		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Carbon tetrachloride		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Chlorobenzene		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
1,2-dichloroethane		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
1,1,2,2-tetrachloroethane		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
1,1,1-trichloroethane		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
1,1,2-trichloroethane		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
1,1,2-trichloroethylene		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Chloroform		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Dichlorobenzene		<200	ug/Kg	S-8260B		8/6/98	AG		4736	200
1,1-dichloroethylene		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Dichloropropenes		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Ethylbenzene		150	ug/Kg	S-8260B		8/6/98	AG		4736	100
Bromodichloromethane		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Bromomethane		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Chloromethane		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Dichlorodifluoromethane		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Dichloromethane		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Trichlorofluorometane		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Tetrachloroethylene		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Toluene		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Trichloroethylene		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Vinyl chloride		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
m,p-xylene		810	ug/Kg	S-8260B		8/6/98	AG		4736	100
o-xylene		180	ug/Kg	S-8260B		8/6/98	AG		4736	100
1,1-dichloroethane		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Ethylene dibromide		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
cis-1,2-dichlorethylene		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
trans-1,2-dichloroethylene		<100	ug/Kg	S-8260B		8/6/98	AG		4736	100
Methylene chloride		<500	ug/Kg	S-8260B		8/6/98	AG		4736	500
Surr. Dibromofluoromethane		100	%	S-8260B		8/6/98	AG		4736	72-130
Surr. Toluene-d8		103	%	S-8260B		8/6/98	AG		4736	77-127
Surr. 4-Bromofluorobenzene		107	%	S-8260B		8/6/98	AG		4736	72-131
Benzidine		<12.5	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	12.5
Hexachlorobenzene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Pentachlorobenzene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
1,2,4,5-tetrachlorobenzene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25

Corrected

Date: 05-12-99
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Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070
Sample Number: 104148

Sample Description: MW-3 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4-dichlorophenol		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
2,4,5-trichlorophenol		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
2,4,6-trichlorophenol		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
bis (2-chloroethyl) ether		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
bis (2-chloroisopropyl) ether		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
bis (chloromethyl) ether		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
3,3-dichlorobenzidine		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
2,4-dinitrotoluene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Diphenylhydrazine		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
Hexachlorobutadiene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Hexachlorocyclopentadiene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Isophorone		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
Nitrobenzene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2,4-dinitro-o-cresol		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
2,4-dinitrophenols		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
n-nitrosodiethylamine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
N-nitrosodimethylamine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
N-nitrosodibutylamine		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
N-nitrosodiphenylamine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
N-nitrosopyrrolidine		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Pentachlorophenol		<6.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	6.25
Dibutyl phthalate		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
di-2-ethylhexyl phthalate		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Diethyl phthalate		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Dimethyl phthalate		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Anthracene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
3,4-benzofluoranthene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Benzo(k)fluoranthene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Fluoranthene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Fluorene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Phenanthrene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Pyrene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Naphthalene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
1-methylnaphthalene		2.60	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
2-methylnaphthalene		2.52	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Benzo-a-pyrene		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Phenol		<1.25	mg/Kg	S-8270C	8/5/98	8/21/98	DG	4650	5040	1.25
Surr. 2-Fluorophenol		53	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	25-121
Surr. Phenol-d6		54	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	24-113
Surr. Nitroobenzene-d5		49	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	23-120
Surr. 2-Fluorobiphenyl		81	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	30-115
Surr. 2,4,6-Tribromophenol		49	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	19-122
Surr. Terphenyl-d14		96	%	S-8270C	8/5/98	8/21/98	DG	4650	5040	28-137

Corrected - Added Phenol result.

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070
Sample Number: 104148

Sample Description: MW-3 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
Chlordane		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
DDT		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
Dieldrin		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endosulfan		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endrin		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
Heptachlor		<50	ugKg	S-8080	8/13/98	9/20/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S-8082	8/10/98	8/10/98	RC	4691	4805	0.1
Arsenic		1.1	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Barium		29	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Cadmium		0.61	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.1
Chromium		4.4	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Lead		1.7	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Total Mercury		<0.25	mg/Kg	S 7470	8/6/98	8/11/98	MS	4662	4812	0.25
Selenium		0.76	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Silver		<0.50	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Uranium		<1.0	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Copper		2.3	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Iron		2,600	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	2
Manganese		23	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Zinc		9.3	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	2
Aluminum		2,100	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	10
Boron		6.9	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	10
Cobalt		2.9	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Molybdenum		1.9	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	1
Nickel		2.6	mg/Kg	S 6010B	8/10/98	8/20/98	RR	4710	5030	0.5
Cyanide		0.02	mg/Kg	SM 4500 C,E		8/11/98	RC		4815	0.01
Fluoride		1.1	mg/Kg	E 300.0		8/13/98	JS		4862	0.2
Nitrate		<0.2	mg/Kg	E 300.0		8/13/98	JS		4862	0.2
Chloride		37	mg/Kg	E 300.0		8/13/98	JS		4862	1.0
Sulfate		6.1	mg/Kg	E 300.0		8/13/98	JS		4862	1.0
pH		9.0	s.u.	E 150.1		8/9/98	BP		4775	---
TRPHC		3,820	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenols		7.5	mg/Kg	SM 5530 A,D		8/11/98	RC		4813	0.25
TDS		310	mg/Kg	S 160.1		8/13/98	RS		4872	---
Total Radium		4.34	pCi/gm	E 901.1M		8/19/98	DS	---	---	---

Quality Control Report
Blanks

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	8/6/98		4735
Acrylonitrile		<5	ug/L	5	8/6/98		4735
Benzene		<1	ug/L	1	8/6/98		4735
Carbon tetrachloride		<1	ug/L	1	8/6/98		4735
Chlorobenzene		<1	ug/L	1	8/6/98		4735
1,2-dichloroethane		<1	ug/L	1	8/6/98		4735
1,1,2,2-tetrachloroethane		<1	ug/L	1	8/6/98		4735
1,1,1-trichloroethane		<1	ug/L	1	8/6/98		4735
1,1,2-trichloroethane		<1	ug/L	1	8/6/98		4735
1,1,2-trichloroethylene		<1	ug/L	1	8/6/98		4735
Chloroform		<1	ug/L	1	8/6/98		4735
Dichlorobenzene		<2	ug/L	2	8/6/98		4735
1,1-dichloroethylene		<1	ug/L	1	8/6/98		4735
Dichloropropenes		<1	ug/L	1	8/6/98		4735
Ethylbenzene		<1	ug/L	1	8/6/98		4735
Bromodichloromethane		<1	ug/L	1	8/6/98		4735
Bromomethane		<5	ug/L	5	8/6/98		4735
Chloromethane		<1	ug/L	1	8/6/98		4735
Dichlorodifluoromethane		<1	ug/L	1	8/6/98		4735
Dichloromethane		<1	ug/L	1	8/6/98		4735
Trichlorofluoromethane		<1	ug/L	1	8/6/98		4735
Tetrachloroethylene		<1	ug/L	1	8/6/98		4735
Toluene		<1	ug/L	1	8/6/98		4735
Trichloroethylene		<1	ug/L	1	8/6/98		4735
Vinyl chloride		<1	ug/L	1	8/6/98		4735
m,p-xylene		<1	ug/L	1	8/6/98		4735
o-xylene		<1	ug/L	1	8/6/98		4735
1,1-dichloroethane		<1	ug/L	1	8/6/98		4735
Ethylene dibromide		<1	ug/L	1	8/6/98		4735
cis-1,2-dichlorethylene		<1	ug/L	1	8/6/98		4735
trans-1,2-dichloroethylene		<1	ug/L	1	8/6/98		4735
Methylene chloride		<5	ug/L	5	8/6/98		4735
Surr. Dibromofluoromethane		95	%	72-130	8/6/98		4735
Surr. Toluene-d8		105	%	77-127	8/6/98		4735
Surr. 4-Bromofluorobenzene		102	%	72-131	8/6/98		4735
Acrolein		<125	ug/Kg	125	8/6/98		4736
Acrylonitrile		<125	ug/Kg	125	8/6/98		4736
Benzene		<25	ug/Kg	25	8/6/98		4736
Carbon tetrachloride		<25	ug/Kg	25	8/6/98		4736
Chlorobenzene		<25	ug/Kg	25	8/6/98		4736
1,2-dichloroethane		<25	ug/Kg	25	8/6/98		4736

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	8/6/98		4736
1,1,1-trichloroethane		<25	ug/Kg	25	8/6/98		4736
1,1,2-trichloroethane		<25	ug/Kg	25	8/6/98		4736
1,1,2-trichloroethylene		<25	ug/Kg	25	8/6/98		4736
Chloroform		<25	ug/Kg	25	8/6/98		4736
Dichlorobenzene		<50	ug/Kg	50	8/6/98		4736
1,1-dichloroethylene		<25	ug/Kg	25	8/6/98		4736
Dichloropropenes		<25	ug/Kg	25	8/6/98		4736
Ethylbenzene		<25	ug/Kg	25	8/6/98		4736
Bromodichloromethane		<25	ug/Kg	25	8/6/98		4736
Bromomethane		<25	ug/Kg	25	8/6/98		4736
Chloromethane		<25	ug/Kg	25	8/6/98		4736
Dichlorodifluoromethane		<25	ug/Kg	25	8/6/98		4736
Dichloromethane		<25	ug/Kg	25	8/6/98		4736
Trichlorofluoromethane		<25	ug/Kg	25	8/6/98		4736
Tetrachloroethylene		<25	ug/Kg	25	8/6/98		4736
Toluene		<25	ug/Kg	25	8/6/98		4736
Trichloroethylene		<25	ug/Kg	25	8/6/98		4736
Vinyl chloride		<25	ug/Kg	25	8/6/98		4736
m,p-xylene		<25	ug/Kg	25	8/6/98		4736
o-xylene		<25	ug/Kg	25	8/6/98		4736
1,1-dichloroethane		<25	ug/Kg	25	8/6/98		4736
Ethylene dibromide		<25	ug/Kg	25	8/6/98		4736
cis-1,2-dichlorethylene		<25	ug/Kg	25	8/6/98		4736
trans-1,2-dichloroethylene		<25	ug/Kg	25	8/6/98		4736
Methylene chloride		<125	ug/Kg	125	8/6/98		4736
Surr. Dibromofluoromethane		85	%	72-130	8/6/98		4736
Surr. Toluene-d8		99	%	77-127	8/6/98		4736
Surr. 4-Bromofluorobenzene		96	%	72-131	8/6/98		4736
PCB		<0.1	mg/Kg	0.1	8/10/98	4691	4805
Cyanide		<0.01	mg/Kg	0.01	8/11/98		4815
Total Mercury		<0.25	mg/Kg	0.25	8/11/98	4662	4812
Fluoride		<0.2	mg/Kg	0.2	8/13/98		4862
Nitrate		<0.2	mg/Kg	0.2	8/13/98		4862
Chloride		<1.0	mg/Kg	1.0	8/13/98		4862
Sulfate		<1.0	mg/Kg	1.0	8/13/98		4862
Chloride		<1.0	mg/Kg	1.0	8/17/98		4930
TRPHC		<10.0	mg/Kg	10	8/6/98	4663	4738
Arsenic		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Barium		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Cadmium		<0.1	mg/Kg	0.1	8/20/98	4710	5030
Chromium		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Lead		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Selenium		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Silver		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Uranium		<1.0	mg/Kg	1.0	8/20/98	4710	5030
Copper		<1.0	mg/Kg	1.0	8/20/98	4710	5030
Iron		<2.0	mg/Kg	2.0	8/20/98	4710	5030
Manganese		<1.0	mg/Kg	1.0	8/20/98	4710	5030

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Zinc		<2.0	mg/Kg	2.0	8/20/98	4710	5030
Aluminum		<10	mg/Kg	10	8/20/98	4710	5030
Boron		<10	mg/Kg	10	8/20/98	4710	5030
Cobalt		<0.05	mg/Kg	0.5	8/20/98	4710	5030
Molybdenum		<1.0	mg/Kg	1.0	8/20/98	4710	5030
Nickel		<0.05	mg/Kg	0.5	8/20/98	4710	5030
TRPHC		<10.0	mg/Kg	10	8/22/98	4743	5045
Total Phenols		<0.25	mg/Kg	0.25	8/11/98		4813
Benzidine		<2.5	mg/kg	2.5	9/18/98	4916	5412
Hexachlorobenzene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Pentachlorobenzene		<0.25	mg/kg	0.25	9/18/98	4916	5412
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Hexachloroethane		<0.25	mg/kg	0.25	9/18/98	4916	5412
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/18/98	4916	5412
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/18/98	4916	5412
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/18/98	4916	5412
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Diphenylhydrazine		<1.25	mg/kg	1.25	9/18/98	4916	5412
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Isophorone		<1.25	mg/kg	1.25	9/18/98	4916	5412
Nitrobenzene		<0.25	mg/kg	0.25	9/18/98	4916	5412
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/18/98	4916	5412
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/18/98	4916	5412
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/18/98	4916	5412
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/18/98	4916	5412
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/18/98	4916	5412
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/18/98	4916	5412
Pentachlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412
Dibutyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
Diethyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
Dimethyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
Anthracene		<0.25	mg/kg	0.25	9/18/98	4916	5412
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Fluoranthene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Fluorene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Phenanthrene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Pyrene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Naphthalene		<0.25	mg/kg	0.25	9/18/98	4916	5412
1-methylnaphthalene		<0.25	mg/kg	0.25	9/18/98	4916	5412
2-methylnaphthalene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/18/98	4916	5412

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Surr. 2-Fluorophenol		76	%	25-121	8/21/98	4650	5040
Surr. Phenol-d6		79	%	24-113	8/21/98	4650	5040
Surr. Nitroobenzene-d5		75	%	23-120	8/21/98	4650	5040
Surr. 2-Fluorobiphenyl		84	%	30-115	8/21/98	4650	5040
Surr. 2,4,6-Tribromophenol		92	%	19-122	8/21/98	4650	5040
Surr. Terphenyl-d14		109	%	28-137	8/21/98	4650	5040

Quality Control Report
Continuing Calibration Verification Standard

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	100	100	8/6/98	4735
1,1-Dichloroethene		100	ug/L	94	94	8/6/98	4735
Chloroform		100	ug/L	97	97	8/6/98	4735
1,2-Dichloropropane		100	ug/L	120	120	8/6/98	4735
Toluene		100	ug/L	97	97	8/6/98	4735
Chlorobenzene		100	ug/L	92	92	8/6/98	4735
Ethylbenzene		100	ug/L	98	98	8/6/98	4735
Vinyl chloride		100	ug/L	100	100	8/6/98	4736
1,1-Dichloroethene		100	ug/L	94	94	8/6/98	4736
Chloroform		100	ug/L	97	97	8/6/98	4736
1,2-Dichloropropane		100	ug/L	120	120	8/6/98	4736
Toluene		100	ug/L	97	97	8/6/98	4736
Chlorobenzene		100	ug/L	92	92	8/6/98	4736
Ethylbenzene		100	ug/L	98	98	8/6/98	4736
PCB		0.40	mg/L	0.42	105	8/10/98	4805
Cyanide		0.12	mg/L	0.12	100	8/11/98	4815
Total Mercury		5.00	mg/L	4.75	95	8/11/98	4812
pH		7.0	mg/L	7.0	100	8/9/98	4775
Fluoride		2.5	mg/L	2.41	96	8/13/98	4862
Nitrate		5.0	mg/L	4.815	96	8/13/98	4862
Chloride		12.5	mg/L	11.86	95	8/13/98	4862
Sulfate		12.5	mg/L	12.55	100	8/13/98	4862
Chloride		12.5	mg/L	13.085	105	8/17/98	4930
TRPHC		100	mg/L	99	99	8/6/98	4738
Arsenic		1.0	mg/L	0.97	97	8/20/98	5030
Barium		1.0	mg/L	0.97	97	8/20/98	5030
Cadmium		1.0	mg/L	0.95	95	8/20/98	5030
Chromium		1.0	mg/L	0.96	96	8/20/98	5030
Lead		1.0	mg/L	0.95	95	8/20/98	5030
Selenium		1.0	mg/L	0.97	97	8/20/98	5030
Silver		0.2	mg/L	0.19	98	8/20/98	5030
Uranium		1.0	mg/L	0.97	97	8/20/98	5030
Copper		1.0	mg/L	0.99	99	8/20/98	5030
Iron		1.0	mg/L	1.0	100	8/20/98	5030
Manganese		1.0	mg/L	0.97	97	8/20/98	5030
Zinc		1.0	mg/L	0.95	95	8/20/98	5030
Aluminum		1.0	mg/L	0.97	97	8/20/98	5030
Boron		1.0	mg/L	0.97	97	8/20/98	5030

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Date: 10-6-98
Page # 18
Order ID Number: 9808000070

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Cobalt		1.0	mg/L	0.98	98	8/20/98	5030
Molybdenum		1.0	mg/L	0.97	97	8/20/98	5030
Nickel		1.0	mg/L	0.99	99	8/20/98	5030
TRPHC		100	mg/L	104	104	8/22/98	5045
Total Phenols		0.80	mg/L	0.81	101	8/11/98	4813
TDS		1,000	mg/L	961	96	8/13/98	4872
Phenol		80	mg/L	83	104	8/21/98	5040
1,4-Dichlorobenzene		80	mg/L	80	100	8/21/98	5040
2-nitrophenol		80	mg/L	86	108	8/21/98	5040
2,4-Dichlorophenol		80	mg/L	84	105	8/21/98	5040
Hexachlorobutadiene		80	mg/L	80	100	8/21/98	5040
4-Chloro-3-methylphenol		80	mg/L	83	104	8/21/98	5040
2,4,6-Trichlorophenol		80	mg/L	83	104	8/21/98	5040
Acenaphthene		80	mg/L	79	99	8/21/98	5040
n-Nitrosodiphenylamine		80	mg/L	83	104	8/21/98	5040
Pentachlorophenol		80	mg/L	96	120	8/21/98	5040
Pyrene		80	mg/L	78	98	8/21/98	5040
Benzo(a)pyrene		80	mg/L	82	103	8/21/98	5040

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98
Page # 19

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	83	83	100	85	85	2.4	8/6/98		4735
Benzene		ug/L	<1	100	105	105	100	109	109	3.7	8/6/98		4735
Trichloroethene		ug/L	<1	100	86	86	100	91	91	5.6	8/6/98		4735
Toluene		ug/L	<1	100	94	94	100	97	97	3.1	8/6/98		4735
Chlorobenzene		ug/L	<1	100	88	88	100	90	90	2.2	8/6/98		4735
1,1-Dichloroethene		ug/Kg	<25	100	82	82	100	82	82	0	8/6/98		4736
Benzene		ug/Kg	<1	100	105	105	100	105	105	0	8/6/98		4736
Trichloroethene		ug/Kg	<25	100	89	89	100	89	89	0	8/6/98		4736
Toluene		ug/Kg	<25	100	94	94	100	95	95	1.0	8/6/98		4736
Chlorobenzene		ug/Kg	<25	100	88	88	100	88	88	0	8/6/98		4736
[illegible]CB		mg/Kg	<0.1	0.50	0.44	88	0.50	0.47	94	6.6	8/10/98	4691	4805
[illegible]yanide		mg/Kg	<0.01	0.12	0.12	100	0.12	0.12	100	0	8/11/98		4815
Total Mercury		mg/Kg	<0.25	2.5	2.2	88	2.5	2.2	88	0	8/11/98		4812
Fluoride		mg/Kg	0.95	12.5	12.9	96	12.5	13.22	98	2.1	8/13/98		4862
Nitrate		mg/Kg	<0.2	25	25.94	104	25	25.96	104	0	8/13/98		4862
Chloride		mg/Kg	15.1	62.5	72.72	92	62.5	73.07	93	1.1	8/13/98		4862
Sulfate		mg/Kg	20	62.5	79.19	95	62.5	80.76	97	2.1	8/13/98		4862
Chloride		mg/Kg	11.44	12.5	25.09	109	12.5	25.2	110	0.91	8/17/98		4930
TRPHC		mg/Kg	<10.0	250	235	94	250	220	88	6.6	8/6/98	4663	4738
Arsenic		mg/Kg	<0.50	200	156	78	200	158	79	1.3	8/20/98	4710	5030
Barium		mg/Kg	24	200	199	88	200	202	89	1.1	8/20/98	4710	5030
Cadmium		mg/Kg	0.51	200	160	80	200	160	80	0	8/20/98	4710	5030
Chromium		mg/Kg	3.8	200	174	85	200	174	85	0	8/20/98	4710	5030
Lead		mg/Kg	2.7	200	168	83	200	171	84	1.2	8/20/98	4710	5030
Selenium		mg/Kg	<0.50	200	156	78	200	161	81	3.8	8/20/98	4710	5030
Silver		mg/Kg	<0.50	100	84	84	100	79	79	6.1	8/20/98	4710	5030
Uranium		mg/Kg	<0.50	200	150	75	200	151	76	1.3	8/20/98	4710	5030
Copper		mg/Kg	2.3	200	177	87	200	177	89	2.3	8/20/98	4710	5030
Iron		mg/Kg	<0.50	200	154	77	200	150	75	2.6	8/20/98	4710	5030
Manganese		mg/Kg	40	200	212	86	200	212	86	0	8/20/98	4710	5030
Zinc		mg/Kg	9.3	200	176	83	200	180	86	3.6	8/20/98	4710	5030
Aluminum		mg/Kg	<0.50	200	219	110	200	205	106	3.7	8/20/98	4710	5030
Boron		mg/Kg	7.9	200	170	81	200	174	83	2.4	8/20/98	4710	5030
Cobalt		mg/Kg	3.9	200	170	83	200	175	86	3.6	8/20/98	4710	5030
Molybdenum		mg/Kg	1.8	200	173	86	200	175	87	1.2	8/20/98	4710	5030
Nickel		mg/Kg	3.2	200	167	82	200	169	83	1.2	8/20/98	4710	5030
TRPHC		mg/Kg	<10.0	250	276	110	250	235	94	16	8/22/98	4743	5045
Total Phenols		mg/Kg	<0.01	0.80	0.77	96	0.80	0.79	99	3.1	8/11/98		4813
[illegible]enol		mg/Kg	<0.25	10.00	8.84	88	10.00	8.71	87	1.1	8/21/98	4650	5040
[illegible]-Chlorophenol		mg/Kg	<1.25	10.00	8.70	87	10.00	8.40	84	3.5	8/21/98	4650	5040
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	8.23	82	10.00	7.98	80	2.5	8/21/98	4650	5040
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	7.80	78	10.00	9.06	91	15	8/21/98	4650	5040

Order ID Number: 9808000070

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	7.43	74	10.00	7.65	77	4.0	8/21/98	4650	5040
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	8.41	84	10.00	9.32	93	10	8/21/98	4650	5040
Acenaphthene		mg/Kg	<0.25	10.00	9.89	99	10.00	9.96	100	1.0	8/21/98	4650	5040
4-Nitrophenol		mg/Kg	<1.25	10.00	8.78	88	10.00	7.79	78	12	8/21/98	4650	5040
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	11.1	111	10.00	11.2	112	0.9	8/21/98	4650	5040
Pentachlorophenol		mg/Kg	<1.25	10.00	8.64	86	10.00	6.84	68	23	8/21/98	4650	5040
Pyrene		mg/Kg	<0.25	10.00	11.4	114	10.00	12.6	126	10	8/21/98	4650	5040

Quality Control Report
Duplicate

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000070

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		mg/Kg	8.2	8.2	0	8/9/98		4775
TDS		mg/Kg	160	144	11	8/13/98		4872

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Ste. 9
Lubbock, TX 79424
Phone: 800-378-1296
Fax: (806) 794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0814	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	104147	**ARS Sample I.D.:**	ARS-98-2946
Date Sampled:	N/A	**Date Received:**	08/14/98
Time Sampled:	N/A	**Time Received**	1551
Type of Sample:	Soil	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.89	1.78	pCi/gm	0.107	0.066	Bq/gm	EPA 901.1M	8/19/98 1345	DC
Ra-228	<0.16	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	8/19/98 1345	DC
Pb-210	<1.03	N/A	pCi/gm	<0.038	N/A	Bq/gm	EPA 901.1M	8/19/98 1345	DC
Total Activity	4.80	N/A	pCi/gm	0.178	N/A	Bq/gm	EPA 901.1M	8/19/98 1345	DC

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0814	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	104148	**ARS Sample I.D.:**	ARS-98-2947
Date Sampled:	N/A	**Date Received:**	08/14/98
Time Sampled:	N/A	**Time Received**	1551
Type of Sample:	Soil	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.16	N/A	pCi/gm	<0.043	N/A	Bq/gm	EPA 901.1M	8/19/98 1416	DC
Ra-228	<0.12	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	8/19/98 1416	DC
Pb-210	3.03	2.84	pCi/gm	0.112	0.105	Bq/gm	EPA 901.1M	8/19/98 1416	DC
Total Activity	4.34	N/A	pCi/gm	0.161	N/A	Bq/gm	EPA 901.1M	8/19/98 1416	DC

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ARS
AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeffrey Kindley
Phone #: (915) -563-0118
FAX #: (915) -563-9526

Company Name & Address: Philip Services Corporation
7904 IH 20 West
Midland, Tx 79707

Project #: 19349
Project Name: Shell Grimes

Project Location: Grimes Battery, Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	Methanol	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	SAMPLING: DATE	TIME
104142	Trip Blank	2	40ml VOA	✓							✓		07/30/98	1730
43	Field Blank	2	40ml VOA	✓					✓		✓		07/30/98	1730
46	CSS #8	1	4oz Jar		✓						✓		07/30/98	1355
44	Trip Blank	2	40ml VOA	✓							✓		07/31/98	1745
45	Field Blank	2	40ml VOA	✓					✓		✓		07/31/98	1745
47	MW-3 (53-55')	5	4oz Jars		✓						✓		07/31/98	1330
	MW-3 (53-55')	1	40ml VOA		✓			✓			✓		07/31/98	1330
48	MW-3 (63-65')	5	4oz Jars		✓						✓		07/31/98	1425
	MW-3 (63-65')	1	40ml VOA		✓			✓			✓		07/31/98	1425

ANALYSIS REQUEST

BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240/8260	8270	VOC's	Soil Attached	Chloride (EPA 160.1)
	✓									✓	✓

SPECIAL HANDLING

- Turn around # of days
- Fax ASAP
- Hold

Relinquished by: Jeffrey Kindley Date: August 4, 1998 Time: 4:10 PM
Received by: Helen Shelton 8/4/98 Time: 4:10 PM

Relinquished by: Helen Shelton 8/4/98 Time: 6:40 PM
Received by: Date: Time:

Relinquished by: Date: Time:
Received at Laboratory by: Vicki Wortham 8-5-98 Time: 9:50 AM ONP

REMARKS
run Both Trip Bk.
Normal Turnaround

Shirted Greyhound (-1) 21 samples. HC 155 758 597 5

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
104339	MW-5 58-60'	8/5/98	11:30	8/7/98
104340	MW-5 63-65'	8/5/98	11:58	8/7/98
104341	Field Blank	8/5/98	17:00	8/7/98
104342	Trip Blank			8/7/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All data meets quality control criteria with the exceptions:
8270 matrix spike and spike duplicate RPD out of limits of 20%.
Semivolatile 104340 surrogate recovery out of limits.

Corrections:
1) Dichlorobenzene and 1,1-dichloroethylene blank results corrected.
2) Flag added for Semivolatile 104340 surrogate recovery out of limits.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123
Sample Number: 104341

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/13/98	AG		4864	5
Acrylonitrile		<5	ug/L	S-8260B		8/13/98	AG		4864	5
Benzene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Chlorobenzene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Chloroform		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Dichlorobenzene		<2	ug/L	S-8260B		8/13/98	AG		4864	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Dichloropropenes		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Ethylbenzene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Bromodichloromethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Bromomethane		<5	ug/L	S-8260B		8/13/98	AG		4864	5
Chloromethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Dichloromethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Toluene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Trichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Vinyl chloride		<1	ug/L	S-8260B		8/13/98	AG		4864	1
m,p-xylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
o-xylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Ethylene dibromide		<1	ug/L	S-8260B		8/13/98	AG		4864	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Methylene chloride		<5	ug/L	S-8260B		8/13/98	AG		4864	5
Surr. Dibromofluoromethane		114	%	S-8260B		8/13/98	AG		4864	72-130
Surr. Toluene-d8		113	%	S-8260B		8/13/98	AG		4864	77-127
Surr. 4-Bromofluorobenzene		113	%	S-8260B		8/13/98	AG		4864	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 3

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123
Sample Number: 104342

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/13/98	AG		4864	5
Acrylonitrile		<5	ug/L	S-8260B		8/13/98	AG		4864	5
Benzene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Chlorobenzene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Chloroform		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Dichlorobenzene		<2	ug/L	S-8260B		8/13/98	AG		4864	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Dichloropropenes		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Ethylbenzene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Bromodichloromethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Bromomethane		<5	ug/L	S-8260B		8/13/98	AG		4864	5
Chloromethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Dichloromethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Toluene		2	ug/L	S-8260B		8/13/98	AG		4864	1
Trichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Vinyl chloride		<1	ug/L	S-8260B		8/13/98	AG		4864	1
m,p-xylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
o-xylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Ethylene dibromide		<1	ug/L	S-8260B		8/13/98	AG		4864	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4864	1
Methylene chloride		<5	ug/L	S-8260B		8/13/98	AG		4864	5
Surr. Dibromofluoromethane		114	%	S-8260B		8/13/98	AG		4864	72-130
Surr. Toluene-d8		113	%	S-8260B		8/13/98	AG		4864	77-127
Surr. 4-Bromofluorobenzene		112	%	S-8260B		8/13/98	AG		4864	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-13-99
Page # 4

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123
Sample Number: 104339

Sample Description: MW-5 58-60'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		8/13/98	AG		4869	125
Acrylonitrile		<125	ug/Kg	S-8260B		8/13/98	AG		4869	125
Benzene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Chlorobenzene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Chloroform		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Dichlorobenzene		<50	ug/Kg	S-8260B		8/13/98	AG		4869	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Dichloropropenes		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Ethylbenzene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Bromodichloromethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Bromomethane		<125	ug/Kg	S-8260B		8/13/98	AG		4869	125
Chloromethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Dichloromethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Toluene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Trichloroethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Vinyl chloride		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
m,p-xylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
o-xylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Ethylene dibromide		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Methylene chloride		<125	ug/Kg	S-8260B		8/13/98	AG		4869	125
Surr. Dibromofluoromethane		112	%	S-8260B		8/13/98	AG		4869	72-130
Surr. Toluene-d8		114	%	S-8260B		8/13/98	AG		4869	77-127
Surr. 4-Bromofluorobenzene		119	%	S-8260B		8/13/98	AG		4869	72-131
Benzidine		<25	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	25
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123
Sample Number: 104339

Sample Description: MW-5 58-60'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
2,4-dichlorphenol		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
bis (2-chloroethl) ether		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Isophorone		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
N-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
N-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
Phenol		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Anthracene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Fluorene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Pyrene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
2-methylnaphthalene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Surr. 2-Fluorophenol		67	%	S-8270C	8/10/98	8/18/98	DG	4702	4965	25-121
Surr. Phenol-d6		61	%	S-8270C	8/10/98	8/18/98	DG	4702	4965	24-113
Surr. Nitroobenzene-d5		56	%	S-8270C	8/10/98	8/18/98	DG	4702	4965	23-120
Surr. 2-Fluorobiphenyl		93	%	S-8270C	8/10/98	8/18/98	DG	4702	4965	30-115
Surr. 2,4,6-Tribromophenol		22	%	S-8270C	8/10/98	8/18/98	DG	4702	4965	19-122

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123
Sample Number: 104339

Sample Description: MW-5 58-60'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Surr. Terphenyl-d14		101	%	S-8080	8/10/98	8/18/98	DG	4702	4965	28-137
Aldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
PCB's		<0.25	mg/Kg	S 8082	8/10/98	8/12/98	MS	4699	4832	0.25
Arsenic		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Barium		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Cadmium		<0.10	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.10
Chromium		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Lead		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Total Mercury		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Selenium		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Silver		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Uranium		<10	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	10
Copper		<1.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Iron		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Manganese		<1.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Zinc		<2.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	2.0
Aluminum		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Boron		<10	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	10
Cobalt		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Nickel		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		8/20/98			5028	0.01
Fluoride		0.77	mg/Kg	E 300.0		8/20/98			5025	0.1
Nitrate		1.1	mg/Kg	E 300.0		8/20/98			5025	0.2
Chloride		18	mg/Kg	E 300.0		8/20/98			5025	1.0
Sulfate		38	mg/Kg	E 300.0		8/20/98			5025	1.0
TDS		280	mg/Kg	E 160.1		9/2/98			5195	---
TRPHC		3,170	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenols		7.8	mg/Kg	SM 5530 A,D		8/19/98	RC		5015	0.25
Total Radium		4.33	pCi/gm	E 901.1M		8/18/98	DS	---	---	---
pH		10.3	s.u.	E 150.1		8/9/98	BP		4775	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-13-99
Page # 7

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123
Sample Number: 104340

Sample Description: MW-5 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		8/13/98	AG		4869	125
Acrylonitrile		<125	ug/Kg	S-8260B		8/13/98	AG		4869	125
Benzene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Chlorobenzene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Chloroform		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Dichlorobenzene		<50	ug/Kg	S-8260B		8/13/98	AG		4869	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Dichloropropenes		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Ethylbenzene		110	ug/Kg	S-8260B		8/13/98	AG		4869	25
Bromodichloromethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Bromomethane		<125	ug/Kg	S-8260B		8/13/98	AG		4869	125
Chloromethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Dichloromethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Toluene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Trichloroethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Vinyl chloride		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
m,p-xylene		970	ug/Kg	S-8260B		8/13/98	AG		4869	25
o-xylene		210	ug/Kg	S-8260B		8/13/98	AG		4869	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Ethylene dibromide		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		8/13/98	AG		4869	25
Methylene chloride		<125	ug/Kg	S-8260B		8/13/98	AG		4869	125
Surr. Dibromofluoromethane		119	%	S-8260B		8/13/98	AG		4869	72-130
Surr. Toluene-d8		113	%	S-8260B		8/13/98	AG		4869	77-127
Surr. 4-Bromofluorobenzene		116	%	S-8260B		8/13/98	AG		4869	72-131
Benzidine		<25	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	25
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Hexachloroethane		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123
Sample Number: 104340

Sample Description: MW-5 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorphenol		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
bis (2-chloroethl) ether		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Isophorone		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
i-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	12.5
Phenol		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Anthracene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Fluorene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Pyrene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
2-methylnaphthalene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	8/10/98	8/18/98	DG	4702	4965	2.5
Surr. 2-Fluorophenol		68	%	S-8270C	8/10/98	8/18/98	DG	4702	4965	25-121
Surr. Phenol-d6		57	%	S-8270C	8/10/98	8/18/98	DG	4702	4965	24-113
Surr. Nitroobenzene-d5		54	%	S-8270C	8/10/98	8/18/98	DG	4702	4965	23-120
Surr. 2-Fluorobiphenyl		96	%	S-8270C	8/10/98	8/18/98	DG	4702	4965	30-115
Surr. 2,4,6-Tribromophenol	*	3	%	S-8270C	8/10/98	8/18/98	DG	4702	4965	19-122
Surr. Terphenyl-d14		113	%	S-8270C	8/10/98	8/18/98	DG	4702	4965	28-137

* Surrogate out of standard limits.

Date: 05-13-99
Page # 9
Order ID Number: 9808000123
Sample Number: 104340

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Sample Description: MW-5 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
PCB's		<0.25	mg/Kg	S 8082	8/10/98	8/12/98	MS	4699	4832	0.25
Arsenic		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Barium		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Cadmium		<0.10	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.10
Chromium		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Lead		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Total Mercury		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Selenium		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Silver		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Uranium		<10	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	10
Copper		<1.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Iron		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Manganese		<1.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Zinc		<2.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	2.0
Aluminum		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Boron		<10	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	10
Cobalt		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Nickel		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		8/20/98	sa		5028	0.01
Fluoride		0.83	mg/Kg	E 300.0		8/13/98	JS		4863	0.2
Nitrate		<0.2	mg/Kg	E 300.0		8/17/98	JS		4930	0.2
Chloride		37	mg/Kg	E 300.0		8/13/98	JS		4863	1.0
Sulfate		35	mg/Kg	E 300.0		8/13/98	JS		4863	1.0
TDS		260	mg/Kg	E 160.1		9/2/98	RS		5195	---
pH		8.9	s.u.	E 150.1		8/9/98	BP		4775	---
TRPHC		1,950	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		8/19/98	RC		5015	0.25
Total Radium		4.33	pCi/gm	E 901.1M		8/18/98	DS	---	---	---

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	8/13/98		4864
Acrylonitrile		<5	ug/L	5	8/13/98		4864
Benzene		<1	ug/L	1	8/13/98		4864
Carbon tetrachloride		<1	ug/L	1	8/13/98		4864
Chlorobenzene		<1	ug/L	1	8/13/98		4864
1,2-dichloroethane		<1	ug/L	1	8/13/98		4864
1,1,2,2-tetrachloroethane		<1	ug/L	1	8/13/98		4864
1,1,1-trichloroethane		<1	ug/L	1	8/13/98		4864
1,1,2-trichloroethane		<1	ug/L	1	8/13/98		4864
1,1,2-trichloroethylene		<1	ug/L	1	8/13/98		4864
Chloroform		<1	ug/L	1	8/13/98		4864
Dichlorobenzene		<2	ug/L	2	8/13/98		4864
1,1-dichloroethylene		<1	ug/L	1	8/13/98		4864
Dichloropropenes		<1	ug/L	1	8/13/98		4864
Ethylbenzene		<1	ug/L	1	8/13/98		4864
Bromodichloromethane		<1	ug/L	1	8/13/98		4864
Bromomethane		<5	ug/L	5	8/13/98		4864
Chloromethane		<1	ug/L	1	8/13/98		4864
Dichlorodifluoromethane		<1	ug/L	1	8/13/98		4864
Dichloromethane		<1	ug/L	1	8/13/98		4864
Trichlorofluorometane		<1	ug/L	1	8/13/98		4864
Tetrachloroethylene		<1	ug/L	1	8/13/98		4864
Toluene		<1	ug/L	1	8/13/98		4864
Trichloroethylene		<1	ug/L	1	8/13/98		4864
Vinyl chloride		<1	ug/L	1	8/13/98		4864
m,p-xylene		<1	ug/L	1	8/13/98		4864
o-xylene		<1	ug/L	1	8/13/98		4864
1,1-dichloroethane		<1	ug/L	1	8/13/98		4864
Ethylene dibromide		<1	ug/L	1	8/13/98		4864
cis-1,2-dichlorethylene		<1	ug/L	1	8/13/98		4864
trans-1,2-dichloroethylene		<1	ug/L	1	8/13/98		4864
Methylene chloride		<5	ug/L	5	8/13/98		4864
Surr. Dibromofluoromethane		108	ug/L	72-130	8/13/98		4864
Surr. Toluene-d8		112	ug/L	77-127	8/13/98		4864
Surr. 4-Bromofluorobenzene		113	ug/L	72-131	8/13/98		4864
Acrolein		<125	ug/Kg	125	8/13/98		4869
Acrylonitrile		<125	ug/Kg	125	8/13/98		4869
Benzene		<25	ug/Kg	25	8/13/98		4869

Corrected

Date: 05-26-99
Page # 11
Order ID Number: 9808000123

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Carbon tetrachloride		<25	ug/Kg	25	8/13/98		4869
Chlorobenzene		<25	ug/Kg	25	8/13/98		4869
1,2-dichloroethane		<25	ug/Kg	25	8/13/98		4869
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	8/13/98		4869
1,1,1-trichloroethane		<25	ug/Kg	25	8/13/98		4869
1,1,2-trichloroethane		<25	ug/Kg	25	8/13/98		4869
1,1,2-trichloroethylene		<25	ug/Kg	25	8/13/98		4869
Chloroform		<25	ug/Kg	25	8/13/98		4869
Dichlorobenzene		<50	ug/Kg	**50	8/13/98		4869
1,1-dichloroethylene		<25	ug/Kg	**25	8/13/98		4869
Dichloropropenes		<25	ug/Kg	25	8/13/98		4869
Ethylbenzene		<25	ug/Kg	25	8/13/98		4869
Bromodichloromethane		<25	ug/Kg	25	8/13/98		4869
Bromomethane		<125	ug/Kg	125	8/13/98		4869
Chloromethane		<25	ug/Kg	25	8/13/98		4869
Dichlorodifluoromethane		<25	ug/Kg	25	8/13/98		4869
Dichloromethane		<25	ug/Kg	25	8/13/98		4869
Trichlorofluoromethane		<25	ug/Kg	25	8/13/98		4869
Tetrachloroethylene		<25	ug/Kg	25	8/13/98		4869
Toluene		<25	ug/Kg	25	8/13/98		4869
Trichloroethylene		<25	ug/Kg	25	8/13/98		4869
Vinyl chloride		<25	ug/Kg	25	8/13/98		4869
m,p-xylene		<25	ug/Kg	25	8/13/98		4869
o-xylene		<25	ug/Kg	25	8/13/98		4869
1,1-dichloroethane		<25	ug/Kg	25	8/13/98		4869
Ethylene dibromide		<25	ug/Kg	25	8/13/98		4869
cis-1,2-dichlorethylene		<25	ug/Kg	25	8/13/98		4869
trans-1,2-dichloroethylene		<25	ug/Kg	25	8/13/98		4869
Methylene chloride		<125	ug/Kg	125	8/13/98		4869
Surr. Dibromofluoromethane		120	%	72-130	8/13/98		4869
Surr. Toluene-d8		116	%	77-127	8/13/98		4869
Surr. 4-Bromofluorobenzene		118	%	72-131	8/13/98		4869
Benzidine		<2.5	mg/Kg	2.5	8/18/98	4702	4965
Hexachlorobenzene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Pentachlorobenzene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Hexachloroethane		<0.25	mg/Kg	0.25	8/18/98	4702	4965
2,4-dichlorophenol		<1.25	mg/Kg	1.25	8/18/98	4702	4965
2,4,5-trichlorophenol		<1.25	mg/Kg	1.25	8/18/98	4702	4965
2,4,6-trichlorophenol		<1.25	mg/Kg	1.25	8/18/98	4702	4965
bis (2-chloroethl) ether		<1.25	mg/Kg	1.25	8/18/98	4702	4965
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	1.25	8/18/98	4702	4965
bis (chloromethyl) ether		<1.25	mg/Kg	1.25	8/18/98	4702	4965

** Reporting limits corrected.

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
3,3-dichlorobenzidine		<1.25	mg/Kg	1.25	8/18/98	4702	4965
2,4-dinitrotoluene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Diphenylhydrazine		<1.25	mg/Kg	1.25	8/18/98	4702	4965
Hexachlorobutadiene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Hexachlorocyclopentadiene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Isophorone		<1.25	mg/Kg	1.25	8/18/98	4702	4965
Nitrobenzene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
2,4-dinitro-o-cresol		<1.25	mg/Kg	1.25	8/18/98	4702	4965
2,4-dinitrophenols		<1.25	mg/Kg	1.25	8/18/98	4702	4965
i-nitrosodiethylamine		<0.25	mg/Kg	0.25	8/18/98	4702	4965
N-nitrosodimethylamine		<0.25	mg/Kg	0.25	8/18/98	4702	4965
N-nitrosodibutylamine		<1.25	mg/Kg	1.25	8/18/98	4702	4965
N-nitrosodiphenylamine		<0.25	mg/Kg	0.25	8/18/98	4702	4965
N-nitrosopyrrolidine		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Pentachlorophenol		<1.25	mg/Kg	1.25	8/18/98	4702	4965
Phenol		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Dibutyl phthalate		<0.25	mg/Kg	0.25	8/18/98	4702	4965
s(2-ethylhexyl) phthalate		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Diethyl phthalate		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Dimethyl phthalate		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Anthracene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Fluoranthene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Fluorene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Phenanthrene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Pyrene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Naphthalene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
1-methylnaphthalene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
2-methylnaphthalene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Benzo-a-pyrene		<0.25	mg/Kg	0.25	8/18/98	4702	4965
monomethylnaphthalenes		<0.25	mg/Kg	0.25	8/18/98	4702	4965
Surr. 2-Fluorophenol		98	%	25-121	8/18/98	4702	4965
Surr. Phenol-d6		97	%	24-113	8/18/98	4702	4965
Surr. Nitroobenzene-d5		74	%	23-120	8/18/98	4702	4965
Surr. 2-Fluorobiphenyl		103	%	30-115	8/18/98	4702	4965
Surr. 2,4,6-Tribromophenol		75	%	19-122	8/18/98	4702	4965
Surr. Terphenyl-d14		107	%	28-137	8/18/98	4702	4965
Cyanide		<0.01	mg/Kg	0.01	8/20/98		5028
TRPHC		<10.0	mg/Kg	10	8/22/98	4743	5045
Total Phenols		<0.25	mg/Kg	0.25	8/19/98		5015
Total Mercury		<0.25	mg/Kg	0.25	8/12/98	4699	4832
Fluoride		<0.2	mg/Kg	0.2	8/13/98		4863

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Nitrate		<0.2	mg/Kg	0.2	8/17/98		4930
Chloride		<1.0	mg/Kg	1.0	8/13/98		4863
Sulfate		<1.0	mg/Kg	1.0	8/13/98		4863
Arsenic		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Barium		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Cadmium		<0.10	mg/Kg	0.10	8/24/98	4718	5090
Chromium		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Lead		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Total Mercury		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Selenium		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Silver		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Uranium		<10	mg/Kg	10	8/24/98	4718	5090
Copper		<1.0	mg/Kg	1.0	8/24/98	4718	5090
Iron		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Manganese		<1.0	mg/Kg	1.0	8/24/98	4718	5090
Zinc		<2.0	mg/Kg	2.0	8/24/98	4718	5090
Aluminum		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Boron		<10	mg/Kg	10	8/24/98	4718	5090
Cobalt		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Molybdenum		<1.0	mg/Kg	1.0	8/24/98	4718	5090
Nickel		<0.50	mg/Kg	0.50	8/24/98	4718	5090

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Total Mercury		5.0	mg/L	4.9	97	8/12/98	4832
pH		7.0	s.u.	7.0	100	8/9/98	4775
Fluoride		2.5	mg/L	2.40	96	8/13/98	4863
Nitrate		5.0	mg/L	5.45	109	8/17/98	4930
Chloride		12.5	mg/L	11.925	95	8/13/98	4863
Sulfate		12.5	mg/L	12.545	100	8/13/98	4863
Vinyl chloride		100	ug/L	110	110	8/13/98	4864
1,1-Dichloroethene		100	ug/L	105	105	8/13/98	4864
Chloroform		100	ug/L	118	118	8/13/98	4864
1,2-Dichloropropane		100	ug/L	118	118	8/13/98	4864
Toluene		100	ug/L	120	120	8/13/98	4864
Chlorobenzene		100	ug/L	118	118	8/13/98	4864
Ethylbenzene		100	ug/L	116	116	8/13/98	4864
Vinyl chloride		100	ug/L	118	118	8/13/98	4869
1,1-Dichloroethene		100	ug/L	116	116	8/13/98	4869
Chloroform		100	ug/L	114	114	8/13/98	4869
1,2-Dichloropropane		100	ug/L	114	114	8/13/98	4869
Toluene		100	ug/L	117	117	8/13/98	4869
Chlorobenzene		100	ug/L	114	114	8/13/98	4869
Ethylbenzene		100	ug/L	117	117	8/13/98	4869
Phenol		80	mg/L	81	101	8/18/98	4965
1,4-Dichlorobenzene		80	mg/L	81	101	8/18/98	4965
2-nitrophenol		80	mg/L	82	103	8/18/98	4965
2,4-Dichlorophenol		80	mg/L	75	94	8/18/98	4965
Hexachlorobutadiene		80	mg/L	81	101	8/18/98	4965
4-Chloro-3-methylphenol		80	mg/L	74	93	8/18/98	4965
2,4,6-Trichlorophenol		80	mg/L	86	108	8/18/98	4965
Acenaphthene		80	mg/L	80	100	8/18/98	4965
n-Nitrosodiphenylamine		80	mg/L	73	91	8/18/98	4965
Pentachlorophenol		80	mg/L	82	103	8/18/98	4965
Fluoranthene		80	mg/L	83	104	8/18/98	4965
Di-n-octylphthalate		80	mg/L	82	103	8/18/98	4965
Benzo(a)pyrene		80	mg/L	82	103	8/18/98	4965
Cyanide		0.12	mg/L	0.1	83	8/20/98	5028
TRPHC		100	mg/L	104	104	8/22/98	5045

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Total Mercury		mg/Kg	<0.25	2.50	2.40	96	2.50	2.30	92	4.3	8/12/98	4699	4832
Fluoride		mg/Kg	1	12.5	12.50	92	12.5	13.21	98	6.3	8/13/98		4863
Nitrate		mg/Kg	5.72	5.0	11.17	109	5.0	11.34	112	2.7	8/17/98		4930
Chloride		mg/Kg	14.7	62.5	72.48	92	62.5	72.94	93	1.1	8/13/98		4863
Sulfate		mg/Kg	10.1	62.5	70.51	97	62.5	69.90	96	1.0	8/13/98		4863
1,1-Dichloroethene		ug/L	<1	100	109	109	100	109	109	0	8/13/98		4864
Benzene		ug/L	<1	100	111	111	100	105	105	5.6	8/13/98		4864
Trichloroethene		ug/L	<1	100	110	110	100	102	102	7.5	8/13/98		4864
Toluene		ug/L	<1	100	111	111	100	106	106	4.6	8/13/98		4864
Chlorobenzene		ug/L	<1	100	103	103	100	101	101	2.0	8/13/98		4864
1,1-Dichloroethene		ug/Kg	<25	100	85	85	100	92	92	7.3	8/13/98		4869
Benzene		ug/Kg	<25	100	90	90	100	95	95	5.4	8/13/98		4869
Trichloroethene		ug/Kg	<25	100	89	89	100	95	95	6.5	8/13/98		4869
Toluene		ug/Kg	<25	100	91	91	100	96	96	5.3	8/13/98		4869
Chlorobenzene		ug/Kg	<25	100	87	87	100	91	91	4.5	8/13/98		4869
Phenol	***	mg/Kg	<0.25	10.00	10	100	10.00	8.01	80	22	8/18/98	4702	4965
2-Chlorophenol	***	mg/Kg	<1.25	10.00	9.59	96	10.00	7.7	77	22	8/18/98	4702	4965
1,4-Dichlorobenzene	***	mg/Kg	<0.25	10.00	9.46	95	10.00	7.53	75	24	8/18/98	4702	4965
n-Nitrosodi-n-propylamin	***	mg/Kg	<0.25	10.00	10.4	104	10.00	8.24	82	24	8/18/98	4702	4965
1,2,4-trichlorobenzene	***	mg/Kg	<0.25	10.00	9.34	93	10.00	7.47	75	21	8/18/98	4702	4965
4-Chloro-3-methylphenol	***	mg/Kg	<1.25	10.00	9.77	98	10.00	7.5	75	26	8/18/98	4702	4965
Acenaphthene		mg/Kg	<0.25	10.00	10.6	106	10.00	8.7	87	20	8/18/98	4702	4965
4-Nitrophenol	***	mg/Kg	<1.25	10.00	6.62	66	10.00	4.97	50	28	8/18/98	4702	4965
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	10.1	101	10.00	8.6	86	16	8/18/98	4702	4965
Pentachlorophenol		mg/Kg	<1.25	10.00	7.67	77	10.00	6.41	64	18	8/18/98	4702	4965
Pyrene		mg/Kg	<0.25	10.00	10.8	108	10.00	9.57	96	8.0	8/18/98	4702	4965
Cyanide		mg/Kg	<0.01	0.120	0.110	92	0.120	0.120	100	8.3	8/20/98		5028
TRPHC		mg/Kg	<10.0	250	276	110	250	235	94	16	8/22/98	4743	5045

*** RPD out of limits of 20%

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000123

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	8.2	8.2	0	8/9/98		4775
TDS		mg/Kg	530	544	2.6	9/2/98		5195

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Ste. 9
Lubbock, TX 79424
Phone: 800-378-1296
Fax: (806) 794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0798	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	104339	**ARS Sample I.D.:**	ARS-98-2879
Date Sampled:	08/05/98	**Date Received:**	08/11/98
Time Sampled:	N/A	**Time Received**	1617
Type of Sample:	Soil	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.04	1.32	pCi/gm	0.075	0.049	Bq/gm	EPA 901.1M	8/18/98 1125	DC
Ra-228	<0.11	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	8/18/98 1125	DC
Pb-210	3.14	1.63	pCi/gm	0.116	0.060	Bq/gm	EPA 901.1M	8/18/98 1125	DC
Total Activity	9.49	N/A	pCi/gm	0.351	N/A	Bq/gm	EPA 901.1M	8/18/98 1125	DC

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0798	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	104340	**ARS Sample I.D.:**	ARS-98-2880
Date Sampled:	08/05/98	**Date Received:**	08/11/98
Time Sampled:	N/A	**Time Received**	1617
Type of Sample:	Soil	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.71	N/A	pCi/gm	<0.026	N/A	Bq/gm	EPA 901.1M	8/18/98 1204	DC
Ra-228	<0.06	N/A	pCi/gm	<0.002	N/A	Bq/gm	EPA 901.1M	8/18/98 1204	DC
Pb-210	1.93	1.82	pCi/gm	0.071	0.067	Bq/gm	EPA 901.1M	8/18/98 1204	DC
Total Activity	2.98	N/A	pCi/gm	0.110	N/A	Bq/gm	EPA 901.1M	8/18/98 1204	DC

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 123 / 124

Company Name: Philip Services Corporation
Phone #: 915-563-0118
Address: 7904 IH 20 West, Midland, Tx 79706
Fax #: 915-563-9526
Contact Person: Jeff Kindley / Sharon Hall
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, N.M.
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
41	Field Blank	2	40ml VOA	✓				✓					08/05/98	1700
104339	MW-5 (58-60')	5	40ml VOAs		✓					✓			08/05/98	1130
	MW-5 (58-60')	1	40ml VOA		✓							✓	08/05/98	1130
40	MW-5 (63-65')	5	40ml VOAs		✓					✓			08/05/98	1158
	MW-5 (63-65')	1	40ml VOA		✓							✓	08/05/98	1158
42	Trip Blank	2	40ml VOA	✓						✓			08/05/98	

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	VOC's	See Attached		Turn Around Time if different from standard	Hold
														✓	✓			
															✓			
														✓				
															✓			
														✓				

Relinquished by: Jeffrey Kindley Date: 8/5/98 Time: 730 AM
Received by: Date: Time:
Relinquished by: Date: Time:
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Vicki Wyndham Date: 8-7-98 Time: 9:30 AM

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 2 °
Log-in Review ONA

REMARKS: Normal Turnaround

Carrier # DBecs 901 984 6209

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
104530	Field Blank	8/6/98	16:00	8/8/98
104531	Trip Blank			8/8/98
104532	MW-6 3-5'	8/6/98	9:02	8/8/98
104533	MW-6 63-65'	8/6/98	15:00	8/8/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrections:
1) 8260 units corrected from ug/kg to ug/L for samples 104530 and 104531.
2) Dichlorobenzene and 1,1-dichloroethylene blank results corrected.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99
Page # 2

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159
Sample Number: 104530

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	*ug/L	S-8260B		8/13/98	AG		4865	5
Acrylonitrile		<5	*ug/L	S-8260B		8/13/98	AG		4865	5
Benzene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Carbon tetrachloride		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Chlorobenzene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,2-dichloroethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2,2-tetrachloroethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,1,1-trichloroethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2-trichloroethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2-trichloroethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Chloroform		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Dichlorobenzene		<2	*ug/L	S-8260B		8/13/98	AG		4865	2
1,1-dichloroethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Dichloropropenes		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Ethylbenzene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Bromodichloromethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Bromomethane		<5	*ug/L	S-8260B		8/13/98	AG		4865	5
Chloromethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Dichlorodifluoromethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Dichloromethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Trichlorofluorometane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Tetrachloroethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Toluene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Trichloroethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Vinyl chloride		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
m,p-xylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
o-xylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,1-dichloroethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Ethylene dibromide		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
cis-1,2-dichlorethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
trans-1,2-dichloroethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Methylene chloride		<5	*ug/L	S-8260B		8/13/98	AG		4865	5
Surr. Dibromofluoromethane		120	%	S-8260B		8/13/98	AG		4865	72-130
Surr. Toluene-d8		113	%	S-8260B		8/13/98	AG		4865	77-127
Surr. 4-Bromofluorobenzene		110	%	S-8260B		8/13/98	AG		4865	72-131

* Units corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99
Page # 3

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159
Sample Number: 104531

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	*ug/L	S-8260B		8/13/98	AG		4865	5
Acrylonitrile		<5	*ug/L	S-8260B		8/13/98	AG		4865	5
Benzene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Carbon tetrachloride		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Chlorobenzene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,2-dichloroethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2,2-tetrachloroethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,1,1-trichloroethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2-trichloroethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2-trichloroethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Chloroform		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Dichlorobenzene		<2	*ug/L	S-8260B		8/13/98	AG		4865	2
1,1-dichloroethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Dichloropropenes		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Ethylbenzene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Bromodichloromethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Bromomethane		<5	*ug/L	S-8260B		8/13/98	AG		4865	5
Chloromethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Dichlorodifluoromethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Dichloromethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Trichlorofluorometane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Tetrachloroethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Toluene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Trichloroethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Vinyl chloride		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
m,p-xylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
o-xylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
1,1-dichloroethane		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Ethylene dibromide		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
cis-1,2-dichlorethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
trans-1,2-dichloroethylene		<1	*ug/L	S-8260B		8/13/98	AG		4865	1
Methylene chloride		<5	*ug/L	S-8260B		8/13/98	AG		4865	5
Surr. Dibromofluoromethane		116	%	S-8260B		8/13/98	AG		4865	72-130
Surr. Toluene-d8		115	%	S-8260B		8/13/98	AG		4865	77-127
Surr. 4-Bromofluorobenzene		110	%	S-8260B		8/13/98	AG		4865	72-131

* Units corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 4

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159
Sample Number: 104532

Sample Description: MW-6 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<180	ug/Kg	S-8260B		8/24/98	AG		5082	180
Acrylonitrile		<180	ug/Kg	S-8260B		8/24/98	AG		5082	180
Benzene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Carbon tetrachloride		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Chlorobenzene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
1,2-dichloroethane		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
1,1,2,2-tetrachloroethane		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
1,1,1-trichloroethane		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
1,1,2-trichloroethane		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
1,1,2-trichloroethylene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Chloroform		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Dichlorobenzene		<72	ug/Kg	S-8260B		8/24/98	AG		5082	72
1,1-dichloroethylene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Dichloropropenes		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Ethylbenzene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Bromodichloromethane		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Bromomethane		<180	ug/Kg	S-8260B		8/24/98	AG		5082	180
Chloromethane		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Dichlorodifluoromethane		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Dichloromethane		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Trichlorofluorometane		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Tetrachloroethylene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Toluene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Trichloroethylene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Vinyl chloride		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
m,p-xylene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
o-xylene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
1,1-dichloroethane		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Ethylene dibromide		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
cis-1,2-dichlorethylene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
trans-1,2-dichloroethylene		<36	ug/Kg	S-8260B		8/24/98	AG		5082	36
Methylene chloride		<180	ug/Kg	S-8260B		8/24/98	AG		5082	180
Dibromofluoromethane		103	%	S-8260B		8/24/98	AG		5082	72-130
Toluene-d8		96	%	S-8260B		8/24/98	AG		5082	77-127
4-Bromofluorobenzene		101	%	S-8260B		8/24/98	AG		5082	72-131
Benzidine		<2.5	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159
Sample Number: 104532

Sample Description: MW-6 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
i-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Phenol		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159
Sample Number: 104532

Sample Description: MW-6 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Surr. 2-Fluorophenol		63	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	25-121
Surr. Phenol-d6		65	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	24-113
Surr. Nitroobenzene-d5		62	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	23-120
Surr. 2-Fluorobiphenyl		64	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	30-115
Surr. 2,4,6-Tribromophenol		65	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	19-122
Surr. Terphenyl-d14		69	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	28-137
Aldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/20/98	8/20/98	RC	4741	5026	0.1
Arsenic		1.8	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Barium		320	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Cadmium		0.32	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.10
Chromium		5.4	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Lead		2.0	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Total Mercury		<0.10	mg/Kg	6010	8/24/98	8/25/98	MS	4765	5101	<0.10
Selenium		<.50	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Silver		<.50	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Uranium		<1.0	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	1.0
Copper		2.1	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	1.0
Iron		3210	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	10
Manganese		25	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	1.0
Zinc		20	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	2.0
Aluminum		4940	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	10
Boron		12	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	10
Cobalt		6.2	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Molybdenum		1.6	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	1.0
Nickel		8.6	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Cyanide		0.02	mg/Kg	SM 4500 CN,CE		8/20/98	SA		5028	0.02
Fluoride		8.3	mg/Kg	E 300.0		8/13/98	JS		4863	0.2
Nitrate		4.2	mg/Kg	E 300.0		8/13/98	JS		4863	0.2
Chloride		22	mg/Kg	E 300.0		8/13/98	JS		4863	1.0
Sulfate		96	mg/Kg	E 300.0		8/13/98	JS		4863	1.0
TDS		3900	mg/Kg	E 160.1		9/2/98	RS		5195	
TRPHC		15.6	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10
Phenolics		<0.01	mg/Kg	SM 5530 A,D		8/19/98	RC		8270	0.01
Total Radium		3.59	pCi/gm	E 901.1M		8/18/98	DS	---	---	---
pH		8.7	s.u.	E 150.1		9/30/98	SA		5565	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159
Sample Number: 104533

Sample Description: MW-6 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<293	ug/Kg	S-8260B		8/24/98	AG		5082	293
Acrylonitrile		<293	ug/Kg	S-8260B		8/24/98	AG		5082	293
Benzene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Carbon tetrachloride		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Chlorobenzene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
1,2-dichloroethane		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
1,1,2,2-tetrachloroethane		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
1,1,1-trichloroethane		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
1,1,2-trichloroethane		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
1,1,2-trichloroethylene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Chloroform		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Dichlorobenzene		<118	ug/Kg	S-8260B		8/24/98	AG		5082	118
1,1-dichloroethylene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Dichloropropenes		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Ethylbenzene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Bromodichloromethane		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Bromomethane		<293	ug/Kg	S-8260B		8/24/98	AG		5082	293
Chloromethane		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Dichlorodifluoromethane		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Dichloromethane		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Trichlorofluorometane		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Tetrachloroethylene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Toluene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Trichloroethylene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Vinyl chloride		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
m,p-xylene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
o-xylene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
1,1-dichloroethane		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Ethylene dibromide		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
cis-1,2-dichlorethylene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
trans-1,2-dichloroethylene		<59	ug/Kg	S-8260B		8/24/98	AG		5082	59
Methylene chloride		<293	ug/Kg	S-8260B		8/24/98	AG		5082	293
Dibromofluoromethane		106	%	S-8260B		8/24/98	AG		5082	72-130
Toluene-d8		95	%	S-8260B		8/24/98	AG		5082	77-127
4-Bromofluorobenzene		105	%	S-8260B		8/24/98	AG		5082	72-131
Benzidine		<2.5	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25

Date: 9-29-98
Page # 8
Order ID Number: 9808000159
Sample Number: 104533

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Sample Description: MW-6 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Phenol		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Surr. 2-Fluorophenol		53	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	25-121
Surr. Phenol-d6		57	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	24-113
Surr. Nitroobenzene-d5		55	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	23-120
Surr. 2-Fluorobiphenyl		55	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	30-115
Surr. 2,4,6-Tribromophenol		59	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	19-122
Surr. Terphenyl-d14		65	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	28-137

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159
Sample Number: 104533

Sample Description: MW-6 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/20/98	8/20/98	RC	4741	5026	0.02
Arsenic		<.50	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Barium		9.7	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Cadmium		0.23	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.10
Chromium		5.2	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Lead		1.4	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Total Mercury		<0.10	mg/Kg	6010	8/24/98	8/25/98	MS	4765	5101	<0.10
Selenium		<0.50	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Silver		<0.50	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Uranium		<0.10	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	1.0
Copper		<1.0	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	1.0
Iron		1880	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	10
Manganese		21	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	1.0
Zinc		8.3	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	2.0
Aluminum		1620	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	10
Boron		<10	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	10
Cobalt		2.3	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Molybdenum		<1.0	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	1.0
Nickel		4.9	mg/Kg	6010	8/12/98	8/24/98	RR	4718	5090	0.50
Cyanide		<0.01	mg/Kg	E 335.2		8/20/98	SA		5028	0.01
Fluoride		0.75	mg/Kg	E 300.0		8/13/98	JS		4863	0.2
Nitrate		1.3	mg/Kg	E 300.0		8/20/98	JS		5025	0.2
Nitrate		4.2	mg/Kg	E 300.1		8/13/98	JS		4863	
Chloride		13	mg/Kg	E 300.0		8/13/98	JS		4863	1.0
Sulfate		30	mg/Kg	E 300.0		8/13/98	JS		4863	1.0
TDS		220	mg/Kg	E 160.1		9/2/98	RS		5195	
TRPHC		<10.0	mg/Kg	E 150.1	8/21/98	8/22/98	SR	4743	5045	10
Phenolics		<0.01	mg/Kg	SM 5530 A,D		8/19/98	RC		8270	0.01
Total Radium		2.38	pCi/gm	E 901.1M		8/18/98	DS	---	---	---
pH		8.5	s.u.	E 150.1		9/30/98	SA		5565	---

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Fluoride		<0.2	mg/Kg	0.2	8/13/98		4863
Nitrate		<0.2	mg/Kg	0.2	8/13/98		4863
Chloride		<1.0	mg/Kg	1.0	8/13/98		4863
Sulfate		<1.0	mg/Kg	1.0	8/13/98		4863
Acrolein		<5	ug/L	5	8/13/98		4865
Acrylonitrile		<5	ug/L	5	8/13/98		4865
Benzene		<1	ug/L	1	8/13/98		4865
Carbon tetrachloride		<1	ug/L	1	8/13/98		4865
Chlorobenzene		<1	ug/L	1	8/13/98		4865
1,2-dichloroethane		<1	ug/L	1	8/13/98		4865
1,1,2,2-tetrachloroethane		<1	ug/L	1	8/13/98		4865
1,1,1-trichloroethane		<1	ug/L	1	8/13/98		4865
1,1,2-trichloroethane		<1	ug/L	1	8/13/98		4865
1,1,2-trichloroethylene		<1	ug/L	1	8/13/98		4865
Chloroform		<1	ug/L	1	8/13/98		4865
Dichlorobenzene		<2	ug/L	2	8/13/98		4865
1,1-dichloroethylene		<1	ug/L	1	8/13/98		4865
Dichloropropenes		<1	ug/L	1	8/13/98		4865
Ethylbenzene		<1	ug/L	1	8/13/98		4865
Bromodichloromethane		<1	ug/L	1	8/13/98		4865
Bromomethane		<5	ug/L	5	8/13/98		4865
Chloromethane		<1	ug/L	1	8/13/98		4865
Dichlorodifluoromethane		<1	ug/L	1	8/13/98		4865
Dichloromethane		<1	ug/L	1	8/13/98		4865
Trichlorofluoromethane		<1	ug/L	1	8/13/98		4865
Tetrachloroethylene		<1	ug/L	1	8/13/98		4865
Toluene		<1	ug/L	1	8/13/98		4865
Trichloroethylene		<1	ug/L	1	8/13/98		4865
Vinyl chloride		<1	ug/L	1	8/13/98		4865
m,p-xylene		<1	ug/L	1	8/13/98		4865
o-xylene		<1	ug/L	1	8/13/98		4865
1,1-dichloroethane		<1	ug/L	1	8/13/98		4865
Ethylene dibromide		<1	ug/L	1	8/13/98		4865
cis-1,2-dichlorethylene		<1	ug/L	1	8/13/98		4865
trans-1,2-dichloroethylene		<1	ug/L	1	8/13/98		4865
Methylene chloride		<5	ug/L	5	8/13/98		4865
Surr. Dibromofluoromethane		107	%	72-130	8/13/98		4865
Surr. Toluene-d8		112	%	77-127	8/13/98		4865
Surr. 4-Bromofluorobenzene		110	%	72-131	8/13/98		4865
Acrolein		<125	ug/Kg	125	9/3/98		5205

Corrected

Date: 05-18-99
Page # 11
Order ID Number: 9808000159

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrylonitrile		<125	ug/Kg	125	9/3/98		5205
Benzene		<25	ug/Kg	25	9/3/98		5205
Carbon tetrachloride		<25	ug/Kg	25	9/3/98		5205
Chlorobenzene		<25	ug/Kg	25	9/3/98		5205
1,2-dichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,1-trichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2-trichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2-trichloroethylene		<25	ug/Kg	25	9/3/98		5205
Chloroform		<25	ug/Kg	25	9/3/98		5205
Dichlorobenzene		<50	ug/Kg	**50	9/3/98		5205
1,1-dichloroethylene		<25	ug/Kg	**25	9/3/98		5205
Dichloropropenes		<25	ug/Kg	25	9/3/98		5205
Ethylbenzene		<25	ug/Kg	25	9/3/98		5205
Bromodichloromethane		<25	ug/Kg	25	9/3/98		5205
Bromomethane		<125	ug/Kg	125	9/3/98		5205
Chloromethane		<25	ug/Kg	25	9/3/98		5205
Dichlorodifluoromethane		<25	ug/Kg	25	9/3/98		5205
Dichloromethane		<25	ug/Kg	25	9/3/98		5205
Trichlorofluoromethane		<25	ug/Kg	25	9/3/98		5205
Tetrachloroethylene		<25	ug/Kg	25	9/3/98		5205
Toluene		<25	ug/Kg	25	9/3/98		5205
Trichloroethylene		<25	ug/Kg	25	9/3/98		5205
Vinyl chloride		<25	ug/Kg	25	9/3/98		5205
m,p-xylene		<25	ug/Kg	25	9/3/98		5205
o-xylene		<25	ug/Kg	25	9/3/98		5205
1,1-dichloroethane		<25	ug/Kg	25	9/3/98		5205
Ethylene dibromide		<25	ug/Kg	25	9/3/98		5205
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/3/98		5205
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/3/98		5205
Methylene chloride		<125	ug/Kg	125	9/3/98		5205
Surr. Dibromofluoromethane		101	%	72-130	9/3/98		5205
Surr. Toluene-d8		99	%	77-127	9/3/98		5205
Surr. 4-Bromofluorobenzene		102	%	72-131	9/3/98		5205
PCB		0.1	mg/Kg	0.1	8/20/98	4741	5026
Cyanide		<0.01	mg/Kg	0.01	8/20/98		5028
Arsenic		<0.50	mg/Kg	0.50	08/24/98	4718	5090
Barium		<0.50	mg/Kg	0.50	08/24/98	4718	5090
Cadmium		<0.10	mg/Kg	0.10	08/24/98	4718	5090
Chromium		<0.50	mg/Kg	0.50	08/24/98	4718	5090
Lead		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Total Mercury		<0.10	mg/Kg	<0.10	8/25/98	4761	5101
Selenium		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Silver		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Uranium		<1.0	mg/Kg	1.0	8/24/98	4718	5090
Copper		<1.0	mg/Kg	1.0	8/24/98	4718	5090

** Reporting limit corrected.

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Iron		<10	mg/Kg	10	8/24/98	4718	5090
Manganese		<1.0	mg/Kg	1.0	8/24/98	4718	5090
Zinc		<2.0	mg/Kg	2.0	8/24/98	4718	5090
Aluminum		<10	mg/Kg	10	8/24/98	4718	5090
Boron		<1.0	mg/Kg	10	8/24/98	4718	5090
Cobalt		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Molybdenum		<1.0	mg/Kg	1.0	8/24/98	4718	5090
Nickel		<0.50	mg/Kg	0.50	8/24/98	4718	5090
Hg		<0.10	mg/Kg	0.10	8/25/98	4765	5101
Phenolics		<0.01	mg/Kg	0.01	8/19/98		5015
TRPHC		<10.0	mg/Kg	10	8/22/98	4743	5045
Benzidine		<2.5	mg/Kg	2.5	8/25/98	4721	5105
Hexachlorobenzene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Pentachlorobenzene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Hexachloroethane		<0.25	mg/Kg	0.25	8/25/98	4721	5105
2,4-dichlorophenol		<1.25	mg/Kg	1.25	8/25/98	4721	5105
2,4,5-trichlorophenol		<1.25	mg/Kg	1.25	8/25/98	4721	5105
2,4,6-trichlorophenol		<1.25	mg/Kg	1.25	8/25/98	4721	5105
bis (2-chloroethl) ether		<1.25	mg/Kg	1.25	8/25/98	4721	5105
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	1.25	8/25/98	4721	5105
bis (chloromethyl) ether		<1.25	mg/Kg	1.25	8/25/98	4721	5105
3,3-dichlorobenzidine		<1.25	mg/Kg	1.25	8/25/98	4721	5105
2,4-dinitrotoluene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Diphenylhydrazine		<1.25	mg/Kg	1.25	8/25/98	4721	5105
Hexachlorobutadiene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Hexachlorocyclopentadiene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Isophorone		<1.25	mg/Kg	1.25	8/25/98	4721	5105
Nitrobenzene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
2,4-dinitro-o-cresol		<1.25	mg/Kg	1.25	8/25/98	4721	5105
2,4-dinitrophenols		<1.25	mg/Kg	1.25	8/25/98	4721	5105
i-nitrosodiethylamine		<0.25	mg/Kg	0.25	8/25/98	4721	5105
N-nitrosodimethylamine		<0.25	mg/Kg	0.25	8/25/98	4721	5105
N-nitrosodibutylamine		<1.25	mg/Kg	1.25	8/25/98	4721	5105
N-nitrosodiphenylamine		<0.25	mg/Kg	0.25	8/25/98	4721	5105
N-nitrosopyrrolidine		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Pentachlorophenol		<1.25	mg/Kg	1.25	8/25/98	4721	5105
Phenol		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Dibutyl phthalate		<0.25	mg/Kg	0.25	8/25/98	4721	5105
bis(2-ethylhexyl) phthalate		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Diethyl phthalate		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Dimethyl phthalate		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Anthracene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Fluoranthene		<0.25	mg/Kg	0.25	8/25/98	4721	5105

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Fluorene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Phenanthrene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Pyrene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Naphthalene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
1-methylnaphthalene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
2-methylnaphthalene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Benzo-a-pyrene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
monomethylnaphthalenes		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Surr. 2-Fluorophenol		52	%	25-121	8/25/98	4721	5105
Surr. Phenol-d6		61	%	24-113	8/25/98	4721	5105
Surr. Nitrobenzene-d5		55	%	23-120	8/25/98	4721	5105
Surr. 2-Fluorobiphenyl		62	%	30-115	8/25/98	4721	5105
Surr. 2,4,6-Tribromophenol		86	%	19-122	8/25/98	4721	5105
Surr. Terphenyl-d14		67	%	28-137	8/25/98	4721	5105

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Fluoride		2.5	mg/L	2.40	96	8/13/98	4863
Nitrate		5.0	mg/L	4.835	97	8/13/98	4863
Nitrate		5.0	mg/L	4.57	91	8/20/98	5025
Chloride		12.5	mg/L	11.925	95	8/13/98	4863
Sulfate		12.5	mg/L	12.545	100	8/13/98	4863
Vinyl chloride		100	ug/L	110	110	8/13/98	4865
1,1-Dichloroethene		100	ug/L	105	105	8/13/98	4865
Chloroform		100	ug/L	118	118	8/13/98	4865
1,2-Dichloropropane		100	ug/L	118	118	8/13/98	4865
Toluene		100	ug/L	120	120	8/13/98	4865
Chlorobenzene		100	ug/L	118	118	8/13/98	4865
Ethylbenzene		100	ug/L	116	116	8/13/98	4865
PCB		0.400	mg/L	0.440	110	8/20/98	5026
Cyanide		0.12	mg/L	0.10	83	8/20/98	5028
Arsenic		1.0	mg/L	1.0	100	8/24/98	5090
Barium		1.0	mg/L	0.97	97	8/24/98	5090
Cadmium		1.0	mg/L	1.0	100	8/24/98	5090
Chromium		1.0	mg/L	1.0	100	8/24/98	5090
Lead		1.0	mg/L	1.0	100	8/24/98	5090
Total Mercury		1.0	mg/L	1.1	110	8/24/98	5090
Selenium		1.0	mg/L	1.0	100	8/24/98	5090
Vinyl chloride		100	ug/L	104	104	9/3/98	5205
1,1-Dichloroethene		100	ug/L	119	119	9/3/98	5205
Chloroform		100	ug/L	112	112	9/3/98	5205
1,2-Dichloropropane		100	ug/L	106	106	9/3/98	5205
Toluene		100	ug/L	115	115	9/3/98	5205
Ethylbenzene		100	ug/L	112	112	9/3/98	5205
Silver		0.20	mg/L	0.20	100	8/24/98	5090
Uranium		1.0	mg/L	0.99	99	8/24/98	5090
Copper		1.0	mg/L	0.99	99	8/24/98	5090
Iron		50	mg/L	50	100	8/24/98	5090
Manganese		1.0	mg/L	1.0	100	8/24/98	5090
Zinc		1.0	mg/L	1.0	100	8/24/98	5090
Aluminum		125	mg/L	126	101	8/24/98	5090
Boron		1.0	mg/L	1.0	100	8/24/98	5090
Cobalt		1.0	mg/L	1.0	100	8/24/98	5090
Molybdenum		1.0	mg/L	1.0	100	8/24/98	5090
Nickel		1.0	mg/L	1.0	100	8/24/98	5090

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Hg		1.0	mg/L	1.0	100	8/25/98	5101
Nitrate		5.0	mg/L	4.57	91	8/20/98	5025
Phenolics		0.8	mg/L	0.8	100	8/19/98	5015
TRPHC		100	mg/L	104	104	8/22/98	5045
Phenol		80	mg/L	89	111	8/25/98	5105
1,4-Dichlorobenzene		80	mg/L	85	106	8/25/98	5105
2-nitrophenol		80	mg/L	84	105	8/25/98	5105
2,4-Dichlorophenol		80	mg/L	87	109	8/25/98	5105
Hexachlorobutadiene		80	mg/L	87	109	8/25/98	5105
4-Chloro-3-methylphenol		80	mg/L	84	105	8/25/98	5105
2,4,6-Trichlorophenol		80	mg/L	85	107	8/25/98	5105
Acenaphthene		80	mg/L	83	104	8/25/98	5105
n-Nitrosodiphenylamine		80	mg/L	85	107	8/25/98	5105
Pentachlorophenol		80	mg/L	89	111	8/25/98	5105
Fluoranthene		80	mg/L	84	105	8/25/98	5105
Di-n-octylphthalate		80	mg/L	81	101	8/25/98	5105
Benzo(a)pyrene		80	mg/L	84	105	8/25/98	5105
pH		7.0	s.u.	7.0	100	9/30/98	5565

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Fluoride		mg/Kg	1	12.5	12.50	92	12.5	13.21	98	6.3	8/13/98		4863
Nitrate		mg/Kg	<0.2	25.0	25.60	102	25.0	25.89	104	1.9	8/13/98		4863
Nitrate		mg/Kg	<0.2	5.0	4.92	98	5.0	4.94	99	1.0	8/20/98		5025
Chloride		mg/Kg	14.7	62.5	72.48	92	62.5	72.94	93	1.1	8/13/98		4863
Sulfate		mg/Kg	10.1	62.5	70.51	97	62.5	69.90	96	1.0	8/13/98		4863
1,1-Dichloroethene		ug/L	<1	100	109	109	100	109	109	0	8/13/98		4865
Benzene		ug/L	<1	100	111	111	100	105	105	5.6	8/13/98		4865
Trichloroethene		ug/L	<1	100	110	110	100	105	105	4.7	8/13/98		4865
Toluene		ug/L	<1	100	111	111	100	106	106	4.6	8/13/98		4865
Chlorobenzene		ug/L	<1	100	103	103	100	101	101	2.0	8/13/98		4865
PCB		mg/Kg	<0.1	0.500	0.520	104	0.500	0.520	104	0	8/20/98	4741	5026
Cyanide		mg/Kg	<0.01	0.12	0.11	92	0.12	0.12	100	8.3	8/20/98		5028
1,1-Dichloroethene		mg/Kg	<1	100	81	81	100	87	87	7.1	8/24/98		5082
Benzene		mg/Kg	<1	100	86	86	100	82	82	4.8	8/24/98		5082
Trichloroethene		mg/Kg	<1	100	93	93	100	84	84	10	8/24/98		5082
Toluene		mg/Kg	<1	100	88	88	100	81	81	8.3	8/24/98		5082
Chlorobenzene		mg/Kg	<1	100	93	93	100	83	83	11	8/24/98		5082
Arsenic		mg/Kg	0.68	200	190	95	200	183	92	3.2	8/24/98	4718	5090
Barium		mg/Kg	6.5	200	194	94	200	194	94	0	8/24/98	4718	5090
Cadmium		mg/Kg	0.14	200	182	91	200	180	90	1.1	8/24/98	4718	5090
Chromium		mg/Kg	4.5	200	197	96	200	191	93	3.2	8/24/98	4718	5090
Lead		mg/Kg	2.2	200	181	89	200	180	89	0	8/24/98	4718	5090
Total Mercury		mg/Kg	<0.10	1.0	1.2	120	1.0	1.2	120	0	8/25/98	4765	5101
Selenium		mg/Kg	<0.50	200	171	86	200	166	83	3.6	8/24/98	4718	5090
Silver		mg/Kg	<0.50	25	22	88	25	22	88	0	8/24/98	4718	5090
1,1-Dichloroethene		mg/Kg	<25	100	98	98	100	95	95	3.1	9/3/98		5205
Benzene		mg/Kg	<25	100	102	102	100	104	104	1.9	9/3/98		5205
Trichloroethene		mg/Kg	<25	100	108	108	100	108	108	0	9/3/98		5205
Toluene		mg/Kg	<25	100	100	100	100	101	101	1.0	9/3/98		5205
Chlorobenzene		mg/Kg	<25	100	88	88	100	87	87	1.1	9/3/98		5205
Uranium		mg/Kg	<1.0	200	166	83	200	170	85	2.4	8/24/98	4718	5090
Copper		mg/Kg	1.3	200	197	98	200	197	98	0	8/24/98	4718	5090
Iron		mg/Kg	<10	250	245	98	250	245	98	0	8/24/98	4718	5090
Manganese		mg/Kg	21	200	202	91	200	202	91	0	8/24/98	4718	5090
Zinc		mg/Kg	3.7	200	178	87	200	178	87	0	8/24/98	4718	5090
Aluminum		mg/Kg	<10	250	269	108	250	275	110	1.8	8/24/98	4718	5090
Boron		mg/Kg	<0.10	200	193	97	200	179	90	7.5	8/24/98	4718	5090
Cobalt		mg/Kg	2.8	200	187	92	200	187	92	0	8/24/98	4718	5090
Molybdenum		mg/Kg	<1.0	200	191	96	200	191	96	0	8/24/98	4718	5090

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Nickel		mg/Kg	2.4	200	185	91	200	185	91	0	8/24/98	4718	5090
Phenolics		mg/Kg	<0.01	0.8	0.76	95	0.8	0.77	96	1	8/19/98		5015
TRPHC		mg/Kg	<10.0	250	276	110	250	235	94	16	8/22/98	4743	5045
Phenol		mg/Kg	<0.25	10.00	8.2	82	10.00	8.49	85	2.4	8/25/98	4721	5105
2-Chlorophenol		mg/Kg	<1.25	10.00	7.93	79	10.00	7.98	80	1.3	8/25/98	4721	5105
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	7.61	76	10.00	7.87	79	3.9	8/25/98	4721	5105
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	8.23	82	10.00	9.53	95	8.2	8/25/98	4721	5105
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	7.7	77	10.00	7.89	79	2.6	8/25/98	4721	5105
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	8.3	83	10.00	8.51	85	2.4	8/25/98	4721	5105
Acenaphthene		mg/Kg	<0.25	10.00	9.01	90	10.00	8.73	87	3.4	8/25/98	4721	5105
4-Nitrophenol		mg/Kg	<1.25	10.00	6.62	66	10.00	5.73	57	15	8/25/98	4721	5105
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	9.38	94	10.00	8.8	88	6.6	8/25/98	4721	5105
Pentachlorophenol		mg/Kg	<1.25	10.00	6.87	69	10.00	7.55	76	9.7	8/25/98	4721	5105
Pyrene		mg/Kg	<0.25	10.00	9.19	92	10.00	9.7	97	5.2	8/25/98	4721	5105

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000159

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
TDS		mg/kg	530	544	2.6	9/2/98		5195
pH		s.u.	8.5	8.5	0	9/30/98		5565

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Ste. 9
Lubbock, TX 79424
Phone: 800-378-1296
Fax: (806) 794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0798	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	104532	**ARS Sample I.D.:**	ARS-98-2881
Date Sampled:	08/06/98	**Date Received:**	08/11/98
Time Sampled:	N/A	**Time Received**	1617
Type of Sample:	Soil	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.83	1.59	pCi/gm	0.068	0.059	Bq/gm	EPA 901.1M	8/18/98 1256	DC
Ra-228	<0.12	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	8/18/98 1256	DC
Pb-210	<0.97	N/A	pCi/gm	<0.036	N/A	Bq/gm	EPA 901.1M	8/18/98 1256	DC
Total Activity	3.59	N/A	pCi/gm	0.133	N/A	Bq/gm	EPA 901.1M	8/18/98 1256	DC

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0798	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	104533	**ARS Sample I.D.:**	ARS-98-2882
Date Sampled:	08/06/98	**Date Received:**	08/11/98
Time Sampled:	N/A	**Time Received**	1617
Type of Sample:	Soil	**Date of Report**	8/26/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.85	N/A	pCi/gm	<0.031	N/A	Bq/gm	EPA 901.1M	8/19/98 1106	DC
Ra-228	0.50	0.25	pCi/gm	0.019	0.009	Bq/gm	EPA 901.1M	8/19/98 1106	DC
Pb-210	<1.20	N/A	pCi/gm	<0.044	N/A	Bq/gm	EPA 901.1M	8/19/98 1106	DC
Total Activity	2.38	N/A	pCi/gm	0.088	N/A	Bq/gm	EPA 901.1M	8/19/98 1106	DC

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 159 & 160

Company Name: Philip Services Corporation
Phone #: 915-563-0118
Address: 7904 IH 20 West Midland, Tx 79706
Fax #: 915-563-9526
Contact Person: Jeff Kindley / Sharon Hall
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
104530	Field Blank	2	40ml VOA	✓				✓		✓			08/06/98	1600
104531	Trip Blank	2	40ml VOA	✓						✓			08/06/98	
532	MW-6 (3-5')	5	4oz Jars		✓					✓			08/06/98	902
	MW-6 (3-5')	1	40ml VOA		✓							✓	08/06/98	902
533	MW-6 (63-65')	5	4oz Jars		✓					✓			08/06/98	1500
	MW-6 (63-65')	1	40ml VOA		✓							✓	08/06/98	1500

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	VOCs	See Attached			Turn Around Time if different from standard	Hold
														✓	✓				
															✓				
															✓				
														✓					
															✓				
														✓					

Relinquished by: Jeffrey Kindley Date: August 7, 1998 Time: 700 AM
Received by: Date: Time:
Relinquished by: Date: Time:
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: 08/06/98 Date: Time:

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 0 °
Log-in Review

REMARKS:
Normal Turnaround.

Carrier # TNM40 901 984 6110

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Corrected

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99
Page # 1

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000186

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
104631	Field Blank	8/10/98	15:00	8/11/98
104632	Trip Blank			8/11/98
104633	MW-7 48-50'	8/10/98	11:13	8/11/98
104634	MW-7 63-65'	8/10/98	13:56	8/11/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrections:
1) Benzidine, Hexachlorobenzene and Pentachlorobenzene added to SemiVolatiles 104633 and 104634.
2) CCVS True Concentration corrected to 100.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 2

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000186
Sample Number: 104631

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/13/98	AG		4865	5
Acrylonitrile		<5	ug/L	S-8260B		8/13/98	AG		4865	5
Benzene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Chlorobenzene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Chloroform		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Dichlorobenzene		<2	ug/L	S-8260B		8/13/98	AG		4865	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Dichloropropenes		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Ethylbenzene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Bromodichloromethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Bromomethane		<5	ug/L	S-8260B		8/13/98	AG		4865	5
Chloromethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Dichloromethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Toluene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Trichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Vinyl chloride		<1	ug/L	S-8260B		8/13/98	AG		4865	1
m,p-xylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
o-xylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Ethylene dibromide		<1	ug/L	S-8260B		8/13/98	AG		4865	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Methylene chloride		<5	ug/L	S-8260B		8/13/98	AG		4865	5
Surr. Dibromofluoromethane		116	%	S-8260B		8/13/98	AG		4865	71-132
Surr. Toluene-d8		114	%	S-8260B		8/13/98	AG		4865	82-124
Surr. 4-Bromofluorobenzene		119	%	S-8260B		8/13/98	AG		4865	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 3

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000186
Sample Number: 104632

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/13/98	AG		4865	5
Acrylonitrile		<5	ug/L	S-8260B		8/13/98	AG		4865	5
Benzene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Chlorobenzene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Chloroform		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Dichlorobenzene		<2	ug/L	S-8260B		8/13/98	AG		4865	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Dichloropropenes		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Ethylbenzene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Bromodichloromethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Bromomethane		<5	ug/L	S-8260B		8/13/98	AG		4865	5
Chloromethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Dichloromethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Toluene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Trichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Vinyl chloride		<1	ug/L	S-8260B		8/13/98	AG		4865	1
m,p-xylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
o-xylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Ethylene dibromide		<1	ug/L	S-8260B		8/13/98	AG		4865	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/13/98	AG		4865	1
Methylene chloride		<5	ug/L	S-8260B		8/13/98	AG		4865	5
Surr. Dibromofluoromethane		117	%	S-8260B		8/13/98	AG		4865	71-132
Surr. Toluene-d8		112	%	S-8260B		8/13/98	AG		4865	82-124
Surr. 4-Bromofluorobenzene		117	%	S-8260B		8/13/98	AG		4865	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 4

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000186
Sample Number: 104633

Field Code: MW-7 48-50'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S 8260B		8/13/98	AG		4869	125
Acrylonitrile		<125	ug/Kg	S 8260B		8/13/98	AG		4869	125
Benzene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Carbon tetrachloride		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Chlorobenzene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,2-dichloroethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,1,1-trichloroethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,1,2-trichloroethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,1,2-trichloroethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Chloroform		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Dichlorobenzene		<50	ug/Kg	S 8260B		8/13/98	AG		4869	50
,1-dichloroethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Dichloropropenes		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Ethylbenzene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Bromodichloromethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Bromomethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Chloromethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Dichlorodifluoromethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Dichloromethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Trichlorofluorometane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Tetrachloroethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Toluene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Trichloroethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Vinyl chloride		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
m,p-xylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
o-xylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,1-dichloroethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Ethylene dibromide		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
cis-1,2-dichlorethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
trans-1,2-dichloroethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Methylene chloride		<125	ug/Kg	S 8260B		8/13/98	AG		4869	125
Surr. Dibromofluoromethane		110	%	S 8260B		8/13/98	AG		4869	71-132
Surr. Toluene-d8		110	%	S 8260B		8/13/98	AG		4869	82-124
Surr. 4-Bromofluorobenzene		118	%	S 8260B		8/13/98	AG		4869	76-126
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25

Corrected

Date: 10-1-98
Page # 5
Order ID Number: 9808000186
Sample Number: 104633

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Field Code: MW-7 48-50'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
i-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Phenol		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Benzidine		<2.5	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Surr. 2-Fluorophenol		53	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	25-121
Surr. Phenol-d6		57	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	24-113
Surr. Nitrobenzene-d5		53	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	23-120
Surr. 2-Fluorobiphenyl		53	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	30-115
Surr. 2,4,6-Tribromophenol		54	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	19-122
Surr. Terphenyl-d14		55	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	28-137
Aldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50

Corrected - Added Benzidine, Hexachlorobenzene, & Pentachlorobenzene results.

Date: 10-1-98
Page # 6
Order ID Number: 9808000186
Sample Number: 104633

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Field Code: MW-7 48-50'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Endosulfan		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/20/98	8/20/98	RC	4741	5026	0.1
Arsenic		0.68	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Barium		6.5	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Cadmium		0.14	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.10
Chromium		4.5	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Lead		2.2	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Total Mercury		<0.25	mg/Kg	S 7471	8/12/98	8/13/98	MS	4715	4866	0.25
Selenium		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Silver		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Uranium		<1.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Copper		1.3	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Iron		1,790	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	10
Manganese		21	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Zinc		3.7	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	2.0
Aluminum		1,950	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	10
Boron		<10	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	10
Cobalt		2.8	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Molybdenum		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Nickel		2.4	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Cyanide		0.01	mg/Kg	SM 4500 CN,CE		8/20/98	SA		5028	0.01
Fluoride		0.79	mg/Kg	E 300.0		8/25/98	JS		5096	0.2
Nitrate		1.2	mg/Kg	E 300.0		8/25/98	JS		5096	0.2
Chloride		10	mg/Kg	E 300.0		8/25/98	JS		5096	1.0
Sulfate		8.8	mg/Kg	E 300.0		8/25/98	JS		5096	1.0
TDS		200	mg/Kg	E 160.1		9/2/98	RS		5195	---
pH		8.8	s.u.	E 150.1		8/13/98	SA		4870	---
TRPHC		<10.0	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Radium		17.62	pCi/gm	E 901.1M		8/18/98	DS	---	---	---
Total Phenols		3.75	mg/Kg	SM 5530 A,D		8/19/98	RC		5015	

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
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Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000186
Sample Number: 104634

Field Code: MW-7 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S 8260B		8/13/98	AG		4869	125
Acrylonitrile		<125	ug/Kg	S 8260B		8/13/98	AG		4869	125
Benzene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Carbon tetrachloride		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Chlorobenzene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,2-dichloroethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,1,1-trichloroethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,1,2-trichloroethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,1,2-trichloroethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Chloroform		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Dichlorobenzene		<50	ug/Kg	S 8260B		8/13/98	AG		4869	50
1,1-dichloroethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Dichloropropenes		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Ethylbenzene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Bromodichloromethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Bromomethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Chloromethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Dichlorodifluoromethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Dichloromethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Trichlorofluorometane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Tetrachloroethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Toluene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Trichloroethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Vinyl chloride		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
m,p-xylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
o-xylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
1,1-dichloroethane		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Ethylene dibromide		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
cis-1,2-dichlorethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
trans-1,2-dichloroethylene		<25	ug/Kg	S 8260B		8/13/98	AG		4869	25
Methylene chloride		<125	ug/Kg	S 8260B		8/13/98	AG		4869	125
Surr. Dibromofluoromethane		108	%	S 8260B		8/13/98	AG		4869	71-132
Surr. Toluene-d8		113	%	S 8260B		8/13/98	AG		4869	82-124
Surr. 4-Bromofluorobenzene		117	%	S 8260B		8/13/98	AG		4869	76-126
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25

Corrected

Date: 10-1-98
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Order ID Number: 9808000186
Sample Number: 104634

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Field Code: MW-7 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
i-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0 25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	1.25
Phenol		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Benzidine		<2.5	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/12/98	8/25/98	DG	4721	5105	0.25
Surr. 2-Fluorophenol		54	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	25-121
Surr. Phenol-d6		57	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	24-113
Surr. Nitroobenzene-d5		55	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	23-120
Surr. 2-Fluorobiphenyl		56	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	30-115
Surr. 2,4,6-Tribromophenol		59	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	19-122
Surr. Terphenyl-d14		65	%	S-8270C	8/12/98	8/25/98	DG	4721	5105	28-137
Aldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50

Corrected - Added Benzidine, Hexachlorobenzene, & Pentachlorobenzene results.

Date: 10-1-98
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Order ID Number: 9808000186
Sample Number: 104634

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Field Code: MW-7 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Endosulfan		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/13/98	9/20/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/20/98	8/20/98	RC	4741	5026	0.1
Arsenic		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Barium		4.3	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Cadmium		0.23	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.10
Chromium		4.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Lead		1.2	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Total Mercury		<0.25	mg/Kg	S 7471	8/12/98	8/13/98	MS	4715	4866	0.25
Selenium		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Silver		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Uranium		<1.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Copper		<1.0	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Iron		1,200	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	10
Manganese		8.7	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	1.0
Zinc		2.8	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	2.0
Aluminum		1,390	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	10
oron		<10	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	10
Cobalt		1.5	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Molybdenum		<0.50	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Nickel		1.7	mg/Kg	S 6010B	8/12/98	8/24/98	RR	4718	5090	0.50
Cyanide		0.02	mg/Kg	SM 4500 CN,CE		8/20/98	SA		5028	0.01
Fluoride		0.75	mg/Kg	E 300.0		8/25/98	JS		5096	0.2
Nitrate		1.3	mg/Kg	E 300.0		8/25/98	JS		5096	0.2
Chloride		12	mg/Kg	E 300.0		8/25/98	JS		5096	1.0
Sulfate		6.0	mg/Kg	E 300.0		8/25/98	JS		5096	1.0
TDS		280	mg/Kg	E 160.1		9/2/98	RS		5195	---
pH		8.9	s.u.	E 150.1		8/13/98	SA		4870	---
TRPHC		<10.0	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Radium		6.55	pCi/gm	E 901.1M		8/19/98	DS	---	---	---
Total Phenols		4.0	mg/Kg	SM 5530 A,D		8/19/98	RC		5015	

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000186

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	8/13/98		4865
Acrylonitrile		<5	ug/L	5	8/13/98		4865
Benzene		<1	ug/L	1	8/13/98		4865
Carbon tetrachloride		<1	ug/L	1	8/13/98		4865
Chlorobenzene		<1	ug/L	1	8/13/98		4865
1,2-dichloroethane		<1	ug/L	1	8/13/98		4865
1,1,2,2-tetrachloroethane		<1	ug/L	1	8/13/98		4865
1,1,1-trichloroethane		<1	ug/L	1	8/13/98		4865
1,1,2-trichloroethane		<1	ug/L	1	8/13/98		4865
1,1,2-trichloroethylene		<1	ug/L	1	8/13/98		4865
Chloroform		<1	ug/L	1	8/13/98		4865
Dichlorobenzene		<2	ug/L	2	8/13/98		4865
1,1-dichloroethylene		<1	ug/L	1	8/13/98		4865
Dichloropropenes		<1	ug/L	1	8/13/98		4865
Ethylbenzene		<1	ug/L	1	8/13/98		4865
Bromodichloromethane		<1	ug/L	1	8/13/98		4865
Bromomethane		<5	ug/L	5	8/13/98		4865
Chloromethane		<1	ug/L	1	8/13/98		4865
Dichlorodifluoromethane		<1	ug/L	1	8/13/98		4865
Dichloromethane		<1	ug/L	1	8/13/98		4865
Trichlorofluoromethane		<1	ug/L	1	8/13/98		4865
Tetrachloroethylene		<1	ug/L	1	8/13/98		4865
Toluene		<1	ug/L	1	8/13/98		4865
Trichloroethylene		<1	ug/L	1	8/13/98		4865
Vinyl chloride		<1	ug/L	1	8/13/98		4865
m,p-xylene		<1	ug/L	1	8/13/98		4865
o-xylene		<1	ug/L	1	8/13/98		4865
1,1-dichloroethane		<1	ug/L	1	8/13/98		4865
Ethylene dibromide		<1	ug/L	1	8/13/98		4865
cis-1,2-dichlorethylene		<1	ug/L	1	8/13/98		4865
trans-1,2-dichloroethylene		<1	ug/L	1	8/13/98		4865
Methylene chloride		<5	ug/L	5	8/13/98		4865
Surr. Dibromofluoromethane		107	%	72-130	8/13/98		4865
Surr. Toluene-d8		112	%	77-127	8/13/98		4865
Surr. 4-Bromofluorobenzene		110	%	72-131	8/13/98		4865
Acrolein		<125	ug/Kg	125	8/13/98		4869
Acrylonitrile		<125	ug/Kg	125	8/13/98		4869
Benzene		<25	ug/Kg	25	8/13/98		4869
Carbon tetrachloride		<25	ug/Kg	25	8/13/98		4869

Date: 10-1-98
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Order ID Number: 9808000186

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Chlorobenzene		<25	ug/Kg	25	8/13/98		4869
1,2-dichloroethane		<25	ug/Kg	25	8/13/98		4869
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	8/13/98		4869
1,1,1-trichloroethane		<25	ug/Kg	25	8/13/98		4869
1,1,2-trichloroethane		<25	ug/Kg	25	8/13/98		4869
1,1,2-trichloroethylene		<25	ug/Kg	25	8/13/98		4869
Chloroform		<25	ug/Kg	25	8/13/98		4869
Dichlorobenzene		<50	ug/Kg	50	8/13/98		4869
1,1-dichloroethylene		<25	ug/Kg	25	8/13/98		4869
Dichloropropenes		<25	ug/Kg	25	8/13/98		4869
Ethylbenzene		<25	ug/Kg	25	8/13/98		4869
Bromodichloromethane		<25	ug/Kg	25	8/13/98		4869
Bromomethane		<25	ug/Kg	25	8/13/98		4869
Chloromethane		<25	ug/Kg	25	8/13/98		4869
Dichlorodifluoromethane		<25	ug/Kg	25	8/13/98		4869
Dichloromethane		<25	ug/Kg	25	8/13/98		4869
Trichlorofluoromethane		<25	ug/Kg	25	8/13/98		4869
Tetrachloroethylene		<25	ug/Kg	25	8/13/98		4869
Toluene		<25	ug/Kg	25	8/13/98		4869
Trichloroethylene		<25	ug/Kg	25	8/13/98		4869
Vinyl chloride		<25	ug/Kg	25	8/13/98		4869
m,p-xylene		<25	ug/Kg	25	8/13/98		4869
o-xylene		<25	ug/Kg	25	8/13/98		4869
1,1-dichloroethane		<25	ug/Kg	25	8/13/98		4869
Ethylene dibromide		<25	ug/Kg	25	8/13/98		4869
cis-1,2-dichlorethylene		<25	ug/Kg	25	8/13/98		4869
trans-1,2-dichloroethylene		<25	ug/Kg	25	8/13/98		4869
Methylene chloride		<125	ug/Kg	125	8/13/98		4869
Surr. Dibromofluoromethane		120	%	71-132	8/13/98		4869
Surr. Toluene-d8		116	%	82-124	8/13/98		4869
Surr. 4-Bromofluorobenzene		118	%	76-126	8/13/98		4869
Total Mercury		<0.25	mg/Kg	0.25	8/13/98	4715	4866
PCB		<0.1	mg/Kg	0.1	8/20/98	4741	5026
Cyanide		<0.01	mg/Kg	0.0	8/20/98		5028
TRPHC		<10.0	mg/Kg	10.0	8/22/98	4743	5045
Benzidine		<2.5	mg/Kg	2.5	8/25/98	4721	5105
Hexachlorobenzene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Pentachlorobenzene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Hexachloroethane		<0.25	mg/Kg	0.25	8/25/98	4721	5105
2,4-dichlorophenol		<1.25	mg/Kg	1.25	8/25/98	4721	5105
2,4,5-trichlorophenol		<1.25	mg/Kg	1.25	8/25/98	4721	5105
2,4,6-trichlorophenol		<1.25	mg/Kg	1.25	8/25/98	4721	5105
bis (2-chloroethl) ether		<1.25	mg/Kg	1.25	8/25/98	4721	5105
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	1.25	8/25/98	4721	5105

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM
Order ID Number: 9808000186

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
bis (chloromethyl) ether		<1.25	mg/Kg	1.25	8/25/98	4721	5105
3,3-dichlorobenzidine		<1.25	mg/Kg	1.25	8/25/98	4721	5105
2,4-dinitrotoluene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Diphenylhydrazine		<1.25	mg/Kg	1.25	8/25/98	4721	5105
Hexachlorobutadiene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Hexachlorocyclopentadiene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Isophorone		<1.25	mg/Kg	1.25	8/25/98	4721	5105
Nitrobenzene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
2,4-dinitro-o-cresol		<1.25	mg/Kg	1.25	8/25/98	4721	5105
2,4-dinitrophenols		<1.25	mg/Kg	1.25	8/25/98	4721	5105
i-nitrosodiethylamine		<0.25	mg/Kg	0.25	8/25/98	4721	5105
N-nitrosodimethylamine		<0.25	mg/Kg	0.25	8/25/98	4721	5105
N-nitrosodibutylamine		<1.25	mg/Kg	1.25	8/25/98	4721	5105
N-nitrosodiphenylamine		<0.25	mg/Kg	0.25	8/25/98	4721	5105
N-nitrosopyrrolidine		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Pentachlorophenol		<1.25	mg/Kg	1.25	8/25/98	4721	5105
Phenol		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Dibutyl phthalate		<0.25	mg/Kg	0.25	8/25/98	4721	5105
bis(2-ethylhexyl) phthalate		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Diethyl phthalate		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Dimethyl phthalate		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Anthracene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Fluoranthene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Fluorene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Phenanthrene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Pyrene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Naphthalene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
1-methylnaphthalene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
2-methylnaphthalene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Benzo-a-pyrene		<0.25	mg/Kg	0.25	8/25/98	4721	5105
monomethylnaphthalenes		<0.25	mg/Kg	0.25	8/25/98	4721	5105
Surr. 2-Fluorophenol		52	%	25-121	8/25/98	4721	5105
Surr. Phenol-d6		61	%	24-113	8/25/98	4721	5105
Surr. Nitroobenzene-d5		55	%	23-120	8/25/98	4721	5105
Surr. 2-Fluorobiphenyl		62	%	30-115	8/25/98	4721	5105
Surr. 2,4,6-Tribromophenol		86	%	19-122	8/25/98	4721	5105
Surr. Terphenyl-d14		67	%	28-137	8/25/98	4721	5105
Arsenic		<0.50	mg/Kg	0.50	8/12/98	4718	5090
Barium		<0.50	mg/Kg	0.50	8/12/98	4718	5090
Cadmium		<0.10	mg/Kg	0.10	8/12/98	4718	5090
Chromium		<0.50	mg/Kg	0.50	8/12/98	4718	5090
Lead		<0.50	mg/Kg	0.50	8/12/98	4718	5090
Selenium		<0.50	mg/Kg	0.50	8/12/98	4718	5090
Silver		<0.50	mg/Kg	0.50	8/12/98	4718	5090

Order ID Number: 9808000186

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Uranium		<1.0	mg/Kg	1.0	8/12/98	4718	5090
Copper		<1.0	mg/Kg	1.0	8/12/98	4718	5090
Iron		<10	mg/Kg	10	8/12/98	4718	5090
Manganese		<1.0	mg/Kg	1.0	8/12/98	4718	5090
Zinc		<2.0	mg/Kg	2.0	8/12/98	4718	5090
Aluminum		<10	mg/Kg	10	8/12/98	4718	5090
Boron		<10	mg/Kg	10	8/12/98	4718	5090
Cobalt		<0.50	mg/Kg	0.50	8/12/98	4718	5090
Molybdenum		<0.50	mg/Kg	0.50	8/12/98	4718	5090
Nickel		<0.50	mg/Kg	0.50	8/12/98	4718	5090
Total Phenols		<0.25	mg/Kg	0.25	8/19/98		5015
Fluoride		<0.2	mg/Kg	0.2	8/25/98		5096
Nitrate		<0.2	mg/Kg	0.2	8/25/98		5096
Chloride		<1.0	mg/Kg	1	8/25/98		5096
Sulfate		<1.0	mg/Kg	1	8/25/98		5096

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000186

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	110	110	8/13/98	4865
1,1-Dichloroethene		100	ug/L	105	105	8/13/98	4865
Chloroform		100	ug/L	118	118	8/13/98	4865
1,2-Dichloropropane		100	ug/L	118	118	8/13/98	4865
Toluene		100	ug/L	120	120	8/13/98	4865
Chlorobenzene		100	ug/L	118	118	8/13/98	4865
Ethylbenzene		100	ug/L	116	116	8/13/98	4865
Vinyl chloride		100	ug/L	118	118	8/13/98	4869
1,1-Dichloroethene		100	ug/L	116	116	8/13/98	4869
Chloroform		100	ug/L	114	114	8/13/98	4869
1,2-Dichloropropane		100	ug/L	114	114	8/13/98	4869
Toluene		100	ug/L	117	117	8/13/98	4869
Chlorobenzene		100	ug/L	114	114	8/13/98	4869
Ethylbenzene		100	ug/L	117	117	8/13/98	4869
Total Mercury		5.0	mg/L	4.90	98	8/13/98	4866
PCB		0.40	mg/L	0.44	110	8/20/98	5026
Cyanide		0.12	mg/L	0.10	83	8/20/98	5028
TRPHC		*100	mg/L	104.000	104	8/22/98	5045
Phenol		80	mg/L	89	111	8/25/98	5105
1,4-Dichlorobenzene		80	mg/L	85	106	8/25/98	5105
2-nitrophenol		80	mg/L	84	105	8/25/98	5105
2,4-Dichlorophenol		80	mg/L	87	109	8/25/98	5105
Hexachlorobutadiene		80	mg/L	87	109	8/25/98	5105
4-Chloro-3-methylphenol		80	mg/L	84	105	8/25/98	5105
2,4,6-Trichlorophenol		80	mg/L	85	107	8/25/98	5105
Acenaphthene		80	mg/L	83	104	8/25/98	5105
n-Nitrosodiphenylamine		80	mg/L	85	107	8/25/98	5105
Pentachlorophenol		80	mg/L	89	111	8/25/98	5105
Fluoranthene		80	mg/L	84	105	8/25/98	5105
Di-n-octylphthalate		80	mg/L	81	101	8/25/98	5105
Benzo(a)pyrene		80	mg/L	84	105	8/25/98	5105
Arsenic		1.0	mg/L	1.0	100	8/24/98	5090
Barium		1.0	mg/L	0.97	97	8/24/98	5090
Cadmium		1.0	mg/L	1.0	100	8/24/98	5090
Chromium		1.0	mg/L	1.0	100	8/24/98	5090
Lead		1.0	mg/L	1.0	100	8/24/98	5090
Selenium		1.0	mg/L	1.0	100	8/24/98	5090
Silver		0.2	mg/L	0.2	100	8/24/98	5090
Uranium		1.0	mg/L	0.99	99	8/24/98	5090

* CCV corrected to 100.

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Copper		1.0	mg/L	0.99	99	8/24/98	5090
Iron		1.0	mg/L	1.0	100	8/24/98	5090
Manganese		1.0	mg/L	1.0	100	8/24/98	5090
Zinc		1.0	mg/L	1.0	100	8/24/98	5090
Aluminum		1.0	mg/L	1.0	100	8/24/98	5090
Boron		1.0	mg/L	1.0	100	8/24/98	5090
Cobalt		1.0	mg/L	1.0	100	8/24/98	5090
Molybdenum		1.0	mg/L	1.0	100	8/24/98	5090
Nickel		1.0	mg/L	1.0	100	8/24/98	5090
pH		7.0	mg/L	7.0	100	8/13/98	4870
TDS		1000	mg/L	1005	101	9/2/98	5195
Total Phenols		0.8	mg/L	0.81	101	8/19/98	5015
Fluoride		2.5	mg/L	2.325	93	8/25/98	5096
Nitrate		5	mg/L	4.605	92	8/25/98	5096
Chloride		12.5	mg/L	11.755	94	8/25/98	5096
Sulfate		12.5	mg/L	11.355	91	8/25/98	5096

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000186

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	109	109	100	109	109	0	8/13/98		4865
Benzene		ug/L	<1	100	111	111	100	105	105	5.6	8/13/98		4865
Trichloroethene		ug/L	<1	100	110	110	100	105	105	4.7	8/13/98		4865
Toluene		ug/L	<1	100	111	111	100	106	106	4.6	8/13/98		4865
Chlorobenzene		ug/L	<1	100	103	103	100	101	101	2.0	8/13/98		4865
1,1-Dichloroethene		ug/Kg	<25	100	85	85	100	92	92	7.9	8/13/98		4869
Benzene		ug/Kg	<25	100	90	90	100	95	95	5.4	8/13/98		4869
Trichloroethene		ug/Kg	<25	100	89	89	100	95	95	6.5	8/13/98		4869
Toluene		ug/Kg	<25	100	91	91	100	96	96	5.3	8/13/98		4869
Chlorobenzene		ug/Kg	<25	100	87	87	100	87	87	0.0	8/13/98		4869
Total Mercury		mg/Kg	<0.25	2.5	2.40	96	2.5	2.40	96	0	8/13/98	4715	4866
PCB		mg/Kg	<0.1	0.50	0.52	104	0.50	0.52	104	0	8/20/98	4741	5026
Cyanide		mg/Kg	<0.01	0.1	0.11	110	0.1	0.12	120	8.7	8/20/98		5028
trphc		mg/Kg	<10.0	250	276	110	250	235	94	16.0	8/22/98	4743	5045
Phenol		mg/Kg	<0.25	10.00	8.2	82	10.00	8.49	85	2.4	8/25/98	4721	5105
2-Chlorophenol		mg/Kg	<1.25	10.00	7.93	79	10.00	7.98	80	1.3	8/25/98	4721	5105
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	7.61	76	10.00	7.87	79	3.9	8/25/98	4721	5105
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	8.23	82	10.00	9.53	95	8.2	8/25/98	4721	5105
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	7.7	77	10.00	7.89	79	2.6	8/25/98	4721	5105
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	8.3	83	10.00	8.51	85	2.4	8/25/98	4721	5105
Acenaphthene		mg/Kg	<0.25	10.00	9.01	90	10.00	8.73	87	3.4	8/25/98	4721	5105
4-Nitrophenol		mg/Kg	<1.25	10.00	6.62	66	10.00	5.73	57	15	8/25/98	4721	5105
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	9.38	94	10.00	8.8	88	6.6	8/25/98	4721	5105
Pentachlorophenol		mg/Kg	<1.25	10.00	6.87	69	10.00	7.55	76	9.7	8/25/98	4721	5105
Pyrene		mg/Kg	<0.25	10.00	9.19	92	10.00	9.7	97	5.2	8/25/98	4721	5105
Arsenic		mg/Kg	<0.50	200	191	96	200	193	97	1.0	8/24/98	4718	5090
Barium		mg/Kg	<0.50	200	206	103	200	206	103	0	8/24/98	4718	5090
Cadmium		mg/Kg	<0.10	200	194	97	200	197	99	2.0	8/24/98	4718	5090
Chromium		mg/Kg	<0.50	200	205	103	200	207	103	0	8/24/98	4718	5090
Lead		mg/Kg	<0.50	200	194	97	200	197	99	2.0	8/24/98	4718	5090
Selenium		mg/Kg	<0.50	200	171	86	200	172	86	0	8/24/98	4718	5090
Silver		mg/Kg	<0.50	25	22	88	25	23	92	4.4	8/24/98	4718	5090
Uranium		mg/Kg	<1.0	200	192	96	200	192	96	0	8/24/98	4718	5090
Copper		mg/Kg	<1.0	200	209	105	200	210	105	0	8/24/98	4718	5090
Iron		mg/Kg	<10	250	269	108	250	275	110	1.8	8/24/98	4718	5090
Manganese		mg/Kg	<1.0	200	207	104	200	211	106	1.9	8/24/98	4718	5090
Zinc		mg/Kg	<2.0	200	190	95	200	188	94	1.0	8/24/98	4718	5090
Aluminum		mg/Kg	<10	250	245	98	250	245	98	0	8/24/98	4718	5090

Date: 10-1-98

Order ID Number: 9808000186

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Boron		mg/Kg	<10	200	188	94	200	189	94	0	8/24/98	4718	5090
Cobalt		mg/Kg	<0.50	200	200	100	200	200	100	0	8/24/98	4718	5090
Molybdenum		mg/Kg	<0.50	200	205	103	200	208	104	1.0	8/24/98	4718	5090
Nickel		mg/Kg	<0.50	200	199	100	200	199	100	0	8/24/98	4718	5090
Total Phenols		mg/Kg	<0.25	0.80	0.76	95	0.80	0.77	96	1.0	8/19/98		5015
Fluoride		mg/Kg	0.4	2.5	2.55	86	2.5	2.68	91	5.6	8/25/98		5096
Nitrate		mg/Kg	0.65	5.0	5.05	88	5.0	5.1	89	1.1	8/25/98		5096
Chloride		mg/Kg	6.0	12.5	18.05	96	12.5	18.15	97	1.1	8/25/98		5096
Sulfate		mg/Kg	3.0	12.5	14.38	91	12.5	14.41	91	0	8/25/98		5096

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000186

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	8.9	8.9	0	8/13/98		4870
TDS		mg/Kg	530	544	2.6	9/2/98		5195

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
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American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Ste. 9
Lubbock, TX 79424
Phone: 800-378-1296
Fax: (806) 794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0814	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	104633	**ARS Sample I.D.:**	ARS-98-2944
Date Sampled:	08/10/98	**Date Received:**	08/14/98
Time Sampled:	N/A	**Time Received**	1551
Type of Sample:	Soil	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	4.02	2.01	pCi/gm	0.149	0.074	Bq/gm	EPA 901.1M	8/19/98 1211	DC
Ra-228	0.61	0.27	pCi/gm	0.023	0.010	Bq/gm	EPA 901.1M	8/19/98 1211	DC
Pb-210	5.12	2.58	pCi/gm	0.189	0.095	Bq/gm	EPA 901.1M	8/19/98 1211	DC
Total Activity	17.62	N/A	pCi/gm	0.652	N/A	Bq/gm	EPA 901.1M	8/19/98 1211	DC

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0814	**P.O. Number:**	Project Location: Hobbs, NM
Client I.D.:	104634	**ARS Sample I.D.:**	ARS-98-2945
Date Sampled:	08/10/98	**Date Received:**	08/14/98
Time Sampled:	N/A	**Time Received**	1551
Type of Sample:	Soil	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.31	N/A	pCi/gm	<0.048	N/A	Bq/gm	EPA 901.1M	8/19/98 1233	DC
Ra-228	<0.23	N/A	pCi/gm	<0.009	N/A	Bq/gm	EPA 901.1M	8/19/98 1233	DC
Pb-210	<1.46	N/A	pCi/gm	<0.054	N/A	Bq/gm	EPA 901.1M	8/19/98 1233	DC
Total Activity	6.55	N/A	pCi/gm	0.242	N/A	Bq/gm	EPA 901.1M	8/19/98 1233	DC

Notes:

Quality Assurance Review

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Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 186/187

Company Name: Phillip Services Corporation
Phone #: (915) - 563 - 0118
Address: 7904 IH 20 West Midland, Tx 79706
Fax #: (915) - 563 - 9526
Contact Person: Jeffrey Kindley / Sharon Hall
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Goines Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD:	HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
104631	Field Blank	2	40ml VOA	✓					✓		✓			08/10/98	1500
32	Trip Blank	2	40ml VOA	✓							✓			08/10/98	
33	MW-7 (48-50')	5	4 oz Jars		✓						✓			08/10/98	1113
	MW-7 (48-50')	1	40ml VOA		✓								✓	08/10/98	1113
34	MW-7 (63-65')	5	4 oz Jars		✓						✓			08/10/98	1356
	MW-7 (63-65')	1	40ml VOA		✓								✓	08/10/98	1356

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	VOC's	See Attached			Turn Around Time if different from standard	Hold
														✓	✓				
															✓				
															✓				
														✓					
															✓				
														✓					

Relinquished by: Jeffrey Kindley Date: 08/10/98 Time: 1700
Received by: Date: Time:
Relinquished by: Date: Time:
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Lilli Wardlaw Date: 8-11-98 Time: 9:30

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 3 °
Log-in Review MD

REMARKS: Normal Turnaround

Carrier # Bus 901 984 6165

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail. lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99
Page # 1

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000272

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
104946	Field Blank	8/12/98	15:30	8/14/98
104947	Trip Blank			8/14/98
104948	MW-8 28-30'	8/12/98	10:04	8/14/98
104949	MW-8 63-65'	8/12/98	15:00	8/14/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrections:
1) Dichlorobenzene and 1,1-dichloroethylene blank results corrected.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98
Page # 2

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000272
Sample Number: 104946

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Acrylonitrile		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Benzene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Chlorobenzene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Chloroform		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichlorobenzene		<2	ug/L	S-8260B		8/16/98	AG		4915	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichloropropenes		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Ethylbenzene		1.2	ug/L	S-8260B		8/16/98	AG		4915	1
Bromodichloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Bromomethane		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Chloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Toluene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Trichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Vinyl chloride		<1	ug/L	S-8260B		8/16/98	AG		4915	1
m,p-xylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
o-xylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Ethylene dibromide		<1	ug/L	S-8260B		8/16/98	AG		4915	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Methylene chloride		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Surr. Dibromofluoromethane		117	%	S-8260B		8/16/98	AG		4915	72-130
Surr. Toluene-d8		112	%	S-8260B		8/16/98	AG		4915	77-127
Surr. 4-Bromofluorobenzene		116	%	S-8260B		8/16/98	AG		4915	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000272
Sample Number: 104947

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Acrylonitrile		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Benzene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Chlorobenzene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Chloroform		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichlorobenzene		<2	ug/L	S-8260B		8/16/98	AG		4915	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichloropropenes		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Ethylbenzene		1.2	ug/L	S-8260B		8/16/98	AG		4915	1
Bromodichloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Bromomethane		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Chloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Toluene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Trichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Vinyl chloride		<1	ug/L	S-8260B		8/16/98	AG		4915	1
m,p-xylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
o-xylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Ethylene dibromide		<1	ug/L	S-8260B		8/16/98	AG		4915	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Methylene chloride		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Surr. Dibromofluoromethane		119	%	S-8260B		8/16/98	AG		4915	72-130
Surr. Toluene-d8		111	%	S-8260B		8/16/98	AG		4915	77-127
Surr. 4-Bromofluorobenzene		111	%	S-8260B		8/16/98	AG		4915	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98
Page # 4

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000272
Sample Number: 104948

Field Code: MW-8 28-30'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Acrylonitrile		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Benzene		400	ug/Kg	S-8260B		8/24/98	AG		5082	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chlorobenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chloroform		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichlorobenzene		<50	ug/Kg	S-8260B		8/24/98	AG		5082	2
1,1-dichloroethylene		370	ug/Kg	S-8260B		8/24/98	AG		5082	50
Dichloropropenes		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylbenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromodichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromomethane		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Chloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Toluene		410	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichloroethylene		420	ug/Kg	S-8260B		8/24/98	AG		5082	25
Vinyl chloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
m,p-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
o-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylene dibromide		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Methylene chloride		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Surr. Dibromofluoromethane		114	%	S-8260B		8/24/98	AG		5082	72-130
Surr. Toluene-d8		104	%	S-8260B		8/24/98	AG		5082	77-127
Surr. 4-Bromofluorobenzene		112	%	S-8260B		8/24/98	AG		5082	72-131
Benzidine		<2.5	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25

Date: 9-30-98
Page # 5
Order ID Number: 9808000272
Sample Number: 104948

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Field Code: MW-8 28-30'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
i-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
Phenol		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Surr. 2-Fluorophenol		49	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	25-121
Surr. Phenol-d6		60	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	24-113
Surr. Nitroobenzene-d5		49	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	23-120
Surr. 2-Fluorobiphenyl		89	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	30-115
Surr. 2,4,6-Tribromophenol		72	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	19-122
Surr. Terphenyl-d14		68	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	28-137

Date: 9-30-98
Page # 6
Order ID Number: 9808000272
Sample Number: 104948

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Field Code: MW-8 28-30'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/20/98	8/20/98	RC	4741	5026	0.1
Arsenic		0.2	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Barium		490	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Cadmium		<0.10	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.10
Chromium		3.2	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Lead		0.59	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/16/98	8/18/98	MS	4745	4952	0.10
Selenium		1.2	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Silver		<0.50	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Uranium		<2.0	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	2.0
Copper		1.9	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	1.0
Iron		2,600	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4799	5122	2.0
Manganese		15	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	1.0
Zinc		7.2	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	2.0
Aluminum		3,100	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5122	10
Boron		<10	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	10
Cobalt		4.3	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Molybdenum		2.4	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	1.0
Nickel		4.3	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Cyanide		<0.01	mg/Kg	4500 CN,CE		8/20/98	SA		5028	0.01
Fluoride		2.9	mg/Kg	E 300.0		8/25/98	JS		5096	0.2
Nitrate		1.3	mg/Kg	E 300.0		8/25/98	JS		5096	0.2
Chloride		85	mg/Kg	E 300.0		8/25/98	JS		5096	1.0
Sulfate		92	mg/Kg	E 300.0		8/25/98	JS		5096	1.0
TDS		530	mg/Kg	E 160.1		9/2/98	RS		5195	---
pH		8.7	s.u.	E 150.1		8/14/98			4890	---
TRPHC		<10.0	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenol		3.5	mg/Kg	SM 5530 A,D		8/19/98	RC		5015	0.25
Total Radium		4.13	pCi/gm	E 901.1M		8/22/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98
Page # 7

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000272
Sample Number: 104949

Field Code: MW-8 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Acrylonitrile		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Benzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chlorobenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chloroform		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichlorobenzene		<50	ug/Kg	S-8260B		8/24/98	AG		5082	2
1,1-dichloroethylene		<50	ug/Kg	S-8260B		8/24/98	AG		5082	50
Dichloropropenes		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylbenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromodichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromomethane		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Chloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Toluene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Vinyl chloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
m,p-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
o-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylene dibromide		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Methylene chloride		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Surr. Dibromofluoromethane		116	%	S-8260B		8/24/98	AG		5082	72-130
Surr. Toluene-d8		102	%	S-8260B		8/24/98	AG		5082	77-127
Surr. 4-Bromofluorobenzene		116	%	S-8260B		8/24/98	AG		5082	72-131
Benzidine		<2.5	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Date: 9-30-98
Page # 8
Order ID Number: 9808000272
Sample Number: 104949

Field Code: MW-8 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
[redacted]nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
[redacted]-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	1.25
Phenol		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/18/98	9/1/98	JG	4730	5188	0.25
Surr. 2-Fluorophenol		54	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	25-121
Surr. Phenol-d6		64	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	24-113
Surr. Nitroobenzene-d5		55	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	23-120
Surr. 2-Fluorobiphenyl		65	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	30-115
Surr. 2,4,6-Tribromophenol		70	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	19-122
[redacted]urr. Terphenyl-d14		75	%	S-8270C	8/18/98	9/1/98	JG	4730	5188	28-137

Date: 9-30-98
Page # 9
Order ID Number: 9808000272
Sample Number: 104949

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Field Code: MW-8 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/20/98	8/20/98	RC	4741	5026	0.1
Arsenic		<0.50	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Barium		13	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Cadmium		<0.10	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.10
Chromium		3.4	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Lead		<0.50	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/16/98	8/18/98	MS	4745	4952	0.10
Selenium		<0.50	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Silver		<0.50	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Uranium		<2.0	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	2.0
Copper		1.5	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	1.0
Iron		3,200	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4799	5122	2.0
Manganese		25	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	1.0
Zinc		6.3	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	2.0
Aluminum		2,700	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5122	10
Boron		<10	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	10
Cobalt		4.1	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Molybdenum		1.6	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	1.0
Nickel		4.2	mg/Kg	S 6010B	8/26/98	9/1/98	RR	4799	5182	0.50
Cyanide		<0.01	mg/Kg	A 4500 CN,CE		8/20/98	SA		5028	0.01
Fluoride		1.0	mg/Kg	E 300.0		8/25/98	JS		5096	0.2
Nitrate		1.2	mg/Kg	E 300.0		8/25/98	JS		5096	0.2
Chloride		18	mg/Kg	E 300.0		8/25/98	JS		5096	1.0
Sulfate		4.9	mg/Kg	E 300.0		8/25/98	JS		5096	1.0
TDS		170	mg/Kg	E 160.1		9/2/98	RS		5195	---
pH		9.1	s.u.	E 150.1		8/14/98	SA		4890	---
TRPHC		<10.0	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenol		1.5	mg/Kg	SM 5530 A,D		8/19/98	RC		5015	0.25
Total Radium		6.14	pCi/gm	E 901.1M		8/22/98	DS	---	---	---

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000272

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Total Mercury		<0.25	mg/Kg	0.25	8/18/98	4745	4952
Acrolein		<5	ug/L	5	8/16/98		4915
Acrylonitrile		<5	ug/L	5	8/16/98		4915
Benzene		<1	ug/L	1	8/16/98		4915
Carbon tetrachloride		<1	ug/L	1	8/16/98		4915
Chlorobenzene		<1	ug/L	1	8/16/98		4915
1,2-dichloroethane		<1	ug/L	1	8/16/98		4915
1,1,2,2-tetrachloroethane		<1	ug/L	1	8/16/98		4915
1,1,1-trichloroethane		<1	ug/L	1	8/16/98		4915
1,1,2-trichloroethane		<1	ug/L	1	8/16/98		4915
1,1,2-trichloroethylene		<1	ug/L	1	8/16/98		4915
Chloroform		<1	ug/L	1	8/16/98		4915
Dichlorobenzene		<2	ug/L	2	8/16/98		4915
,1-dichloroethylene		<1	ug/L	1	8/16/98		4915
Dichloropropenes		<1	ug/L	1	8/16/98		4915
Ethylbenzene		<1	ug/L	1	8/16/98		4915
Bromodichloromethane		<1	ug/L	1	8/16/98		4915
Bromomethane		<5	ug/L	5	8/16/98		4915
Chloromethane		<1	ug/L	1	8/16/98		4915
Dichlorodifluoromethane		<1	ug/L	1	8/16/98		4915
Dichloromethane		<1	ug/L	1	8/16/98		4915
Trichlorofluoromethane		<1	ug/L	1	8/16/98		4915
Tetrachloroethylene		<1	ug/L	1	8/16/98		4915
Toluene		<1	ug/L	1	8/16/98		4915
Trichloroethylene		<1	ug/L	1	8/16/98		4915
Vinyl chloride		<1	ug/L	1	8/16/98		4915
m,p-xylene		<1	ug/L	1	8/16/98		4915
o-xylene		<1	ug/L	1	8/16/98		4915
1,1-dichloroethane		<1	ug/L	1	8/16/98		4915
Ethylene dibromide		<1	ug/L	1	8/16/98		4915
cis-1,2-dichlorethylene		<1	ug/L	1	8/16/98		4915
trans-1,2-dichloroethylene		<1	ug/L	1	8/16/98		4915
Methylene chloride		<5	ug/L	5	8/16/98		4915
Surr. Dibromofluoromethane		115	%	72-130	8/16/98		4915
Surr. Toluene-d8		111	%	77-127	8/16/98		4915
Surr. 4-Bromofluorobenzene		110	%	72-131	8/16/98		4915
Acrolein		<125	ug/Kg	125	8/24/98		5082
Acrylonitrile		<125	ug/Kg	125	8/24/98		5082
Benzene		<25	ug/Kg	25	8/24/98		5082
Carbon tetrachloride		<25	ug/Kg	25	8/24/98		5082

Corrected

Date: 05-18-99
Page # 11
Order ID Number: 9808000272

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Chlorobenzene		<25	ug/Kg	25	8/24/98		5082
1,2-dichloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,1-trichloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,2-trichloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,2-trichloroethylene		<25	ug/Kg	25	8/24/98		5082
Chloroform		<25	ug/Kg	25	8/24/98		5082
Dichlorobenzene		<50	ug/Kg	*50	8/24/98		5082
1,1-dichloroethylene		<25	ug/Kg	*25	8/24/98		5082
Dichloropropenes		<25	ug/Kg	25	8/24/98		5082
Ethylbenzene		<25	ug/Kg	25	8/24/98		5082
Bromodichloromethane		<25	ug/Kg	25	8/24/98		5082
Bromomethane		<125	ug/Kg	125	8/24/98		5082
Chloromethane		<25	ug/Kg	25	8/24/98		5082
Dichlorodifluoromethane		<25	ug/Kg	25	8/24/98		5082
Dichloromethane		<25	ug/Kg	25	8/24/98		5082
Trichlorofluoromethane		<25	ug/Kg	25	8/24/98		5082
Tetrachloroethylene		<25	ug/Kg	25	8/24/98		5082
Toluene		<25	ug/Kg	25	8/24/98		5082
Trichloroethylene		<25	ug/Kg	25	8/24/98		5082
Vinyl chloride		<25	ug/Kg	25	8/24/98		5082
m,p-xylene		<25	ug/Kg	25	8/24/98		5082
o-xylene		<25	ug/Kg	25	8/24/98		5082
1,1-dichloroethane		<25	ug/Kg	25	8/24/98		5082
Ethylene dibromide		<25	ug/Kg	25	8/24/98		5082
cis-1,2-dichlorethylene		<25	ug/Kg	25	8/24/98		5082
trans-1,2-dichloroethylene		<25	ug/Kg	25	8/24/98		5082
Methylene chloride		<125	ug/Kg	125	8/24/98		5082
Surr. Dibromofluoromethane		112	%	72-130	8/24/98		5082
Surr. Toluene-d8		105	%	77-127	8/24/98		5082
Surr. 4-Bromofluorobenzene		112	%	72-131	8/24/98		5082
Benzidine		<2.5	mg/Kg	2.5	9/1/98	4730	5188
Hexachlorobenzene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Pentachlorobenzene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Hexachloroethane		<0.25	mg/Kg	0.25	9/1/98	4730	5188
2,4-dichlorphenol		<1.25	mg/Kg	1.25	9/1/98	4730	5188
2,4,5-trichlorophenol		<1.25	mg/Kg	1.25	9/1/98	4730	5188
2,4,6-trichlorophenol		<1.25	mg/Kg	1.25	9/1/98	4730	5188
bis (2-chloroethl) ether		<1.25	mg/Kg	1.25	9/1/98	4730	5188
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	1.25	9/1/98	4730	5188
bis (chloromethyl) ether		<1.25	mg/Kg	1.25	9/1/98	4730	5188
3,3-dichlorobenzidine		<1.25	mg/Kg	1.25	9/1/98	4730	5188
2,4-dinitrotoluene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Diphenylhydrazine		<1.25	mg/Kg	1.25	9/1/98	4730	5188
Hexachlorobutadiene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Hexachlorocyclopentadiene		<0.25	mg/Kg	0.25	9/1/98	4730	5188

* Reporting limit corrected.

Date: 9-30-98
Page # 12
Order ID Number: 9808000272

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Isophorone		<1.25	mg/Kg	1.25	9/1/98	4730	5188
Nitrobenzene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
2,4-dinitro-o-cresol		<1.25	mg/Kg	1.25	9/1/98	4730	5188
2,4-dinitrophenols		<1.25	mg/Kg	1.25	9/1/98	4730	5188
i-nitrosodiethylamine		<0.25	mg/Kg	0.25	9/1/98	4730	5188
N-nitrosodimethylamine		<0.25	mg/Kg	0.25	9/1/98	4730	5188
N-nitrosodibutylamine		<1.25	mg/Kg	1.25	9/1/98	4730	5188
N-nitrosodiphenylamine		<0.25	mg/Kg	0.25	9/1/98	4730	5188
N-nitrosopyrrolidine		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Pentachlorophenol		<1.25	mg/Kg	1.25	9/1/98	4730	5188
Phenol		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Dibutyl phthalate		<0.25	mg/Kg	0.25	9/1/98	4730	5188
di-2-ethylhexyl phthalate		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Diethyl phthalate		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Dimethyl phthalate		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Anthracene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
3,4-benzofluoranthene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Fluoranthene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
uorene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Phenanthrene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Pyrene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Naphthalene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
1-methylnaphthalene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
2-methylnaphthalene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Benzo-a-pyrene		<0.25	mg/Kg	0.25	9/1/98	4730	5188
monomethylnaphthalnenes		<0.25	mg/Kg	0.25	9/1/98	4730	5188
Surr. 2-Fluorophenol		72	%	25-121	9/1/98	4730	5188
Surr. Phenol-d6		85	%	24-113	9/1/98	4730	5188
Surr. Nitroobenzene-d5		55	%	23-120	9/1/98	4730	5188
Surr. 2-Fluorobiphenyl		80	%	30-115	9/1/98	4730	5188
Surr. 2,4,6-Tribromophenol		76	%	19-122	9/1/98	4730	5188
Surr. Terphenyl-d14		65	%	28-137	9/1/98	4730	5188
PCB		<0.1	mg/Kg	0.1	8/20/98	4741	5026
Cyanide		<0.01	mg/Kg	0.01	8/20/98		5028
TRPHC		<10.0	mg/Kg	10	8/22/98	4743	5045
Arsenic		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Barium		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Cadmium		<0.10	mg/Kg	0.10	9/1/98	4799	5182
Chromium		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Lead		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Total Mercury		<0.50	mg/Kg	0.50	8/18/98	4745	4952
Selenium		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Silver		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Uranium		<10	mg/Kg	10	9/1/98	4799	5182
opper		<1.0	mg/Kg	1.0	9/1/98	4799	5182

Date: 9-30-98
Page # 13
Order ID Number: 9808000272

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Iron		<2.0	mg/Kg	2.0	8/27/98	4799	5122
Manganese		<1.0	mg/Kg	1.0	9/1/98	4799	5182
Zinc		<2.0	mg/Kg	2.0	9/1/98	4799	5182
Aluminum		<10	mg/Kg	10	8/27/98	4799	5122
Boron		<10	mg/Kg	10	9/1/98	4799	5182
Cobalt		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Molybdenum		<1.0	mg/Kg	1.0	9/1/98	4799	5182
Nickel		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Total Phenols		<0.25	mg/Kg	0.25	8/19/98		5015
Fluoride		<0.2	mg/Kg	0.2	8/25/98		5096
Nitrate		<0.2	mg/Kg	0.2	8/25/98		5096
Chloride		<1.0	mg/Kg	1.0	8/25/98		5096
Sulfate		<1.0	mg/Kg	1.0	8/25/98		5096

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000272

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Total Mercury		5.0	mg/L	5.1	102	8/18/98	4952
Vinyl chloride		100	mg/L	110	110	8/24/98	5082
1,1-Dichloroethene		100	mg/L	90	90	8/24/98	5082
Chloroform		100	mg/L	109	109	8/24/98	5082
1,2-Dichloropropane		100	mg/L	92	92	8/24/98	5082
Toluene		100	mg/L	96	96	8/24/98	5082
Chlorobenzene		100	mg/L	98	98	8/24/98	5082
Ethylbenzene		100	mg/L	100	100	8/24/98	5082
Vinyl chloride		100	ug/L	117	117	8/16/98	4915
1,1-Dichloroethene		100	ug/L	119	119	8/16/98	4915
Chloroform		100	ug/L	120	120	8/16/98	4915
1,2-Dichloropropane		100	ug/L	118	118	8/16/98	4915
Toluene		100	ug/L	117	117	8/16/98	4915
Chlorobenzene		100	ug/L	115	115	8/16/98	4915
Ethylbenzene		100	ug/L	116	116	8/16/98	4915
pH		7.0	s.u.	7.0	100	8/14/98	4890
PCB		0.400	mg/L	0.440	110	8/20/98	5026
Cyanide		0.120	mg/L	0.100	83	8/20/98	5028
Phenol		80	mg/L	89	111	9/1/98	5188
1,4-Dichlorobenzene		80	mg/L	85	106	9/1/98	5188
2-nitrophenol		80	mg/L	83	104	9/1/98	5188
2,4-Dichlorophenol		80	mg/L	86	108	9/1/98	5188
Hexachlorobutadiene		80	mg/L	84	105	9/1/98	5188
4-Chloro-3-methylphenol		80	mg/L	76	95	9/1/98	5188
2,4,6-Trichlorophenol		80	mg/L	86	108	9/1/98	5188
Acenaphthene		80	mg/L	85	106	9/1/98	5188
n-Nitrosodiphenylamine		80	mg/L	80	100	9/1/98	5188
Pentachlorophenol		80	mg/L	80	100	9/1/98	5188
Fluoranthene		80	mg/L	81	101	9/1/98	5188
Di-n-octylphthalate		80	mg/L	83	104	9/1/98	5188
Benzo(a)pyrene		80	mg/L	85	106	9/1/98	5188
TRPHC		100	mg/L	104	104	8/22/98	5045
Arsenic		1.0	mg/L	1.0	100	9/1/98	5182
Barium		1.0	mg/L	0.98	98	9/1/98	5182
Cadmium		1.0	mg/L	1.0	100	9/1/98	5182
Chromium		1.0	mg/L	1.0	100	9/1/98	5182
Lead		1.0	mg/L	1.0	100	9/1/98	5182
Selenium		1.0	mg/L	1.0	100	9/1/98	5182

Order ID Number: 9808000272

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Silver		0.2	mg/L	0.20	100	9/1/98	5182
Uranium		1.0	mg/L	1.0	100	9/1/98	5182
Copper		1.0	mg/L	1.0	100	9/1/98	5182
Iron		50.0	mg/L	52.0	104	9/1/98	5182
Manganese		1.0	mg/L	1.0	100	9/1/98	5182
Zinc		1.0	mg/L	1.0	100	9/1/98	5182
Aluminum		125.0	mg/L	129.0	103	9/1/98	5182
Boron		1.0	mg/L	1.0	100	9/1/98	5182
Cobalt		1.0	mg/L	1.0	100	9/1/98	5182
Molybdenum		1.0	mg/L	1.0	100	9/1/98	5182
Nickel		1.0	mg/L	1.0	100	9/1/98	5182
Total Phenols		0.80	mg/L	0.81	101	8/19/98	5015
Fluoride		2.5	mg/L	2.3	92	8/25/98	5096
Nitrate		5	mg/L	4.625	93	8/25/98	5096
Chloride		12.5	mg/L	11.83	95	8/25/98	5096
Sulfate		12.5	mg/L	11.465	92	8/25/98	5096

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98
Page # 16

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000272

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Total Mercury		mg/Kg	<0.25	2.5	2.7	93	2.5	2.7	93	0	8/18/98	4745	4952
1,1-Dichloroethene		ug/L	<1	100	81	81	100	87	87	7.1	8/24/98		5082
Benzene		ug/L	<1	100	86	86	100	82	82	4.8	8/24/98		5082
Trichloroethene		ug/L	<1	100	93	93	100	84	84	10	8/24/98		5082
Toluene		ug/L	<1	100	88	88	100	81	81	8.3	8/24/98		5082
Chlorobenzene		ug/L	<1	100	93	93	100	83	83	11	8/24/98		5082
1,1-Dichloroethene		ug/L	<1	100	85	85	100	87	87	2.3	8/16/98		4915
Benzene		ug/L	<1	100	87	87	100	89	89	2.3	8/16/98		4915
Trichloroethene		ug/L	<1	100	87	87	100	89	89	2.3	8/16/98		4915
Toluene		ug/L	<1	100	86	86	100	87	87	1.2	8/16/98		4915
Chlorobenzene		ug/L	<1	100	83	83	100	86	86	3.6	8/16/98		4915
PCB		mg/Kg	<0.1	0.500	0.520	104	0.500	0.520	104	0	8/20/98	4741	5026
Cyanide		mg/Kg	<0.01	0.1	0.11	110	0.1	0.12	120	8.7	8/20/98		5028
Phenol		mg/Kg	<0.25	10.00	6.86	69	10.00	6.87	69	0	9/1/98	4730	5188
2-Chlorophenol		mg/Kg	<1.25	10.00	6.09	61	10.00	6.1	61	0	9/1/98	4730	5188
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	7.08	71	10.00	7.13	71	0	9/1/98	4730	5188
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	8.7	87	10.00	8.84	88	1.1	9/1/98	4730	5188
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	7.41	74	10.00	7.35	74	0	9/1/98	4730	5188
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	6.41	64	10.00	6.47	65	1.6	9/1/98	4730	5188
Acenaphthene		mg/Kg	<0.25	10.00	7.73	77	10.00	7.69	77	0	9/1/98	4730	5188
4-Nitrophenol		mg/Kg	<1.25	10.00	2.55	26	10.00	2.54	25	3.9	9/1/98	4730	5188
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	7.35	74	10.00	7.38	74	0	9/1/98	4730	5188
Pentachlorophenol		mg/Kg	<1.25	10.00	9.08	91	10.00	9.31	93	2.2	9/1/98	4730	5188
Pyrene		mg/Kg	<0.25	10.00	8.25	83	10.00	8.41	84	1.2	9/1/98	4730	5188
TRPHC		mg/Kg	<10.0	250	276	110	250	235	94	16	8/22/98	4743	5045
Arsenic		mg/Kg	<0.50	200	175	88	200	177	89	1.1	9/1/98	4799	5182
Barium		mg/Kg	<0.50	200	196	98	200	196	98	0	9/1/98	4799	5182
Cadmium		mg/Kg	<0.10	200	182	91	200	184	92	1.2	9/1/98	4799	5182
Chromium		mg/Kg	<0.50	200	185	93	200	189	95	2.1	9/1/98	4799	5182
Lead		mg/Kg	<0.50	200	184	92	200	185	93	1.1	9/1/98	4799	5182
Selenium		mg/Kg	<0.50	200	163	82	200	167	84	2.4	9/1/98	4799	5182
Silver		mg/Kg	<0.50	100	80	80	100	77	77	3.8	9/1/98	4799	5182
Uranium		mg/Kg	<10	200	182	91	200	185	93	2.2	9/1/98	4799	5182
Copper		mg/Kg	<1.0	200	189	95	200	191	96	1	9/1/98	4799	5182
Iron		mg/Kg	<2.0	200	204	102	200	208	104	1.9	8/27/98	4799	5122
Manganese		mg/Kg	<1.0	200	190	95	200	194	97	2.1	9/1/98	4799	5182
Zinc		mg/Kg	<2.0	200	173	87	200	174	87	0	9/1/98	4799	5182
Aluminum		mg/Kg	<10	200	194	97	200	194	97	0	8/27/98	4799	5122
Boron		mg/Kg	<10	200	173	87	200	173	87	0	9/1/98	4799	5182
Cobalt		mg/Kg	<0.50	200	184	92	200	187	94	2.2	9/1/98	4799	5182
Molybdenum		mg/Kg	<1.0	200	182	91	200	186	93	2.2	9/1/98	4799	5182

Order ID Number: 9808000272

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Nickel		mg/Kg	<0.50	200	186	93	200	188	94	1.1	9/1/98	4799	5182
Total Phenols		mg/Kg	<0.25	0.8	0.76	95	0.8	0.77	96	1	8/19/98		5015
Fluoride		mg/Kg	0.5	2.5	2.82	93	2.5	2.89	96	3.2	8/25/98		5096
Nitrate		mg/Kg	0.6	5	5.02	88	5	5.18	92	4.4	8/25/98		5096
Chloride		mg/Kg	9	12.5	20.42	91	12.5	21.1	97	6.4	8/25/98		5096
Sulfate		mg/Kg	2.45	12.5	13.72	90	12.5	13.82	91	1.1	8/25/98		5096

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000272

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	7.6	7.6	0	8/14/98		4890
TDS		mg/Kg	530	544	2.6	9/2/98		5195

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0838	**P.O. Number:**	Project 19349
Client I.D.:	104948	**ARS Sample I.D.:**	ARS-98-3060
Date Sampled:	N/A	**Date Received:**	08/20/98
Time Sampled:	N/A	**Time Received**	1041
Type of Sample:	Solid	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.91	N/A	pCi/gm	<0.034	N/A	Bq/gm	EPA 901.1M	8/22/98 1544	MK
Ra-228	0.32	0.16	pCi/gm	0.012	0.006	Bq/gm	EPA 901.1M	8/22/98 1544	MK
Pb-210	<0.90	N/A	pCi/gm	<0.033	N/A	Bq/gm	EPA 901.1M	8/22/98 1544	MK
Total Activity	4.13	N/A	pCi/gm	0.153	N/A	Bq/gm	EPA 901.1M	8/22/98 1544	MK

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0838	**P.O. Number:**	Project 19349
Client I.D.:	104949	**ARS Sample I.D.:**	ARS-98-3061
Date Sampled:	N/A	**Date Received:**	08/20/98
Time Sampled:	N/A	**Time Received**	1041
Type of Sample:	Solid	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.47	N/A	pCi/gm	<0.017	N/A	Bq/gm	EPA 901.1M	8/22/98 1502	MK
Ra-228	0.31	0.15	pCi/gm	0.011	0.006	Bq/gm	EPA 901.1M	8/22/98 1502	MK
Pb-210	1.23	0.93	pCi/gm	0.046	0.034	Bq/gm	EPA 901.1M	8/22/98 1502	MK
Total Activity	6.14	N/A	pCi/gm	0.227	N/A	Bq/gm	EPA 901.1M	8/22/98 1502	MK

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.
1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 272 / 273

Company Name: Phillip Services Corporation
Phone #: (915) - 563 - 0118
Address: 7904 IH 20 West Midland, Tx 79706
Fax #: (915) 563 - 9526.
Contact Person: Jeffrey Kindley / Sharon Hall
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
10494	Field Blank	2	40ml VOA	✓				✓		✓			08/12/98	1530
47	Trip Blank	2	40ml VOA	✓						✓			08/12/98	1530
48	MW-8 (28-30')	5	40z Jar		✓					✓			08/12/98	1004
	MW-8 (28-30')	1	40ml VOA		✓							✓	08/12/98	1004
49	MW-8 (63-65')	5	40z Jar		✓					✓			08/12/98	1500
	MW-8 (63-65')	1	40ml VOA		✓							✓	08/12/98	1500
50	MW-7 (48-50) VW	1										✓		
51	MW-7 (63-65) VW	1										✓		

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	VOC's	See Attached.	Turn Around Time if different from standard	Hold
															✓		
															✓		
															✓		
														✓			
															✓		
														✓			
															✓		
														✓			
															✓		
															✓		

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	08/13/98	700 AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Vicki Woodham	8-14-98	9:30 Am

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY

Intact Y / N
Headspace Y / N
Temp 4 °
Log-in Review

REMARKS:

Normal Turnaround.

VW
MW7 48-50/63-65 ADD on Fax previous COC

Carrier # Bus 901984619 8

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000307

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
105069	Field Blank	8/13/98	15:30	8/15/98
105070	Trip Blank			8/15/98
105071	GSB-1 2-3'	8/13/98	9:11	8/15/98
105072	GSB-1 58-60'	8/13/98	14:25	8/15/98
105073	GSB-1 63-65'	8/13/98	14:40	8/15/98
105074	GSB-1B 63-65'	8/13/98	14:04	8/15/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrections:
1) Dichlorobenzene and 1,1-dichloroethylene blank results corrected.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000307
Sample Number: 105069

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Acrylonitrile		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Benzene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Chlorobenzene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Chloroform		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichlorobenzene		<2	ug/L	S-8260B		8/16/98	AG		4915	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichloropropenes		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Ethylbenzene		1.2	ug/L	S-8260B		8/16/98	AG		4915	1
Bromodichloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Bromomethane		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Chloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Toluene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Trichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Vinyl chloride		<1	ug/L	S-8260B		8/16/98	AG		4915	1
m,p-xylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
o-xylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Ethylene dibromide		<1	ug/L	S-8260B		8/16/98	AG		4915	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Methylene chloride		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Surr. Dibromofluoromethane		119	%	S-8260B		8/16/98	AG		4915	72-130
Surr. Toluene-d8		110	%	S-8260B		8/16/98	AG		4915	77-127
Surr. 4-Bromofluorobenzene		117	%	S-8260B		8/16/98	AG		4915	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98
Page # 3

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000307
Sample Number: 105070

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Acrylonitrile		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Benzene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Chlorobenzene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Chloroform		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichlorobenzene		<2	ug/L	S-8260B		8/16/98	AG		4915	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichloropropenes		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Ethylbenzene		3.7	ug/L	S-8260B		8/16/98	AG		4915	1
Bromodichloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Bromomethane		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Chloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Dichloromethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Toluene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Trichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Vinyl chloride		<1	ug/L	S-8260B		8/16/98	AG		4915	1
m,p-xylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
o-xylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Ethylene dibromide		<1	ug/L	S-8260B		8/16/98	AG		4915	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/16/98	AG		4915	1
Methylene chloride		<5	ug/L	S-8260B		8/16/98	AG		4915	5
Surr. Dibromofluoromethane		116	%	S-8260B		8/16/98	AG		4915	72-130
Surr. Toluene-d8		112	%	S-8260B		8/16/98	AG		4915	77-127
Surr. 4-Bromofluorobenzene		116	%	S-8260B		8/16/98	AG		4915	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98
Page # 4

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000307
Sample Number: 105071

Field Code: GSB-1 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Acrylonitrile		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Benzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chlorobenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chloroform		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichlorobenzene		<50	ug/Kg	S-8260B		8/24/98	AG		5082	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichloropropenes		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylbenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromodichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromomethane		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Chloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Toluene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Vinyl chloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
m,p-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
o-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylene dibromide		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Methylene chloride		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Surr. Dibromofluoromethane		118	%	S-8260B		8/24/98	AG		5082	72-130
Surr. Toluene-d8		102	%	S-8260B		8/24/98	AG		5082	77-127
Surr. 4-Bromofluorobenzene		116	%	S-8260B		8/24/98	AG		5082	72-131
Benzidine		<2.5	mg/Kg	S-8270C	8/18/98	8/29/98	JG			2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25

Date: 9-30-98
Page # 5
Order ID Number: 9808000307
Sample Number: 105071

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GSB-1 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/18/98	8/29/98	JG			0.25
Surr. 2-Fluorophenol		65	%	S-8270C	8/18/98	8/29/98	JG			25-121
Surr. Phenol-d6		62	%	S-8270C	8/18/98	8/29/98	JG			24-113
Surr. Nitroobenzene-d5		61	%	S-8270C	8/18/98	8/29/98	JG			23-120
Surr. 2-Fluorobiphenyl		76	%	S-8270C	8/18/98	8/29/98	JG			30-115
Surr. 2,4,6-Tribromophenol		62	%	S-8270C	8/18/98	8/29/98	JG			19-122
Surr. Terphenyl-d14		61	%	S-8270C	8/18/98	8/29/98	JG			28-137

Date: 9-30-98
Page # 6
Order ID Number: 9808000307
Sample Number: 105071

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GSB-1 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/18/98	9/23/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	
Arsenic		4.2	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	0.50
Barium		370	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	0.50
Cadmium		<0.10	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	0.10
Chromium		4.9	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	0.50
Lead		1.8	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	0.50
Total Mercury		<0.25	mg/Kg	S 7471	8/16/98	8/18/98	MS	4745	4952	0.25
Selenium		0.85	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	0.50
Silver		<.50	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	0.50
Uranium		<2.0	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	2.0
Copper		1.9	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	1.0
Iron		4200	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	2.0
Manganese		36	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	10
Zinc		9.3	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	2.0
Aluminum		6600	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	10
Boron		13	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	1.0
Cobalt		8.1	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	0.50
Molybdenum		2.8	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	1.0
Nickel		8.6	mg/Kg	6010	8/26/98	9/1/98	RR	4799	5182	0.50
Cyanide		0.062	mg/Kg	SM 4500 CN,CE		8/20/98	SA		5029	0.01
Fluoride		13	mg/Kg	E 335.2		8/25/98	JS		5096	0.01
Nitrate		2.1	mg/Kg	E 300.0		8/25/98	JS		5096	0.01
Chloride		8.9	mg/Kg	E 300.0		8/25/98	JS		5096	0.05
Sulfate		29	mg/Kg	E 300.0		8/25/98	JS		5096	0.05
TDS		300	mg/Kg	E 160.2		9/10/98	RS		5273	---
pH		8.5	s.u.	E 150.1		8/17/98			4935	---
TRPHC		<10.0	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenol		<0.25	mg/Kg	SM 5530 A,D		8/19/98	RC		5015	0.25
Total Radium		4.80	pCi/gm	E 901.1M		8/23/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98
Page # 7

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000307
Sample Number: 105072

Field Code: GSB-1 58-60'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/kg	E 8021B		8/18/98	JG		4967	0.050
Toluene		<0.050	mg/kg	E 8021B		8/18/98	JG		4967	0.050
Ethylbenzene		<0.050	mg/kg	E 8021B		8/18/98	JG		4967	0.050
m,p,o-xylene		0.857	mg/kg	E 8021B		8/18/98	JG		4967	0.050
TRPHC		1,770	mg/kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Chloride		<8.0	mg/kg	SM 4500 ClB		9/1/98	JS		5187	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98
Page # 8

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000307
Sample Number: 105073

Field Code: GSB-1 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/kg	E 8021B		8/18/98	JG		4967	0.050
Toluene		<0.050	mg/kg	E 8021B		8/18/98	JG		4967	0.050
Ethylbenzene		<0.050	mg/kg	E 8021B		8/18/98	JG		4967	0.050
m,p,o-xylene		0.075	mg/kg	E 8021B		8/18/98	JG		4967	0.050
TRPHC		274	mg/kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Chloride		13	mg/kg	SM 4500 ClB		9/1/98	JS		5187	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98
Page # 9

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000307
Sample Number: 105074

Field Code: GSB-1B 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/kg	E 8021B		8/18/98	JG		4967	0.050
Toluene		<0.050	mg/kg	E 8021B		8/18/98	JG		4967	0.050
Ethylbenzene		<0.050	mg/kg	E 8021B		8/18/98	JG		4967	0.050
m,p,o-xylene		<0.050	mg/kg	E 8021B		8/18/98	JG		4967	0.050
TRPHC		1,340	mg/kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Chloride		11	mg/kg	SM 4500 ClB		9/1/98	JS		5187	2.0

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000307

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	8/16/98		4915
Acrylonitrile		<5	ug/L	5	8/16/98		4915
Benzene		<1	ug/L	1	8/16/98		4915
Carbon tetrachloride		<1	ug/L	1	8/16/98		4915
Chlorobenzene		<1	ug/L	1	8/16/98		4915
1,2-dichloroethane		<1	ug/L	1	8/16/98		4915
1,1,2,2-tetrachloroethane		<1	ug/L	1	8/16/98		4915
1,1,1-trichloroethane		<1	ug/L	1	8/16/98		4915
1,1,2-trichloroethane		<1	ug/L	1	8/16/98		4915
1,1,2-trichloroethylene		<1	ug/L	1	8/16/98		4915
Chloroform		<1	ug/L	1	8/16/98		4915
Dichlorobenzene		<2	ug/L	2	8/16/98		4915
1,1-dichloroethylene		<1	ug/L	1	8/16/98		4915
Dichloropropenes		<1	ug/L	1	8/16/98		4915
Ethylbenzene		<1	ug/L	1	8/16/98		4915
Bromodichloromethane		<1	ug/L	1	8/16/98		4915
Bromomethane		<5	ug/L	5	8/16/98		4915
Chloromethane		<1	ug/L	1	8/16/98		4915
Dichlorodifluoromethane		<1	ug/L	1	8/16/98		4915
Dichloromethane		<1	ug/L	1	8/16/98		4915
Trichlorofluoromethane		<1	ug/L	1	8/16/98		4915
Tetrachloroethylene		<1	ug/L	1	8/16/98		4915
Toluene		<1	ug/L	1	8/16/98		4915
Trichloroethylene		<1	ug/L	1	8/16/98		4915
Vinyl chloride		<1	ug/L	1	8/16/98		4915
m,p-xylene		<1	ug/L	1	8/16/98		4915
o-xylene		<1	ug/L	1	8/16/98		4915
1,1-dichloroethane		<1	ug/L	1	8/16/98		4915
Ethylene dibromide		<1	ug/L	1	8/16/98		4915
cis-1,2-dichlorethylene		<1	ug/L	1	8/16/98		4915
trans-1,2-dichloroethylene		<1	ug/L	1	8/16/98		4915
Methylene chloride		<5	ug/L	5	8/16/98		4915
Surr. Dibromofluoromethane		115	%	72-130	8/16/98		4915
Surr. Toluene-d8		111	%	77-127	8/16/98		4915
Surr. 4-Bromofluorobenzene		110	%	72-131	8/16/98		4915
Total Mercury		<0.25	mg/Kg	0.25	8/18/98	4745	4952
Cyanide		<0.01	mg/Kg	0.01	8/20/98		5029
Chloride		<2.0	mg/Kg	2.0	9/1/98		5187
Fluoride		<0.2	mg/Kg	0.2	8/25/98		5096
Nitrate		<0.2	mg/Kg	0.2	8/25/98		5096

Date: 9-30-98
Page # 11
Order ID Number: 9808000307

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Chloride		<1.0	mg/Kg	1.0	8/25/98		5096
Sulfate		<1.0	mg/Kg	1.0	8/25/98		5096
Arsenic		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Barium		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Cadmium		<0.10	mg/Kg	0.50	9/1/98	4799	5182
Chromium		<0.50	mg/Kg	0.10	9/1/98	4799	5182
Lead		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Selenium		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Silver		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Uranium		<2.0	mg/Kg	2.0	9/1/98	4799	5182
Copper		<1.0	mg/Kg	1.0	9/1/98	4799	5182
Iron		<2.0	mg/Kg	2.0	9/1/98	4799	5182
Manganese		<1.0	mg/Kg	1.0	9/1/98	4799	5182
Zinc		<2.0	mg/Kg	2.0	9/1/98	4799	5182
Aluminum		<10	mg/Kg	10	9/1/98	4799	5182
Boron		<10	mg/Kg	10	9/1/98	4799	5182
Cobalt		<0.50	mg/Kg	0.50	9/1/98	4799	5182
Molybdenum		<1.0	mg/Kg	1.0	9/1/98	4799	5182
Nickel		<0.50	mg/Kg	0.50	9/1/98	4799	5182
TRPHC		<10.0	mg/Kg	10	8/22/98	4743	5045
TRPHC		<10.0	mg/Kg	10	8/30/98	4810	5168
Benzene		<0.050	mg/Kg	0.050	8/18/98		4967
Toluene		<0.050	mg/Kg	0.050	8/18/98		4967
Ethylbenzene		<0.050	mg/Kg	0.050	8/18/98		4967
m,p,o-xylene		<0.050	mg/Kg	0.050	8/18/98		4967
Total Phenols		<0.25	mg/Kg	0.25	8/19/98		5015
Benzidine		<2.5	mg/kg	2.5	8/29/98	4725	5160
Hexachlorobenzene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Pentachlorobenzene		<0.25	mg/kg	0.25	8/29/98	4725	5160
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Hexachloroethane		<0.25	mg/kg	0.25	8/29/98	4725	5160
2,4-dichlorophenol		<1.25	mg/kg	1.25	8/29/98	4725	5160
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	8/29/98	4725	5160
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	8/29/98	4725	5160
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	8/29/98	4725	5160
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	8/29/98	4725	5160
bis (chloromethyl) ether		<1.25	mg/kg	1.25	8/29/98	4725	5160
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	8/29/98	4725	5160
2,4-dinitrotoluene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Diphenylhydrazine		<1.25	mg/kg	1.25	8/29/98	4725	5160
Hexachlorobutadiene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Isophorone		<1.25	mg/kg	1.25	8/29/98	4725	5160
Nitrobenzene		<0.25	mg/kg	0.25	8/29/98	4725	5160
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	8/29/98	4725	5160
2,4-dinitrophenols		<1.25	mg/kg	1.25	8/29/98	4725	5160

Corrected

Date: 05-18-99
Page # 12
Order ID Number: 9808000307

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
n-nitrosodiethylamine		<0.25	mg/kg	0.25	8/29/98	4725	5160
N-nitrosodimethylamine		<0.25	mg/kg	0.25	8/29/98	4725	5160
N-nitrosodibutylamine		<1.25	mg/kg	1.25	8/29/98	4725	5160
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	8/29/98	4725	5160
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	8/29/98	4725	5160
Pentachlorophenol		<1.25	mg/kg	1.25	8/29/98	4725	5160
Dibutyl phthalate		<0.25	mg/kg	0.25	8/29/98	4725	5160
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	8/29/98	4725	5160
Diethyl phthalate		<0.25	mg/kg	0.25	8/29/98	4725	5160
Dimethyl phthalate		<0.25	mg/kg	0.25	8/29/98	4725	5160
Anthracene		<0.25	mg/kg	0.25	8/29/98	4725	5160
3,4-benzofluoranthene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Fluoranthene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Fluorene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Phenanthrene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Pyrene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Naphthalene		<0.25	mg/kg	0.25	8/29/98	4725	5160
1-methylnaphthalene		<0.25	mg/kg	0.25	8/29/98	4725	5160
2-methylnaphthalene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Benzo-a-pyrene		<0.25	mg/kg	0.25	8/29/98	4725	5160
Surr. 2-Fluorophenol		70	%	25-121	8/29/98	4725	5160
Surr. Phenol-d6		70	%	24-113	8/29/98	4725	5160
Surr. Nitroobenzene-d5		52	%	23-120	8/29/98	4725	5160
Surr. 2-Fluorobiphenyl		84	%	30-115	8/29/98	4725	5160
Surr. 2,4,6-Tribromophenol		72	%	19-122	8/29/98	4725	5160
Surr. Terphenyl-d14		65	%	28-137	8/29/98	4725	5160
Acrolein		<125	ug/Kg	125	8/24/98		5082
Acrylonitrile		<125	ug/Kg	125	8/24/98		5082
Benzene		<25	ug/Kg	25	8/24/98		5082
Carbon tetrachloride		<25	ug/Kg	25	8/24/98		5082
Chlorobenzene		<25	ug/Kg	25	8/24/98		5082
1,2-dichloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,1-trichloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,2-trichloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,2-trichloroethylene		<25	ug/Kg	25	8/24/98		5082
Chloroform		<25	ug/Kg	25	8/24/98		5082
Dichlorobenzene		<50	ug/Kg	*50	8/24/98		5082
1,1-dichloroethylene		<25	ug/Kg	*25	8/24/98		5082
Dichloropropenes		<25	ug/Kg	25	8/24/98		5082
Ethylbenzene		<25	ug/Kg	25	8/24/98		5082
Bromodichloromethane		<25	ug/Kg	25	8/24/98		5082
Bromomethane		<125	ug/Kg	125	8/24/98		5082
Chloromethane		<25	ug/Kg	25	8/24/98		5082
Dichlorodifluoromethane		<25	ug/Kg	25	8/24/98		5082

Date: 9-30-98
Page # 13
Order ID Number: 9808000307

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Dichloromethane		<25	ug/Kg	25	8/24/98		5082
Trichlorofluoromethane		<25	ug/Kg	25	8/24/98		5082
Tetrachloroethylene		<25	ug/Kg	25	8/24/98		5082
Toluene		<25	ug/Kg	25	8/24/98		5082
Trichloroethylene		<25	ug/Kg	25	8/24/98		5082
Vinyl chloride		<25	ug/Kg	25	8/24/98		5082
m,p-xylene		<25	ug/Kg	25	8/24/98		5082
o-xylene		<25	ug/Kg	25	8/24/98		5082
1,1-dichloroethane		<25	ug/Kg	25	8/24/98		5082
Ethylene dibromide		<25	ug/Kg	25	8/24/98		5082
cis-1,2-dichlorethylene		<25	ug/Kg	25	8/24/98		5082
trans-1,2-dichloroethylene		<25	ug/Kg	25	8/24/98		5082
Methylene chloride		<125	ug/Kg	125	8/24/98		5082
Surr. Dibromofluoromethane		112	%	72-130	8/24/98		5082
Surr. Toluene-d8		105	%	77-127	8/24/98		5082
Surr. 4-Bromofluorobenzene		112	%	72-131	8/24/98		5082

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000307

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	117	117	8/16/98	4915
1,1-Dichloroethene		100	ug/L	119	119	8/16/98	4915
Chloroform		100	ug/L	120	120	8/16/98	4915
1,2-Dichloropropane		100	ug/L	118	118	8/16/98	4915
Toluene		100	ug/L	117	117	8/16/98	4915
Chlorobenzene		100	ug/L	115	115	8/16/98	4915
Ethylbenzene		100	ug/L	116	116	8/16/98	4915
pH		7	s.u.	7	100	8/17/98	4935
Total Mercury		5.0	mg/L	5.1	102	8/18/98	4952
Cyanide		0.12	mg/L	0.11	110	8/20/98	5029
Fluoride		2.5	mg/L	2.335	93	8/25/98	5096
Nitrate		5.0	mg/L	4.625	93	8/25/98	5096
Chloride		12.5	mg/L	11.83	95	8/25/98	5096
Sulfate		12.5	mg/L	11.465	92	8/25/98	5096
Arsenic		1.0	mg/L	1.0	100	9/1/98	5182
Barium		1.0	mg/L	0.99	99	9/1/98	5182
Cadmium		1.0	mg/L	1.0	100	9/1/98	5182
Chromium		1.0	mg/L	1.0	100	9/1/98	5182
Lead		1.0	mg/L	1.0	100	9/1/98	5182
Selenium		1.0	mg/L	1.0	100	9/1/98	5182
Silver		0.20	mg/L	0.20	100	9/1/98	5182
Uranium		1.0	mg/L	1.0	100	9/1/98	5182
Copper		1.0	mg/L	1.0	100	9/1/98	5182
Iron		50	mg/L	51	102	9/1/98	5182
Manganese		1.0	mg/L	1.0	100	9/1/98	5182
Zinc		1.0	mg/L	1.0	100	9/1/98	5182
Aluminum		125	mg/L	128	102	9/1/98	5182
Boron		1.0	mg/L	1.0	100	9/1/98	5182
Cobalt		1.0	mg/L	1.0	100	9/1/98	5182
Molybdenum		1.0	mg/L	1.0	100	9/1/98	5182
Nickel		1.0	mg/L	1.0	100	9/1/98	5182
TRPHC		100	mg/L	104	104	8/22/98	5045
TRPHC		100	mg/L	99	99	8/30/98	5168
Benzene		0.100	mg/L	0.098	98	8/18/98	4967
Toluene		0.100	mg/L	0.097	97	8/18/98	4967
Ethylbenzene		0.100	mg/L	0.098	98	8/18/98	4967
m,p,o-xylene		0.300	mg/L	0.275	92	8/18/98	4967
TDS		1000	mg/L	978	98	9/10/98	5273
Total Phenols		0.80	mg/L	0.81	101	8/19/98	5015

Order ID Number: 9808000307

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Phenol		80	mg/L	86	108	9/21/98	5480
1,4-Dichlorobenzene		80	mg/L	87	109	9/21/98	5480
2-nitrophenol		80	mg/L	84	105	9/21/98	5480
2,4-Dichlorophenol		80	mg/L	86	108	9/21/98	5480
Hexachlorobutadiene		80	mg/L	82	103	9/21/98	5480
4-Chloro-3-methylphenol		80	mg/L	83	104	9/21/98	5480
2,4,6-Trichlorophenol		80	mg/L	85	106	9/21/98	5480
Acenaphthene		80	mg/L	81	101	9/21/98	5480
n-Nitrosodiphenylamine		80	mg/L	81	101	9/21/98	5480
Pentachlorophenol		80	mg/L	89	111	9/21/98	5480
Fluoranthene		80	mg/L	86	108	9/21/98	5480
Di-n-octylphthalate		80	mg/L	111	139	9/21/98	5480
Benzo(a)pyrene		80	mg/L	86	108	9/21/98	5480
Vinyl chloride		100	mg/L	110	110	8/24/98	5082
1,1-Dichloroethene		100	mg/L	90	90	8/24/98	5082
Chloroform		100	mg/L	109	109	8/24/98	5082
1,2-Dichloropropane		100	mg/L	92	92	8/24/98	5082
Toluene		100	mg/L	96	96	8/24/98	5082
Chlorobenzene		100	mg/L	98	98	8/24/98	5082
Ethylbenzene		100	mg/L	100	100	8/24/98	5082

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000307

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	85	85	100	87	87	2.3	8/16/98		4915
Benzene		ug/L	<1	100	87	87	100	89	89	2.3	8/16/98		4915
Trichloroethene		ug/L	<1	100	87	87	100	89	89	2.3	8/16/98		4915
Toluene		ug/L	<1	100	86	86	100	87	87	1.2	8/16/98		4915
Chlorobenzene		ug/L	<1	100	83	83	100	86	86	3.6	8/16/98		4915
1,1-Dichloroethene		ug/L	<1	100	81	81	100	87	87	7.1	8/24/98		5082
Benzene		ug/L	<1	100	86	86	100	82	82	4.8	8/24/98		5082
Trichloroethene		ug/L	<1	100	93	93	100	84	84	10	8/24/98		5082
Toluene		ug/L	<1	100	88	88	100	81	81	8.3	8/24/98		5082
Chlorobenzene		ug/L	<1	100	93	93	100	83	83	11	8/24/98		5082
Total Mercury		mg/Kg	<0.25	2.5	2.7	93	2.5	2.7	93	0	8/18/98	4745	4952
Cyanide		mg/Kg	<0.01	0.12	0.1	83	0.12	0.1	83	0	8/20/98		5029
Fluoride		mg/Kg	0.5	2.5	2.82	93	2.5	2.89	96	3.2	8/25/98		5096
Nitrate		mg/Kg	0.61	5.0	5.02	88	5.0	5.18	91	3.4	8/25/98		5096
Chloride		mg/Kg	8.82	12.5	20.42	93	12.5	21.10	98	5.2	8/25/98		5096
Sulfate		mg/Kg	2.46	12.5	13.72	90	12.5	13.82	91	1.1	8/25/98		5096
Arsenic		mg/Kg	1.2	200	168	83	200	161	81	2.4	9/1/98	4799	5182
Barium		mg/Kg	<0.5	200	196	98	200	196	98	0	9/1/98	4799	5182
Cadmium		mg/Kg	<0.10	200	168	84	200	160	80	4.9	9/1/98	4799	5182
Chromium		mg/Kg	3.2	200	177	87	200	172	84	3.5	9/1/98	4799	5182
Lead		mg/Kg	0.59	200	168	84	200	163	81	3.5	9/1/98	4799	5182
Selenium		mg/Kg	1.2	200	163	81	200	167	83	2.4	9/1/98	4799	5182
Silver		mg/Kg	<0.50	100	81	81	100	91	91	12	9/1/98	4799	5182
Uranium		mg/Kg	<2.0	200	159	80	200	164	82	2.5	9/1/98	4799	5182
Copper		mg/Kg	1.9	200	182	90	200	180	89	1.1	9/1/98	4799	5182
Iron		mg/Kg	<2.0	200	204	102	200	208	104	1.9	9/1/98	4799	5182
Manganese		mg/Kg	15	200	183	84	200	182	84	0	9/1/98	4799	5182
Zinc		mg/Kg	7.2	200	163	78	200	165	79	1.3	9/1/98	4799	5182
Aluminum		mg/Kg	<10	200	194	97	200	194	97	0	9/1/98	4799	5182
Boron		mg/Kg	<10	200	174	87	200	172	86	1.2	9/1/98	4799	5182
Cobalt		mg/Kg	4.3	200	162	79	200	159	77	2.6	9/1/98	4799	5182
Molybdenum		mg/Kg	2.4	200	173	85	200	171	84	1.2	9/1/98	4799	5182
Nickel		mg/Kg	4.3	200	161	78	200	160	78	0	9/1/98	4799	5182
TRPHC		mg/Kg	<10.0	250	276	110	250	235	94	16	8/22/98	4743	5045
TRPHC		mg/Kg	<10.0	250	243	97	250	231	92	5.3	8/30/98	4810	5168
Benzene		mg/Kg	<0.050	5.00	4.63	93	5.00	4.6	92	1.1	8/18/98		4967
Toluene		mg/Kg	<0.050	5.00	4.6	92	5.00	4.59	92	0	8/18/98		4967
Ethylbenzene		mg/Kg	<0.050	5.00	5.22	104	5.00	5.19	104	0	8/18/98		4967
m,p,o-xylene		mg/Kg	<0.050	15.00	13.1	87	15.00	13.1	87	0	8/18/98		4967

Order ID Number: 9808000307

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Total Phenols		mg/Kg	<0.25	0.8	0.76	98	0.8	0.77	96	2.1	8/19/98		5015
Phenol		mg/Kg	<0.25	10	6.45	65	10	5.81	58	11	8/27/98	4725	5160
2-Chlorophenol		mg/Kg	<1.25	10	6.59	66	10	6.64	66	0	8/27/98	4725	5160
1,4-Dichlorobenzene		mg/Kg	<0.25	10	7.41	74	10	7.45	75	1.3	8/27/98	4725	5160
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10	7.19	72	10	7.28	73	1.4	8/27/98	4725	5160
1,2,4-trichlorobenzene		mg/Kg	<0.25	10	7.36	76	10	7.32	73	4.0	8/27/98	4725	5160
4-Chloro-3-methylphenol		mg/Kg	<1.25	10	6.92	69	10	6.92	69	0	8/27/98	4725	5160
Acenaphthene		mg/Kg	<0.25	10	7.45	75	10	7.53	75	0	8/27/98	4725	5160
4-Nitrophenol		mg/Kg	<1.25	10	2.66	27	10	2.54	25	7.7	8/27/98	4725	5160
2,4-Dinitrotoluene		mg/Kg	<0.25	10	7.12	71	10	7.26	73	2.8	8/27/98	4725	5160
Pentachlorophenol		mg/Kg	<1.25	10	6.59	66	10	6.9	69	4.4	8/27/98	4725	5160
Pyrene		mg/Kg	<0.25	10	8.61	86	10	8.77	88	2.3	8/27/98	4725	5160

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000307

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	8.3	8.3	0	8/17/98		4935
TDS		mg/Kg	880	864	1.8	9/10/98		5273

AMERICAN RADIATION SERVICES, INC.
1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0838	**P.O. Number:**	Project 19349
Client I.D.:	105071	**ARS Sample I.D.:**	ARS-98-3059
Date Sampled:	08/13/98	**Date Received:**	08/20/98
Time Sampled:	N/A	**Time Received**	1041
Type of Sample:	Soil	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.84	N/A	pCi/gm	<0.031	N/A	Bq/gm	EPA 901.1M	8/23/98 0951	MK
Ra-228	<0.14	N/A	pCi/gm	<0.005	N/A	Bq/gm	EPA 901.1M	8/23/98 0951	MK
Pb-210	<1.20	N/A	pCi/gm	<0.044	N/A	Bq/gm	EPA 901.1M	8/23/98 0951	MK
Total Activity	4.80	N/A	pCi/gm	0.178	N/A	Bq/gm	EPA 901.1M	8/23/98 0951	MK

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 307/308

Company Name: Philip Services Corporation
Phone #: (915) -563- 0118
Address: 7904 I-20 West Midland, Tx 79706
Fax #: (915)-563- 9526
Contact Person: Jeffrey Kindley / Sharon Hall
Invoice to: (If different from above) Sims
Project #: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
105069	Field Blank	2	40ml VOA	✓				✓					08/13/98	1530
70	Trip Blank	2	40ml VOA	✓						✓			08/13/98	
71	GSB-1 (2-3')	5	4 oz Jars		✓					✓			08/13/98	0911
	GSB-1 (2-3')	1	40 ml VOA		✓							✓	08/13/98	0911
72	GSB-1 (58-60')	2	4 oz Jars		✓					✓			08/13/98	1425
73	GSB-1 (63-65')	2	4 oz Jars		✓					✓			08/13/98	1440
74	GSB-1B (63-65')	2	4 oz Jars		✓					✓			08/13/98	1440

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	See Attached	VOC's	Total Chlorides (300.1)	Turn Around Time if different from standard	Hold
	✓	✓														✓		
	✓	✓														✓		
	✓	✓														✓		

Relinquished by: Jeffrey Kindley Date: August 14, 1998 Time: 700 AM
Received by: Date: Time:
Relinquished by: Date: Time:
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Armando Gomez Date: 8/15/98 Time: 9:30 am

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp -2 °
Log-in Review

REMARKS: Normal Turnaround.

Carrier # Greyhound 901 984 601 1

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
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Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
105222	Field Blank	8/14/98	15:30	8/18/98
105223	Trip Blank			8/18/98
105224	GSB-2 5-6'	8/14/98	9:19	8/18/98
105225	GSB-2 45-47'	8/14/98	11:45	8/18/98
105226	GSB-2 55-57'	8/14/98	13:30	8/18/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrections:
1) Added MTBE result for samples 105225 and 105226.
2) *Dichlorobenzene and 1,1-dichloroethylene blank result corrected.*

Note:
Pages were misnumbered. There is no page 16.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 2

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344
Sample Number: 105222

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/24/98	AG		5081	5
Acrylonitrile		<5	ug/L	S-8260B		8/24/98	AG		5081	5
Benzene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Chlorobenzene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Chloroform		<1	ug/L	S-8260B		8/24/98	AG		5081	1
ichlorobenzene		<2	ug/L	S-8260B		8/24/98	AG		5081	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Dichloropropenes		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Ethylbenzene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Bromodichloromethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Bromomethane		<5	ug/L	S-8260B		8/24/98	AG		5081	5
Chloromethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Dichloromethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Toluene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Trichloroethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Vinyl chloride		<1	ug/L	S-8260B		8/24/98	AG		5081	1
m,p-xylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
o-xylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Ethylene dibromide		<1	ug/L	S-8260B		8/24/98	AG		5081	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Methylene chloride		<5	ug/L	S-8260B		8/24/98	AG		5081	5
Surr. Dibromofluoromethane		115	%	S-8260B		8/24/98	AG		5081	72-130
Surr. Toluene-d8		104	%	S-8260B		8/24/98	AG		5081	77-127
Surr. 4-Bromofluorobenzene		113	%	S-8260B		8/24/98	AG		5081	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344
Sample Number: 105223

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		8/24/98	AG		5081	5
Acrylonitrile		<5	ug/L	S-8260B		8/24/98	AG		5081	5
Benzene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Carbon tetrachloride		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Chlorobenzene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,2-dichloroethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Chloroform		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Dichlorobenzene		<2	ug/L	S-8260B		8/24/98	AG		5081	2
1,1-dichloroethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Dichloropropenes		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Ethylbenzene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Bromodichloromethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Bromomethane		<5	ug/L	S-8260B		8/24/98	AG		5081	5
Chloromethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Dichloromethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Trichlorofluorometane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Tetrachloroethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Toluene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Trichloroethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Vinyl chloride		<1	ug/L	S-8260B		8/24/98	AG		5081	1
m,p-xylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
o-xylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
1,1-dichloroethane		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Ethylene dibromide		<1	ug/L	S-8260B		8/24/98	AG		5081	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		8/24/98	AG		5081	1
Methylene chloride		<5	ug/L	S-8260B		8/24/98	AG		5081	5
Surr. Dibromofluoromethane		120	%	S-8260B		8/24/98	AG		5081	72-130
Surr. Toluene-d8		100	%	S-8260B		8/24/98	AG		5081	77-127
Surr. 4-Bromofluorobenzene		117	%	S-8260B		8/24/98	AG		5081	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344
Sample Number: 105224

Field Code: GSB-2 5-6'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Acrylonitrile		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Benzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chlorobenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chloroform		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
chlorobenzene		<50	ug/Kg	S-8260B		8/24/98	AG		5082	2
,1-dichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	50
Dichloropropenes		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylbenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromodichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromomethane		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Chloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Toluene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Vinyl chloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
m,p-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
o-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylene dibromide		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Methylene chloride		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Surr. Dibromofluoromethane		118	%	S-8260B		8/24/98	AG		5082	72-130
Surr. Toluene-d8		102	%	S-8260B		8/24/98	AG		5082	77-127
Surr. 4-Bromofluorobenzene		116	%	S-8260B		8/24/98	AG		5082	72-131
Benzidine		<2.5	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
entachlorobenzene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344
Sample Number: 105224

Field Code: GSB-2 5-6'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/24/98	8/31/98	JG	4770	5172	0.25
Surr. 2-Fluorophenol		51	%	S-8270C	8/24/98	8/31/98	JG	4770	5172	25-121
Surr. Phenol-d6		57	%	S-8270C	8/24/98	8/31/98	JG	4770	5172	24-113
Surr. Nitroobenzene-d5		60	%	S-8270C	8/24/98	8/31/98	JG	4770	5172	23-120
Surr. 2-Fluorobiphenyl		64	%	S-8270C	8/24/98	8/31/98	JG	4770	5172	30-115

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344
Sample Number: 105224

Field Code: GSB-2 5-6'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Surr. 2,4,6-Tribromophenol		59	%	S-8270C	8/24/98	8/31/98	JG	4770	5172	19-122
Surr. Terphenyl-d14		99	%	S-8270C	8/24/98	8/31/98	JG	4770	5172	28-137
Aldrin		<50	ug/Kg	S-8080	8/25/98	9/27/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/25/98	9/27/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	8/25/98	9/27/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/25/98	9/27/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/25/98	9/27/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	8/25/98	9/27/98	KC	---	---	50
Heptachlor		<50	mg/Kg	S-8080	8/25/98	9/27/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S-8080	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		4.1	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	0.50
Barium		170	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	0.50
Cadmium		0.14	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	0.10
Chromium		2.7	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	0.50
Lead		0.72	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	0.25
Selenium		<0.50	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	0.50
Silver		<0.50	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	0.50
Uranium		<2.0	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	2.0
Copper		2.9	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	1.0
Iron		1900	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	2.0
Manganese		28	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	1.0
Zinc		13	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	2.0
Aluminum		3500	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	10
Boron		11	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	10
Cobalt		5.5	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	0.50
Molybdenum		2.6	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	1.0
Nickel		6.1	mg/Kg	6010	8/26/98	9/3/98	RR	4800	5202	0.50
Cyanide		0.01	mg/Kg	Sm 4500 Cn,CE		8/20/98	SA		5029	0.01
Fluoride		6.1	mg/Kg	E 300.0		8/25/98	JS		5096	0.1
Nitrate		1.8	mg/Kg	E 300.0		8/25/98	JS		5096	0.1
Chloride		41	mg/Kg	E 300.0		8/25/98	JS		5096	0.5
Sulfate		240	mg/Kg	E 300.0		8/25/98	JS		5096	0.5
TDS		880	mg/Kg	E 160.1		9/10/98	RS		5273	---
pH		8.6	s.u.	E 150.1		8/19/98	SA		5018	---
TRPHC		<10.0	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenols		<0.01	mg/Kg	SM 5530 A,d		8/26/98	RC		5110	0.01
Total Radium		1.67	pCi/gm	E 901.1M		8/18/98	DS	---	---	---

Analytical Results Report
Corrected

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99
Page # 7

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344
Sample Number: 105225

Field Code: GSB-2 45-47'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/kg	E 8021B		8/20/98	JG		5031	0.050
Benzene		<0.050	mg/kg	E 8021B		8/20/98	JG		5031	0.050
Toluene		0.101	mg/kg	E 8021B		8/20/98	JG		5031	0.050
Ethylbenzene		0.125	mg/kg	E 8021B		8/20/98	JG		5031	0.050
m,p,o-xylene		1.25	mg/kg	E 8021B		8/20/98	JG		5031	0.050
TRPHC		870	mg/kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Chloride		26	mg/kg	E 300.0		8/25/98	JS		5103	0.5

Corrected - Added MTBE result.

Analytical Results Report
Corrected

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99
Page # 8

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344
Sample Number: 105226

Field Code: GSB-2 55-57'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/kg	E 8021B		8/20/98	JG		5031	0.050
Benzene		<0.050	mg/kg	E 8021B		8/20/98	JG		5031	0.050
Toluene		0.481	mg/kg	E 8021B		8/20/98	JG		5031	0.050
Ethylbenzene		0.296	mg/kg	E 8021B		8/20/98	JG		5031	0.050
m,p,o-xylene		2.62	mg/kg	E 8021B		8/20/98	JG		5031	0.050
TRPHC		1,020	mg/kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Chloride		37	mg/kg	E 300.0		8/25/98	JS		5103	0.5

Corrected - Added MTBE results

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	8/24/98		5081
Acrylonitrile		<5	ug/L	5	8/24/98		5081
Benzene		<1	ug/L	1	8/24/98		5081
Carbon tetrachloride		<1	ug/L	1	8/24/98		5081
Chlorobenzene		<1	ug/L	1	8/24/98		5081
1,2-dichloroethane		<1	ug/L	1	8/24/98		5081
1,1,2,2-tetrachloroethane		<1	ug/L	1	8/24/98		5081
1,1,1-trichloroethane		<1	ug/L	1	8/24/98		5081
1,1,2-trichloroethane		<1	ug/L	1	8/24/98		5081
1,1,2-trichloroethylene		<1	ug/L	1	8/24/98		5081
Chloroform		<1	ug/L	1	8/24/98		5081
Dichlorobenzene		<2	ug/L	2	8/24/98		5081
,1-dichloroethylene		<1	ug/L	1	8/24/98		5081
Dichloropropenes		<1	ug/L	1	8/24/98		5081
Ethylbenzene		<1	ug/L	1	8/24/98		5081
Bromodichloromethane		<1	ug/L	1	8/24/98		5081
Bromomethane		<5	ug/L	5	8/24/98		5081
Chloromethane		<1	ug/L	1	8/24/98		5081
Dichlorodifluoromethane		<1	ug/L	1	8/24/98		5081
Dichloromethane		<1	ug/L	1	8/24/98		5081
Trichlorofluoromethane		<1	ug/L	1	8/24/98		5081
Tetrachloroethylene		<1	ug/L	1	8/24/98		5081
Toluene		<1	ug/L	1	8/24/98		5081
Trichloroethylene		<1	ug/L	1	8/24/98		5081
Vinyl chloride		<1	ug/L	1	8/24/98		5081
m,p-xylene		<1	ug/L	1	8/24/98		5081
o-xylene		<1	ug/L	1	8/24/98		5081
1,1-dichloroethane		<1	ug/L	1	8/24/98		5081
Ethylene dibromide		<1	ug/L	1	8/24/98		5081
cis-1,2-dichlorethylene		<1	ug/L	1	8/24/98		5081
trans-1,2-dichloroethylene		<1	ug/L	1	8/24/98		5081
Methylene chloride		<5	ug/L	5	8/24/98		5081
Surr. Dibromofluoromethane		120	%	72-130	8/24/98		5081
Surr. Toluene-d8		104	%	77-127	8/24/98		5081
Surr. 4-Bromofluorobenzene		115	%	72-131	8/24/98		5081
Acrolein		<125	ug/Kg	125	8/24/98		5082
Acrylonitrile		<125	ug/Kg	125	8/24/98		5082
Benzene		<25	ug/Kg	25	8/24/98		5082
Carbon tetrachloride		<25	ug/Kg	25	8/24/98		5082
Chlorobenzene		<25	ug/Kg	25	8/24/98		5082

Corrected

Date: 05-18-99

Order ID Number: 9808000344

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,2-dichloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,1-trichloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,2-trichloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,2-trichloroethylene		<25	ug/Kg	25	8/24/98		5082
Chloroform		<25	ug/Kg	25	8/24/98		5082
Dichlorobenzene		<50	ug/Kg	*50	8/24/98		5082
1,1-dichloroethylene		<25	ug/Kg	*25	8/24/98		5082
Dichloropropenes		<25	ug/Kg	25	8/24/98		5082
Ethylbenzene		<25	ug/Kg	25	8/24/98		5082
Bromodichloromethane		<25	ug/Kg	25	8/24/98		5082
Bromomethane		<125	ug/Kg	125	8/24/98		5082
Chloromethane		<25	ug/Kg	25	8/24/98		5082
Dichlorodifluoromethane		<25	ug/Kg	25	8/24/98		5082
Dichloromethane		<25	ug/Kg	25	8/24/98		5082
Trichlorofluoromethane		<25	ug/Kg	25	8/24/98		5082
Tetrachloroethylene		<25	ug/Kg	25	8/24/98		5082
Toluene		<25	ug/Kg	25	8/24/98		5082
Trichloroethylene		<25	ug/Kg	25	8/24/98		5082
Vinyl chloride		<25	ug/Kg	25	8/24/98		5082
m,p-xylene		<25	ug/Kg	25	8/24/98		5082
o-xylene		<25	ug/Kg	25	8/24/98		5082
1,1-dichloroethane		<25	ug/Kg	25	8/24/98		5082
Ethylene dibromide		<25	ug/Kg	25	8/24/98		5082
cis-1,2-dichlorethylene		<25	ug/Kg	25	8/24/98		5082
trans-1,2-dichloroethylene		<25	ug/Kg	25	8/24/98		5082
Methylene chloride		<125	ug/Kg	125	8/24/98		5082
Surr. Dibromofluoromethane		112	%	72-130	8/24/98		5082
Surr. Toluene-d8		105	%	77-127	8/24/98		5082
Surr. 4-Bromofluorobenzene		112	%	72-131	8/24/98		5082
Total Mercury		<0.25	mg/Kg	0.25	8/25/98		5101
Cyanide		<0.01	mg/Kg	0.01	8/20/98		5029
Phenolics		<0.01	mg/Kg	<0.01	8/26/98		5110
Chloride		<1.0	mg/Kg	1.0	8/25/98		5103
Arsenic		<0.50	mg/Kg	0.50	8/27/98	4798	5122
Barium		<0.50	mg/Kg	0.50	8/27/98	4798	5122
Cadmium		<0.10	mg/Kg	0.10	8/27/98	4798	5122
Chromium		<0.50	mg/Kg	0.50	8/27/98	4798	5122
Lead		<0.50	mg/Kg	0.50	8/27/98	4798	5122
Selenium		<0.50	mg/Kg	0.50	8/27/98	4798	5122
Silver		<0.50	mg/Kg	0.50	8/27/98	4798	5122
Uranium		<2.0	mg/Kg	2.0	8/27/98	4798	5122
Copper		<1.0	mg/Kg	1.0	8/27/98	4798	5122
Iron		<2.0	mg/Kg	2.0	8/27/98	4798	5122
Manganese		<1.0	mg/Kg	1.0	8/27/98	4798	5122
Zinc		<2.0	mg/Kg	2.0	8/27/98	4798	5122

* Reporting limit corrected.

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Aluminum		<10	mg/Kg	10	8/27/98	4798	5122
Boron		<10	mg/Kg	10	8/27/98	4798	5122
Cobalt		<0.50	mg/Kg	0.50	8/27/98	4798	5122
Molybdenum		<1.0	mg/Kg	1.0	8/27/98	4798	5122
Nickel		<0.50	mg/Kg	0.50	8/27/98	4798	5122
TRPHC		<10.0	mg/Kg	10	8/22/98	4743	5045
TRPHC		<10.0	mg/Kg	10	8/30/98	4810	5168
Benzene		<0.050	mg/Kg	0.050	8/20/98		5031
Toluene		<0.050	mg/Kg	0.050	8/20/98		5031
Ethylbenzene		<0.050	mg/Kg	0.050	8/20/98		5031
m,p,o-xylene		<0.050	mg/Kg	0.050	8/20/98		5031
Benzidine		<2.5	mg/kg	2.5	8/21/98	4650	5040
Hexachlorobenzene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Pentachlorobenzene		<0.25	mg/kg	0.25	8/21/98	4650	5040
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Hexachloroethane		<0.25	mg/kg	0.25	8/21/98	4650	5040
2,4-dichlorophenol		<1.25	mg/kg	1.25	8/21/98	4650	5040
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	8/21/98	4650	5040
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	8/21/98	4650	5040
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	8/21/98	4650	5040
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	8/21/98	4650	5040
bis (chloromethyl) ether		<1.25	mg/kg	1.25	8/21/98	4650	5040
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	8/21/98	4650	5040
2,4-dinitrotoluene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Diphenylhydrazine		<1.25	mg/kg	1.25	8/21/98	4650	5040
Hexachlorobutadiene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Isophorone		<1.25	mg/kg	1.25	8/21/98	4650	5040
Nitrobenzene		<0.25	mg/kg	0.25	8/21/98	4650	5040
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	8/21/98	4650	5040
2,4-dinitrophenols		<1.25	mg/kg	1.25	8/21/98	4650	5040
n-nitrosodiethylamine		<0.25	mg/kg	0.25	8/21/98	4650	5040
N-nitrosodimethylamine		<0.25	mg/kg	0.25	8/21/98	4650	5040
N-nitrosodibutylamine		<1.25	mg/kg	1.25	8/21/98	4650	5040
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	8/21/98	4650	5040
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	8/21/98	4650	5040
Pentachlorophenol		<1.25	mg/kg	1.25	8/21/98	4650	5040
Dibutyl phthalate		<0.25	mg/kg	0.25	8/21/98	4650	5040
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	8/21/98	4650	5040
Diethyl phthalate		<0.25	mg/kg	0.25	8/21/98	4650	5040
Dimethyl phthalate		<0.25	mg/kg	0.25	8/21/98	4650	5040
Anthracene		<0.25	mg/kg	0.25	8/21/98	4650	5040
3,4-benzofluoranthene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	8/21/98	4650	5040

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Fluoranthene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Fluorene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Phenanthrene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Pyrene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Naphthalene		<0.25	mg/kg	0.25	8/21/98	4650	5040
1-methylnaphthalene		<0.25	mg/kg	0.25	8/21/98	4650	5040
2-methylnaphthalene		<0.25	mg/kg	0.25	8/21/98	4650	5040
Benzo-a-pyrene		<0.25	mg/kg	0.25	8/21/98	4650	5040
monomethylnaphthalenes		<0.25	mg/kg	0.25	8/21/98	4650	5040
Surr. 2-Fluorophenol		63	%	25-121	8/21/98	4650	5040
Surr. Phenol-d6		65	%	24-113	8/21/98	4650	5040
Surr. Nitroobenzene-d5		59	%	23-120	8/21/98	4650	5040
Surr. 2-Fluorobiphenyl		72	%	30-115	8/21/98	4650	5040
Surr. 2,4,6-Tribromophenol		79	%	19-122	8/21/98	4650	5040
Surr. Terphenyl-d14		107	%	28-137	8/21/98	4650	5040

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	111	111	8/24/98	5081
1,1-Dichloroethene		100	ug/L	90	90	8/24/98	5081
Chloroform		100	ug/L	109	109	8/24/98	5081
1,2-Dichloropropane		100	ug/L	92	92	8/24/98	5081
Toluene		100	ug/L	96	96	8/24/98	5081
Chlorobenzene		100	ug/L	98	98	8/24/98	5081
Ethylbenzene		100	ug/L	100	100	8/24/98	5081
Vinyl chloride		100	mg/L	110	110	8/24/98	5082
1,1-Dichloroethene		100	mg/L	90	90	8/24/98	5082
Chloroform		100	mg/L	109	109	8/24/98	5082
1,2-Dichloropropane		100	mg/L	92	92	8/24/98	5082
Toluene		100	mg/L	96	96	8/24/98	5082
Chlorobenzene		100	mg/L	98	98	8/24/98	5082
Ethylbenzene		100	mg/L	100	100	8/24/98	5082
pH		7.0	s.u.	7.0	100	8/19/98	5018
Total Mercury		1.0	mg/L	1.0	100	8/25/98	5101
Cyanide		0.12	mg/L	0.11	110	8/20/98	5029
Phenolics		0.80	mg/L	0.80	100	8/26/98	5110
Fluoride		2.5	mg/L	2.325	93	8/25/98	5096
Nitrate		5.0	mg/L	4.605	92	8/25/98	5096
Chloride		12.5	mg/L	11.755	94	8/25/98	5096
Sulfate		12.5	mg/L	11.355	91	8/25/98	5096
Arsenic		1.0	mg/L	1.0	100	9/3/98	5202
Barium		1.0	mg/L	0.98	98	9/3/98	5202
Cadmium		1.0	mg/L	1.0	100	9/3/98	5202
Chromium		1.0	mg/L	1.0	100	9/3/98	5202
Lead		1.0	mg/L	1.0	100	9/3/98	5202
Selenium		1.0	mg/L	1.0	100	9/3/98	5202
Silver		0.20	mg/L	0.20	100	9/3/98	5202
Uranium		1.0	mg/L	1.0	100	9/3/98	5202
Copper		1.0	mg/L	1.0	100	9/3/98	5202
Iron		50	mg/L	51	102	9/3/98	5202
Manganese		1.0	mg/L	1.0	100	9/3/98	5202
Zinc		1.0	mg/L	1.0	100	9/3/98	5202
Aluminum		125	mg/L	128	102	9/3/98	5202
Boron		1.0	mg/L	1.0	100	9/3/98	5202
Cobalt		1.0	mg/L	1.0	100	9/3/98	5202
Molybdenum		1.0	mg/L	1.0	100	9/3/98	5202
Nickel		1.0	mg/L	1.0	100	9/3/98	5202
TRPHC		100	mg/L	104	104	08/22/98	5045

Date: 9-29-98

Order ID Number: 9808000344

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
TRPHC		100	mg/L	99	99	8/30/98	5168
Benzene		0.100	mg/L	0.096	96	8/20/98	5031
Toluene		0.100	mg/L	0.095	95	8/20/98	5031
Ethylbenzene		0.100	mg/L	0.095	95	8/20/98	5031
m,p,o-xylene		0.300	mg/L	0.275	92	8/20/98	5031
TDS		1000	mg/L	978	98	9/10/98	5273
Phenol		80	mg/L	82	103	8/31/98	5172
1,4-Dichlorobenzene		80	mg/L	85	106	8/31/98	5172
2-nitrophenol		80	mg/L	83	104	8/31/98	5172
2,4-Dichlorophenol		80	mg/L	84	105	8/31/98	5172
Hexachlorobutadiene		80	mg/L	87	109	8/31/98	5172
4-Chloro-3-methylphenol		80	mg/L	81	101	8/31/98	5172
2,4,6-Trichlorophenol		80	mg/L	84	105	8/31/98	5172
Acenaphthene		80	mg/L	82	103	8/31/98	5172
n-Nitrosodiphenylamine		80	mg/L	80	100	8/31/98	5172
Fluoranthene		80	mg/L	78	98	8/31/98	5172
Di-n-octyl phthalate		80	mg/L	93	116	8/31/98	5172
Benzo(a)pyrene		80	mg/L	86	108	8/31/98	5172

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	86	86	100	85	85	1.2	8/24/98		5081
Benzene		ug/L	<1	100	90	90	100	92	92	2.2	8/24/98		5081
Trichloroethene		ug/L	<1	100	96	96	100	98	98	2.1	8/24/98		5081
Toluene		ug/L	<1	100	93	93	100	95	95	2.1	8/24/98		5081
Chlorobenzene		ug/L	<1	100	92	92	100	94	94	2.2	8/24/98		5081
1,1-Dichloroethene		ug/Kg	<25	100	81	81	100	87	87	7.1	8/24/98		5082
Benzene		ug/Kg	<25	100	86	86	100	82	82	4.8	8/24/98		5082
Trichloroethene		ug/Kg	<25	100	93	93	100	84	84	10	8/24/98		5082
Toluene		ug/Kg	<25	100	88	88	100	81	81	8.3	8/24/98		5082
Chlorobenzene		ug/Kg	<25	100	93	93	100	83	83	11	8/24/98		5082
Total Mercury		mg/Kg	<0.10	1.0	1.2	120	1.0	1.2	120	0	8/25/98	4765	5101
Cyanide		mg/Kg	<0.01	0.12	0.1	83	0.12	0.1	83	0	8/20/98		5029
Fluoride		mg/Kg	0.75	2.5	2.55	72	2.5	2.68	77	6.7	8/25/98		5096
Nitrate		mg/Kg	1.26	5.0	5.05	76	5.0	5.10	77	1.3	8/25/98		5096
Chloride		mg/Kg	6.17	12.5	18.05	95	12.5	18.15	96	1	8/25/98		5096
Sulfate		mg/Kg	3.02	12.5	14.38	91	12.5	14.41	91	0.0	8/25/98		5096
Arsenic		mg/Kg	0.96	200	170	85	200	165	82	3.6	9/3/98	4800	5202
Barium		mg/Kg	6.1	200	188	91	200	185	89	2.2	9/3/98	4800	5202
Cadmium		mg/Kg	<0.10	200	176	88	200	175	88	0	9/3/98	4800	5202
Chromium		mg/Kg	3.4	200	183	90	200	179	88	2.2	9/3/98	4800	5202
Lead		mg/Kg	0.62	200	178	89	200	177	88	1.1	9/3/98	4800	5202
Selenium		mg/Kg	<0.50	200	164	82	200	160	80	2.5	9/3/98	4800	5202
Silver		mg/Kg	<0.50	100	86	86	200	91	91	5.6	9/3/98	4800	5202
Uranium		mg/Kg	<2.0	200	162	81	200	160	80	1.2	9/3/98	4800	5202
Copper		mg/Kg	11	200	180	85	200	180	85	0	9/3/98	4800	5202
Iron		mg/Kg	<2.0	200	204	102	200	208	104	1.9	8/27/98	4800	5202
Manganese		mg/Kg	<1.0	200	179	90	200	177	89	1.1	9/3/98	4800	5202
Zinc		mg/Kg	8.6	200	170	81	200	172	82	1.2	9/3/98	4800	5202
Aluminum		mg/Kg	<10.0	200	194	97	200	194	97	0	8/27/98	4800	5202
Boron		mg/Kg	<10.1	200	167	84	200	168	84	0	9/3/98	4800	5202
Cobalt		mg/Kg	1.2	200	176	87	200	178	88	1.1	9/3/98	4800	5202
Molybdenum		mg/Kg	<1.0	200	181	91	200	177	89	2.2	9/3/98	4800	5202
Nickel		mg/Kg	24	200	177	77	200	176	76	1.3	9/3/98	4800	5202
TRPHC		mg/Kg	<10.0	250	276	110	250	235	94	16	8/22/98	4743	5045
TRPHC		mg/Kg	<10.0	250	231	92	250	220	88	4.4	8/30/98	4810	5168
Benzene		mg/Kg	<0.050	5.00	4.64	93	5.00	4.75	95	2.1	8/20/98		5031
Toluene		mg/Kg	<0.050	5.00	4.66	93	5.00	4.78	96	3.2	8/20/98		5031
Ethylbenzene		mg/Kg	<0.050	5.00	465	93	5.00	5.51	110	17	8/20/98		5031
m,p,o-xylene		mg/Kg	<0.050	15.00	13.7	91	15.00	14	93	2.2	8/20/98		5031

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Phenol		mg/Kg	<0.25	10.00	6.45	65	10.00	5.91	59	9.7	8/31/98	4770	5172
2-Chlorophenol		mg/Kg	<1.25	10.00	5.82	58	10.00	5.34	53	9.0	8/31/98	4770	5172
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	6.82	68	10.00	5.96	60	13	8/31/98	4770	5172
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	7.00	70	10.00	6.42	64	9.0	8/31/98	4770	5172
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	6.8	68	10.00	6.09	61	11.0	8/31/98	4770	5172
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	6.12	61	10.00	5.73	57	6.8	8/31/98	4770	5172
Acenaphthene		mg/Kg	<0.25	10.00	7.69	77	10.00	7.04	70	9.5	8/31/98	4770	5172
4-Nitrophenol		mg/Kg	<1.25	10.00	5.71	57	10.00	5.42	54	5.5	8/31/98	4770	5172
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	7.71	77	10.00	6.96	70	9.5	8/31/98	4770	5172
Pentachlorophenol		mg/Kg	<1.25	10.00	5.84	58	10.00	5.32	53	9.0	8/31/98	4770	5172
Pyrene		mg/Kg	<0.25	10.00	10.8	108	10.00	10.1	101	6.7	8/31/98	4770	5172

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000344

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
TDS			880	864	1.8	9/10/98		5273
pH			8.6	8.6	0	8/19/98		5018

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Ste. 9
Lubbock, TX 79424
Phone: 800-378-1296
Fax: (806) 794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ARS
AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0843	**P.O. Number:**	Project #19349
Client I.D.:	105224	**ARS Sample I.D.:**	ARS-98-3088
Date Sampled:	08/14/98	**Date Received:**	08/20/98
Time Sampled:	N/A	**Time Received**	1510
Type of Sample:	Solid	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	3.29	1.80	pCi/gm	0.122	0.067	Bq/gm	EPA 901.1M	8/23/98 1037	MK
Ra-228	<0.14	N/A	pCi/gm	<0.005	N/A	Bq/gm	EPA 901.1M	8/23/98 1037	MK
Pb-210	<1.04	N/A	pCi/gm	<0.038	N/A	Bq/gm	EPA 901.1M	8/23/98 1037	MK
Total Activity	16.61	N/A	pCi/gm	0.615	N/A	Bq/gm	EPA 901.1M	8/23/98 1037	MK

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

344/3[illegible]

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Philip Services Corporation
Phone #: (915) 563-0118
FAX #: (915) 563-9526
Company Name & Address: Philip Services Corporation 7904 IH 20 west, Midland, Tx 79706
Project #: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME	BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240 / 8260	8270	See Attached VOC's	Total Chloride (300.1)
105222	Field Blank	2	40ml VOA	✓				✓					08/14/98	1530									✓		
223	Trip Blank	2	40ml VOA	✓						✓			08/14/98										✓		
224	GSB-2 (5-6')	5	4oz Jar		✓					✓			08/14/98	0919									✓		
	GSB-2 (5-6')	1	4ml VOA		✓							✓	08/14/98	0919										✓	
225	GSB-2 (45-47')	2	4oz Jar		✓					✓			08/14/98	1145	✓	✓									✓
226	GSB-2 (55-57')	2	4oz Jar		✓					✓			08/14/98	1330	✓	✓									✓

SPECIAL HANDLING: Turn around # of days; Fax ASAP; Hold

Relinquished by: Jeffrey Kindley Date: August 17, 1998 Time: 11:00am
Received by: Helen Shelton 8/17/98 11:00 AM

Relinquished by: Helen Shelton 8/17/98 6:30PM
Received by: Date: Time:

Relinquished by: Date: Time:
Received at Laboratory by: Vicki Wrotha 8-18-98 9:55 AM

REMARKS: Normal Turnaround

Chilled Shipment 2° 11 samples - HC 155 758 9705

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99
Page # 1

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000380

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
105406	Field Blank	8/17/98	16:20	8/19/98
105407	Trip Blank	8/17/98		8/19/98
105408	TSB-8 2-3'	8/17/98	13:25	8/19/98
105409	TSB-8 8-10'	8/17/98	13:28	8/19/98
105410	TSB-8 40-42'	8/17/98	15:52	8/19/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All data meets quality control criteria with the following exceptions:
Semivolatiles extracted 7 days past hold time
105408 Semivolatile low surrogate recovery due to matrix

Corrections:
1) Flag added for samples 105408 - 105410 SemiVolatiles extracted past hold time.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 2

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000380
Sample Number: 105406

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Acrylonitrile		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Benzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chlorobenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chloroform		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorobenzene		<2	ug/L	S-8260B		9/1/98	AG		5183	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloropropenes		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylbenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromodichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromomethane		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Chloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Toluene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Vinyl chloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
m,p-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
o-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylene dibromide		<1	ug/L	S-8260B		9/1/98	AG		5183	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Methylene chloride		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Surr. Dibromofluoromethane		118	%	S-8260B		9/1/98	AG		5183	72-130
Surr. Toluene-d8		109	%	S-8260B		9/1/98	AG		5183	77-127
Surr. 4-Bromofluorobenzene		117	%	S-8260B		9/1/98	AG		5183	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 3

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000380
Sample Number: 105407

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Acrylonitrile		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Benzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chlorobenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chloroform		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorobenzene		<2	ug/L	S-8260B		9/1/98	AG		5183	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloropropenes		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylbenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromodichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromomethane		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Chloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Toluene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Vinyl chloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
m,p-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
o-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylene dibromide		<1	ug/L	S-8260B		9/1/98	AG		5183	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Methylene chloride		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Surr. Dibromofluoromethane		119	%	S-8260B		9/1/98	AG		5183	72-130
Surr. Toluene-d8		109	%	S-8260B		9/1/98	AG		5183	77-127
Surr. 4-Bromofluorobenzene		114	%	S-8260B		9/1/98	AG		5183	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99
Page # 4

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000380
Sample Number: 105408

Field Code: TSB-8 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<6750	ug/Kg	S-8260B		9/6/98	AG		5207	6750
Acrylonitrile		<6750	ug/Kg	S-8260B		9/6/98	AG		5207	6750
Benzene		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Carbon tetrachloride		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Chlorobenzene		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
1,2-dichloroethane		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
1,1,2,2-tetrachloroethane		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
1,1,1-trichloroethane		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
1,1,2-trichloroethane		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
1,1,2-trichloroethylene		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Chloroform		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Dichlorobenzene		<2700	ug/Kg	S-8260B		9/6/98	AG		5207	2700
1,1-dichloroethylene		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Dichloropropenes		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Ethylbenzene		17,000	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Bromodichloromethane		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Bromomethane		<6750	ug/Kg	S-8260B		9/6/98	AG		5207	6750
Chloromethane		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Dichlorodifluoromethane		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Dichloromethane		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Trichlorofluorometane		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Tetrachloroethylene		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Toluene		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Trichloroethylene		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Vinyl chloride		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
m,p-xylene		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
o-xylene		5,600	ug/Kg	S-8260B		9/6/98	AG		5207	1350
1,1-dichloroethane		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Ethylene dibromide		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
cis-1,2-dichlorethylene		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
trans-1,2-dichloroethylene		<1350	ug/Kg	S-8260B		9/6/98	AG		5207	1350
Methylene chloride		<6750	ug/Kg	S-8260B		9/6/98	AG		5207	6750
Surr. Dibromofluoromethane		108	%	S-8260B		9/6/98	AG		5207	72-130
Surr. Toluene-d8		91	%	S-8260B		9/6/98	AG		5207	77-127
Surr. 4-Bromofluorobenzene		99	%	S-8260B		9/6/98	AG		5207	72-131
Benzidine		<25	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	25
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5

Corrected

Date: 05-18-99

Order ID Number: 9808000380
Sample Number: 105408

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TSB-8 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
2,4-dichlorophenol		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
bis (2-chloroethyl) ether		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Isophorone		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
n-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
N-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	12.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Anthracene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Fluorene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Pyrene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
2-methylnaphthalene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	*9/8/98	9/18/98	DG	4916	5412	2.5
Surr. 2-Fluorophenol	**LSR	5.4	mg/Kg	S-8270C	9/8/98	9/18/98	DG	4916	5412	25-121
Surr. Phenol-d6	**LSR	4.7	mg/Kg	S-8270C	9/8/98	9/18/98	DG	4916	5412	24-113
Surr. Nitroobenzene-d5	**LSR	7.1	mg/Kg	S-8270C	9/8/98	9/18/98	DG	4916	5412	23-120
Surr. 2-Fluorobiphenyl	**LSR	7.1	mg/Kg	S-8270C	9/8/98	9/18/98	DG	4916	5412	30-115
Surr. 2,4,6-Tribromophenol	**LSR	4.2	mg/Kg	S-8270C	9/8/98	9/18/98	DG	4916	5412	19-122
Surr. Terphenyl-d14	**LSR	12	mg/Kg	S-8270C	9/8/98	9/18/98	DG	4916	5412	28-137
Aldrin		<500	ug/Kg	S-8080	8/25/98	9/27/98		---	---	50
Chlordane		<500	ug/Kg	S-8080	8/25/98	9/27/98		---	---	50

Corrected

Date: 05-18-99

Order ID Number: 9808000380
Sample Number: 105408

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TSB-8 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
DDT		<500	ug/Kg	S-8080	8/25/98	9/27/98		---	---	50
Dieldrin		<500	ug/Kg	S-8080	8/25/98	9/27/98		---	---	50
Endosulfan		<500	ug/Kg	S-8080	8/25/98	9/27/98		---	---	50
Endrin		<500	ug/Kg	S-8080	8/25/98	9/27/98		---	---	50
Heptachlor		<500	ug/Kg	S-8080	8/25/98	9/27/98		---	---	50
PCB's		<1.0	mg/Kg	S 8082	8/26/98	9/3/98	RC	4795	5206	1.0
Arsenic		<0.50	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	0.50
Barium		240	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	0.50
Cadmium		<0.10	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	0.10
Chromium		2.5	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	0.50
Lead		0.77	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	<0.10
Selenium		<0.50	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	0.50
Silver		<0.50	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	0.50
Uranium		<2.0	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	2.0
Copper		1.2	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	0.50
Iron		1700	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	2.0
Manganese		17	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	1.0
Zinc		5.5	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	2.0
Aluminum		2900	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	10
Boron		<10	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	10
Cobalt		4.5	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	0.50
Molybdenum		1.3	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	1.0
Nickel		4.5	mg/Kg	6010	8/26/98	8/27/98	RR	4797	5120	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		8/20/98	SA		5029	0.01
Fluoride		1.9	mg/Kg	E 300.0		8/27/98	JS		5126	
Nitrate		4.3	mg/Kg	E 300.0		8/27/98	JS		5126	
Chloride		120	mg/Kg	E 300.0		8/27/98	JS		5126	
Sulfate		720	mg/Kg	E 300.0		8/27/98	JS		5126	
TDS		4,000	mg/Kg	E 160.1		9/16/98	RS		5364	---
pH		9.5	s.u.	E 150.1	8/24/98	8/25/98	SA		5089	7.0
Total Phenols		0.07	mg/kg	SM 55430 A,D		8/26/98	RC		5110	0.01
TRPHC		60,300	mg/kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Radium		4.33	pCi/gm	E 901.1M		8/18/98	DS	---	---	---

**LSR Low surrogate recovery due to matrix.
* Sample extracted 7 days past hold time

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000380

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/1/98		5183
Acrylonitrile		<5	ug/L	5	9/1/98		5183
Benzene		<1	ug/L	1	9/1/98		5183
Carbon tetrachloride		<1	ug/L	1	9/1/98		5183
Chlorobenzene		<1	ug/L	1	9/1/98		5183
1,2-dichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/1/98		5183
1,1,1-trichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2-trichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2-trichloroethylene		<1	ug/L	1	9/1/98		5183
Chloroform		<1	ug/L	1	9/1/98		5183
Dichlorobenzene		<2	ug/L	2	9/1/98		5183
1,1-dichloroethylene		<1	ug/L	1	9/1/98		5183
Dichloropropenes		<1	ug/L	1	9/1/98		5183
Ethylbenzene		<1	ug/L	1	9/1/98		5183
Bromodichloromethane		<1	ug/L	1	9/1/98		5183
Bromomethane		<5	ug/L	5	9/1/98		5183
Chloromethane		<1	ug/L	1	9/1/98		5183
Dichlorodifluoromethane		<1	ug/L	1	9/1/98		5183
Dichloromethane		<1	ug/L	1	9/1/98		5183
Trichlorofluoromethane		<1	ug/L	1	9/1/98		5183
Tetrachloroethylene		<1	ug/L	1	9/1/98		5183
Toluene		<1	ug/L	1	9/1/98		5183
Trichloroethylene		<1	ug/L	1	9/1/98		5183
Vinyl chloride		<1	ug/L	1	9/1/98		5183
m,p-xylene		<1	ug/L	1	9/1/98		5183
o-xylene		<1	ug/L	1	9/1/98		5183
1,1-dichloroethane		<1	ug/L	1	9/1/98		5183
Ethylene dibromide		<1	ug/L	1	9/1/98		5183
cis-1,2-dichlorethylene		<1	ug/L	1	9/1/98		5183
trans-1,2-dichloroethylene		<1	ug/L	1	9/1/98		5183
Methylene chloride		<5	ug/L	5	9/1/98		5183
Surr. Dibromofluoromethane		120	%	72-130	9/1/98		5183
Surr. Toluene-d8		107	%	77-127	9/1/98		5183
Surr. 4-Bromofluorobenzene		99	%	72-131	9/1/98		5183
Acrolein		<125	ug/Kg	125	9/6/98		5207
Acrylonitrile		<125	ug/Kg	125	9/6/98		5207
Benzene		<25	ug/Kg	25	9/6/98		5207
Carbon tetrachloride		<25	ug/Kg	25	9/6/98		5207
Chlorobenzene		<25	ug/Kg	25	9/6/98		5207
1,2-dichloroethane		<25	ug/Kg	25	9/6/98		5207

Order ID Number: 9808000380

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/6/98		5207
1,1,1-trichloroethane		<25	ug/Kg	25	9/6/98		5207
1,1,2-trichloroethane		<25	ug/Kg	25	9/6/98		5207
1,1,2-trichloroethylene		<25	ug/Kg	25	9/6/98		5207
Chloroform		<25	ug/Kg	25	9/6/98		5207
Dichlorobenzene		<50	ug/Kg	50	9/6/98		5207
1,1-dichloroethylene		<25	ug/Kg	25	9/6/98		5207
Dichloropropenes		<25	ug/Kg	25	9/6/98		5207
Ethylbenzene		<25	ug/Kg	25	9/6/98		5207
Bromodichloromethane		<25	ug/Kg	25	9/6/98		5207
Bromomethane		<125	ug/Kg	125	9/6/98		5207
Chloromethane		<25	ug/Kg	25	9/6/98		5207
Dichlorodifluoromethane		<25	ug/Kg	25	9/6/98		5207
Dichloromethane		<25	ug/Kg	25	9/6/98		5207
Trichlorofluoromethane		<25	ug/Kg	25	9/6/98		5207
Tetrachloroethylene		<25	ug/Kg	25	9/6/98		5207
Toluene		<25	ug/Kg	25	9/6/98		5207
Trichloroethylene		<25	ug/Kg	25	9/6/98		5207
Vinyl chloride		<25	ug/Kg	25	9/6/98		5207
m,p-xylene		<25	ug/Kg	25	9/6/98		5207
o-xylene		<25	ug/Kg	25	9/6/98		5207
1,1-dichloroethane		<25	ug/Kg	25	9/6/98		5207
Ethylene dibromide		<25	ug/Kg	25	9/6/98		5207
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/6/98		5207
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/6/98		5207
Methylene chloride		<125	ug/Kg	125	9/6/98		5207
Surr. Dibromofluoromethane		101	%	72-130	9/6/98		5207
Surr. Toluene-d8		89	%	77-127	9/6/98		5207
Surr. 4-Bromofluorobenzene		92	%	72-131	9/6/98		5207
Total Mercury		<0.10	mg/Kg	<0.10	8/25/98	4765	5101
Cyanide		<0.01	mg/Kg	0.01	8/20/98		5029
Fluoride		<0.1	mg/Kg	0.1	8/27/98		5126
Nitrate		<0.2	mg/Kg	0.2	8/27/98		5126
Chloride		<0.5	mg/Kg	0.5	8/27/98		5126
Sulfate		<0.5	mg/Kg	0.5	8/27/98		5126
Arsenic		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Barium		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Cadmium		<0.10	mg/Kg	0.10	8/27/98	4797	5120
Chromium		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Lead		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Selenium		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Silver		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Uranium		<2.0	mg/Kg	2.0	8/27/98	4797	5120
Copper		<1.0	mg/Kg	0.50	8/27/98	4797	5120
Iron		<2.0	mg/Kg	2.0	8/27/98	4797	5120
Manganese		<1.0	mg/Kg	1.0	8/27/98	4797	5120
Zinc		<2.0	mg/Kg	2.0	8/27/98	4797	5120

Date: 9-29-98
Page # 9
Order ID Number: 9808000380

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Aluminum		<10	mg/Kg	10	8/27/98	4797	5120
Boron		<10	mg/Kg	10	8/27/98	4797	5120
Cobalt		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Molybdenum		<1.0	mg/Kg	1.0	8/27/98	4797	5120
Nickel		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Phenolics		<0.01	mg/Kg	0.01	8/26/98		5110
PCBs		<0.1	mg/Kg	0.1	9/3/98	4795	5206
Benzidine		<2.5	mg/kg	2.5	9/18/98	4916	5412
Hexachlorobenzene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Pentachlorobenzene		<0.25	mg/kg	0.25	9/18/98	4916	5412
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Hexachloroethane		<0.25	mg/kg	0.25	9/18/98	4916	5412
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/18/98	4916	5412
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/18/98	4916	5412
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/18/98	4916	5412
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Diphenylhydrazine		<1.25	mg/kg	1.25	9/18/98	4916	5412
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Isophorone		<1.25	mg/kg	1.25	9/18/98	4916	5412
Nitrobenzene		<0.25	mg/kg	0.25	9/18/98	4916	5412
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/18/98	4916	5412
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/18/98	4916	5412
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/18/98	4916	5412
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/18/98	4916	5412
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/18/98	4916	5412
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/18/98	4916	5412
Pentachlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412
Dibutyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
Diethyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
Dimethyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
Anthracene		<0.25	mg/kg	0.25	9/18/98	4916	5412
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Fluoranthene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Fluorene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Phenanthrene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Pyrene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Naphthalene		<0.25	mg/kg	0.25	9/18/98	4916	5412
1-methylnaphthalene		<0.25	mg/kg	0.25	9/18/98	4916	5412
2-methylnaphthalene		<0.25	mg/kg	0.25	9/18/98	4916	5412

Order ID Number: 9808000380

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Surr. 2-Fluorophenol		48	%	25-121	9/18/98	4916	5412
Surr. Phenol-d6		51	%	24-113	9/18/98	4916	5412
Surr. Nitroobenzene-d5		52	%	23-120	9/18/98	4916	5412
Surr. 2-Fluorobiphenyl		53	%	30-115	9/18/98	4916	5412
Surr. 2,4,6-Tribromophenol		37	%	19-122	9/18/98	4916	5412
Surr. Terphenyl-d14		59	%	28-137	9/18/98	4916	5412

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000380

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	107	107	9/1/98	5183
1,1-Dichloroethene		100	ug/L	117	117	9/1/98	5183
Chloroform		100	ug/L	103	103	9/1/98	5183
1,2-Dichloropropane		100	ug/L	115	115	9/1/98	5183
Toluene		100	ug/L	119	119	9/1/98	5183
Chlorobenzene		100	ug/L	118	118	9/1/98	5183
Ethylbenzene		100	ug/L	115	115	9/1/98	5183
Vinyl chloride		100	ug/L	92	92	9/6/98	5207
1,1-Dichloroethene		100	ug/L	98	98	9/6/98	5207
Chloroform		100	ug/L	91	91	9/6/98	5207
1,2-Dichloropropane		100	ug/L	82	82	9/6/98	5207
Toluene		100	ug/L	86	86	9/6/98	5207
Chlorobenzene		100	ug/L	87	87	9/6/98	5207
Ethylbenzene		100	ug/L	86	86	9/6/98	5207
pH		7.0	s.u.	7.0	100	8/24/98	5089
Total Mercury		1.0	mg/L	1.0	100	8/25/98	5101
Cyanide		0.12	mg/L	0.11	110	8/20/98	5029
Fluoride		2.5	mg/L	2.425	97	5/27/98	5126
Nitrate		5.0	mg/L	4.75	95	5/27/98	5126
Chloride		12.5	mg/L	11.84	95	5/27/98	5126
Sulfate		12.5	mg/L	12.09	97	5/27/98	5126
Arsenic		1.0	mg/L	0.98	98	8/27/98	5120
Barium		1.0	mg/L	1.0	100	8/27/98	5120
Cadmium		1.0	mg/L	0.98	98	8/27/98	5120
Chromium		1.0	mg/L	1.0	100	8/27/98	5120
Lead		1.0	mg/L	0.99	99	8/27/98	5120
Selenium		1.0	mg/L	0.99	99	8/27/98	5120
Silver		0.20	mg/L	0.20	100	8/27/98	5120
Uranium		1.0	mg/L	1.0	100	8/27/98	5120
Copper		1.0	mg/L	1.0	100	8/27/98	5120
Iron		50	mg/L	51	102	8/27/98	5120
Manganese		1.0	mg/L	1.0	100	8/27/98	5120
Zinc		1.0	mg/L	0.97	97	8/27/98	5120
Aluminum		125	mg/L	128	102	8/27/98	5120
Boron		1.0	mg/L	0.99	99	8/27/98	5120
Cobalt		1.0	mg/L	0.99	99	8/27/98	5120
Molybdenum		1.0	mg/L	0.99	99	8/27/98	5120
Nickel		1.0	mg/L	0.99	99	8/27/98	5120
Phenolics		0.80	mg/L	0.80	100	8/26/98	5110
PCB		0.40	mg/L	0.45	113	9/3/98	5206

Order ID Number: 9808000380

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
TDS		1,000	mg/L	997	100	9/16/98	5364
Phenol		80	mg/L	76	95	9/18/98	5412
1,4-Dichlorobenzene		80	mg/L	67	84	9/18/98	5412
2-nitrophenol		80	mg/L	75	94	9/18/98	5412
2,4-Dichlorophenol		80	mg/L	80	100	9/18/98	5412
Hexachlorobutadiene		80	mg/L	64	80	9/18/98	5412
4-Chloro-3-methylphenol		80	mg/L	67	84	9/18/98	5412
2,4,6-Trichlorophenol		80	mg/L	66	83	9/18/98	5412
Acenaphthene		80	mg/L	68	85	9/18/98	5412
n-Nitrosodiphenylamine		80	mg/L	86	104	9/18/98	5412
Pentachlorophenol		80	mg/L	89	111	9/18/98	5412
Fluoranthene		80	mg/L	74	93	9/18/98	5412
Di-n-octylphthalate		80	mg/L	91	114	9/18/98	5412
Benzo(a)pyrene		80	mg/L	69	86	9/18/98	5412

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 13

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000380

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	111	111	100	98	98	12	9/1/98		5183
Benzene		ug/L	<1	100	101	101	100	93	93	8.2	9/1/98		5183
Trichloroethene		ug/L	<1	100	96	96	100	90	90	6.5	9/1/98		5183
Toluene		ug/L	<1	100	111	111	100	101	101	9.4	9/1/98		5183
Chlorobenzene		ug/L	<1	100	101	101	100	93	93	8.2	9/1/98		5183
1,1-Dichloroethene		mg/Kg	<69	100	97	97	100	97	97	0	9/6/98		5207
Benzene		mg/Kg	<69	100	104	104	100	105	105	0.96	9/6/98		5207
Trichloroethene		mg/Kg	<69	100	117	117	100	116	116	0.9	9/6/98		5207
Toluene		mg/Kg	<69	100	104	104	100	104	104	0.0	9/6/98		5207
Chlorobenzene		mg/Kg	<69	100	90	90	100	89	89	1.1	9/6/98		5207
Total Mercury		mg/Kg	<0.10	1.0	1.2	120	1.0	1.2	120	0	8/25/98	4765	5101
Cyanide		mg/Kg	<0.01	0.12	0.1	83	0.12	0.1	83	0	8/20/98		5029
Fluoride		mg/Kg	3.31	2.5	5.90	104	2.5	5.69	95	9	8/27/98		5126
Nitrate		mg/Kg	8.58	5.0	13.20	92	5.0	13.17	92	0	8/27/98		5126
Chloride		mg/Kg	70.26	12.5	79.35	73	12.5	78.96	70	4.2	8/27/98		5126
Sulfate		mg/Kg	60.07	12.5	69.61	76	12.5	69.49	75	1.3	8/27/98		5126
Arsenic		mg/Kg	<0.50	200	152	76	200	152	76	0	8/27/98		5120
Barium		mg/Kg	240	200	380	70	200	412	86	20	8/27/98		5120
Cadmium		mg/Kg	<0.10	200	135	68	200	132	66	3	8/27/98		5120
Chromium		mg/Kg	2.5	200	147	72	200	147	72	0	8/27/98		5120
Lead		mg/Kg	0.77	200	136	68	200	137	68	0	8/27/98		5120
Selenium		mg/Kg	<0.50	200	140	70	200	138	69	1.1	8/27/98		5120
Silver		mg/Kg	<0.50	100	61	61	100	78	78	24	8/27/98		5120
Uranium		mg/Kg	<2.0	200	150	75	200	151	76	1.3	8/27/98		5120
Copper		mg/Kg	1.2	200	173	83	200	169	84	1.2	8/27/98		5120
Iron		mg/Kg	<2	200	204	102	200	208	104	1.9	8/27/98		5120
Manganese		mg/Kg	17	200	163	73	200	166	75	2.7	8/27/98		5120
Zinc		mg/Kg	5.5	200	133	64	200	133	64	0	8/27/98		5120
Aluminum		mg/Kg	<10	200	194	97	200	194	97	0	8/27/98		5120
Boron		mg/Kg	<10	200	159	80	200	162	81	1.2	8/27/98		5120
Cobalt		mg/Kg	4.5	200	145	70	200	144	70	0	8/27/98		5120
Molybdenum		mg/Kg	1.3	200	146	72	200	149	74	2.7	8/27/98		5120
Nickel		mg/Kg	4.5	200	144	70	200	143	69	1.4	8/27/98		5120
Phenolics		mg/Kg	<0.01	0.80	0.79	99	0.80	0.80	100	1	8/26/98		5110
PCB		mg/Kg	<0.1	0.5	0.45	90	0.5	0.48	96	6.4	3-Sep	4795	5206
Phenol		mg/Kg	<0.25	10.00	4.05	41	10.00	3.69	37	10	9/18/98	4916	5412
2-Chlorophenol		mg/Kg	<1.25	10.00	3.82	38	10.00	3.54	35	8.2	9/18/98	4916	5412
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	4.86	49	10.00	4.45	45	8.5	9/18/98	4916	5412
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	4.05	40	10.00	3.74	37	7.8	9/18/98	4916	5412
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	4.38	44	10.00	4.02	40	9.5	9/18/98	4916	5412
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	3.73	37	10.00	3.48	35	5.6	9/18/98	4916	5412

Order ID Number: 9808000380

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Acenaphthene		mg/Kg	<0.25	10.00	5.04	50	10.00	4.79	48	4.1	9/18/98	4916	5412
4-Nitrophenol		mg/Kg	<1.25	10.00	2.75	28	10.00	2.46	25	11	9/18/98	4916	5412
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	4.59	46	10.00	4.35	44	4.4	9/18/98	4916	5412
Pentachlorophenol		mg/Kg	<1.25	10.00	3.74	37	10.00	3.45	35	5.6	9/18/98	4916	5412
Pyrene		mg/Kg	<0.25	10.00	4.58	46	10.00	4.51	45	2.2	9/18/98	4916	5412

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000380

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		mg/Kg	8.0	8.0	0	8/24/98		5089
TDS		mg/Kg	2,100	2,200	4.7	9/16/98		5364

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0843	**P.O. Number:**	Project #19349
Client I.D.:	105408	**ARS Sample I.D.:**	ARS-98-3089
Date Sampled:	08/17/98	**Date Received:**	08/20/98
Time Sampled:	N/A	**Time Received**	1510
Type of Sample:	Solid	**Date of Report**	8/25/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.84	N/A	pCi/gm	<0.031	N/A	Bq/gm	EPA 901.1M	8/23/98 1112	MK
Ra-228	<0.14	N/A	pCi/gm	<0.005	N/A	Bq/gm	EPA 901.1M	8/23/98 1112	MK
Pb-210	<0.93	N/A	pCi/gm	<0.034	N/A	Bq/gm	EPA 901.1M	8/23/98 1112	MK
Total Activity	4.33	N/A	pCi/gm	0.160	N/A	Bq/gm	EPA 901.1M	8/23/98 1112	MK

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.
1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Philip Services Corporation
Phone #: (915)-563-0118
FAX #: (915)-563-9526
Company Name & Address: 7904 IH 20 West, Midland, Texas 79706
Project #: 19350
Project Name: Shell Tocker Road
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindle

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING DATE	SAMPLING TIME	BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240 / 8260	8270	See Attached	VOC's	Total Chlorides (300.1)
105406	Field Blank	2	40ml VOA	✓				✓					08/17/98	1620										✓	✓	✓
407	Trip Blank	2	40ml VOA	✓						✓			08/17/98											✓	✓	✓
408	TSB-8 (2-3')	5	4oz Jars		✓					✓			08/17/98	1325										✓		
	TSB-8 (2-3')	1	40ml VOA									✓	08/17/98	1329											✓	
409	TSB-8 (8-10')	2	4oz Jars		✓					✓			08/17/98	1328	✓	✓	Carrell									✓
410	TSB-8 (40-42')	2	4oz Jars		✓					✓			08/17/98	1552	✓	✓	Carrell									✓
																per JAB 8.19.98									

SPECIAL HANDLING: Turn around # of days; Fax ASAP; Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindle	August 18, 1998	0700 AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Vicki Wadha	8-19-98	9:40 AM

REMARKS: Normal Turnaround

Bus 190 984 6114

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99
Page # 1

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000400

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
105612	Field Blank	8/18/98	15:30	8/20/98
105613	Trip Blank			8/20/98
105614	TMW-2 53-55'	8/18/98	12:49	8/20/98
105615	TMW-2 63-65'	8/18/98	13:50	8/20/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrections:
1) TRPHC units added to Quality Control Report for Matrix Spike and Matrix Duplicate Spike.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 2

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000400
Sample Number: 105612

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Acrylonitrile		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Benzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chlorobenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chloroform		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorobenzene		<2	ug/L	S-8260B		9/1/98	AG		5183	2
,1-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloropropenes		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylbenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromodichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromomethane		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Chloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Toluene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Vinyl chloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
m,p-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
o-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylene dibromide		1	ug/L	S-8260B		9/1/98	AG		5183	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Methylene chloride		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Surr. Dibromofluoromethane		119	%	S-8260B		9/1/98	AG		5183	72-130
Surr. Toluene-d8		107	%	S-8260B		9/1/98	AG		5183	77-127
Surr. 4-Bromofluorobenzene		103	%	S-8260B		9/1/98	AG		5183	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 3

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000400
Sample Number: 105613

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Acrylonitrile		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Benzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chlorobenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chloroform		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorobenzene		<2	ug/L	S-8260B		9/1/98	AG		5183	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloropropenes		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylbenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromodichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromomethane		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Chloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Toluene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Vinyl chloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
m,p-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
o-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylene dibromide		<1	ug/L	S-8260B		9/1/98	AG		5183	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Methylene chloride		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Surr. Dibromofluoromethane		116	%	S-8260B		9/1/98	AG		5183	72-130
Surr. Toluene-d8		107	%	S-8260B		9/1/98	AG		5183	77-127
Surr. 4-Bromofluorobenzene		104	%	S-8260B		9/1/98	AG		5183	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98
Page # 4

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000400
Sample Number: 105614

Field Code: TMW-2 53-55'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Acrylonitrile		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Benzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chlorobenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chloroform		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichlorobenzene		<50	ug/Kg	S-8260B		8/24/98	AG		5082	2
1,1-dichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	50
Dichloropropenes		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylbenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromodichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromomethane		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Chloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Toluene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Vinyl chloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
m,p-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
o-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylene dibromide		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Methylene chloride		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Surr. Dibromofluoromethane		120	%	S-8260B		8/24/98	AG		5082	72-130
Surr. Toluene-d8		104	%	S-8260B		8/24/98	AG		5082	77-127
Surr. 4-Bromofluorobenzene		113	%	S-8260B		8/24/98	AG		5082	72-131
Benzidine		<2.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25

Date: 9-29-98
Page # 5
Order ID Number: 9808000400
Sample Number: 105614

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TMW-2 53-55'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Surr. 2-Fluorophenol		63	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	25-121
Surr. Phenol-d6		77	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	24-113
Surr. Nitroobenzene-d5		61	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	23-120
Surr. 2-Fluorobiphenyl		72	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	30-115
Surr. 2,4,6-Tribromophenol		60	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	19-122
Surr. Terphenyl-d14		71	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	28-137

Date: 9-29-98
Page # 6
Order ID Number: 9808000400
Sample Number: 105614

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TMW-2 53-55'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		<0.50	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Barium		29	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Cadmium		<0.10	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.10
Chromium		3.5	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Lead		0.67	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	0.10
Selenium		2.3	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Silver		<0.50	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Uranium		<2.0	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	2.0
Copper		<1.0	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	1.0
Iron		2,000	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4798	5122	2.0
Manganese		17	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	1.0
Zinc		6.1	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	2.0
Aluminum		1,900	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4798	5122	10.0
Boron		<10	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	10
Cobalt		1.4	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	1.0
Nickel		1.5	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		8/24/98	SA		5087	0.01
Fluoride		0.98	mg/Kg	E 300.0		9/2/98	JS		5192	0.2
Nitrate		1.8	mg/Kg	E 300.0		9/2/98	JS		5192	0.2
Chloride		18	mg/Kg	E 300.0		9/2/98	JS		5192	1.0
Sulfate		12	mg/Kg	E 300.0		9/2/98	JS		5192	1.0
TDS		140	mg/Kg	E 160.2		9/10/98	RS		5273	---
pH		9.0	s.u.	E 150.1		8/24/98	SA		5085	---
TRPHC		21.5	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenol		2.25	mg/Kg	SM 5530 A,D		8/26/98	RC		5110	0.25
Total Radium		7.59	pCi/gm	E 901.1M		9/5/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000400
Sample Number: 105615

Field Code: TMW-2 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Acrylonitrile		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Benzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chlorobenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Chloroform		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichlorobenzene		<50	ug/Kg	S-8260B		8/24/98	AG		5082	2
1,1-dichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	50
Dichloropropenes		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylbenzene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromodichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Bromomethane		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Chloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Dichloromethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Toluene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Trichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Vinyl chloride		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
m,p-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
o-xylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Ethylene dibromide		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		8/24/98	AG		5082	25
Methylene chloride		<125	ug/Kg	S-8260B		8/24/98	AG		5082	125
Surr. Dibromofluoromethane		119	%	S-8260B		8/24/98	AG		5082	72-130
Surr. Toluene-d8		104	%	S-8260B		8/24/98	AG		5082	77-127
Surr. 4-Bromofluorobenzene		113	%	S-8260B		8/24/98	AG		5082	72-131
Benzidine		<2.5	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25

Date: 9-29-98
Page # 8
Order ID Number: 9808000400
Sample Number: 105615

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TMW-2 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
monomethylnaphthalenes		<0.25	mg/Kg	S-8270C	9/4/98	9/16/98	DG	4885	5363	0.25
Surr. 2-Fluorophenol		46	%	S-8270C	9/4/98	9/16/98	DG	4885	5363	25-121
Surr. Phenol-d6		59	%	S-8270C	9/4/98	9/16/98	DG	4885	5363	24-113
Surr. Nitroobenzene-d5		48	%	S-8270C	9/4/98	9/16/98	DG	4885	5363	23-120
Surr. 2-Fluorobiphenyl		63	%	S-8270C	9/4/98	9/16/98	DG	4885	5363	30-115
Surr. 2,4,6-Tribromophenol		55	%	S-8270C	9/4/98	9/16/98	DG	4885	5363	19-122
Surr. Terphenyl-d14		74	%	S-8270C	9/4/98	9/16/98	DG	4885	5363	28-137

Date: 9-29-98
Page # 9
Order ID Number: 9808000400
Sample Number: 105615

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TMW-2 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/26/98	9/27/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		<0.50	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Barium		34	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Cadmium		<0.10	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.10
Chromium		3.7	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Lead		1.3	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	0.10
Selenium		<0.50	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Silver		<0.50	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Uranium		<2.0	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	2.0
Copper		<1.0	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	1.0
Iron		2,300	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4798	5122	2.0
Manganese		21	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	1.0
Zinc		5.3	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	2.0
Aluminum		2,300	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4798	5122	10
Boron		<10	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	10
Cobalt		1.8	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	1.0
Nickel		1.5	mg/Kg	S 6010B	8/26/98	8/27/98	RR	4797	5120	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE	8/24/98	8/24/98	SA		5087	0.01
Fluoride		0.99	mg/Kg	E 300.0		9/2/98	JS		5192	0.2
Nitrate		1.8	mg/Kg	E 300.0		9/2/98	JS		5192	0.2
Chloride		27	mg/Kg	E 300.0		9/2/98	JS		5192	1.0
Sulfate		12	mg/Kg	E 300.0		9/2/98	JS		5192	1.0
TDS		130	mg/Kg	E 160.2		9/10/98	RS		5273	---
pH		8.4	s.u.	E 150.1	8/24/98	8/24/98	SA		5085	
TRPHC		50.0	mg/Kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10.0
Total Phenol		<0.25	mg/Kg	SM 5530 A,D		8/26/98	RC		5110	0.25
Total Radium		0.74	pCi/gm	E 901.1M		8/29/98	DS	---	---	---

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000400

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/1/98		5183
Acrylonitrile		<5	ug/L	5	9/1/98		5183
Benzene		<1	ug/L	1	9/1/98		5183
Carbon tetrachloride		<1	ug/L	1	9/1/98		5183
Chlorobenzene		<1	ug/L	1	9/1/98		5183
1,2-dichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/1/98		5183
1,1,1-trichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2-trichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2-trichloroethylene		<1	ug/L	1	9/1/98		5183
Chloroform		<1	ug/L	1	9/1/98		5183
Dichlorobenzene		<2	ug/L	2	9/1/98		5183
1,1-dichloroethylene		<1	ug/L	1	9/1/98		5183
Dichloropropenes		<1	ug/L	1	9/1/98		5183
Ethylbenzene		<1	ug/L	1	9/1/98		5183
Bromodichloromethane		<1	ug/L	1	9/1/98		5183
Bromomethane		<5	ug/L	5	9/1/98		5183
Chloromethane		<1	ug/L	1	9/1/98		5183
Dichlorodifluoromethane		<1	ug/L	1	9/1/98		5183
Dichloromethane		<1	ug/L	1	9/1/98		5183
Trichlorofluoromethane		<1	ug/L	1	9/1/98		5183
Tetrachloroethylene		<1	ug/L	1	9/1/98		5183
Toluene		<1	ug/L	1	9/1/98		5183
Trichloroethylene		<1	ug/L	1	9/1/98		5183
Vinyl chloride		<1	ug/L	1	9/1/98		5183
m,p-xylene		<1	ug/L	1	9/1/98		5183
o-xylene		<1	ug/L	1	9/1/98		5183
1,1-dichloroethane		<1	ug/L	1	9/1/98		5183
Ethylene dibromide		<1	ug/L	1	9/1/98		5183
cis-1,2-dichlorethylene		<1	ug/L	1	9/1/98		5183
trans-1,2-dichloroethylene		<1	ug/L	1	9/1/98		5183
Methylene chloride		<5	ug/L	5	9/1/98		5183
Surr. Dibromofluoromethane		120	%	72-130	9/1/98		5183
Surr. Toluene-d8		107	%	77-127	9/1/98		5183
Surr. 4-Bromofluorobenzene		99	%	72-131	9/1/98		5183
Acrolein		<125	ug/Kg	125	8/24/98		5082
Acrylonitrile		<125	ug/Kg	125	8/24/98		5082
Benzene		<25	ug/Kg	25	8/24/98		5082
Carbon tetrachloride		<25	ug/Kg	25	8/24/98		5082
Chlorobenzene		<25	ug/Kg	25	8/24/98		5082
1,2-dichloroethane		<25	ug/Kg	25	8/24/98		5082

Date: 9-29-98
Page # 11
Order ID Number: 9808000400

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,1-trichloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,2-trichloroethane		<25	ug/Kg	25	8/24/98		5082
1,1,2-trichloroethylene		<25	ug/Kg	25	8/24/98		5082
Chloroform		<25	ug/Kg	25	8/24/98		5082
Dichlorobenzene		<50	ug/Kg	2	8/24/98		5082
1,1-dichloroethylene		<25	ug/Kg	50	8/24/98		5082
Dichloropropenes		<25	ug/Kg	25	8/24/98		5082
Ethylbenzene		<25	ug/Kg	25	8/24/98		5082
Bromodichloromethane		<25	ug/Kg	25	8/24/98		5082
Bromomethane		<125	ug/Kg	125	8/24/98		5082
Chloromethane		<25	ug/Kg	25	8/24/98		5082
Dichlorodifluoromethane		<25	ug/Kg	25	8/24/98		5082
Dichloromethane		<25	ug/Kg	25	8/24/98		5082
Trichlorofluoromethane		<25	ug/Kg	25	8/24/98		5082
Tetrachloroethylene		<25	ug/Kg	25	8/24/98		5082
Toluene		<25	ug/Kg	25	8/24/98		5082
Trichloroethylene		<25	ug/Kg	25	8/24/98		5082
Vinyl chloride		<25	ug/Kg	25	8/24/98		5082
m,p-xylene		<25	ug/Kg	25	8/24/98		5082
o-xylene		<25	ug/Kg	25	8/24/98		5082
1,1-dichloroethane		<25	ug/Kg	25	8/24/98		5082
Ethylene dibromide		<25	ug/Kg	25	8/24/98		5082
cis-1,2-dichlorethylene		<25	ug/Kg	25	8/24/98		5082
trans-1,2-dichloroethylene		<25	ug/Kg	25	8/24/98		5082
Methylene chloride		<125	ug/Kg	125	8/24/98		5082
Surr. Dibromofluoromethane		112	%	72-130	8/24/98		5082
Surr. Toluene-d8		105	%	77-127	8/24/98		5082
Surr. 4-Bromofluorobenzene		112	%	72-131	8/24/98		5082
Benzidine		<2.5	mg/kg	2.5	9/10/98	4829	5276
Hexachlorobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Pentachlorobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Hexachloroethane		<0.25	mg/kg	0.25	9/10/98	4829	5276
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/10/98	4829	5276
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/10/98	4829	5276
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/10/98	4829	5276
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Diphenylhydrazine		<1.25	mg/kg	1.25	9/10/98	4829	5276
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Isophorone		<1.25	mg/kg	1.25	9/10/98	4829	5276
Nitrobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276

Order ID Number: 9808000400

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/10/98	4829	5276
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/10/98	4829	5276
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/10/98	4829	5276
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/10/98	4829	5276
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/10/98	4829	5276
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/10/98	4829	5276
Pentachlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
Dibutyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276
Diethyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276
Dimethyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276
Anthracene		<0.25	mg/kg	0.25	9/10/98	4829	5276
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Fluoranthene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Fluorene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Phenanthrene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Pyrene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Naphthalene		<0.25	mg/kg	0.25	9/10/98	4829	5276
1-methylnaphthalene		<0.25	mg/kg	0.25	9/10/98	4829	5276
2-methylnaphthalene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/10/98	4829	5276
monomethylnaphthalenes		<0.25	mg/kg	0.25	9/10/98	4829	5276
Surr. 2-Fluorophenol		42	%	25-121	9/10/98	4829	5276
Surr. Phenol-d6		51	%	24-113	9/10/98	4829	5276
Surr. Nitroobenzene-d5		35	%	23-120	9/10/98	4829	5276
Surr. 2-Fluorobiphenyl		51	%	30-115	9/10/98	4829	5276
Surr. 2,4,6-Tribromophenol		47	%	19-122	9/10/98	4829	5276
Surr. Terphenyl-d14		59	%	28-137	9/10/98	4829	5276
Benzidine		<2.5	mg/kg	2.5	9/16/98	4885	5363
Hexachlorobenzene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Pentachlorobenzene		<0.25	mg/kg	0.25	9/16/98	4885	5363
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Hexachloroethane		<0.25	mg/kg	0.25	9/16/98	4885	5363
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/16/98	4885	5363
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/16/98	4885	5363
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/16/98	4885	5363
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/16/98	4885	5363
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/16/98	4885	5363
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/16/98	4885	5363
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/16/98	4885	5363
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Diphenylhydrazine		<1.25	mg/kg	1.25	9/16/98	4885	5363
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Isophorone		<1.25	mg/kg	1.25	9/16/98	4885	5363

Date: 9-29-98
Page # 13
Order ID Number: 9808000400

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Nitrobenzene		<0.25	mg/kg	0.25	9/16/98	4885	5363
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/16/98	4885	5363
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/16/98	4885	5363
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/16/98	4885	5363
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/16/98	4885	5363
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/16/98	4885	5363
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/16/98	4885	5363
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/16/98	4885	5363
Pentachlorophenol		<1.25	mg/kg	1.25	9/16/98	4885	5363
Dibutyl phthalate		<0.25	mg/kg	0.25	9/16/98	4885	5363
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/16/98	4885	5363
Diethyl phthalate		<0.25	mg/kg	0.25	9/16/98	4885	5363
Dimethyl phthalate		<0.25	mg/kg	0.25	9/16/98	4885	5363
Anthracene		<0.25	mg/kg	0.25	9/16/98	4885	5363
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Fluoranthene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Fluorene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Phenanthrene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Pyrene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Naphthalene		<0.25	mg/kg	0.25	9/16/98	4885	5363
1-methylnaphthalene		<0.25	mg/kg	0.25	9/16/98	4885	5363
2-methylnaphthalene		<0.25	mg/kg	0.25	9/16/98	4885	5363
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/16/98	4885	5363
monomethylnaphthalenes		<0.25	mg/kg	0.25	9/16/98	4885	5363
Surr. 2-Fluorophenol		61	%	25-121	9/16/98	4885	5363
Surr. Phenol-d6		69	%	24-113	9/16/98	4885	5363
Surr. Nitroobenzene-d5		52	%	23-120	9/16/98	4885	5363
Surr. 2-Fluorobiphenyl		71	%	30-115	9/16/98	4885	5363
Surr. 2,4,6-Tribromophenol		60	%	19-122	9/16/98	4885	5363
Surr. Terphenyl-d14		71	%	28-137	9/16/98	4885	5363
Cyanide		<0.01	mg/Kg	0.01	8/24/98		5087
TRPHC		<10.0	mg/Kg	10.0	8/22/98	4743	5045
Arsenic		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Barium		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Cadmium		<0.10	mg/Kg	0.10	8/27/98	4797	5120
Chromium		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Lead		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Total Mercury		<0.10	mg/Kg	0.10	8/25/98	4765	5101
Selenium		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Silver		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Uranium		<2.0	mg/Kg	2.0	8/27/98	4797	5120
Copper		<1.0	mg/Kg	1.0	8/27/98	4797	5120
Iron		<2.0	mg/Kg	2.0	8/27/98	4798	5122
Manganese		<1.0	mg/Kg	1.0	8/27/98	4797	5120
Zinc		<2.0	mg/Kg	2.0	8/27/98	4797	5120
Aluminum		<10.0	mg/Kg	10	8/27/98	4798	5122

Order ID Number: 9808000400

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Boron		<10	mg/Kg	10	8/27/98	4797	5120
Cobalt		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Molybdenum		<1.0	mg/Kg	1.0	8/27/98	4797	5120
Nickel		<0.50	mg/Kg	0.50	8/27/98	4797	5120
Total Phenol		<0.25	mg/Kg	0.25	8/26/98		5110
PCB		<0.1	mg/Kg	0.1	8/26/98	4796	5112
Fluoride		<0.2	mg/Kg	0.2	9/2/98		5192
Nitrate		<0.2	mg/Kg	0.2	9/2/98		5192
Chloride		<1.0	mg/Kg	1.0	9/2/98		5192
Sulfate		<1.0	mg/Kg	1.0	9/2/98		5192

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000400

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	107	107	9/1/98	5183
1,1-Dichloroethene		100	ug/L	117	117	9/1/98	5183
Chloroform		100	ug/L	103	103	9/1/98	5183
1,2-Dichloropropane		100	ug/L	115	115	9/1/98	5183
Toluene		100	ug/L	119	119	9/1/98	5183
Chlorobenzene		100	ug/L	118	118	9/1/98	5183
Ethylbenzene		100	ug/L	115	115	9/1/98	5183
Vinyl chloride		100	mg/L	110	110	8/24/98	5082
1,1-Dichloroethene		100	mg/L	90	90	8/24/98	5082
Chloroform		100	mg/L	109	109	8/24/98	5082
1,2-Dichloropropane		100	mg/L	92	92	8/24/98	5082
Toluene		100	mg/L	96	96	8/24/98	5082
Chlorobenzene		100	mg/L	98	98	8/24/98	5082
Ethylbenzene		100	mg/L	100	100	8/24/98	5082
Phenol		80	mg/L	82	103	9/10/98	5276
1,4-Dichlorobenzene		80	mg/L	82	100	9/10/98	5276
2-nitrophenol		80	mg/L	86	108	9/10/98	5276
2,4-Dichlorophenol		80	mg/L	89	111	9/10/98	5276
Hexachlorobutadiene		80	mg/L	85	106	9/10/98	5276
4-Chloro-3-methylphenol		80	mg/L	75	94	9/10/98	5276
2,4,6-Trichlorophenol		80	mg/L	80	100	9/10/98	5276
Acenaphthene		80	mg/L	82	103	9/10/98	5276
n-Nitrosodiphenylamine		80	mg/L	77	96	9/10/98	5276
Pentachlorophenol		80	mg/L	80	100	9/10/98	5276
Fluoranthene		80	mg/L	75	94	9/10/98	5276
Di-n-octylphthalate		80	mg/L	95	119	9/10/98	5276
Benzo(a)pyrene		80	mg/L	84	105	9/10/98	5276
Phenol		80	mg/L	78	98	9/16/98	5363
1,4-Dichlorobenzene		80	mg/L	73	91	9/16/98	5363
2-nitrophenol		80	mg/L	75	94	9/16/98	5363
2,4-Dichlorophenol		80	mg/L	79	99	9/16/98	5363
Hexachlorobutadiene		80	mg/L	74	93	9/16/98	5363
4-Chloro-3-methylphenol		80	mg/L	66	83	9/16/98	5363
2,4,6-Trichlorophenol		80	mg/L	78	98	9/16/98	5363
Acenaphthene		80	mg/L	82	103	9/16/98	5363
n-Nitrosodiphenylamine		80	mg/L	69	86	9/16/98	5363
Pentachlorophenol		80	mg/L	69	86	9/16/98	5363
Fluoranthene		80	mg/L	64	80	9/16/98	5363
Di-n-octylphthalate		80	mg/L	65	81	9/16/98	5363
Benzo(a)pyrene		80	mg/L	73	91	9/16/98	5363

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000400

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
pH		7.0	s.u.	7.0	100	8/24/98	5085
Cyanide		0.12	mg/L	0.11	92	8/24/98	5087
TRPHC		100	mg/L	104	104	8/22/98	5045
TDS		1,000	mg/L	978	98	9/10/98	5273
Arsenic		1.0	mg/L	0.98	98	8/27/98	5120
Barium		1.0	mg/L	1.0	100	8/27/98	5120
Cadmium		1.0	mg/L	0.97	97	8/27/98	5120
Chromium		1.0	mg/L	1.0	100	8/27/98	5120
Lead		1.0	mg/L	0.98	98	8/27/98	5120
Total Mercury		1.0	mg/L	1.1	110	8/25/98	5101
Selenium		1.0	mg/L	0.98	98	8/27/98	5120
Silver		0.2	mg/L	0.20	100	8/27/98	5120
Uranium		1.0	mg/L	1.0	100	8/27/98	5120
Copper		1.0	mg/L	1.0	100	8/27/98	5120
Iron		50	mg/L	52	104	8/27/98	5122
Manganese		1.0	mg/L	1.0	100	8/27/98	5120
Zinc		1.0	mg/L	0.99	99	8/27/98	5120
Aluminum		100	mg/L	103	103	8/27/98	5122
Boron		1.0	mg/L	1.0	100	8/27/98	5120
Cobalt		1.0	mg/L	0.99	99	8/27/98	5120
Molybdenum		1.0	mg/L	0.99	99	8/27/98	5120
Nickel		1.0	mg/L	0.97	97	8/27/98	5120
Total Phenol		0.8	mg/L	0.80	100	8/26/98	5110
PCB		0.4	mg/L	0.38	95	8/26/98	5112
Fluoride		2.5	mg/L	2.45	98	9/2/98	5192
Nitrate		5	mg/L	5.06	101	9/2/98	5192
Chloride		12.5	mg/L	11.905	95	9/2/98	5192
Sulfate		12.5	mg/L	12.735	102	9/2/98	5192

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-18-99
Page # 17

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000400

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	111	111	100	98	98	12	9/1/98		5183
Benzene		ug/L	<1	100	101	101	100	93	93	8.2	9/1/98		5183
Trichloroethene		ug/L	<1	100	96	96	100	90	90	6.5	9/1/98		5183
Toluene		ug/L	<1	100	111	111	100	101	101	1.0	9/1/98		5183
Chlorobenzene		ug/L	<1	100	101	101	100	93	93	8.2	9/1/98		5183
Cyanide		mg/Kg	<0.01	0.12	0.12	100	0.12	0.11	92	8.3	8/24/98		5087
1,1-Dichloroethene		mg/Kg	<1	100	81	81	100	98	98	19	8/24/98		5082
Benzene		mg/Kg	<1	100	86	86	100	93	93	7.8	8/24/98		5082
Trichloroethene		mg/Kg	<1	100	93	93	100	90	90	3.3	8/24/98		5082
Toluene		mg/Kg	<1	100	88	88	100	101	101	14	8/24/98		5082
Chlorobenzene		mg/Kg	<1	100	93	93	100	93	93	0	8/24/98		5082
TRPHC		*mg/Kg	<10.0	250	276	110	250	235	94	16	8/22/98	4743	5045
Phenol		mg/Kg	<0.25	10.00	4.17	42	10.00	4.38	44	4.7	9/10/98	4829	5276
2-Chlorophenol		mg/Kg	<1.25	10.00	3.72	37	10.00	3.88	38	2.7	9/10/98	4829	5276
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	3.89	39	10.00	4.06	41	5.0	9/10/98	4829	5276
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	5.23	52	10.00	5.54	55	5.6	9/10/98	4829	5276
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	4.9	49	10.00	5.05	51	4.0	9/10/98	4829	5276
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	4.28	43	10.00	4.49	45	4.6	9/10/98	4829	5276
Acenaphthene		mg/Kg	<0.25	10.00	4.88	49	10.00	4.93	49	0	9/10/98	4829	5276
4-Nitrophenol		mg/Kg	<1.25	10.00	4.54	45	10.00	5.34	53	16	9/10/98	4829	5276
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	5	50	10.00	5.16	52	3.9	9/10/98	4829	5276
Pentachlorophenol		mg/Kg	<1.25	10.00	3.31	33	10.00	3.59	36	8.7	9/10/98	4829	5276
Pyrene		mg/Kg	<0.25	10.00	6.32	63	10.00	6.25	63	0	9/10/98	4829	5276
Phenol		mg/Kg	<0.25	10.00	5.43	54	10.00	5.33	53	1.9	9/16/98	4885	5363
2-Chlorophenol		mg/Kg	<1.25	10.00	5.11	51	10.00	5.11	51	0	9/16/98	4885	5363
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	5.91	59	10.00	5.9	59	0.0	9/16/98	4885	5363
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	7.98	80	10.00	7.71	77	3.8	9/16/98	4885	5363
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	6.11	61	10.00	6.06	61	0.0	9/16/98	4885	5363
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	4.29	43	10.00	4.92	49	13	9/16/98	4885	5363
Acenaphthene		mg/Kg	<0.25	10.00	6.64	66	10.00	6.49	65	1.5	9/16/98	4885	5363
4-Nitrophenol		mg/Kg	<1.25	10.00	4.8	48	10.00	4.26	43	11	9/16/98	4885	5363
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	6.05	61	10.00	5.97	60	1.7	9/16/98	4885	5363
Pentachlorophenol		mg/Kg	<1.25	10.00	3.41	34	10.00	3.11	31	9.2	9/16/98	4885	5363
Pyrene		mg/Kg	<0.25	10.00	6.09	61	10.00	6.08	61	0	9/16/98	4885	5363
Arsenic		mg/Kg	<0.50	200	160	80	200	162	81	1.2	8/27/98	4797	5120
Barium		mg/Kg	<0.50	200	195	98	200	199	100	2.0	8/27/98	4797	5120
Cadmium		mg/Kg	<0.10	200	164	82	200	164	82	0	8/27/98	4797	5120
Chromium		mg/Kg	<0.50	200	177	89	200	176	88	1.1	8/27/98	4797	5120

*TRPHC unit added.

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000400

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Lead		mg/Kg	<0.50	200	170	85	200	170	85	0	8/27/98	4797	5120
Total Mercury		mg/Kg	<0.10	1	1.2	120	1	1.2	120	0	8/23/98	4765	5101
Selenium		mg/Kg	<0.50	200	150	75	200	150	75	0	8/27/98	4797	5120
Silver		mg/Kg	<0.50	100	88	88	100	84	84	4.7	8/27/98	4797	5120
Uranium		mg/Kg	<2.0	200	174	87	200	198	99	13	8/27/98	4797	5120
Copper		mg/Kg	<1.0	200	181	91	200	179	90	1.1	8/27/98	4797	5120
Iron		mg/Kg	<2.0	200	204	102	200	208	104	1.9	8/27/98	4798	5122
Manganese		mg/Kg	<1.0	200	174	87	200	175	88	1.1	8/27/98	4797	5120
Zinc		mg/Kg	<2.0	200	160	80	200	162	81	1.2	8/27/98	4797	5120
Aluminum		mg/Kg	<10.0	200	194	97	200	194	84	14	8/27/98	4798	5122
Boron		mg/Kg	<10	200	162	81	200	162	81	0	8/27/98	4797	5120
Cobalt		mg/Kg	<0.50	200	172	86	200	168	84	2.4	8/27/98	4797	5120
Molybdenum		mg/Kg	<1.0	200	179	90	200	175	88	2.2	8/27/98	4797	5120
Nickel		mg/Kg	<0.50	200	168	84	200	168	84	0	8/27/98	4797	5120
Total Phenol		mg/Kg	<0.25	0.8	0.8	100	0.8	0.81	101	1.0	8/26/98		5110
PCB		mg/Kg	<0.1	0.5	0.48	96	0.5	0.46	92	4.3	8/26/98	4796	5112

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-29-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9808000400

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
Ph		s.u.	4.6	4.7	2.2	8/24/98		5085
TDS		mg/kg	880	864	1.8	9/10/98		5273

400 / 401

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeff Kindley
Phone #: (915) 563-0118
Philip Services Corporation
FAX #: (915) 563-9526
Company Name & Address: 7904 I H 20 West
Midland, Tx 79706
Project #: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
105612	Field Blank	2	40ml VOA	✓				✓					08/18/98	1530
613	Trip Blank	2	40ml VOA	✓						✓			08/18/98	
14	TMW-2 (53-55')	5	4oz Jars		✓					✓			08/18/98	1249
	TMW-2 (53-55')	1	40ml VOA		✓							✓	08/18/98	1249
15	TMW-2 (63-65')	5	4oz Jars		✓					✓			08/18/98	1350
	TMW-2 (63-65')	1	40ml VOA		✓							✓	08/18/98	1350

ANALYSIS REQUEST: BTEX, MTBE; TPH; Total Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Volatiles; TCLP Semi Volatiles; RCI; 8240 / 8260; 8270; See Attached VOC's

SPECIAL HANDLING: Turn around # of days; Fax ASAP; Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	August 19, 1998	0700 AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Wardha	Date: 8-20-98	Time: 9:50 AM

REMARKS: Normal Turnaround

Bus 901 984 6033 2°

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Ave. Ste 9
Lubbock, TX 79424
Phone:806-794-1296
Fax:806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

lotes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0867	**P.O. Number:**	Verbal
Client I.D.:	105614	**ARS Sample I.D.:**	ARS-98-3151
Date Sampled:	8/18/98	**Date Received:**	8/26/98
Time Sampled:	N/A	**Time Received**	1157
Type of Sample:	Solid	**Date of Report**	9/6/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.08	1.61	pCi/gm	0.077	0.060	Bq/gm	EPA 901.1M	9/5/98 1137	sw
Ra-228	<0.15	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	9/5/98 1137	sw
Pb-210	3.83	2.18	pCi/gm	0.142	0.081	Bq/gm	EPA 901.1M	9/5/98 1137	sw
Total Activity	7.59	N/A	pCi/gm	0.281	N/A	Bq/gm	EPA 901.1M	9/5/98 1137	sw

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0867	**P.O. Number:**	Verbal
Client I.D.:	105615	**ARS Sample I.D.:**	ARS-98-3152
Date Sampled:	8/18/98	**Date Received:**	8/26/98
Time Sampled:	N/A	**Time Received**	1157
Type of Sample:	Solid	**Date of Report**	9/6/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.01	N/A	pCi/gm	<0.037	N/A	Bq/gm	EPA 901.1M	8/29/98 1547	sw
Ra-228	<0.09	N/A	pCi/gm	<0.003	N/A	Bq/gm	EPA 901.1M	8/29/98 1547	sw
Pb-210	<1.28	N/A	pCi/gm	<0.047	N/A	Bq/gm	EPA 901.1M	8/29/98 1547	sw
Total Activity	0.74	N/A	pCi/gm	0.027	N/A	Bq/gm	EPA 901.1M	8/29/98 1547	sw

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

Analysis, Inc.

Tel (806) 794 1296 Fax (806) 794 1298
378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeff Rindley
Phone #: (915) 563-0118
Philip Services Corporation
FAX #: (915) 563-9526

Company Name & Address: 7904 I H 20 West
Midland, Tx 79706

Project #: 19350

Project Name: Shell Tasker Road

Project Location: Hobbs, New Mexico

Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
105612	Field Blank	2	40ml VOA	✓				✓					08/18/98	1530
613	Trip Blank	2	40ml VOA	✓						✓			08/18/98	
14	TMW-2 (53-55')	5	4 oz Jars		✓					✓			08/18/98	1249
	TMW-2 (53-55')	1	40ml VOA		✓							✓	08/18/98	1249
15	TMW-2 (63-65')	5	4 oz Jars		✓					✓			08/18/98	1350
	TMW-2 (63-65')	1	40ml VOA		✓							✓	08/18/98	1350

ANALYSIS REQUEST: BTEX, MTBE; TPH; Total Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Volatiles; TCLP Semi Volatiles; RCI; 8240/8260; 8270; See Attached VOC's

SPECIAL HANDLING: Turn around # of days; Fax ASAP; Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	August 19, 1998	0700 AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Wadhams	Date: 8-20-98	Time: 9:50 AM

REMARKS: Normal Turnaround

Bus 901 987 603 3 2°

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Corrected

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99
Page # 1

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
105740	Field Blank	8/19/98	15:30	8/21/98
105741	Trip Blank			8/21/98
105742	TMW-1 2-3'	8/19/98	8:30	8/21/98
105743	TMW-1 63-65'	8/19/98	15:00	8/21/98
105744	TMW-1A 63-65'	8/19/98	15:00	8/21/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All data meets quality control criteria with the exceptions:
105742 Semivolatile low surrogate recovery due to matrix effect
Sample 105743 result could not be confirmed on bulk soil sample reanalyzed on 12-23-98

Corrections:
1) 105743 result flagged that Bromomethane could not be confirmed.
2) Dichlorobenzene and 1,1-dichloroethylene blank results corrected.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435
Sample Number: 105740

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Acrylonitrile		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Benzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chlorobenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chloroform		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorobenzene		<2	ug/L	S-8260B		9/1/98	AG		5183	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloropropenes		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylbenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromodichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromomethane		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Chloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Toluene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Vinyl chloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
m,p-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
o-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylene dibromide		<1	ug/L	S-8260B		9/1/98	AG		5183	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Methylene chloride		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Surr. Dibromofluoromethane		119	%	S-8260B		9/1/98	AG		5183	72-130
Surr. Toluene-d8		100	%	S-8260B		9/1/98	AG		5183	77-127
Surr. 4-Bromofluorobenzene		115	%	S-8260B		9/1/98	AG		5183	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435
Sample Number: 105741

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Acrylonitrile		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Benzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chlorobenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chloroform		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorobenzene		<2	ug/L	S-8260B		9/1/98	AG		5183	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloropropenes		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylbenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromodichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromomethane		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Chloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Toluene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Vinyl chloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
m,p-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
o-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylene dibromide		<1	ug/L	S-8260B		9/1/98	AG		5183	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Methylene chloride		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Surr. Dibromofluoromethane		109	%	S-8260B		9/1/98	AG		5183	72-130
Surr. Toluene-d8		97	%	S-8260B		9/1/98	AG		5183	77-127
Surr. 4-Bromofluorobenzene		120	%	S-8260B		9/1/98	AG		5183	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-13-99

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435
Sample Number: 105742

Field Code: TMW-1 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<10,000	ug/Kg	S-8260B		9/3/98	AG		5205	10,000
Acrylonitrile		<10,000	ug/Kg	S-8260B		9/3/98	AG		5205	10,000
Benzene		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Carbon tetrachloride		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Chlorobenzene		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
1,2-dichloroethane		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
1,1,2,2-tetrachloroethane		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
1,1,1-trichloroethane		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
1,1,2-trichloroethane		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
1,1,2-trichloroethylene		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Chloroform		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Dichlorobenzene		<4,000	ug/Kg	S-8260B		9/3/98	AG		5205	4,000
1,1-dichloroethylene		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Dichloropropenes		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Ethylbenzene		10,900	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Bromodichloromethane		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Bromomethane		<10,000	ug/Kg	S-8260B		9/3/98	AG		5205	10,000
Chloromethane		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Dichlorodifluoromethane		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Dichloromethane		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Trichlorofluorometane		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Tetrachloroethylene		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Toluene		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Trichloroethylene		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Vinyl chloride		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
m,p-xylene		43,600	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
o-xylene		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
1,1-dichloroethane		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Ethylene dibromide		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
cis-1,2-dichlorethylene		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
trans-1,2-dichloroethylene		<2,000	ug/Kg	S-8260B		9/3/98	AG		5205	2,000
Methylene chloride		<10,000	ug/Kg	S-8260B		9/3/98	AG		5205	10,000
Surr. Dibromofluoromethane		105	%	S-8260B		9/3/98	AG		5205	72-130
Surr. Toluene-d8		97	%	S-8260B		9/3/98	AG		5205	77-127
Surr. 4-Bromofluorobenzene		105	%	S-8260B		9/3/98	AG		5205	72-131
Benzidine		<125	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	125
Hexachlorobenzene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Pentachlorobenzene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
1,2,4,5-tetrachlorobenzene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435
Sample Number: 105742

Field Code: TMW-1 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
2,4-dichlorophenol		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
2,4,5-trichlorophenol		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
2,4,6-trichlorophenol		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
bis (2-chloroethyl) ether		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
bis (2-chloroisopropyl) ether		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
bis (chloromethyl) ether		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
3,3-dichlorobenzidine		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
2,4-dinitrotoluene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Diphenylhydrazine		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
Hexachlorobutadiene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Hexachlorocyclopentadiene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Isophorone		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
Nitrobenzene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
2,4-dinitro-o-cresol		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
2,4-dinitrophenols		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
n-nitrosodiethylamine		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
N-nitrosodimethylamine		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
N-nitrosodibutylamine		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
N-nitrosodiphenylamine		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
N-nitrosopyrrolidine		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Pentachlorophenol		<62.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	62.5
Dibutyl phthalate		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
di-2-ethylhexyl phthalate		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Diethyl phthalate		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Dimethyl phthalate		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Anthracene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
3,4-benzofluoranthene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Benzo(k)fluoranthene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Fluoranthene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Fluorene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Phenanthrene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Pyrene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Naphthalene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
1-methylnaphthalene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
2-methylnaphthalene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Benzo-a-pyrene		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
monomethylnaphthalenes		<12.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	12.5
Surr. 2-Fluorophenol		65	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	25-121
Surr. Phenol-d6		38	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	24-113
Surr. Nitroobenzene-d5		82	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	23-120
Surr. 2-Fluorobiphenyl		89	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	30-115
Surr. 2,4,6-Tribromophenol	*LSR	6	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	19-122
Surr. Terphenyl-d14		114	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	28-137

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Corrected

Order ID Number: 9808000435
Sample Number: 105742

Field Code: TMW-1 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
PCB's		<1.0	mg/Kg	S 8082	8/26/98	9/3/98	RC	4795	5204	1.0
Arsenic		0.68	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Barium		150	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Cadmium		0.14	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.10
Chromium		3.3	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Lead		1.1	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	<0.10
Selenium		0.52	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Silver		<0.50	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	2.0
Copper		2.6	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	1.0
Iron		1,970	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Manganese		34	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	1.0
Zinc		11	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	2.0
Aluminum		3,800	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Boron		<10	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	10
Cobalt		3.9	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Molybdenum		1.7	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	1.0
Nickel		4.4	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE	8/24/98	8/24/98	SA		5087	0.01
Fluoride		2.1	mg/Kg	E 300.0		9/9/98	JS		5251	0.2
Nitrate		1.5	mg/Kg	E 300.0		9/9/98	JS		5251	0.2
Chloride		94	mg/Kg	E 300.0		9/16/98	JS		5360	2.0
Sulfate		34	mg/Kg	E 300.0		9/19/98	JS		5424	5.0
TDS		2,700	mg/Kg	E 160.2		9/10/98	RS		5273	---
pH		9.5	s.u.	E 150.1		8/25/98	SA		5104	7.0
Phenolics		0.04	mg/kg	SM 5530 CI		8/26/98	RC		5110	0.01
TRPHC		28,500	mg/kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10
Total Radium		3.12	pCi/gm	E 901.1M		9/5/98	DS	---	---	---

*LSR Low surrogate recovery due to matrix.

Analytical Results Report

Corrected

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99
Page # 7

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435
Sample Number: 105743

Field Code: TMW-1 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<215	ug/Kg	S-8260B		9/3/98	AG		5205	215
Acrylonitrile		<215	ug/Kg	S-8260B		9/3/98	AG		5205	215
Benzene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Carbon tetrachloride		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Chlorobenzene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
1,2-dichloroethane		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
1,1,2,2-tetrachloroethane		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
1,1,1-trichloroethane		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
1,1,2-trichloroethane		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
1,1,2-trichloroethylene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Chloroform		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Dichlorobenzene		<86	ug/Kg	S-8260B		9/3/98	AG		5205	86
1,1-dichloroethylene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Dichloropropenes		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Ethylbenzene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Bromodichloromethane		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Bromomethane		**970	ug/Kg	S-8260B		9/3/98	AG		5205	215
Chloromethane		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Dichlorodifluoromethane		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Dichloromethane		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Trichlorofluorometane		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Tetrachloroethylene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Toluene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Trichloroethylene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Vinyl chloride		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
m,p-xylene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
o-xylene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
1,1-dichloroethane		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Ethylene dibromide		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
cis-1,2-dichlorethylene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
trans-1,2-dichloroethylene		<43	ug/Kg	S-8260B		9/3/98	AG		5205	43
Methylene chloride		<215	ug/Kg	S-8260B		9/3/98	AG		5205	215
Surr. Dibromofluoromethane		106	%	S-8260B		9/3/98	AG		5205	72-130
Surr. Toluene-d8		95	%	S-8260B		9/3/98	AG		5205	77-127
Surr. 4-Bromofluorobenzene		101	%	S-8260B		9/3/98	AG		5205	72-131
Benzidine		<2.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435
Sample Number: 105743

Field Code: TMW-1 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1-methylnaphthalene		20	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2-methylnaphthalene		17.9	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Surr. 2-Fluorophenol		35	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	25-121
Surr. Phenol-d6		43	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	24-113
Surr. Nitroobenzene-d5		35	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	23-120
Surr. 2-Fluorobiphenyl		42	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	30-115
Surr. 2,4,6-Tribromophenol		33	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	19-122
Surr. Terphenyl-d14		44	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	28-137

Corrected

Date: 05-18-99
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Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435
Sample Number: 105743

Field Code: TMW-1 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S-8080	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Barium		5.5	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Cadmium		<0.10	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.10
Chromium		3.5	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Lead		0.85	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	<0.10
Selenium		1.3	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Silver		<0.50	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	2.0
Copper		<1.0	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	1.0
Iron		1,740	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Manganese		14	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	1.0
Zinc		4.3	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	2.0
Aluminum		1,790	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Boron		<10	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	10
Cobalt		<0.50	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	1.0
Nickel		<0.50	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE	8/24/98	8/24/98	SA		5087	0.01
Fluoride		0.84	mg/Kg	E 300.0		9/2/98	JS		5192	0.1
Nitrate		2.0	mg/Kg	E 300.0		9/2/98	JS		5192	0.1
Chloride		82	mg/Kg	E 300.0		9/2/98	JS		5192	0.5
Sulfate		9.1	mg/Kg	E 300.0		9/2/98	JS		5192	0.5
TDS		170	mg/Kg	E 160.2		9/10/98	RS		5273	---
pH		8.7	s.u.	E 150.1		8/25/98	SA		5104	---
Phenolics		0.11	mg/kg	SM 5530 A,D		8/26/98	RC		5110	0.01
TRPHC		18.1	mg/kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10
Total Radium		11.3	pCi/gm	E 901.1M		9/5/98	DS	---	---	---

** Sample 105743 result could not be confirmed on bulk soil sample run on 12-23-98

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435
Sample Number: 105744

Field Code: TMW-1A 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<275	ug/Kg	S-8260B		9/3/98	AG		5205	275
Acrylonitrile		<275	ug/Kg	S-8260B		9/3/98	AG		5205	275
Benzene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Carbon tetrachloride		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Chlorobenzene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
1,2-dichloroethane		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
1,1,2,2-tetrachloroethane		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
1,1,1-trichloroethane		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
1,1,2-trichloroethane		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
1,1,2-trichloroethylene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Chloroform		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Dichlorobenzene		<110	ug/Kg	S-8260B		9/3/98	AG		5205	110
1,1-dichloroethylene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Dichloropropenes		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Ethylbenzene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Bromodichloromethane		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Bromomethane		<275	ug/Kg	S-8260B		9/3/98	AG		5205	275
Chloromethane		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Dichlorodifluoromethane		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Dichloromethane		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Trichlorofluorometane		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Tetrachloroethylene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Toluene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Trichloroethylene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Vinyl chloride		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
m,p-xylene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
o-xylene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
1,1-dichloroethane		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Ethylene dibromide		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
cis-1,2-dichlorethylene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
trans-1,2-dichloroethylene		<55	ug/Kg	S-8260B		9/3/98	AG		5205	55
Methylene chloride		<275	ug/Kg	S-8260B		9/3/98	AG		5205	275
Surr. Dibromofluoromethane		101	%	S-8260B		9/3/98	AG		5205	72-130
Surr. Toluene-d8		98	%	S-8260B		9/3/98	AG		5205	77-127
Surr. 4-Bromofluorobenzene		99	%	S-8260B		9/3/98	AG		5205	72-131
Benzidine		<2.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435
Sample Number: 105744

Field Code: TMW-1A 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1-methylnaphthalene		20	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2-methylnaphthalene		17.9	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Surr. 2-Fluorophenol		47	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	25-121
Surr. Phenol-d6		56	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	24-113
Surr. Nitroobenzene-d5		46	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	23-120
Surr. 2-Fluorobiphenyl		53	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	30-115
Surr. 2,4,6-Tribromophenol		38	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	19-122
Surr. Terphenyl-d14		53	%	S 8270C	8/31/98	9/10/98	DG	4829	5276	28-137

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435
Sample Number: 105744

Field Code: TMW-1A 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S-8080	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		0.88	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Barium		29	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Cadmium		0.13	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.10
Chromium		4.1	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Lead		1.2	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Silver		<0.50	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	2.0
Copper		1.1	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	1.0
Iron		2,530	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Manganese		46	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	1.0
Zinc		5.3	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	2.0
Aluminum		2,240	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Boron		<10	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	10
Cobalt		1.1	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	1.0
Nickel		0.79	mg/Kg	S 6010B	9/1/98	9/4/98	RR	4848	5208	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE	8/24/98	8/24/98	SA		5087	0.01
Fluoride		1.0	mg/Kg	E 335.2		9/2/98	JS		5192	0.1
Nitrate		1.9	mg/Kg	E 300.0		9/2/98	JS		5192	0.1
Chloride		240	mg/Kg	E 300.0		9/2/98	JS		5192	0.5
Sulfate		13	mg/Kg	E 300.0		9/2/98	JS		5192	0.5
TDS		510	mg/Kg	E 160.2		9/10/98	RS		5273	---
pH		8.7	s.u.	E 150.1		8/25/98	SA		5104	---
Phenolics		<0.01	mg/kg	SM 5530 A,D		8/26/98	RC		5110	0.01
TRPHC		63.0	mg/kg	S 418.1	8/21/98	8/22/98	SR	4743	5045	10
Total Radium		11.3	pCi/gm	E 901.1M		9/5/98	DS	---	---	---

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/1/98		5183
Acrylonitrile		<5	ug/L	5	9/1/98		5183
Benzene		<1	ug/L	1	9/1/98		5183
Carbon tetrachloride		<1	ug/L	1	9/1/98		5183
Chlorobenzene		<1	ug/L	1	9/1/98		5183
1,2-dichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/1/98		5183
1,1,1-trichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2-trichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2-trichloroethylene		<1	ug/L	1	9/1/98		5183
Chloroform		<1	ug/L	1	9/1/98		5183
Dichlorobenzene		<2	ug/L	2	9/1/98		5183
1,1-dichloroethylene		<1	ug/L	1	9/1/98		5183
Dichloropropenes		<1	ug/L	1	9/1/98		5183
Ethylbenzene		<1	ug/L	1	9/1/98		5183
Bromodichloromethane		<1	ug/L	1	9/1/98		5183
Bromomethane		<5	ug/L	5	9/1/98		5183
Chloromethane		<1	ug/L	1	9/1/98		5183
Dichlorodifluoromethane		<1	ug/L	1	9/1/98		5183
Dichloromethane		<1	ug/L	1	9/1/98		5183
Trichlorofluoromethane		<1	ug/L	1	9/1/98		5183
Tetrachloroethylene		<1	ug/L	1	9/1/98		5183
Toluene		<1	ug/L	1	9/1/98		5183
Trichloroethylene		<1	ug/L	1	9/1/98		5183
Vinyl chloride		<1	ug/L	1	9/1/98		5183
m,p-xylene		<1	ug/L	1	9/1/98		5183
o-xylene		<1	ug/L	1	9/1/98		5183
1,1-dichloroethane		<1	ug/L	1	9/1/98		5183
Ethylene dibromide		<1	ug/L	1	9/1/98		5183
cis-1,2-dichlorethylene		<1	ug/L	1	9/1/98		5183
trans-1,2-dichloroethylene		<1	ug/L	1	9/1/98		5183
Methylene chloride		<5	ug/L	5	9/1/98		5183
Surr. Dibromofluoromethane		120	%	72-130	9/1/98		5183
Surr. Toluene-d8		107	%	77-127	9/1/98		5183
Surr. 4-Bromofluorobenzene		99	%	72-131	9/1/98		5183
Acrolein		<125	ug/Kg	125	9/3/98		5205
Acrylonitrile		<125	ug/Kg	125	9/3/98		5205
Benzene		<25	ug/Kg	25	9/3/98		5205
Carbon tetrachloride		<25	ug/Kg	25	9/3/98		5205
Chlorobenzene		<25	ug/Kg	25	9/3/98		5205

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Corrected

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,2-dichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,1-trichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2-trichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2-trichloroethylene		<25	ug/Kg	25	9/3/98		5205
Chloroform		<25	ug/Kg	25	9/3/98		5205
Dichlorobenzene		<50	ug/Kg	***50	9/3/98		5205
1,1-dichloroethylene		<25	ug/Kg	***25	9/3/98		5205
Dichloropropenes		<25	ug/Kg	25	9/3/98		5205
Ethylbenzene		<25	ug/Kg	25	9/3/98		5205
Bromodichloromethane		<25	ug/Kg	25	9/3/98		5205
Bromomethane		<125	ug/Kg	125	9/3/98		5205
Chloromethane		<25	ug/Kg	25	9/3/98		5205
Dichlorodifluoromethane		<25	ug/Kg	25	9/3/98		5205
Dichloromethane		<25	ug/Kg	25	9/3/98		5205
Trichlorofluoromethane		<25	ug/Kg	25	9/3/98		5205
Tetrachloroethylene		<25	ug/Kg	25	9/3/98		5205
Toluene		<25	ug/Kg	25	9/3/98		5205
Trichloroethylene		<25	ug/Kg	25	9/3/98		5205
Vinyl chloride		<25	ug/Kg	25	9/3/98		5205
m,p-xylene		<25	ug/Kg	25	9/3/98		5205
o-xylene		<25	ug/Kg	25	9/3/98		5205
1,1-dichloroethane		<25	ug/Kg	25	9/3/98		5205
Ethylene dibromide		<25	ug/Kg	25	9/3/98		5205
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/3/98		5205
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/3/98		5205
Methylene chloride		<125	ug/Kg	125	9/3/98		5205
Surr. Dibromofluoromethane		101	%	72-130	9/3/98		5205
Surr. Toluene-d8		99	%	77-127	9/3/98		5205
Surr. 4-Bromofluorobenzene		102	%	72-131	9/3/98		5205
Total Mercury		<0.10	mg/Kg	<0.10	8/25/98	4765	5101
Cyanide		<0.01	mg/Kg	0.01	8/24/98		5087
Phenolics		<0.01	mg/kg	0.01	8/26/98		5110
Fluoride		<0.1	mg/kg	0.1	9/2/98		5192
Nitrate		<0.1	mg/kg	0.1	9/2/98		5192
Chloride		<0.5	mg/kg	0.5	9/2/98		5192
Sulfate		<0.5	mg/kg	0.5	9/2/98		5192
Fluoride		<0.1	mg/kg	0.1	9/9/98		5251
Nitrate		<0.1	mg/kg	0.1	9/9/98		5251
Arsenic		<0.50	mg/kg	0.5	9/4/98		5208
Barium		<0.50	mg/kg	0.5	9/4/98		5208
Cadmium		<0.10	mg/kg	0.5	9/4/98		5208
Chromium		<0.50	mg/kg	0.5	9/4/98		5208
Lead		<0.50	mg/kg	0.5	9/4/98		5208
Selenium		<0.50	mg/kg	0.5	9/4/98		5208

*** Reporting limit corrected.

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Silver		<0.50	mg/kg	0.5	9/4/98		5208
Uranium		<2.0	mg/kg	2.0	9/4/98		5208
Copper		<1.0	mg/kg	1.0	9/4/98		5208
Iron		<10	mg/kg	10	9/17/98		5372
Manganese		<1.0	mg/kg	1.0	9/4/98		5208
Zinc		<2.0	mg/kg	2.0	9/4/98		5208
Aluminum		<10	mg/kg	10	9/17/98		5372
Boron		<10	mg/kg	10	9/4/98		5208
Cobalt		<0.50	mg/kg	0.5	9/4/98		5208
Molybdenum		<1.0	mg/kg	1.0	9/4/98		5208
Nickel		<0.50	mg/kg	0.5	9/4/98		5208
PCB		<0.1	mg/kg	0.1	9/3/98	4795	5204
TRPHC		<10.0	mg/kg	10	8/22/98	4743	5045
Chloride		<2.0	mg/kg	2.0	9/16/98		5360
Sulfate		<1.0	mg/kg	1.0	9/19/98		5484
Benzidine		<2.5	mg/kg	2.5	9/10/98	4829	5276
Hexachlorobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Pentachlorobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Hexachloroethane		<0.25	mg/kg	0.25	9/10/98	4829	5276
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/10/98	4829	5276
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/10/98	4829	5276
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/10/98	4829	5276
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Diphenylhydrazine		<1.25	mg/kg	1.25	9/10/98	4829	5276
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Isophorone		<1.25	mg/kg	1.25	9/10/98	4829	5276
Nitrobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/10/98	4829	5276
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/10/98	4829	5276
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/10/98	4829	5276
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/10/98	4829	5276
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/10/98	4829	5276
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/10/98	4829	5276
Pentachlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
Dibutyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276
Diethyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276
Dimethyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Anthracene		<0.25	mg/kg	0.25	9/10/98	4829	5276
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Fluoranthene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Fluorene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Phenanthrene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Pyrene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Naphthalene		<0.25	mg/kg	0.25	9/10/98	4829	5276
1-methylnaphthalene		<0.25	mg/kg	0.25	9/10/98	4829	5276
2-methylnaphthalene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Surr. 2-Fluorophenol		42	%	25-121	9/10/98	4829	5276
Surr. Phenol-d6		51	%	24-113	9/10/98	4829	5276
Surr. Nitroobenzene-d5		32	%	23-120	9/10/98	4829	5276
Surr. 2-Fluorobiphenyl		51	%	30-115	9/10/98	4829	5276
Surr. 2,4,6-Tribromophenol		47	%	19-122	9/10/98	4829	5276
Surr. Terphenyl-d14		59	%	28-137	9/10/98	4829	5276

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	107	107	9/1/98	5183
1,1-Dichloroethene		100	ug/L	117	117	9/1/98	5183
Chloroform		100	ug/L	103	103	9/1/98	5183
1,2-Dichloropropane		100	ug/L	115	115	9/1/98	5183
Toluene		100	ug/L	119	119	9/1/98	5183
Chlorobenzene		100	ug/L	118	118	9/1/98	5183
Ethylbenzene		100	ug/L	115	115	9/1/98	5183
Vinyl chloride		100	ug/L	104	104	9/3/98	5205
1,1-Dichloroethene		100	ug/L	119	119	9/3/98	5205
Chloroform		100	ug/L	112	112	9/3/98	5205
1,2-Dichloropropane		100	ug/L	106	106	9/3/98	5205
Toluene		100	ug/L	115	115	9/3/98	5205
Ethylbenzene		100	ug/L	112	112	9/3/98	5205
Cyanide		0.12	mg/L	0.11	92	8/24/98	5087
Total Mercury		1.0	mg/L	1.0	100	8/25/98	5101
Phenolics		0.8	mg/L	0.8	100	8/26/98	5110
Fluoride		2.5	mg/L	2.51	100	9/2/98	5192
Nitrate		5.0	mg/L	5.055	101	9/2/98	5192
Chloride		12.5	mg/L	12.02	96	9/2/98	5192
Sulfate		12.5	mg/L	12.755	102	9/2/98	5192
Fluoride		2.5	mg/L	2.42	97	9/9/98	5251
Nitrate		5.0	mg/L	4.765	95	9/9/98	5251
Arsenic		1.0	mg/L	1.0	100	9/4/98	5208
Barium		1.0	mg/L	1.0	100	9/4/98	5208
Cadmium		1.0	mg/L	0.98	98	9/4/98	5208
Chromium		1.0	mg/L	1.0	100	9/4/98	5208
Lead		1.0	mg/L	0.97	97	9/4/98	5208
Selenium		1.0	mg/L	1.0	100	9/4/98	5208
Silver		0.2	mg/L	0.20	100	9/4/98	5208
Uranium		1.0	mg/L	1.0	100	9/4/98	5208
Copper		1.0	mg/L	1.0	100	9/4/98	5208
Iron		100.0	mg/L	102.0	102	9/17/98	5372
Manganese		1.0	mg/L	1.0	100	9/4/98	5208
Zinc		1.0	mg/L	0.96	96	9/4/98	5208
Aluminum		250.0	mg/L	258.0	103	9/17/98	5372
Boron		1.0	mg/L	1.0	100	9/4/98	5208

Order ID Number: 9808000435

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Cobalt		1.0	mg/L	1.0	100	9/4/98	5208
Molybdenum		1.0	mg/L	1.0	100	9/4/98	5208
Nickel		1.0	mg/L	1.0	100	9/4/98	5208
PCB		0.4	mg/L	0.45	113	9/3/98	5204
TRPHC		100	mg/L	104	104	8/22/98	5045
TDS		1000	mg/L	978	98	9/10/98	5273
Chloride		500	mg/L	499	100	9/16/98	5360
Sulfate		12.5	mg/L	13.195	106	9/19/98	5484
Phenol		80	mg/L	82	103	9/10/98	5276
1,4-Dichlorobenzene		80	mg/L	82	100	9/10/98	5276
2-nitrophenol		80	mg/L	86	108	9/10/98	5276
2,4-Dichlorophenol		80	mg/L	89	111	9/10/98	5276
Hexachlorobutadiene		80	mg/L	85	106	9/10/98	5276
4-Chloro-3-methylphenol		80	mg/L	75	94	9/10/98	5276
2,4,6-Trichlorophenol		80	mg/L	80	100	9/10/98	5276
Acenaphthene		80	mg/L	82	103	9/10/98	5276
n-Nitrosodiphenylamine		80	mg/L	77	96	9/10/98	5276
Pentachlorophenol		80	mg/L	80	100	9/10/98	5276
Fluoranthene		80	mg/L	75	94	9/10/98	5276
Di-n-octylphthalate		80	mg/L	95	119	9/10/98	5276
Benzo(a)pyrene		80	mg/L	84	105	9/10/98	5276

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	111	111	100	98	98	12	9/1/98		5183
Benzene		ug/L	<1	100	101	101	100	93	93	8.2	9/1/98		5183
Trichloroethene		ug/L	<1	100	96	96	100	90	90	6.5	9/1/98		5183
Toluene		ug/L	<1	100	111	111	100	101	101	9.4	9/1/98		5183
Chlorobenzene		ug/L	<1	100	101	101	100	93	93	8.2	9/1/98		5183
1,1-Dichloroethene		mg/Kg	<25	100	98	98	100	95	95	3.1	9/3/98		5205
Benzene		mg/Kg	<25	100	102	102	100	104	104	1.9	9/3/98		5205
Trichloroethene		mg/Kg	<25	100	108	108	100	108	108	0	9/3/98		5205
Toluene		mg/Kg	<25	100	100	100	100	101	101	1.0	9/3/98		5205
Chlorobenzene		mg/Kg	<25	100	88	88	100	87	87	1.1	9/3/98		5205
Cyanide		mg/Kg	<0.01	0.12	0.12	100	0.12	0.11	92	8.3	8/24/98		5087
Total Mercury		mg/kg	<0.10	1.0	1.2	120	1.0	1.2	120	0	8/25/98	4765	5101
Phenolics		mg/kg	<0.01	0.8	0.79	99	0.8	0.8	100	1	8/26/98		5110
Fluoride		mg/kg	0.42	2.5	2.80	95	2.5	2.84	97	1.0	9/2/98		5192
Nitrate		mg/kg	1.0	5.0	5.91	98	5.0	5.89	98	0	9/2/98		5192
Chloride		mg/kg	41	12.5	51.42	83	12.5	52.56	92	10	9/2/98		5192
Sulfate		mg/kg	4.55	12.5	17.21	101	12.5	17.21	101	0	9/2/98		5192
Fluoride		mg/kg	1.05	2.5	3.21	86	2.5	3.25	88	2.3	9/3/98		5251
Nitrate		mg/kg	0.75	5.0	5.46	94	5.0	5.44	94	0.0	9/3/98		5251
Chloride		mg/kg	2,400	50000	57211	110	50000	57017	109	1.1	9/16/98		5360
Sulfate		mg/kg	9.36	25	35.63	105	25	36.25	108	2.8	9/19/98		5424
Arsenic		mg/kg	0.68	200	171	85	200	169	84	1.2	9/4/98		5208
Barium		mg/kg	150	200	328	89	200	323	87	2.3	9/4/98		5208
Cadmium		mg/kg	<0.10	200	163	82	200	163	82	0	9/4/98		5208
Chromium		mg/kg	<0.50	200	178	89	200	175	88	1.1	9/4/98		5208
Lead		mg/kg	<0.50	200	166	83	200	164	82	1.2	9/4/98		5208
Selenium		mg/kg	<0.50	200	150	75	200	150	75	0	9/4/98		5208
Silver		mg/kg	<0.50	100	88	88	100	82	82	7.1	9/4/98		5208
Uranium		mg/kg	<0.50	200	196	98	200	199	100	2	9/4/98		5208
Copper		mg/kg	<0.50	200	185	93	200	190	95	2.1	9/4/98		5208
Iron		mg/kg	<10	200	153	77	200	150	75	2.6	9/17/98	4848	5372
Manganese		mg/kg	<0.50	200	183	92	200	179	90	2.2	9/4/98		5208
Zinc		mg/kg	<0.50	200	156	78	200	153	77	1.3	9/4/98		5208
Aluminum		mg/kg	<10	200	172	86	200	170	85	1.2	9/17/98	4848	5372
Boron		mg/kg	<0.50	200	162	81	200	159	80	1.2	9/4/98		5208
Cobalt		mg/kg	<0.50	200	175	88	200	175	88	0	9/4/98		5208
Molybdenum		mg/kg	<0.50	200	186	93	200	184	88	5.5	9/4/98		5208
Nickel		mg/kg	<0.50	200	173	87	200	173	92	5.6	9/4/98		5208
PCB		mg/kg	<1.0	0.5	0.45	90	0.5	0.48	87	3.4	9/3/98	4795	5204

Date: 10-1-98

Order ID Number: 9808000435

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
TRPHC		mg/kg	<10.0	250	276	110	250	235	96	14	8/22/98	4743	5045
Phenol		mg/Kg	<0.25	10.00	4.17	42	10.00	4.38	44	4.7	9/10/98	4829	5276
2-Chlorophenol		mg/Kg	<1.25	10.00	3.72	37	10.00	3.88	38	2.7	9/10/98	4829	5276
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	3.89	39	10.00	4.06	41	5.0	9/10/98	4829	5276
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	5.23	52	10.00	5.54	55	5.6	9/10/98	4829	5276
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	4.9	49	10.00	5.05	51	4.0	9/10/98	4829	5276
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	4.28	43	10.00	4.49	45	4.6	9/10/98	4829	5276
Acenaphthene		mg/Kg	<0.25	10.00	4.88	49	10.00	4.93	49	0	9/10/98	4829	5276
4-Nitrophenol		mg/Kg	<1.25	10.00	4.54	45	10.00	5.34	53	16	9/10/98	4829	5276
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	5	50	10.00	5.16	52	3.9	9/10/98	4829	5276
Pentachlorophenol		mg/Kg	<1.25	10.00	3.31	33	10.00	3.59	36	8.7	9/10/98	4829	5276
Pyrene		mg/Kg	<0.25	10.00	6.32	63	10.00	6.25	63	0	9/10/98	4829	5276

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	9.5	9.6	1.0	8/25/98		5104
TDS		mg/kg	880	864	1.8	9/10/98		5273

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Ave. Ste 9
Lubbock, TX 79424
Phone:806-794-1296
Fax:806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ARS
AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0867	**P.O. Number:**	Verbal
Client I.D.:	105742	**ARS Sample I.D.:**	ARS-98-3153
Date Sampled:	8/19/98	**Date Received:**	8/26/98
Time Sampled:	N/A	**Time Received**	1157
Type of Sample:	Solid	**Date of Report**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.09	N/A	pCi/gm	<0.040	N/A	Bq/gm	EPA 901.1M	9/5/98 1208	sw
Ra-228	<0.12	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	9/5/98 1208	sw
Pb-210	<1.11	N/A	pCi/gm	<0.041	N/A	Bq/gm	EPA 901.1M	9/5/98 1208	sw
Total Activity	3.12	N/A	pCi/gm	0.115	N/A	Bq/gm	EPA 901.1M	9/5/98 1208	sw

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0867	**P.O. Number:**	Verbal
Client I.D.:	105742 3 m	**ARS Sample I.D.:**	ARS-98-3154
Date Sampled:	8/19/98	**Date Received:**	8/26/98
Time Sampled:	N/A	**Time Received**	1157
Type of Sample:	Solid	**Date of Report**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	4.14	2.50	pCi/gm	0.153	0.092	Bq/gm	EPA 901.1M	9/5/98 1255	sw
Ra-228	<0.17	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	9/5/98 1255	sw
Pb-210	2.48	2.29	pCi/gm	0.092	0.085	Bq/gm	EPA 901.1M	9/5/98 1255	sw
Total Activity	11.30	N/A	pCi/gm	0.418	N/A	Bq/gm	EPA 901.1M	9/5/98 1255	sw

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0867	**P.O. Number:**	Verbal
Client I.D.:	105744	**ARS Sample I.D.:**	ARS-98-3155
Date Sampled:	8/19/98	**Date Received:**	8/26/98
Time Sampled:	N/A	**Time Received**	1157
Type of Sample:	Solid	**Date of Report**	9/6/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.15	1.81	pCi/gm	0.080	0.067	Bq/gm	EPA 901.1M	9/5/98 1449	sw
Ra-228	0.37	0.21	pCi/gm	0.014	0.008	Bq/gm	EPA 901.1M	9/5/98 1449	sw
Pb-210	<0.94	N/A	pCi/gm	<0.035	N/A	Bq/gm	EPA 901.1M	9/5/98 1449	sw
Total Activity	7.14	N/A	pCi/gm	0.264	N/A	Bq/gm	EPA 901.1M	9/5/98 1449	sw

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.
1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 435 / 436

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH20 West, Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19.350
Project Name: Shell Tasker Road
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
105740	Field Blank	2	40ml VOA	✓				✓					08/19/98	1530
41	Trip Blank	2	40ml VOA	✓						✓			08/19/98	
42	TMW-1 (2-3')	5	4oz Jars		✓					✓			08/19/98	0830
	TMW-1 (2-3')	1	40ml VOA		✓							✓	08/19/98	0830
43	TMW-1 (63-65')	5	4oz Jars		✓					✓			08/19/98	1500
	TMW-1 (63-65')	1	40ml VOA		✓							✓	08/19/98	1500
44	TMW-1A (63-65')	5	4oz Jars		✓					✓			08/19/98	1500
	TMW-1A (63-65')	1	40ml VOA		✓							✓	08/19/98	1500

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	See Attached	VOC's			Turn Around Time if different from standard	Hold
														✓	✓				
														✓					
														✓					
															✓				
														✓					
															✓				
														✓					
															✓				

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	August 19, 1998	700 AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Windham	8-21-98	9:30

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY
Intact Y N
Headspace Y / N
Temp 5°C °
Log-in Review AM

REMARKS:
Normal Turnaround

Carrier # TNM&O - 901 984 6055

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99
Page # 1

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
105743	TMW-1 63-65'	8/19/98	15:00	8/21/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All data meets quality control criteria with the exceptions:
Sample 105743 result could not be confirmed on bulk soil sample run on 12-23-98
Sample reanalyzed out of hold time for confirmation only

Dr. Blair Leftwich
Director

Analytical Results Report

Corrected

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99
Page #2

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435
Sample Number: 105743

Field Code: TMW-1 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Bromomethane		**<125	ug/Kg	S-8260B		*12/23/98	JG			125

*Sample was reanalyzed past hold time
**The result could not confirm the results ran on 9-3-98

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Bromomethane		<5	ug/L	5	12/23/98		

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	86	86	12/23/98	
1,1-Dichloroethene		100	ug/L	101	101	12/23/98	
Chloroform		100	ug/L	99	99	12/23/98	
1,2-Dichloropropane		100	ug/L	100	100	12/23/98	
Toluene		100	ug/L	101	101	12/23/98	
Chlorobenzene		100	ug/L	100	100	12/23/98	
Ethylbenzene		100	ug/L	105	105	12/23/98	

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-18-99
Page # 5

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000435

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	111	111	100	106	106	4	12/23/98		
Benzene		ug/L	<1	100	114	114	100	112	112	2	12/23/98		
Trichloroethene		ug/L	<1	100	112	112	100	111	111	1	12/23/98		
Toluene		ug/L	<1	100	108	108	100	106	106	2	12/23/98		
Chlorobenzene		ug/L	<1	100	105	105	100	104	104	1	12/23/98		

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-09-99
Page # 1

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
105953	Field Blank	8/20/98	16:00	8/22/98
105954	Trip Blank			8/22/98
105955	TSB-1 2-3'	8/20/98	8:52	8/22/98
105956	TSB-1 3-5'	8/20/98	9:05	8/22/98
105957	TSB-1 8-10'	8/20/98	9:23	8/22/98
105958	TSB-2 2-3'	8/20/98	14:17	8/22/98
105959	TSB-2 3-5'	8/20/98	14:20	8/22/98
105960	TSB-2 18-20'	8/20/98	15:03	8/22/98
105961	TSB-1 43-45'	8/20/98	12:11	8/22/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Data meets quality control criteria with the following exceptions:
105955 elevated Semivolatile surrogate recovery due to matrix

Corrections:
1) Phenol result added to samples 105955-60.
2) Dichlorobenzene and 1,1-dichloroethylene reporting limits corrected.

Note:
Pages misnumbered in report. There is no page 23.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98
Page # 2

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469
Sample Number: 105953

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Acrylonitrile		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Benzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chlorobenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chloroform		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorobenzene		<2	ug/L	S-8260B		9/1/98	AG		5183	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloropropenes		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylbenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromodichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromomethane		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Chloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Toluene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Vinyl chloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
m,p-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
o-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylene dibromide		<1	ug/L	S-8260B		9/1/98	AG		5183	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Methylene chloride		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Surr. Dibromofluoromethane		119	%	S-8260B		9/1/98	AG		5183	72-130
Surr. Toluene-d8		107	%	S-8260B		9/1/98	AG		5183	77-127
Surr. 4-Bromofluorobenzene		109	%	S-8260B		9/1/98	AG		5183	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98
Page # 3

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469
Sample Number: 105954

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Acrylonitrile		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Benzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chlorobenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chloroform		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorobenzene		<2	ug/L	S-8260B		9/1/98	AG		5183	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloropropenes		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylbenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromodichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromomethane		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Chloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Toluene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Vinyl chloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
m,p-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
o-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylene dibromide		<1	ug/L	S-8260B		9/1/98	AG		5183	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Methylene chloride		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Surr. Dibromofluoromethane		119	%	S-8260B		9/1/98	AG		5183	72-130
Surr. Toluene-d8		107	%	S-8260B		9/1/98	AG		5183	77-127
Surr. 4-Bromofluorobenzene		109	%	S-8260B		9/1/98	AG		5183	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-13-99
Page # 4

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469
Sample Number: 105955

Field Code: TSB-1 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<170	ug/Kg	S-8260B		9/3/98	AG		5205	<170
Acrylonitrile		<170	ug/Kg	S-8260B		9/3/98	AG		5205	<170
Benzene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Carbon tetrachloride		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Chlorobenzene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
1,2-dichloroethane		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
1,1,2,2-tetrachloroethane		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
1,1,1-trichloroethane		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
1,1,2-trichloroethane		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
1,1,2-trichloroethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Chloroform		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Dichlorobenzene		<68	ug/Kg	S-8260B		9/3/98	AG		5205	68
1,1-dichloroethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Dichloropropenes		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Ethylbenzene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Bromodichloromethane		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Bromomethane		<170	ug/Kg	S-8260B		9/3/98	AG		5205	<170
Chloromethane		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Dichlorodifluoromethane		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Dichloromethane		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Trichlorofluorometane		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Tetrachloroethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Toluene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Trichloroethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Vinyl chloride		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
m,p-xylene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
o-xylene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
1,1-dichloroethane		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Ethylene dibromide		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
cis-1,2-dichlorethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
trans-1,2-dichloroethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5205	34
Methylene chloride		<170	ug/Kg	S-8260B		9/3/98	AG		5205	<170
Surr. Dibromofluoromethane		103	%	S-8260B		9/3/98	AG		5205	72-130
Surr. Toluene-d8		94	%	S-8260B		9/3/98	AG		5205	77-127
Surr. 4-Bromofluorobenzene		102	%	S-8260B		9/3/98	AG		5205	72-131
Benzidine		<250	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	250
Hexachlorobenzene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Pentachlorobenzene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
1,2,4,5-tetrachlorobenzene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25

Corrected

Date: 05-19-99
Page # 5

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469
Sample Number: 105955

Field Code: TSB-1 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
2,4-dichlorophenol		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
2,4,5-trichlorophenol		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
2,4,6-trichlorophenol		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
bis (2-chloroethyl) ether		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
bis (2-chloroisopropyl) ether		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
bis (chloromethyl) ether		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
3,3-dichlorobenzidine		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
2,4-dinitrotoluene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Diphenylhydrazine		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
Hexachlorobutadiene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Hexachlorocyclopentadiene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Isophorone		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
Nitrobenzene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
2,4-dinitro-o-cresol		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
2,4-dinitrophenols		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
n-nitrosodiethylamine		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
N-nitrosodimethylamine		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
N-nitrosodibutylamine		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
N-nitrosodiphenylamine		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
N-nitrosopyrrolidine		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Pentachlorophenol		<125	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	125
Dibutyl phthalate		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
di-2-ethylhexyl phthalate		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Diethyl phthalate		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Dimethyl phthalate		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Anthracene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
3,4-benzofluoranthene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Benzo(k)fluoranthene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Fluoranthene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Fluorene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Phenanthrene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Pyrene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Naphthalene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
1-methylnaphthalene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
2-methylnaphthalene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Benzo-a-pyrene		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Phenol		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Surr. 2-Fluorophenol	*ESR	126	%	S-8270C	8/31/98	9/11/98	DG	4828	5283	25-121
Surr. Phenol-d6		89	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	24-113
Surr. Nitroobenzene-d5	*ESR	125	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	23-120
Surr. 2-Fluorobiphenyl	*ESR	269	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	30-115
Surr. 2,4,6-Tribromophenol		39	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	19-122
Surr. Terphenyl-d14	*ESR	213	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 6

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469
Sample Number: 105955

Field Code: TSB-1 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Barium		90	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cadmium		0.32	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.10
Chromium		8.6	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Lead		5.5	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	0.10
Selenium		0.57	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Silver		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Copper		5.4	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Iron		7,000	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Manganese		77	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Zinc		34	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Aluminum		10,000	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Boron		17	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	10.0
Cobalt		7.8	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Molybdenum		2.9	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Nickel		8.6	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		8/27/98	SA		5128	0.01
Fluoride		1.6	mg/Kg	E 300.0		9/3/98	JS		5197	0.4
Nitrate		2.1	mg/Kg	E 300.0		9/3/98	JS		5197	0.4
Chloride		30	mg/Kg	E 300.0		9/3/98	JS		5197	2.0
Sulfate		70	mg/Kg	E 300.0		9/3/98	JS		5197	2.0
TDS		6,900	mg/Kg	E 160.1		9/16/98	RS		5364	---
pH		8.1	s.u.	E 150.1		8/25/98	SA		5104	---
Total Phenols		6.25	mg/kg	SM 5530 A,D		8/26/98	RC		5109	0.25
Total Radium		8.4	pCi/gm	E 901.1M		8/18/98	DS	---	---	---
TRPHC		10,200	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

*ESR Elevated Surrogate Recovery due to matrix.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-19-99

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469
Sample Number: 105956

Field Code: TSB-1 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<2,090	ug/Kg	S-8260B		9/3/98	AG		5205	2090
Acrylonitrile		<2,090	ug/Kg	S-8260B		9/3/98	AG		5205	2090
Benzene		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Carbon tetrachloride		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Chlorobenzene		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
1,2-dichloroethane		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
1,1,2,2-tetrachloroethane		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
1,1,1-trichloroethane		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
1,1,2-trichloroethane		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
1,1,2-trichloroethylene		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Chloroform		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Dichlorobenzene		<936	ug/Kg	S-8260B		9/3/98	AG		5205	936
,1-dichloroethylene		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Dichloropropenes		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Ethylbenzene		11,100	ug/Kg	S-8260B		9/3/98	AG		5205	418
Bromodichloromethane		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Bromomethane		<2,090	ug/Kg	S-8260B		9/3/98	AG		5205	2090
Chloromethane		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Dichlorodifluoromethane		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Dichloromethane		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Trichlorofluorometane		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Tetrachloroethylene		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Toluene		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Trichloroethylene		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Vinyl chloride		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
m,p-xylene		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
o-xylene		1,900	ug/Kg	S-8260B		9/3/98	AG		5205	418
1,1-dichloroethane		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Ethylene dibromide		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
cis-1,2-dichlorethylene		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
trans-1,2-dichloroethylene		<418	ug/Kg	S-8260B		9/3/98	AG		5205	418
Methylene chloride		<2,090	ug/Kg	S-8260B		9/3/98	AG		5205	2090
Surr. Dibromofluoromethane		106	%	S-8260B		9/3/98	AG		5205	72-130
Surr. Toluene-d8		101	%	S-8260B		9/3/98	AG		5205	77-127
Surr. 4-Bromofluorobenzene		114	%	S-8260B		9/3/98	AG		5205	72-131
Benzidine		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25

Corrected

Date: 05-19-99

Order ID Number: 9808000469
Sample Number: 105956

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-1 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
1-methylnaphthalene		20.0	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
2-methylnaphthalene		17.9	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Phenol		<0.25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	0.25
Surr. 2-Fluorophenol		58	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	25-121
Surr. Phenol-d6		65	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	24-113
Surr. Nitroobenzene-d5		56	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	23-120
Surr. 2-Fluorobiphenyl		67	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	30-115
Surr. 2,4,6-Tribromophenol		42	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	19-122
Surr. Terphenyl-d14		71	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	28-137

Corrected - Added Phenol result.

Date: 05-19-99
Page # 9
Order ID Number: 9808000469
Sample Number: 105956

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-1 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
PCB's		<1.0	mg/Kg	S 8082	8/26/98	9/3/98	RC	4795	5204	1.0
Arsenic		2.2	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Barium		105	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cadmium		0.23	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.10
Chromium		6.0	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Lead		3.9	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Silver		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Copper		3.3	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Iron		4,800	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Manganese		64	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Zinc		14	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Aluminum		6,900	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Boron		12	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	10.0
Cobalt		7.1	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Molybdenum		2.0	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Nickel		7.9	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		8/27/98	SA		5128	0.01
Fluoride		3.5	mg/Kg	E 300.0		9/3/98	JS		5197	0.4
Nitrate		3.6	mg/Kg	E 300.0		9/3/98	JS		5197	0.4
Chloride		29	mg/Kg	E 300.0		9/3/98	JS		5197	2.0
Sulfate		14	mg/Kg	E 300.0		9/3/98	JS		5197	2.0
TDS		280	mg/Kg	E 160.1		9/16/98	RS		5364	---
pH		8.4	s.u.	E 150.1		8/25/98	SA		5104	---
Total Phenols		4.25	mg/kg	SM 5530 A,D		8/26/98	RC		5109	0.25
Total Radium		3.29	pCi/gm	E 901.1M		8/18/98	DS	---	---	---
TRPHC		37,100	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-19-99
Page # 10

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469
Sample Number: 105957

Field Code: TSB-1 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<255	ug/Kg	S-8260B		9/3/98	AG		5205	255
Acrylonitrile		<255	ug/Kg	S-8260B		9/3/98	AG		5205	255
Benzene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Carbon tetrachloride		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Chlorobenzene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
1,2-dichloroethane		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
1,1,2,2-tetrachloroethane		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
1,1,1-trichloroethane		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
1,1,2-trichloroethane		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
1,1,2-trichloroethylene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Chloroform		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Dichlorobenzene		<102	ug/Kg	S-8260B		9/3/98	AG		5205	102
1,1-dichloroethylene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Dichloropropenes		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Ethylbenzene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Bromodichloromethane		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Bromomethane		<255	ug/Kg	S-8260B		9/3/98	AG		5205	255
Chloromethane		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Dichlorodifluoromethane		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Dichloromethane		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Trichlorofluorometane		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Tetrachloroethylene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Toluene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Trichloroethylene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Vinyl chloride		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
m,p-xylene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
o-xylene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
1,1-dichloroethane		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Ethylene dibromide		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
cis-1,2-dichlorethylene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
trans-1,2-dichloroethylene		<51	ug/Kg	S-8260B		9/3/98	AG		5205	51
Methylene chloride		<255	ug/Kg	S-8260B		9/3/98	AG		5205	255
Surr. Dibromofluoromethane		106	%	S-8260B		9/3/98	AG		5205	72-130
Surr. Toluene-d8		93	%	S-8260B		9/3/98	AG		5205	77-127
Surr. 4-Bromofluorobenzene		101	%	S-8260B		9/3/98	AG		5205	72-131
Benzidine		<25	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	25
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5

Corrected

Date: 05-19-99
Page # 11
Order ID Number: 9808000469
Sample Number: 105957

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-1 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Hexachloroethane		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
2,4-dichlorophenol		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
bis (2-chloroethyl) ether		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Isophorone		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
N-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
N-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	12.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Anthracene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Fluorene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Pyrene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
2-methylnaphthalene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Phenol		<2.5	mg/Kg	S-8270C	8/31/98	9/11/98	DG	4828	5283	2.5
Surr. 2-Fluorophenol		39	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	25-121
Surr. Phenol-d6		60	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	24-113

Corrected - Added Phenol result.

Order ID Number: 9808000469
Sample Number: 105957

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-1 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Surr. Nitroobenzene-d5		78	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	23-120
Surr. 2-Fluorobiphenyl		112	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	30-115
Surr. 2,4,6-Tribromophenol		48	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	19-122
Surr. Terphenyl-d14		98	%	S 8270C	8/31/98	9/11/98	DG	4828	5283	28-137
Aldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		2.9	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Barium		439	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cadmium		0.15	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.10
Chromium		2.7	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Lead		1.2	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Silver		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Copper		4.2	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Iron		1,860	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Manganese		29	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Zinc		5.0	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Aluminum		3,600	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Boron		10	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	10.0
Cobalt		5.2	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Molybdenum		1.6	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Nickel		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		8/27/98	SA		5128	0.01
Fluoride		7.3	mg/Kg	E 300.0		9/3/98	JS		5198	0.2
Nitrate		1.8	mg/Kg	E 300.0		9/3/98	JS		5198	0.2
Chloride		26	mg/Kg	E 300.0		9/3/98	JS		5198	1.0
Sulfate		7.0	mg/Kg	E 300.0		9/3/98	JS		5198	1.0
TDS		830	mg/Kg	E 160.1		9/16/98	RS		5364	---
pH		8.6	s.u.	E 150.1		8/25/98	SA		5104	---
Total Phenols		5.5	mg/kg	SM 5530 A,D		8/26/98	RC		5109	0.25
Total Radium		2.95	pCi/gm	E 901.1M		8/18/98	DS	---	---	---
TRPHC		7,790	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469
Sample Number: 105958

Field Code: TSB2 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<205	ug/Kg	S-8260B		9/3/98	AG		5205	205
Acrylonitrile		<205	ug/Kg	S-8260B		9/3/98	AG		5205	205
Benzene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Carbon tetrachloride		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Chlorobenzene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
1,2-dichloroethane		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
1,1,2,2-tetrachloroethane		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
1,1,1-trichloroethane		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
1,1,2-trichloroethane		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
1,1,2-trichloroethylene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Chloroform		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Dichlorobenzene		<82	ug/Kg	S-8260B		9/3/98	AG		5205	82
1,1-dichloroethylene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Dichloropropenes		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Ethylbenzene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Bromodichloromethane		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Bromomethane		<205	ug/Kg	S-8260B		9/3/98	AG		5205	205
Chloromethane		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Dichlorodifluoromethane		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Dichloromethane		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Trichlorofluorometane		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Tetrachloroethylene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Toluene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Trichloroethylene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Vinyl chloride		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
m,p-xylene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
o-xylene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
1,1-dichloroethane		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Ethylene dibromide		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
cis-1,2-dichlorethylene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
trans-1,2-dichloroethylene		<41	ug/Kg	S-8260B		9/3/98	AG		5205	41
Methylene chloride		<205	ug/Kg	S-8260B		9/3/98	AG		5205	205
Surr. Dibromofluoromethane		106	%	S-8260B		9/3/98	AG		5205	86-118
Surr. Toluene-d8		92	%	S-8260B		9/3/98	AG		5205	88-110
Surr. 4-Bromofluorobenzene		98	%	S-8260B		9/3/98	AG		5205	86-115
Benzidine		<2.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25

Corrected

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Date: 05-19-99

Order ID Number: 9808000469
Sample Number: 105958

Field Code: TSB2 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Isophorone .		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Phenol		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Surr. 2-Fluorophenol		42	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	25-121
Surr. Phenol-d6		51	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	24-113
Surr. Nitroobenzene-d5		44	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	23-120

Corrected - Added Phenol result.

Date: 10-6-98
Page # 15
Order ID Number: 9808000469
Sample Number: 105958

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB2 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Surr. 2-Fluorobiphenyl		53	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	30-115
Surr. 2,4,6-Tribromophenol		42	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	19-122
Surr. Terphenyl-d14		63	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	28-137
Aldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/26/98	10/2/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Barium		82	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cadmium		0.35	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.10
Chromium		9.2	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Lead		5.6	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Silver		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Copper		5.4	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Iron		8,200	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Manganese		126	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Zinc		21	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Aluminum		10,000	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Boron		17	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	10.0
Cobalt		8.3	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Molybdenum		2.5	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Nickel		8.3	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		8/27/98	SA		5128	0.01
Fluoride		4.6	mg/Kg	E 300.0		9/3/98			5198	0.2
Nitrate		2.3	mg/Kg	E 300.0		9/3/98			5198	0.2
Chloride		26	mg/Kg	E 300.0		9/3/98			5198	1.0
Sulfate		29	mg/Kg	E 300.0		9/3/98			5198	1.0
TDS		1,400	mg/Kg	E 160.1		9/16/98	RS		5364	---
pH		8.2	s.u.	E 150.1		8/25/98	SA		5104	---
Total Phenols		4.25	mg/kg	SM 5530 A,D		8/26/98	RC		5110	0.25
Total Radium		12.03	pCi/gm	E 901.1M		8/18/98	DS	---	---	---
TRPHC		12	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469
Sample Number: 105959

Field Code: TSB-2 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<265	ug/Kg	S-8260B		9/3/98	AG		5205	265
Acrylonitrile		<265	ug/Kg	S-8260B		9/3/98	AG		5205	265
Benzene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Carbon tetrachloride		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Chlorobenzene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
1,2-dichloroethane		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
1,1,2,2-tetrachloroethane		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
1,1,1-trichloroethane		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
1,1,2-trichloroethane		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
1,1,2-trichloroethylene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Chloroform		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Dichlorobenzene		<106	ug/Kg	S-8260B		9/3/98	AG		5205	106
1,1-dichloroethylene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Dichloropropenes		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Ethylbenzene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Bromodichloromethane		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Bromomethane		<265	ug/Kg	S-8260B		9/3/98	AG		5205	265
Chloromethane		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Dichlorodifluoromethane		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Dichloromethane		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Trichlorofluorometane		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Tetrachloroethylene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Toluene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Trichloroethylene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Vinyl chloride		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
m,p-xylene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
o-xylene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
1,1-dichloroethane		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Ethylene dibromide		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
cis-1,2-dichlorethylene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
trans-1,2-dichloroethylene		<53	ug/Kg	S-8260B		9/3/98	AG		5205	53
Methylene chloride		<265	ug/Kg	S-8260B		9/3/98	AG		5205	265
Surr. Dibromofluoromethane		105	%	S-8260B		9/3/98	AG		5205	86-118
Surr. Toluene-d8		95	%	S-8260B		9/3/98	AG		5205	88-110
Surr. 4-Bromofluorobenzene		99	%	S-8260B		9/3/98	AG		5205	86-115
Benzidine		<2.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25

Corrected

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Date: 05-19-99

Order ID Number: 9808000469
Sample Number: 105959

Field Code: TSB-2 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Phenol		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Surr. 2-Fluorophenol		49	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	25-121
Surr. Phenol-d6		61	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	24-113
Surr. Nitroobenzene-d5		50	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	23-120
Surr. 2-Fluorobiphenyl		59	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	30-115
Surr. 2,4,6-Tribromophenol		49	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	19-122
Surr. Terphenyl-d14		65	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	28-137
Aldrin		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50

Corrected - Added Phenol result.

Date: 10-6-98
Page # 18
Order ID Number: 9808000469
Sample Number: 105959

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-2 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
DDT		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Barium		93	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cadmium		0.33	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.10
Chromium		9.2	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Lead		7.9	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Silver		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Copper		5.3	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Iron		8,200	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Manganese		143	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Zinc		23	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Aluminum		10,000	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Boron		17	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	10.0
Cobalt		8.0	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Molybdenum		2.4	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Nickel		8.4	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		8/27/98	SA		5128	0.01
Fluoride		4.9	mg/Kg	E 300.0		9/3/98	JS		5198	0.2
Nitrate		2.3	mg/Kg	E 300.0		9/3/98	JS		5198	0.2
Chloride		23	mg/Kg	E 300.0		9/3/98	JS		5198	1.0
Sulfate		42	mg/Kg	E 300.0		9/3/98	JS		5198	1.0
TDS		1,500	mg/Kg	E 160.1		9/16/98	RS		5364	---
pH		8.2	s.u.	E 150.1		8/25/98	SA		5104	---
Total Phenols		1.75	mg/kg	SM 5530 A,D		8/26/98	RC		5110	0.25
Total Radium		30.66	pCi/gm	E 901.1M		8/18/98	DS	---	---	---
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

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Midland, TX 79706

Date: 10-6-98
Page # 19

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469
Sample Number: 105960

Field Code: TSB-2 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<330	ug/Kg	S-8260B		9/3/98	AG		5205	330
Acrylonitrile		<330	ug/Kg	S-8260B		9/3/98	AG		5205	330
Benzene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Carbon tetrachloride		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Chlorobenzene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
1,2-dichloroethane		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
1,1,2,2-tetrachloroethane		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
1,1,1-trichloroethane		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
1,1,2-trichloroethane		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
1,1,2-trichloroethylene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Chloroform		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Dichlorobenzene		<132	ug/Kg	S-8260B		9/3/98	AG		5205	132
1,1-dichloroethylene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Dichloropropenes		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Ethylbenzene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Bromodichloromethane		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Bromomethane		<330	ug/Kg	S-8260B		9/3/98	AG		5205	330
Chloromethane		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Dichlorodifluoromethane		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Dichloromethane		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Trichlorofluorometane		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Tetrachloroethylene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Toluene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Trichloroethylene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Vinyl chloride		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
m,p-xylene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
o-xylene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
1,1-dichloroethane		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Ethylene dibromide		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
cis-1,2-dichlorethylene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
trans-1,2-dichloroethylene		<66	ug/Kg	S-8260B		9/3/98	AG		5205	66
Methylene chloride		<330	ug/Kg	S-8260B		9/3/98	AG		5205	330
Surr. Dibromofluoromethane		106	%	S-8260B		9/3/98	AG		5205	86-118
Surr. Toluene-d8		95	%	S-8260B		9/3/98	AG		5205	88-110
Surr. 4-Bromofluorobenzene		101	%	S-8260B		9/3/98	AG		5205	86-115
Benzidine		<2.5	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25

Corrected

Date: 05-19-99
Page # 20
Order ID Number: 9808000469
Sample Number: 105960

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-2 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Isophorone		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Anthracene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Fluorene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Phenol		<0.25	mg/Kg	S-8270C	8/31/98	9/10/98	DG	4829	5276	0.25
Surr. 2-Fluorophenol		56	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	25-121
Surr. Phenol-d6		67	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	24-113
Surr. Nitroobenzene-d5		54	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	23-120
Surr. 2-Fluorobiphenyl		67	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	30-115
Surr. 2,4,6-Tribromophenol		49	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	19-122
Surr. Terphenyl-d14		67	%	S-8270C	8/31/98	9/10/98	DG	4829	5276	28-137

Corrected - Added Phenol result

Date: 10-6-98
Page # 21
Order ID Number: 9808000469
Sample Number: 105960

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-2 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/17/98	10/3/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		2.5	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Barium		80	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cadmium		0.26	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.10
Chromium		6.1	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Lead		18	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/24/98	8/25/98	MS	4765	5101	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Silver		<0.50	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Copper		3.5	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Iron		4,900	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Manganese		65	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Zinc		13	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	2.0
Aluminum		7,500	mg/Kg	S 6010B	9/1/98	9/17/98	RR	4848	5372	10
Boron		14	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	10.0
Cobalt		6.5	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Molybdenum		2	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	1.0
Nickel		6.8	mg/Kg	S 6010B	9/10/98	9/15/98	RR	4920	5328	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		8/27/98	SA		5128	0.01
Fluoride		4.4	mg/Kg	E 300.0		9/3/98	JS		5199	0.2
Nitrate		3.1	mg/Kg	E 300.0		9/3/98	JS		5199	0.2
Chloride		27	mg/Kg	E 300.0		9/3/98	JS		5199	1.0
Sulfate		57	mg/Kg	E 300.0		9/3/98	JS		5199	1.0
TDS		300	mg/Kg	E 160.1		9/16/98	RS		5364	---
pH		8.6	s.u.	E 150.1		8/25/98	SA		5104	---
Total Phenols		3.0	mg/kg	SM 5530 A,D		8/26/98	RC		5110	0.25
Total Radium		5.81	pCi/gm	E 901.1M		8/18/98	DS	---	---	---
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98
Page # 22

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469
Sample Number: 105961

Field Code: TSB-1 43-45'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/30/98	CS		---	0.05
Benzene		<0.050	mg/Kg	S 8021B		9/30/98	AG		---	0.05
Toluene		<0.050	mg/Kg	S 8021B		9/30/98	AG		---	0.05
Ethylbenzene		<0.050	mg/Kg	S 8021B		9/30/98	AG		---	0.05
m,p,o-xylene		<0.050	mg/Kg	S 8021B		9/30/98	AG		---	0.05
TRPHC		17.4	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/1/98		5183
Acrylonitrile		<5	ug/L	5	9/1/98		5183
Benzene		<1	ug/L	1	9/1/98		5183
Carbon tetrachloride		<1	ug/L	1	9/1/98		5183
Chlorobenzene		<1	ug/L	1	9/1/98		5183
1,2-dichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/1/98		5183
1,1,1-trichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2-trichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2-trichloroethylene		<1	ug/L	1	9/1/98		5183
Chloroform		<1	ug/L	1	9/1/98		5183
[illegible]chlorobenzene		<2	ug/L	2	9/1/98		5183
[illegible],1-dichloroethylene		<1	ug/L	1	9/1/98		5183
Dichloropropenes		<1	ug/L	1	9/1/98		5183
Ethylbenzene		<1	ug/L	1	9/1/98		5183
Bromodichloromethane		<1	ug/L	1	9/1/98		5183
Bromomethane		<5	ug/L	5	9/1/98		5183
Chloromethane		<1	ug/L	1	9/1/98		5183
Dichlorodifluoromethane		<1	ug/L	1	9/1/98		5183
Dichloromethane		<1	ug/L	1	9/1/98		5183
Trichlorofluoromethane		<1	ug/L	1	9/1/98		5183
Tetrachloroethylene		<1	ug/L	1	9/1/98		5183
Toluene		<1	ug/L	1	9/1/98		5183
Trichloroethylene		<1	ug/L	1	9/1/98		5183
Vinyl chloride		<1	ug/L	1	9/1/98		5183
m,p-xylene		<1	ug/L	1	9/1/98		5183
o-xylene		<1	ug/L	1	9/1/98		5183
1,1-dichloroethane		<1	ug/L	1	9/1/98		5183
Ethylene dibromide		<1	ug/L	1	9/1/98		5183
cis-1,2-dichlorethylene		<1	ug/L	1	9/1/98		5183
trans-1,2-dichloroethylene		<1	ug/L	1	9/1/98		5183
Methylene chloride		<5	ug/L	5	9/1/98		5183
Surr. Dibromofluoromethane		120	%	72-130	9/1/98		5183
Surr. Toluene-d8		107	%	77-127	9/1/98		5183
Surr. 4-Bromofluorobenzene		99	%	72-131	9/1/98		5183
Acrolein		<125	ug/Kg	125	9/3/98		5205
Acrylonitrile		<125	ug/Kg	125	9/3/98		5205
[illegible]nzene		<25	ug/Kg	25	9/3/98		5205
[illegible]arbon tetrachloride		<25	ug/Kg	25	9/3/98		5205
Chlorobenzene		<25	ug/Kg	25	9/3/98		5205

Corrected

Date: 05-19-99
Page # 25
Order ID Number: 9808000469

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,2-dichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,1-trichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2-trichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2-trichloroethylene		<25	ug/Kg	25	9/3/98		5205
Chloroform		<25	ug/Kg	25	9/3/98		5205
Dichlorobenzene		<50	ug/Kg	**50	9/3/98		5205
1,1-dichloroethylene		<25	ug/Kg	**25	9/3/98		5205
Dichloropropenes		<25	ug/Kg	25	9/3/98		5205
Ethylbenzene		<25	ug/Kg	25	9/3/98		5205
Bromodichloromethane		<25	ug/Kg	25	9/3/98		5205
Bromomethane		<125	ug/Kg	125	9/3/98		5205
Chloromethane		<25	ug/Kg	25	9/3/98		5205
Dichlorodifluoromethane		<25	ug/Kg	25	9/3/98		5205
Dichloromethane		<25	ug/Kg	25	9/3/98		5205
Trichlorofluoromethane		<25	ug/Kg	25	9/3/98		5205
Tetrachloroethylene		<25	ug/Kg	25	9/3/98		5205
Toluene		<25	ug/Kg	25	9/3/98		5205
Trichloroethylene		<25	ug/Kg	25	9/3/98		5205
Vinyl chloride		<25	ug/Kg	25	9/3/98		5205
m,p-xylene		<25	ug/Kg	25	9/3/98		5205
o-xylene		<25	ug/Kg	25	9/3/98		5205
1,1-dichloroethane		<25	ug/Kg	25	9/3/98		5205
Ethylene dibromide		<25	ug/Kg	25	9/3/98		5205
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/3/98		5205
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/3/98		5205
Methylene chloride		<125	ug/Kg	125	9/3/98		5205
Surr. Dibromofluoromethane		101	%	72-130	9/3/98		5205
Surr. Toluene-d8		99	%	77-127	9/3/98		5205
Surr. 4-Bromofluorobenzene		102	%	72-131	9/3/98		5205
Total Mercury		<0.10	mg/Kg	<0.10	8/25/98	4765	5101
Cyanide		<0.01	mg/Kg	0.01	8/27/98		5128
Phenolics		<0.01	mg/kg	0.01	8/26/98		5110
Fluoride		<0.1	mg/kg	0.1	9/3/98		5197
Nitrate		<0.1	mg/kg	0.1	9/3/98		5197
Chloride		<0.5	mg/kg	0.5	9/3/98		5197
Sulfate		<0.5	mg/kg	0.5	9/3/98		5197
Fluoride		<0.1	mg/kg	0.1	9/3/98		5198
Nitrate		<0.1	mg/kg	0.1	9/3/98		5198
Chloride		<0.5	mg/kg	0.5	9/3/98		5198
Sulfate		<0.5	mg/kg	0.5	9/3/98		5198
Fluoride		<0.1	mg/kg	0.1	9/3/98		5199
Nitrate		<0.1	mg/kg	0.1	9/3/98		5199
Chloride		<0.5	mg/kg	0.5	9/3/98		5199
Sulfate		<0.5	mg/kg	0.5	9/3/98		5199
PCB		<0.1	mg/kg	0.1	9/3/98	4795	5206

** Corrected reporting limit.

Date: 10-6-98
Page # 26
Order ID Number: 9808000469

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Arsenic		<0.50	mg/kg	0.50	9/15/98	4920	5328
Barium		<0.50	mg/kg	0.50	9/15/98	4920	5328
Cadmium		<0.10	mg/kg	0.10	9/15/98	4920	5328
Chromium		<0.50	mg/kg	0.50	9/15/98	4920	5328
Lead		<0.50	mg/kg	0.50	9/15/98	4920	5328
Selenium		<0.50	mg/kg	0.50	9/15/98	4920	5328
Silver		<0.50	mg/kg	0.50	9/15/98	4920	5328
Uranium		<2.0	mg/kg	2.0	9/15/98	4920	5328
Copper		<1.0	mg/kg	1.0	9/15/98	4920	5328
Iron		<10	mg/kg	10	9/17/98	4848	5372
Manganese		<1.0	mg/kg	1.0	9/15/98	4920	5328
Zinc		<2.0	mg/kg	2.0	9/15/98	4920	5328
Aluminum		<10	mg/kg	10	9/17/98	4848	5372
Boron		<10.0	mg/kg	10.0	9/15/98	4920	5328
Cobalt		<0.50	mg/kg	0.50	9/15/98	4920	5328
Molybdenum		<1.0	mg/kg	1.0	9/15/98	4920	5328
Nickel		<0.50	mg/kg	0.50	9/15/98	4920	5328
[illegible]enzidine		<2.5	mg/kg	2.5	9/22/98	4911	5502
[illegible]exachlorobenzene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Pentachlorobenzene		<0.25	mg/kg	0.25	9/22/98	4911	5502
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Hexachloroethane		<0.25	mg/kg	0.25	9/22/98	4911	5502
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/22/98	4911	5502
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/22/98	4911	5502
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/22/98	4911	5502
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/22/98	4911	5502
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/22/98	4911	5502
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/22/98	4911	5502
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/22/98	4911	5502
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Diphenylhydrazine		<1.25	mg/kg	1.25	9/22/98	4911	5502
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Isophorone		<1.25	mg/kg	1.25	9/22/98	4911	5502
Nitrobenzene		<0.25	mg/kg	0.25	9/22/98	4911	5502
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/22/98	4911	5502
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/22/98	4911	5502
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/22/98	4911	5502
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/22/98	4911	5502
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/22/98	4911	5502
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/22/98	4911	5502
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/22/98	4911	5502
Pentachlorophenol		<1.25	mg/kg	1.25	9/22/98	4911	5502
[illegible]utyl phthalate		<0.25	mg/kg	0.25	9/22/98	4911	5502
[illegible]2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/22/98	4911	5502
Diethyl phthalate		<0.25	mg/kg	0.25	9/22/98	4911	5502

Order ID Number: 9808000469

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Dimethyl phthalate		<0.25	mg/kg	0.25	9/22/98	4911	5502
Anthracene		<0.25	mg/kg	0.25	9/22/98	4911	5502
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Fluoranthene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Fluorene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Phenanthrene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Pyrene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Naphthalene		<0.25	mg/kg	0.25	9/22/98	4911	5502
1-methylnaphthalene		<0.25	mg/kg	0.25	9/22/98	4911	5502
2-methylnaphthalene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/22/98	4911	5502
monomethylnaphthalenes		<0.25	mg/kg	0.25	9/22/98	4911	5502
Surr. 2-Fluorophenol		48	%	25-121	9/22/98	4911	5502
Surr. Phenol-d6		56	%	24-113	9/22/98	4911	5502
Surr. Nitroobenzene-d5		48	%	23-120	9/22/98	4911	5502
Surr. 2-Fluorobiphenyl		59	%	30-115	9/22/98	4911	5502
Surr. 2,4,6-Tribromophenol		41	%	19-122	9/22/98	4911	5502
Surr. Terphenyl-d14		59	%	28-137	9/22/98	4911	5502
Benzidine		<2.5	mg/kg	2.5	9/10/98	4829	5276
Hexachlorobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Pentachlorobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Hexachloroethane		<0.25	mg/kg	0.25	9/10/98	4829	5276
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/10/98	4829	5276
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/10/98	4829	5276
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/10/98	4829	5276
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Diphenylhydrazine		<1.25	mg/kg	1.25	9/10/98	4829	5276
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Isophorone		<1.25	mg/kg	1.25	9/10/98	4829	5276
Nitrobenzene		<0.25	mg/kg	0.25	9/10/98	4829	5276
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/10/98	4829	5276
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/10/98	4829	5276
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/10/98	4829	5276
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/10/98	4829	5276
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/10/98	4829	5276
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/10/98	4829	5276
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/10/98	4829	5276
Pentachlorophenol		<1.25	mg/kg	1.25	9/10/98	4829	5276
Dibutyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276

Date: 10-6-98
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Order ID Number: 9808000469

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276
Diethyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276
Dimethyl phthalate		<0.25	mg/kg	0.25	9/10/98	4829	5276
Anthracene		<0.25	mg/kg	0.25	9/10/98	4829	5276
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Fluoranthene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Fluorene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Phenanthrene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Pyrene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Naphthalene		<0.25	mg/kg	0.25	9/10/98	4829	5276
1-methylnaphthalene		<0.25	mg/kg	0.25	9/10/98	4829	5276
2-methylnaphthalene		<0.25	mg/kg	0.25	9/10/98	4829	5276
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/10/98	4829	5276
monomethylnaphthalenes		<0.25	mg/kg	0.25	9/10/98	4829	5276
Surr. 2-Fluorophenol		42	%	25-121	9/10/98	4829	5276
Surr. Phenol-d6		51	%	24-113	9/10/98	4829	5276
Surr. Nitroobenzene-d5		35	%	23-120	9/10/98	4829	5276
Surr. 2-Fluorobiphenyl		51	%	30-115	9/10/98	4829	5276
Surr. 2,4,6-Tribromophenol		47	%	19-122	9/10/98	4829	5276
Surr. Terphenyl-d14		59	%	28-137	9/10/98	4829	5276
TRPHC		<10.0	mg/kg	, 10	8/30/98	4810	5168
Total Phenols		<0.25	mg/kg	0.25	8/26/98		5109
Total Phenols		<0.25	mg/kg	0.25	8/26/98		5110

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	107	107	9/1/98	5183
1,1-Dichloroethene		100	ug/L	117	117	9/1/98	5183
Chloroform		100	ug/L	103	103	9/1/98	5183
1,2-Dichloropropane		100	ug/L	115	115	9/1/98	5183
Toluene		100	ug/L	119	119	9/1/98	5183
Chlorobenzene		100	ug/L	118	118	9/1/98	5183
Ethylbenzene		100	ug/L	115	115	9/1/98	5183
Vinyl chloride		100	ug/L	104	104	9/3/98	5205
1,1-Dichloroethene		100	ug/L	119	119	9/3/98	5205
Chloroform		100	ug/L	112	112	9/3/98	5205
1,2-Dichloropropane		100	ug/L	106	106	9/3/98	5205
[illegible]luene		100	ug/L	115	115	9/3/98	5205
[illegible]thylbenzene		100	ug/L	112	112	9/3/98	5205
Cyanide		0.12	mg/L	0.11	92	8/27/98	5128
Total Mercury		1.0	mg/L	1.0	100	8/25/98	5101
Phenolics		0.8	mg/L	0.82	103	8/26/98	5110
Fluoride		2.5	mg/L	2.46	98	9/3/98	5197
Nitrate		5.0	mg/L	4.885	98	9/3/98	5197
Chloride		12.5	mg/L	11.59	93	9/3/98	5197
Sulfate		12.5	mg/L	12.295	98	9/3/98	5197
Fluoride		2.5	mg/L	2.455	98	9/3/98	5198
Nitrate		5.0	mg/L	4.885	98	9/3/98	5198
Chloride		12.5	mg/L	11.575	93	9/3/98	5198
Sulfate		12.5	mg/L	12.225	98	9/3/98	5198
Fluoride		2.5	mg/L	2.445	98	9/3/98	5199
Nitrate		5.0	mg/L	4.9	98	9/3/98	5199
Chloride		12.5	mg/L	11.535	92	9/3/98	5199
Sulfate		12.5	mg/L	12.3	98	9/3/98	5199
pH		7.0	s.u.	7.0	100	8/25/98	5104
PCB		0.40	mg/L	0.38	95	8/26/98	5112
PCB		0.40	mg/L	0.45	112	9/3/98	5204
Arsenic		1.0	mg/L	0.97	97	9/15/98	5328
Barium		1.0	mg/L	1.0	100	9/15/98	5328
Cadmium		1.0	mg/L	0.96	96	9/15/98	5328
Chromium		1.0	mg/L	0.96	96	9/15/98	5328
Lead		1.0	mg/L	0.97	97	9/15/98	5328
Selenium		1.0	mg/L	1.0	100	9/15/98	5328
[illegible]er		1.0	mg/L	0.98	98	9/15/98	5328
[illegible]anium		1.0	mg/L	0.99	99	9/15/98	5328

Order ID Number: 9808000469

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Copper		1.0	mg/L	1.0	100	9/15/98	5328
Iron		100	mg/L	102	102	9/15/98	5328
Manganese		1.0	mg/L	0.990	99	9/15/98	5328
Zinc		1.0	mg/L	0.95	95	9/15/98	5328
Aluminum		250	mg/L	258	103	9/15/98	5328
Boron		1.0	mg/L	0.99	99	9/15/98	5328
Cobalt		1.0	mg/L	0.98	98	9/15/98	5328
Molybdenum		1.0	mg/L	0.96	96	9/15/98	5328
Nickel		1.0	mg/L	1.0	100	9/15/98	5328
TDS		1,000	mg/L	997	100	9/16/98	5364
Phenol		80	mg/L	82	103	9/10/98	5276
1,4-Dichlorobenzene		80	mg/L	82	100	9/10/98	5276
2-nitrophenol		80	mg/L	86	108	9/10/98	5276
2,4-Dichlorophenol		80	mg/L	89	111	9/10/98	5276
Hexachlorobutadiene		80	mg/L	85	106	9/10/98	5276
4-Chloro-3-methylphenol		80	mg/L	75	94	9/10/98	5276
2,4,6-Trichlorophenol		80	mg/L	80	100	9/10/98	5276
Acenaphthene		80	mg/L	82	103	9/10/98	5276
n-Nitrosodiphenylamine		80	mg/L	77	96	9/10/98	5276
Pentachlorophenol		80	mg/L	80	100	9/10/98	5276
Fluoranthene		80	mg/L	75	94	9/10/98	5276
Di-n-octylphthalate		80	mg/L	95	119	9/10/98	5276
Benzo(a)pyrene		80	mg/L	84	105	9/10/98	5276
Phenol		80	mg/L	73	91	9/11/98	5823
1,4-Dichlorobenzene		80	mg/L	75	94	9/11/98	5823
2-nitrophenol		80	mg/L	77	96	9/11/98	5823
2,4-Dichlorophenol		80	mg/L	80	100	9/11/98	5823
Hexachlorobutadiene		80	mg/L	78	98	9/11/98	5823
4-Chloro-3-methylphenol		80	mg/L	69	86	9/11/98	5823
2,4,6-Trichlorophenol		80	mg/L	79	99	9/11/98	5823
Acenaphthene		80	mg/L	78	98	9/11/98	5823
n-Nitrosodiphenylamine		80	mg/L	77	96	9/11/98	5823
Pentachlorophenol		80	mg/L	67	84	9/11/98	5823
Fluoranthene		80	mg/L	66	86	9/11/98	5823
Di-n-octylphthalate		80	mg/L	83	104	9/11/98	5823
Benzo(a)pyrene		80	mg/L	75	94	9/11/98	5823
TRPHC		100	mg/L	99	99	8/30/98	5168
Total Phenols		0.80	mg/L	0.80	100	8/26/98	5109
Total Phenols		0.80	mg/L	0.82	103	8/26/98	5110

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-19-99
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Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	111	111	100	98	98	12	9/1/98		5183
Benzene		ug/L	<1	100	101	101	100	93	93	8.2	9/1/98		5183
Trichloroethene		ug/L	<1	100	96	96	100	90	90	6.5	9/1/98		5183
Toluene		ug/L	<1	100	111	111	100	101	101	9.4	9/1/98		5183
Chlorobenzene		ug/L	<1	100	101	101	100	93	93	8.2	9/1/98		5183
1,1-Dichloroethene		mg/Kg	<25	100	98	98	100	95	95	3.1	9/3/98		5205
Benzene		mg/Kg	<25	100	102	102	100	104	104	1.9	9/3/98		5205
Trichloroethene		mg/Kg	<25	100	108	108	100	108	108	0	9/3/98		5205
Toluene		mg/Kg	<25	100	100	100	100	101	101	1.0	9/3/98		5205
Chlorobenzene		mg/Kg	<25	100	88	88	100	87	87	1.1	9/3/98		5205
Cyanide		mg/Kg	<0.01	0.12	0.11	92	0.12	0.11	92	0	8/27/98		5128
Total Mercury		mg/kg	<0.10	1.0	1.2	120	1.0	1.2	120	0	8/25/98	4765	5101
Phenolics		mg/kg	<0.01	0.8	0.81	101	0.8	0.81	101	0	8/26/98		5110
Fluoride		mg/kg	<0.1	2.5	2.43	97	2.5	2.43	97	0.0	9/3/98		5197
Nitrate		mg/kg	1.05	5.0	6.11	101	5.0	6.12	101	0	9/3/98		5197
Chloride		mg/kg	46.6	12.5	58.82	98	12.5	57.4	86	13	9/3/98		5197
Sulfate		mg/kg	7.42	12.5	19.54	97	12.5	19.51	97	0	9/3/98		5197
Fluoride		mg/kg	3.65	2.5	5.81	86	2.5	5.76	84	2.4	9/3/98		5198
Nitrate		mg/kg	0.9	5.0	5.63	95	5.0	5.63	95	0.0	9/3/98		5198
Chloride		mg/kg	13	12.5	24.1	89	12.5	24.09	89	0.0	9/3/98		5198
Sulfate		mg/kg	3.5	12.5	15.9	99	12.5	15.87	99	0	9/3/98		5198
Fluoride		mg/kg	2.2	2.5	4.71	100	2.5	4.75	102	2.0	9/3/98		5199
Nitrate		mg/kg	1.6	5.0	7.25	113	5.0	7.25	113	0.0	9/3/98		5199
Chloride		mg/kg	13.5	12.5	24.83	91	12.5	24.94	92	1.1	9/3/98		5199
Sulfate		mg/kg	28.5	12.5	35.91	59	12.5	36.2	62	5	9/3/98		5199
PCB		mg/kg	<0.1	0.5	0.48	96	0.5	0.46	92	4.3	8/26/98	4796	5112
PCB		mg/kg	<0.1	0.5	0.45	90	0.5	0.48	96	6.5	9/2/98	4795	5204
Arsenic		mg/kg	<0.50	200	170	85	200	170	85	0	9/15/98	4920	5328
Barium		mg/kg	90	200	182	46	200	179	45	2.2	9/15/98	4920	5328
Cadmium		mg/kg	0.32	200	165	82	200	167	83	1.2	9/15/98	4920	5328
Chromium		mg/kg	8.6	200	177	84	200	177	84	0	9/15/98	4920	5328
Lead		mg/kg	5.5	200	164	79	200	166	80	1.3	9/15/98	4920	5328
Selenium		mg/kg	0.57	200	156	78	200	157	78	0	9/15/98	4920	5328
Silver		mg/kg	<0.50	100	88	88	100	94	94	6.6	9/15/98	4920	5328
Uranium		mg/kg	<2.0	200	194	97	200	189	95	2.1	9/15/98	4920	5328
Copper		mg/kg	5.4	200	178	86	200	178	86	0	9/15/98	4920	5328
Iron		mg/kg	<10	200	153	77	200	150	89	14	9/15/98	4920	5328
Manganese		mg/kg	77	200	174	49	200	177	50	2	9/15/98	4920	5328

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Date: 05-19-99

Order ID Number: 9808000469

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Zinc		mg/kg	34	200	165	66	200	160	63	4.7	9/15/98	4920	5328
Aluminum		mg/kg	<10	200	172	86	200	170	85	1.2	9/15/98	4920	5328
Boron		mg/kg	17	200	165	74	200	166	75	1.3	9/15/98	4920	5328
Cobalt		mg/kg	7.8	200	172	85	200	173	83	2.4	9/15/98	4920	5328
Molybdenum		mg/kg	2.9	200	174	86	200	177	87	1.2	9/15/98	4920	5328
Nickel		mg/kg	8.6	200	170	81	200	172	82	1.2	9/15/98	4920	5328
Phenol		mg/kg	<0.25	10.00	4.17	42	10.00	4.38	44	4.7	9/10/98	4829	5276
2-Chlorophenol		mg/kg	<1.25	10.00	3.72	37	10.00	3.88	38	2.7	9/10/98	4829	5276
1,4-Dichlorobenzene		mg/kg	<0.25	10.00	3.89	39	10.00	4.06	41	5.0	9/10/98	4829	5276
n-Nitrosodi-n-propylamine		mg/kg	<0.25	10.00	5.23	52	10.00	5.54	55	5.6	9/10/98	4829	5276
1,2,4-trichlorobenzene		mg/kg	<0.25	10.00	4.9	49	10.00	5.05	51	4.0	9/10/98	4829	5276
4-Chloro-3-methylphenol		mg/kg	<1.25	10.00	4.28	43	10.00	4.49	45	4.6	9/10/98	4829	5276
Acenaphthene		mg/kg	<0.25	10.00	4.88	49	10.00	4.93	49	0	9/10/98	4829	5276
4-Nitrophenol		mg/kg	<1.25	10.00	4.54	45	10.00	5.34	53	16	9/10/98	4829	5276
2,4-Dinitrotoluene		mg/kg	<0.25	10.00	5	50	10.00	5.16	52	3.9	9/10/98	4829	5276
Pentachlorophenol		mg/kg	<1.25	10.00	3.31	33	10.00	3.59	36	8.7	9/10/98	4829	5276
Pyrene		mg/kg	<0.25	10.00	6.32	63	10.00	6.25	63	0	9/10/98	4829	5276
Phenol		mg/kg	<0.25	10.00	4.17	42	10.00	4.38	44	4.7	9/11/98	4828	5283
2-Chlorophenol		mg/kg	<1.25	10.00	3.72	37	10.00	3.88	38	2.7	9/11/98	4828	5283
1,4-Dichlorobenzene		mg/kg	<0.25	10.00	3.89	39	10.00	4.06	41	5.0	9/11/98	4828	5283
n-Nitrosodi-n-propylamine		mg/kg	<0.25	10.00	5.23	52	10.00	5.54	55	5.6	9/11/98	4828	5283
1,2,4-trichlorobenzene		mg/kg	<0.25	10.00	4.9	49	10.00	5.05	51	4.0	9/11/98	4828	5283
4-Chloro-3-methylphenol		mg/kg	<1.25	10.00	4.28	43	10.00	4.49	45	4.6	9/11/98	4828	5283
Acenaphthene		mg/kg	<0.25	10.00	4.88	49	10.00	4.93	49	0	9/11/98	4828	5283
4-Nitrophenol		mg/kg	<1.25	10.00	4.54	45	10.00	5.34	53	16	9/11/98	4828	5283
2,4-Dinitrotoluene		mg/kg	<0.25	10.00	5	50	10.00	5.16	52	3.9	9/11/98	4828	5283
Pentachlorophenol		mg/kg	<1.25	10.00	3.31	33	10.00	3.59	36	8.7	9/11/98	4828	5283
Pyrene		mg/kg	<0.25	10.00	6.32	63	10.00	6.25	63	0	9/11/98	4828	5283
TRPHC		mg/kg	<10.0	250.00	231	92	250.00	220	88	4.4	8/30/98	4810	5168
Total Phenols		mg/kg	<0.01	0.80	0.79	99	0.80	0.80	80	20	8/26/98		5109
Total Phenols		mg/kg	<0.01	0.80	0.81	101	0.80	0.81	101	0	8/26/98		5110

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000469

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	9.5	9.6	1.0	8/25/98		5104
TDS		mg/kg	2,100	2,200		9/16/98		5364

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Ave. Ste 9
Lubbock, TX 79424
Phone:806-794-1296
Fax:806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ARS
AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0867	**P.O. Number:**	Verbal
Client I.D.:	105955	**ARS Sample I.D.:**	ARS-98-3156
Date Sampled:	8/20/98	**Date Received:**	8/26/98
Time Sampled:	N/A	**Time Received**	1157
Type of Sample:	Solid	**Date of Report**	9/6/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.82	N/A	pCi/gm	<0.030	N/A	Bq/gm	EPA 901.1M	9/5/98 1522	sw
Ra-228	0.51	0.23	pCi/gm	0.019	0.009	Bq/gm	EPA 901.1M	9/5/98 1522	sw
Pb-210	<0.94	N/A	pCi/gm	<0.035	N/A	Bq/gm	EPA 901.1M	9/5/98 1522	sw
Total Activity	8.40	N/A	pCi/gm	0.311	N/A	Bq/gm	EPA 901.1M	9/5/98 1522	sw

Notes:

Quality Assurance Review

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ARS
AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0867	**P.O. Number:**	Verbal
Client I.D.:	105956	**ARS Sample I.D.:**	ARS-98-3157
Date Sampled:	8/20/98	**Date Received:**	8/26/98
Time Sampled:	N/A	**Time Received**	1157
Type of Sample:	Solid	**Date of Report**	9/6/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.95	N/A	pCi/gm	<0.035	N/A	Bq/gm	EPA 901.1M	9/5/98 1633	sw
Ra-228	<0.11	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	9/5/98 1633	sw
Pb-210	<1.15	N/A	pCi/gm	<0.043	N/A	Bq/gm	EPA 901.1M	9/5/98 1633	sw
Total Activity	3.29	N/A	pCi/gm	0.122	N/A	Bq/gm	EPA 901.1M	9/5/98 1633	sw

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0867	**P.O. Number:**	Verbal
Client I.D.:	105957	**ARS Sample I.D.:**	ARS-98-3158
Date Sampled:	8/20/98	**Date Received:**	8/26/98
Time Sampled:	N/A	**Time Received**	1157
Type of Sample:	Solid	**Date of Report**	9/6/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.95	N/A	pCi/gm	<0.035	N/A	Bq/gm	EPA 901.1M	9/5/98 1708	mk
Ra-228	<0.17	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	9/5/98 1708	mk
Pb-210	2.00	1.65	pCi/gm	0.074	0.061	Bq/gm	EPA 901.1M	9/5/98 1708	mk
Total Activity	2.95	N/A	pCi/gm	0.109	N/A	Bq/gm	EPA 901.1M	9/5/98 1708	mk

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0867	**P.O. Number:**	Verbal
Client I.D.:	105958	**ARS Sample I.D.:**	ARS-98-3159
Date Sampled:	8/20/98	**Date Received:**	8/26/98
Time Sampled:	N/A	**Time Received**	1157
Type of Sample:	Solid	**Date of Report**	9/6/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.09	N/A	pCi/gm	<0.040	N/A	Bq/gm	EPA 901.1M	8/29/98 1441	mk
Ra-228	<0.24	N/A	pCi/gm	<0.009	N/A	Bq/gm	EPA 901.1M	8/29/98 1441	mk
Pb-210	<1.34	N/A	pCi/gm	<0.050	N/A	Bq/gm	EPA 901.1M	8/29/98 1441	mk
Total Activity	12.03	N/A	pCi/gm	0.445	N/A	Bq/gm	EPA 901.1M	8/29/98 1441	mk

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0867	**P.O. Number:**	Verbal
Client I.D.:	105959	**ARS Sample I.D.:**	ARS-98-3160
Date Sampled:	8/20/98	**Date Received:**	8/26/98
Time Sampled:	N/A	**Time Received**	1157
Type of Sample:	Solid	**Date of Report**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.99	1.66	pCi/gm	0.074	0.061	Bq/gm	EPA 901.1M	8/27/98 1453	kh
Ra-228	0.63	0.25	pCi/gm	0.023	0.009	Bq/gm	EPA 901.1M	8/27/98 1453	kh
Pb-210	<0.98	N/A	pCi/gm	<0.036	N/A	Bq/gm	EPA 901.1M	8/27/98 1453	kh
Total Activity	30.66	N/A	pCi/gm	1.134	N/A	Bq/gm	EPA 901.1M	8/27/98 1453	kh

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0867	**P.O. Number:**	Verbal
Client I.D.:	105960	**ARS Sample I.D.:**	ARS-98-3161
Date Sampled:	8/20/98	**Date Received:**	8/26/98
Time Sampled:	N/A	**Time Received**	1157
Type of Sample:	Solid	**Date of Report**	9/6/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.69	1.97	pCi/gm	0.100	0.073	Bq/gm	EPA 901.1M	8/29/98 1515	mk
Ra-228	0.73	0.32	pCi/gm	0.027	0.012	Bq/gm	EPA 901.1M	8/29/98 1515	mk
Pb-210	<1.09	N/A	pCi/gm	<0.040	N/A	Bq/gm	EPA 901.1M	8/29/98 1515	mk
Total Activity	5.81	N/A	pCi/gm	0.215	N/A	Bq/gm	EPA 901.1M	8/29/98 1515	mk

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Philip Services Corporation
Phone #: (915) 563-0118
FAX #: (915) 563-9526
Company Name & Address: 7904 IH 20 West, Midland, Tx 79706
Project #: 19350
Project Name: Shell Tanker Road
Project Location: Hobbs, New Mexico
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME	BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240 / 8260	8270	See Attached VOC's	Turn around # of days	Fax ASAP	Hold
105953	Field Blank	2	40ml VOA	✓				✓					08/20/98	1600									✓				
954	Trip Blank	2	40ml VOA	✓						✓			08/20/98										✓				
955	TSB-1 (2-3')	5	4oz Jar		✓					✓			08/20/98	0852		✓							✓				
	TSB-1 (2-3')	1	40ml VOA		✓							✓	08/20/98	0852										✓			
956	TSB-1 (3-5')	5	4oz Jar		✓					✓			08/20/98	905		✓							✓				
	TSB-1 (3-5')	1	40ml VOA		✓							✓	08/20/98	905										✓			
957	TSB-1 (8-10')	5	4oz Jar		✓					✓			08/20/98	923		✓							✓				
	TSB-1 (8-10')	1	40ml VOA		✓							✓	08/20/98	923										✓			
105961	TSB-1 (43-45')	1	4oz Jar		✓					✓			08/20/98	1211	✓	✓											
958	TSB-2 (2-3')	5	4oz Jar		✓					✓			08/20/98	1417		✓							✓				
	TSB-2 (2-3')	1	4oz Jar		✓							✓	08/20/98	1417										✓			

Relinquished by: Date: Time:
August 21, 1998 700 AM

Received by: Date: Time:

Relinquished by: Date: Time:

Received by: Date: Time:

Relinquished by: Date: Time:

Received at Laboratory by: Date: Time:
Mell Green 8-22-98 10:00am

REMARKS

Normal Turnaround

17°C

Bus 901 984 6066

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Philip Services Corporation
Phone #: (915) 563-0118
FAX #: (915) 563-9526

Company Name & Address: 7904 IH20 West
Midland, Tx 79706

Project #: 19350
Project Name: Shell Tasker Road

Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindy

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
105959	TSB-2 (3-5')	5	40ml VOA		✓					✓			08/20/98	1420
	TSB-2 (3-5')	1	40ml VOA		✓							✓	08/20/98	1420
960	TSB-2 (18-20')	5	40ml VOA		✓					✓			08/20/98	1503
	TSB-2 (18-20')	1	40ml VOA		✓							✓	08/20/98	1503

ANALYSIS REQUEST

BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240 / 8260	8270	See Attached VOC's
	✓							✓	✓
									✓
	✓							✓	
									✓

SPECIAL HANDLING

Turn around # of days
Fax ASAP
Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindy	August 21, 1998	700 AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Mell Green	Date: 8-22-98	Time: 10:00am

REMARKS

Normal Turnaround

12°C

Bus 901 984 606 6

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page: 1

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
106028	TSB-7 28-30'	8/21/98	15:45	8/25/98
106029	TSB-10 2-3'	8/21/98	9:00	8/25/98
106030	TSB-10 3-5'	8/21/98	9:09	8/25/98
106031	TSB-10 8-10'	8/21/98	9:24	8/25/98
106032	TSB-10 28-31'	8/21/98	10:16	8/25/98
106033	TSB-6 18-20'	8/21/98	11:58	8/25/98
106034	TSB-6 2-3'	8/21/98	11:23	8/25/98
106035	TSB-6 3-5'	8/21/98	11:27	8/25/98
106036	TSB-7 2-3'	8/21/98	14:06	8/25/98
106037	TSB-7 3-5'	8/21/98	14:12	8/25/98
106038	TSB-7 8-10'	8/21/98	14:21	8/25/98
106039	Field Blank	8/21/98		8/25/98
106040	Trip Blank			8/25/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All date meets quality control criteria with the following exceptions:
Semivolatiles were extracted 3 days past hold time
106036 Semivolatile low surrogate recovery due to matrix

Corrections:
1) Corrected Benzidine misidentification for samples 106029-31 and 106036-38.
2) Flag added for Semivolatiles extracted past hold time for samples 106029-31 and 106033-38.
3) Phenol result added for samples 106029-31and 106033-38.
4) Dichlorobenzene and 1,1-dichloroethylene blank results corrected.
5) Analytical method for pesticide samples corrected from S-8270C to S8080.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106039

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Acrylonitrile		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Benzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chlorobenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chloroform		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorobenzene		<2	ug/L	S-8260B		9/1/98	AG		5183	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloropropenes		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylbenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromodichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromomethane		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Chloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Toluene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Vinyl chloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
m,p-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
o-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylene dibromide		<1	ug/L	S-8260B		9/1/98	AG		5183	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Methylene chloride		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Surr. Dibromofluoromethane		120	%	S-8260B		9/1/98	AG		5183	72-130
Surr. Toluene-d8		107	%	S-8260B		9/1/98	AG		5183	77-127
Surr. 4-Bromofluorobenzene		110	%	S-8260B		9/1/98	AG		5183	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98
Page # 3

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106040

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Acrylonitrile		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Benzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chlorobenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Chloroform		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorobenzene		<2	ug/L	S-8260B		9/1/98	AG		5183	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloropropenes		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylbenzene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromodichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Bromomethane		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Chloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Dichloromethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Toluene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Trichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Vinyl chloride		<1	ug/L	S-8260B		9/1/98	AG		5183	1
m,p-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
o-xylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Ethylene dibromide		<1	ug/L	S-8260B		9/1/98	AG		5183	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/1/98	AG		5183	1
Methylene chloride		<5	ug/L	S-8260B		9/1/98	AG		5183	5
Surr. Dibromofluoromethane		119	%	S-8260B		9/1/98	AG		5183	72-130
Surr. Toluene-d8		108	%	S-8260B		9/1/98	AG		5183	77-127
Surr. 4-Bromofluorobenzene		112	%	S-8260B		9/1/98	AG		5183	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106028

Field Code: TSB-7 28-30'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	E 8021B		8/20/98	CS		5031	0.050
Benzene		<0.050	mg/Kg	E 8021B		8/20/98	CS		5031	0.050
Toluene		<0.050	mg/Kg	E 8021B		8/20/98	CS		5031	0.050
Ethylbenzene		<0.050	mg/Kg	E 8021B		8/20/98	CS		5031	0.050
m,p,o-xylene		<0.050	mg/Kg	E 8021B		8/20/98	CS		5031	0.050
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 5

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106029

Field Code: TSB-10 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<3150	ug/Kg	S-8260B		9/3/98	AG		5205	3150
Acrylonitrile		<3150	ug/Kg	S-8260B		9/3/98	AG		5205	3150
Benzene		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Carbon tetrachloride		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Chlorobenzene		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
1,2-dichloroethane		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
1,1,2,2-tetrachloroethane		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
1,1,1-trichloroethane		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
1,1,2-trichloroethane		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
1,1,2-trichloroethylene		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Chloroform		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Dichlorobenzene		<1260	ug/Kg	S-8260B		9/3/98	AG		5205	1260
1,1-dichloroethylene		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Dichloropropenes		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Ethylbenzene		1,350	ug/Kg	S-8260B		9/3/98	AG		5205	630
Bromodichloromethane		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Bromomethane		<3150	ug/Kg	S-8260B		9/3/98	AG		5205	3150
Chloromethane		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Dichlorodifluoromethane		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Dichloromethane		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Trichlorofluorometane		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Tetrachloroethylene		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Toluene		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Trichloroethylene		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Vinyl chloride		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
m,p-xylene		1,710	ug/Kg	S-8260B		9/3/98	AG		5205	630
o-xylene		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
1,1-dichloroethane		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Ethylene dibromide		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
cis-1,2-dichlorethylene		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
trans-1,2-dichloroethylene		<630	ug/Kg	S-8260B		9/3/98	AG		5205	630
Methylene chloride		<3150	ug/Kg	S-8260B		9/3/98	AG		5205	3150
Surr. Dibromofluoromethane		110	%	S-8260B		9/3/98	AG		5205	72-130
Surr. Toluene-d8		97	%	S-8260B		9/3/98	AG		5205	77-127
Surr. 4-Bromofluorobenzene		110	%	S-8260B		9/3/98	AG		5205	72-131
Benzidine		*<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
Hexachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Pentachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
1,2,4,5-tetrachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5

*Corrected Benzidine misidentification to <125 mg/kg.

Corrected

Date: 05-19-99

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106029

Field Code: TSB-10 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
2,4-dichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4,5-trichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4,6-trichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
bis (2-chloroethyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
bis (2-chloroisopropyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
bis (chloromethyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
3,3-dichlorobenzidine		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4-dinitrotoluene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Diphenylhydrazine		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
Hexachlorobutadiene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Hexachlorocyclopentadiene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Isophorone		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
Nitrobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
2,4-dinitro-o-cresol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4-dinitrophenols		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
n-nitrosodiethylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
N-nitrosodimethylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
N-nitrosodibutylamine		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
N-nitrosodiphenylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
N-nitrosopyrrolidine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Pentachlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
Dibutyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
di-2-ethylhexyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Diethyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Dimethyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Anthracene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
3,4-benzofluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Benzo(k)fluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Fluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Fluorene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Phenanthrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Pyrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Naphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
1-methylnaphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
2-methylnaphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Benzo-a-pyrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Phenol		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Surr. 2-Fluorophenol		56	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	25-121
Surr. Phenol-d6		54	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	24-113
Surr. Nitroobenzene-d5		64	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	23-120
Surr. 2-Fluorobiphenyl		79	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	30-115
Surr. 2,4,6-Tribromophenol		60	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	19-122
Surr. Terphenyl-d14		114	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	28-137

**Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 7

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106029

Field Code: TSB-10 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
PCB's		<1.0	mg/Kg	S 8082	8/26/98	9/3/98	RC	4795	5204	1.0
Arsenic		1.5	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Barium		125	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Cadmium		0.53	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.10
Chromium		8.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Lead		10	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471A	8/27/98	8/28/98	MS	4804	5149	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Silver		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Copper		8.4	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Iron		7,300	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Manganese		139	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Zinc		68	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Aluminum		7,700	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Boron		19	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	10
Cobalt		7.7	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Molybdenum		2.8	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Nickel		16	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Cyanide		<0.01	mg/Kg	4500 CN,CE		8/27/98	SA		5128	0.01
Fluoride		1.4	mg/Kg	E 300.0		9/2/98	JS		5192	0.2
Nitrate		1.9	mg/Kg	E 300.0		9/2/98	JS		5192	0.2
Chloride		70	mg/Kg	E 300.0		9/2/98	JS		5192	1.0
Sulfate		420	mg/Kg	E 300.0		9/19/98	JS		5420	1.0
TDS		2,100	mg/Kg	E 160.1		9/16/98	JS		5364	---
pH		8.8	s.u.	E 150.1		8/26/98	SA		5113	---
TRPHC		18,500	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		3.5	mg/Kg	SM 5530 A,D		8/26/98	RC		5114	0.25
Total Radium		3.28	pCi/gm	E 901.1M		9/3/98	DS	---	---	---

** Sample extracted 3 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106030

Field Code: TSB-10 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<9400	ug/Kg	S-8260B		9/3/98	AG		5206	9400
Acrylonitrile		<9400	ug/Kg	S-8260B		9/3/98	AG		5206	9400
Benzene		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Carbon tetrachloride		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Chlorobenzene		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
1,2-dichloroethane		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
1,1,2,2-tetrachloroethane		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
1,1,1-trichloroethane		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
1,1,2-trichloroethane		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
1,1,2-trichloroethylene		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Chloroform		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Dichlorobenzene		<3760	ug/Kg	S-8260B		9/3/98	AG		5206	3760
1,1-dichloroethylene		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Dichloropropenes		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Ethylbenzene		11,000	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Bromodichloromethane		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Bromomethane		<9400	ug/Kg	S-8260B		9/3/98	AG		5206	9400
Chloromethane		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Dichlorodifluoromethane		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Dichloromethane		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Trichlorofluorometane		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Tetrachloroethylene		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Toluene		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Trichloroethylene		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Vinyl chloride		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
m,p-xylene		20,000	ug/Kg	S-8260B		9/3/98	AG		5206	1880
o-xylene		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
1,1-dichloroethane		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Ethylene dibromide		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
cis-1,2-dichlorethylene		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
trans-1,2-dichloroethylene		<1880	ug/Kg	S-8260B		9/3/98	AG		5206	1880
Methylene chloride		<9400	ug/Kg	S-8260B		9/3/98	AG		5206	9400
Surr. Dibromofluoromethane		107	%	S-8260B		9/3/98	AG		5206	72-130
Surr. Toluene-d8		94	%	S-8260B		9/3/98	AG		5206	77-127
Surr. 4-Bromofluorobenzene		97	%	S-8260B		9/3/98	AG		5206	72-131
Benzidine		*<125	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	125
Hexachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Pentachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
1,2,4,5-tetrachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5

*Corrected Benzidine misidentification to <125 mg/kg

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106030

Field Code: TSB-10 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
2,4-dichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
2,4,5-trichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
2,4,6-trichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
bis (2-chloroethyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
bis (2-chloroisopropyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
bis (chloromethyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
3,3-dichlorobenzidine		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
2,4-dinitrotoluene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Diphenylhydrazine		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
Hexachlorobutadiene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Hexachlorocyclopentadiene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Isophorone		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
Nitrobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
2,4-dinitro-o-cresol		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
2,4-dinitrophenols		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
n-nitrosodiethylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
N-nitrosodimethylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
N-nitrosodibutylamine		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
N-nitrosodiphenylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
N-nitrosopyrrolidine		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Pentachlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	62.5
Dibutyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
di-2-ethylhexyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Diethyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Dimethyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Anthracene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
3,4-benzofluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Benzo(k)fluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Fluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Fluorene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Phenanthrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Pyrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Naphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
1-methylnaphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
2-methylnaphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Benzo-a-pyrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Phenol		<12.5	mg/Kg	S-8270C	**9/8/98	9/21/98	JG	4916	5480	12.5
Surr. 2-Fluorophenol		43	%	S-8270C	9/8/98	9/21/98	JG	4916	5480	25-121
Surr. Phenol-d6		41	%	S-8270C	9/8/98	9/21/98	JG	4916	5480	24-113
Surr. Nitroobenzene-d5		49	%	S-8270C	9/8/98	9/21/98	JG	4916	5480	23-120
Surr. 2-Fluorobiphenyl		62	%	S-8270C	9/8/98	9/21/98	JG	4916	5480	30-115
Surr. 2,4,6-Tribromophenol		40	%	S-8270C	9/8/98	9/21/98	JG	4916	5480	19-122
Surr. Terphenyl-d14		68	%	S-8270C	9/8/98	9/21/98	JG	4916	5480	19-122

Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 10

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106030

Field Code: TSB-10 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Chlordane		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
DDT		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Dieldrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Endosulfan		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Endrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Heptachlor		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
PCB's		<1.0	mg/Kg	S 8082	8/26/98	9/3/98	RC	4795	5204	1.0
Arsenic		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Barium		127	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Cadmium		0.37	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.10
Chromium		4.8	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Lead		1.8	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471A	8/27/98	8/28/98	MS	4804	5149	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Silver		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Copper		1.8	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Iron		3,400	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Manganese		31	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Zinc		7.6	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Aluminum		5,700	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Boron		13	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	10
Cobalt		6.1	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Molybdenum		2.2	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Nickel		<0.01	mg/Kg	S 6010B	9/11/98	9/15/98	SA	4922	5340	0.01
Cyanide		<0.25	mg/Kg	4500 CN,CE		8/27/98	RC		5128	0.25
Fluoride		11	mg/Kg	E 300.0		9/3/98	JS		5199	0.2
Nitrate		3.8	mg/Kg	E 300.0		9/3/98	JS		5199	0.2
Chloride		52	mg/Kg	E 300.0		9/3/98	JS		5199	1.0
Sulfate		42	mg/Kg	E 300.0		9/3/98	JS		5199	1.0
TDS		3,000	mg/Kg	E 160.1		9/17/98	RS		5371	---
pH		9.4	s.u.	E 150.1		8/26/98	SA		5113	---
TRPHC		16,000	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		22.8	mg/Kg	SM 5530 A,D		8/26/98	RC		5114	0.25
Total Radium		4.75	pCi/gm	E 901.1M			DS	---	---	---

** Sample extracted 3 days past hold time
***** Analytical Method corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 11

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106031

Field Code: TSB-10 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<755	ug/Kg	S-8260B		9/3/98	AG		5206	755
Acrylonitrile		<755	ug/Kg	S-8260B		9/3/98	AG		5206	755
Benzene		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Carbon tetrachloride		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Chlorobenzene		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
1,2-dichloroethane		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
1,1,2,2-tetrachloroethane		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
1,1,1-trichloroethane		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
1,1,2-trichloroethane		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
1,1,2-trichloroethylene		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Chloroform		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Dichlorobenzene		<302	ug/Kg	S-8260B		9/3/98	AG		5206	302
1,1-dichloroethylene		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Dichloropropenes		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Ethylbenzene		5,600	ug/Kg	S-8260B		9/3/98	AG		5206	151
Bromodichloromethane		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Bromomethane		<755	ug/Kg	S-8260B		9/3/98	AG		5206	755
Chloromethane		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Dichlorodifluoromethane		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Dichloromethane		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Trichlorofluorometane		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Tetrachloroethylene		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Toluene		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Trichloroethylene		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Vinyl chloride		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
m,p-xylene		18,000	ug/Kg	S-8260B		9/3/98	AG		5206	151
o-xylene		880	ug/Kg	S-8260B		9/3/98	AG		5206	151
1,1-dichloroethane		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Ethylene dibromide		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
cis-1,2-dichlorethylene		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
trans-1,2-dichloroethylene		<151	ug/Kg	S-8260B		9/3/98	AG		5206	151
Methylene chloride		<755	ug/Kg	S-8260B		9/3/98	AG		5206	755
Surr. Dibromofluoromethane		106	%	S-8260B		9/3/98	AG		5206	72-130
Surr. Toluene-d8		106	%	S-8260B		9/3/98	AG		5206	77-127
Surr. 4-Bromofluorobenzene		115	%	S-8260B		9/3/98	AG		5206	72-131
Benzidine		*<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
Hexachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Pentachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
1,2,4,5-tetrachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5

*Corrected Benzidine misidentification to <125 mg/kg

Corrected

Date: 05-19-99
Page # 12

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106031

Field Code: TSB-10 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
2,4-dichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4,5-trichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4,6-trichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
bis (2-chloroethyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
bis (2-chloroisopropyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
bis (chloromethyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
3,3-dichlorobenzidine		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4-dinitrotoluene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Diphenylhydrazine		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
Hexachlorobutadiene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Hexachlorocyclopentadiene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Isophorone		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
Nitrobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
2,4-dinitro-o-cresol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4-dinitrophenols		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
n-nitrosodiethylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
N-nitrosodimethylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
N-nitrosodibutylamine		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
N-nitrosodiphenylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
N-nitrosopyrrolidine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Pentachlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
Dibutyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
di-2-ethylhexyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Diethyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Dimethyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Anthracene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
3,4-benzofluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Benzo(k)fluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Fluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Fluorene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Phenanthrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Pyrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Naphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
1-methylnaphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
2-methylnaphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Benzo-a-pyrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Phenol		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Surr. 2-Fluorophenol		41	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	25-121
Surr. Phenol-d6		36	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	24-113
Surr. Nitroobenzene-d5		59	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	23-120
Surr. 2-Fluorobiphenyl		63	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	30-115
Surr. 2,4,6-Tribromophenol		24	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	19-122
Surr. Terphenyl-d14		78	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	19-122

**Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 13

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106031

Field Code: TSB-10 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Chlordane		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
DDT		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Dieldrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Endosulfan		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Endrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Heptachlor		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Barium		146	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Cadmium		0.46	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.10
Chromium		6.9	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Lead		3.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471A	8/27/98	8/28/98	MS	4804	5149	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Silver		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Copper		1.9	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Iron		5,100	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Manganese		37	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Zinc		15	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Aluminum		8,800	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Boron		19	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	10
Cobalt		7.8	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Molybdenum		2.9	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Nickel		<0.01	mg/Kg	S 6010B	9/11/98	9/15/98	SA	4922	5340	0.01
Cyanide		<0.25	mg/Kg	S 4500 CN,CE		8/27/98	RC		5128	0.25
Fluoride		16	mg/Kg	E 300.0		9/3/98	JS		5199	0.2
Nitrate		3.8	mg/Kg	E 300.0		9/3/98	JS		5199	0.2
Chloride		66	mg/Kg	E 300.0		9/3/98	JS		5199	1.0
Sulfate		12	mg/Kg	E 300.0		9/3/98	JS		5199	1.0
TDS		2,500	mg/Kg	E 160.1		9/17/98	RS		5371	---
pH		9.0	s.u.	E 150.1		8/26/98	SA		5113	---
TRPHC		5,580	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		4.3	mg/Kg	SM 5530 A,D		8/26/98	RC		5114	0.25
Total Radium		9.37	pCi/gm	E 901.1M			DS	---	---	---

** Sample extracted 3 days past hold time
***** Analytical Method corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106032

Field Code: TSB-10 28-31'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	E 8021B		8/20/98	CS		5031	0.050
Benzene		<0.050	mg/Kg	E 8021B		8/20/98	CS		5031	0.050
Toluene		<0.050	mg/Kg	E 8021B		8/20/98	CS		5031	0.050
Ethylbenzene		<0.050	mg/Kg	E 8021B		8/20/98	CS		5031	0.050
m,p,o-xylene		<0.050	mg/Kg	E 8021B		8/20/98	CS		5031	0.050
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
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Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106033

Field Code: TSB-6 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<290	ug/Kg	S-8260B		9/3/98	AG		5206	290
Acrylonitrile		<290	ug/Kg	S-8260B		9/3/98	AG		5206	290
Benzene		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Carbon tetrachloride		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Chlorobenzene		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
1,2-dichloroethane		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
1,1,2,2-tetrachloroethane		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
1,1,1-trichloroethane		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
1,1,2-trichloroethane		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
1,1,2-trichloroethylene		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Chloroform		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Dichlorobenzene		<116	ug/Kg	S-8260B		9/3/98	AG		5206	116
1,1-dichloroethylene		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Dichloropropenes		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Ethylbenzene		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Bromodichloromethane		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Bromomethane		<290	ug/Kg	S-8260B		9/3/98	AG		5206	290
Chloromethane		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Dichlorodifluoromethane		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Dichloromethane		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Trichlorofluorometane		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Tetrachloroethylene		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Toluene		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Trichloroethylene		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Vinyl chloride		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
m,p-xylene		72	ug/Kg	S-8260B		9/3/98	AG		5206	58
o-xylene		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
1,1-dichloroethane		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Ethylene dibromide		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
cis-1,2-dichlorethylene		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
trans-1,2-dichloroethylene		<58	ug/Kg	S-8260B		9/3/98	AG		5206	58
Methylene chloride		<290	ug/Kg	S-8260B		9/3/98	AG		5206	290
Surr. Dibromofluoromethane		106	%	S-8260B		9/3/98	AG		5206	72-130
Surr. Toluene-d8		87	%	S-8260B		9/3/98	AG		5206	77-127
Surr. 4-Bromofluorobenzene		93	%	S-8260B		9/3/98	AG		5206	72-131
Benzidine		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106033

Field Code: TSB-6 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	0.25
Surr. 2-Fluorophenol		72	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	25-121
Surr. Phenol-d6		80	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	24-113
Surr. Nitroobenzene-d5		78	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	23-120
Surr. 2-Fluorobiphenyl		82	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	30-115
Surr. 2,4,6-Tribromophenol		72	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	19-122
Surr. Terphenyl-d14		89	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 17

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106033

Field Code: TSB-6 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Chlordane		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
DDT		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Dieldrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Endosulfan		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Endrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Heptachlor		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		1.9	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Barium		58	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Cadmium		0.39	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.10
Chromium		2.2	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Lead		1.8	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471A	8/27/98	8/28/98	MS	4804	5149	0.10
Selenium		1.1	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Silver		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Copper		3	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Iron		1,000	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Manganese		15	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Zinc		3.5	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Aluminum		1,500	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Boron		<10	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	10
Cobalt		4.2	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Molybdenum		1.5	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Nickel		<0.01	mg/Kg	S 6010B	9/11/98	9/15/98	SA	4922	5340	0.01
Cyanide		<0.25	mg/Kg	S 4500 CN,CE		8/27/98	RC		5128	0.25
Fluoride		3.1	mg/Kg	E 300.0		9/19/98	JS		5419	0.2
Nitrate		2.2	mg/Kg	E 300.0		9/19/98	JS		5419	0.2
Chloride		51	mg/Kg	E 300.0		9/19/98	JS		5419	1.0
Sulfate		170	mg/Kg	E 300.0		9/19/98	JS		5419	2.0
TDS		350	mg/Kg	E 160.1		9/17/98	RS		5371	---
pH		8.5	s.u.	E 150.1		8/26/98	SA		5113	---
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		2.3	mg/Kg	SM 5530 A,D		8/26/98	RC		5114	0.25
Total Radium		1.00	pCi/gm	E 901.1M		9/3/98	DS	---	---	---

** Sample extracted 3 days past hold time
***** Analytical Method corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106034

Field Code: TSB-6 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<305	ug/Kg	S-8260B		9/3/98	AG		5206	305
Acrylonitrile		<305	ug/Kg	S-8260B		9/3/98	AG		5206	305
Benzene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Carbon tetrachloride		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Chlorobenzene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
1,2-dichloroethane		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
1,1,2,2-tetrachloroethane		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
1,1,1-trichloroethane		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
1,1,2-trichloroethane		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
1,1,2-trichloroethylene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Chloroform		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
[illegible]ichlorobenzene		<122	ug/Kg	S-8260B		9/3/98	AG		5206	122
[illegible],1-dichloroethylene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Dichloropropenes		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Ethylbenzene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Bromodichloromethane		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Bromomethane		<305	ug/Kg	S-8260B		9/3/98	AG		5206	305
Chloromethane		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Dichlorodifluoromethane		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Dichloromethane		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Trichlorofluorometane		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Tetrachloroethylene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Toluene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Trichloroethylene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Vinyl chloride		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
m,p-xylene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
o-xylene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
1,1-dichloroethane		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Ethylene dibromide		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
cis-1,2-dichlorethylene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
trans-1,2-dichloroethylene		<61	ug/Kg	S-8260B		9/3/98	AG		5206	61
Methylene chloride		<305	ug/Kg	S-8260B		9/3/98	AG		5206	305
Surr. Dibromofluoromethane		108	%	S-8260B		9/3/98	AG		5206	72-130
Surr. Toluene-d8		91	%	S-8260B		9/3/98	AG		5206	77-127
Surr. 4-Bromofluorobenzene		95	%	S-8260B		9/3/98	AG		5206	72-131
Benzidine		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
Hexachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
[illegible]entachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
[illegible],2,4,5-tetrachlorobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5

Corrected

Date: 05-19-99
Page # 19

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106034

Field Code: TSB-6 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
2,4-dichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4,5-trichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4,6-trichlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
bis (2-chloroethyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
bis (2-chloroisopropyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
bis (chloromethyl) ether		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
3,3-dichlorobenzidine		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4-dinitrotoluene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Diphenylhydrazine		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
Hexachlorobutadiene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Hexachlorocyclopentadiene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Isophorone		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
Nitrobenzene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
2,4-dinitro-o-cresol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
2,4-dinitrophenols		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
n-nitrosodiethylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
N-nitrosodimethylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
N-nitrosodibutylamine		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
N-nitrosodiphenylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
N-nitrosopyrrolidine		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Pentachlorophenol		<62.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	62.5
Dibutyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
di-2-ethylhexyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Diethyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Dimethyl phthalate		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Anthracene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
3,4-benzofluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Benzo(k)fluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Fluoranthene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Fluorene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Phenanthrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Pyrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Naphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
1-methylnaphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
2-methylnaphthalene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Benzo-a-pyrene		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Phenol		<12.5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	12.5
Surr. 2-Fluorophenol		65	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	25-121
Surr. Phenol-d6		64	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	24-113
Surr. Nitroobenzene-d5		84	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	23-120
Surr. 2-Fluorobiphenyl		81	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	30-115
Surr. 2,4,6-Tribromophenol		39	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	19-122
Surr. Terphenyl-d14		115	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	28-137

Corrected - Added Phenol result.

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106034

Field Code: TSB-6 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Chlordane		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
DDT		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Dieldrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Endosulfan		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Endrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Heptachlor		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Barium		970	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Cadmium		0.52	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.10
Chromium		244	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Lead		92	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471A	8/27/98	8/28/98	MS	4804	5149	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Silver		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Copper		5.9	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Iron		12,000	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Manganese		79	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Zinc		350	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Aluminum		4,300	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Boron		26	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	10
Cobalt		11	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Molybdenum		2.9	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Nickel		<0.01	mg/Kg	S 6010B	9/11/98	9/15/98	SA	4922	5340	0.01
Cyanide		<0.25	mg/Kg	S 4500 CN,CE		8/27/98	RC		5128	0.25
Fluoride		5	mg/Kg	E 300.0		9/19/98	JS		5419	0.2
Nitrate		1.8	mg/Kg	E 300.0		9/19/98	JS		5419	0.2
Chloride		34	mg/Kg	E 300.0		9/19/98	JS		5419	1.0
Sulfate		82	mg/Kg	E 300.0		9/19/98	JS		5419	1.0
TDS		420	mg/Kg	E 160.1		9/17/98	RS		5371	---
pH		8.4	s.u.	E 150.1		8/26/98	SA		5113	---
TRPHC		86.8	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		8/26/98	RC		5114	0.25
Total Radium		3.01	pCi/gm	E 901.1M			DS	---	---	---

** Sample extracted 3 days past hold time
***** Analytical Method corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 21

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106035

Field Code: TSB-6 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<340	ug/Kg	S-8260B		9/3/98	AG		5206	340
Acrylonitrile		<340	ug/Kg	S-8260B		9/3/98	AG		5206	340
Benzene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Carbon tetrachloride		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Chlorobenzene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
1,2-dichloroethane		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
1,1,2,2-tetrachloroethane		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
1,1,1-trichloroethane		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
1,1,2-trichloroethane		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
1,1,2-trichloroethylene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Chloroform		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Dichlorobenzene		<136	ug/Kg	S-8260B		9/3/98	AG		5206	136
1,1-dichloroethylene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Dichloropropenes		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Ethylbenzene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Bromodichloromethane		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Bromomethane		<340	ug/Kg	S-8260B		9/3/98	AG		5206	340
Chloromethane		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Dichlorodifluoromethane		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Dichloromethane		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Trichlorofluorometane		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Tetrachloroethylene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Toluene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Trichloroethylene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Vinyl chloride		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
m,p-xylene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
o-xylene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
1,1-dichloroethane		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Ethylene dibromide		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
cis-1,2-dichlorethylene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
trans-1,2-dichloroethylene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
Methylene chloride		<340	ug/Kg	S-8260B		9/3/98	AG		5206	340
Surr. Dibromofluoromethane		105	%	S-8260B		9/3/98	AG		5206	72-130
Surr. Toluene-d8		92	%	S-8260B		9/3/98	AG		5206	77-127
Surr. 4-Bromofluorobenzene		96	%	S-8260B		9/3/98	AG		5206	72-131
Benzidine		<25	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	25
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5

Corrected

Date: 05-19-99

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106035

Field Code: TSB-6 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
2,4-dichlorophenol		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
bis (2-chloroethyl) ether		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Isophorone		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
n-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
N-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	12.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Anthracene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Fluorene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Pyrene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
2-methylnaphthalene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Phenol		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Surr. 2-Fluorophenol		61	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	25-121
Surr. Phenol-d6		63	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	24-113
Surr. Nitroobenzene-d5		63	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	23-120
Surr. 2-Fluorobiphenyl		71	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	30-115
Surr. 2,4,6-Tribromophenol		57	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	19-122
Surr. Terphenyl-d14		86	%	S-8270C	9/8/98	9/16/98	DG	4915	5362	28-137

**Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 23

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106035

Field Code: TSB-6 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Chlordane		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
DDT		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Dieldrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Endosulfan		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Endrin		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
Heptachlor		<50	ug/Kg	*****S-8080	8/29/98	9/22/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Barium		242	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Cadmium		0.36	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.10
Chromium		4.4	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Lead		7.3	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471A	8/27/98	8/28/98	MS	4804	5149	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Silver		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Copper		1.8	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Iron		3,100	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Manganese		27	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Zinc		9.7	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Aluminum		4,900	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Boron		11	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	10
Cobalt		6.1	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Molybdenum		1.8	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Nickel		<0.01	mg/Kg	S 6010B	9/11/98	9/15/98	SA	4922	5340	0.01
Cyanide		<0.25	mg/Kg	S 4500 CN,CE		8/27/98	RC		5128	0.25
Fluoride		5.7	mg/Kg	E 300.0		9/19/98	JS		5419	0.2
Nitrate		1.9	mg/Kg	E 300.0		9/19/98	JS		5419	0.2
Chloride		37	mg/Kg	E 300.0		9/19/98	JS		5419	1.0
Sulfate		95	mg/Kg	E 300.0		9/19/98	JS		5419	1.0
TDS		510	mg/Kg	E 160.1		9/17/98	RS		5371	---
pH		8.4	s.u.	E 150.1		8/26/98	SA		5113	---
TRPHC		4,490	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		8/26/98	RC		5114	0.25
Total Radium		3.09	pCi/gm	E 901.1M			DS	---	---	---

** Sample extracted 3 days past hold time
***** Analytical Method corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 24

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106036

Field Code: TSB-7 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<1160	ug/Kg	S-8260B		9/3/98	AG		5206	1160
Acrylonitrile		<1160	ug/Kg	S-8260B		9/3/98	AG		5206	1160
Benzene		710	ug/Kg	S-8260B		9/3/98	AG		5206	232
Carbon tetrachloride		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Chlorobenzene		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
1,2-dichloroethane		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
1,1,2,2-tetrachloroethane		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
1,1,1-trichloroethane		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
1,1,2-trichloroethane		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
1,1,2-trichloroethylene		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Chloroform		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Dichlorobenzene		<464	ug/Kg	S-8260B		9/3/98	AG		5206	464
[illegible],1-dichloroethylene		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
[illegible]Dichloropropenes		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Ethylbenzene		5,700	ug/Kg	S-8260B		9/3/98	AG		5206	232
Bromodichloromethane		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Bromomethane		<1160	ug/Kg	S-8260B		9/3/98	AG		5206	1160
Chloromethane		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Dichlorodifluoromethane		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Dichloromethane		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Trichlorofluorometane		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Tetrachloroethylene		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Toluene		1,000	ug/Kg	S-8260B		9/3/98	AG		5206	232
Trichloroethylene		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Vinyl chloride		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
m,p-xylene		15,000	ug/Kg	S-8260B		9/3/98	AG		5206	232
o-xylene		660	ug/Kg	S-8260B		9/3/98	AG		5206	232
1,1-dichloroethane		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Ethylene dibromide		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
cis-1,2-dichlorethylene		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
trans-1,2-dichloroethylene		<232	ug/Kg	S-8260B		9/3/98	AG		5206	232
Methylene chloride		<1160	ug/Kg	S-8260B		9/3/98	AG		5206	1160
Surr. Dibromofluoromethane		110	%	S-8260B		9/3/98	AG		5206	72-130
Surr. Toluene-d8		98	%	S-8260B		9/3/98	AG		5206	77-127
Surr. 4-Bromofluorobenzene		108	%	S-8260B		9/3/98	AG		5206	72-131
Benzidine		*<50	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	50
Hexachlorobenzene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Pentachlorobenzene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
[illegible]1,2,4,5-tetrachlorobenzene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5

*Corrected Benzidine misidentification to <50 mg/kg

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106036

Field Code: TSB-7 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
2,4-dichlorophenol		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
2,4,5-trichlorophenol		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
2,4,6-trichlorophenol		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
bis (2-chloroethyl) ether		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
bis (2-chloroisopropyl) ether		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
bis (chloromethyl) ether		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
3,3-dichlorobenzidine		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
2,4-dinitrotoluene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Diphenylhydrazine		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
Hexachlorobutadiene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Hexachlorocyclopentadiene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Isophorone		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
Nitrobenzene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
2,4-dinitro-o-cresol		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
2,4-dinitrophenols		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
n-nitrosodiethylamine		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
N-nitrosodimethylamine		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
N-nitrosodibutylamine		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
N-nitrosodiphenylamine		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
N-nitrosopyrrolidine		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Pentachlorophenol		<25	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	25
Dibutyl phthalate		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
di-2-ethylhexyl phthalate		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Diethyl phthalate		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Dimethyl phthalate		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Anthracene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
3,4-benzofluoranthene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Benzo(k)fluoranthene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Fluoranthene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Fluorene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Phenanthrene		<5	mg/Kg	S-8270C	**9/8/98	9/22/98	JG	4911	5502	5
Pyrene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
2-methylnaphthalene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Phenol		<2.5	mg/Kg	S 8270C	**9/8/98	9/16/98	DG	4915	5362	2.5
Surr. 2-Fluorophenol	***LSR	7.4	%	S 8270C	9/8/98	9/22/98	JG	4911	5502	25-121
Surr. Phenol-d6	***LSR	8.2	%	S 8270C	9/8/98	9/22/98	JG	4911	5502	24-113
Surr. Nitrobenzene-d5	***LSR	7.6	%	S 8270C	9/8/98	9/22/98	JG	4911	5502	23-120
Surr. 2-Fluorobiphenyl	***LSR	14	%	S 8270C	9/8/98	9/22/98	JG	4911	5502	30-115
Surr. 2,4,6-Tribromophenol	***LSR	7.4	%	S 8270C	9/8/98	9/22/98	JG	4911	5502	19-122
Surr. Terphenyl-d14	***LSR	19	%	S 8270C	9/8/98	9/22/98	JG	4911	5502	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106036

Field Code: TSB-7 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		2.2	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Barium		194	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Cadmium		0.3	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.10
Chromium		3.7	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Lead		1.7	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471A	8/27/98	8/28/98	MS	4804	5149	0.10
Selenium		<0.01	mg/Kg	S 6010B	9/11/98	9/15/98	SA	4922	5340	0.01
Silver		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Copper		1.7	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Iron		2,600	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Manganese		24	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Zinc		6.4	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Aluminum		4,200	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Boron		15	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	10
Cobalt		6.2	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Molybdenum		1.6	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Nickel		6.5	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Cyanide		<0.25	mg/Kg	4500 CN,CE		8/27/98	RC		5128	0.25
Fluoride		1.1	mg/Kg	E 300.0		9/19/98	JS		5419	0.2
Nitrate		2.3	mg/Kg	E 300.0		9/19/98	JS		5419	0.2
Chloride		320	mg/Kg	E 300.0		9/19/98	JS		5419	5.0
Sulfate		140	mg/Kg	E 300.0		9/19/98	JS		5419	2.0
TDS		1,000	mg/Kg			9/17/98	RS		5371	---
pH		9.3	s.u.	E 150.1						
TRPHC		20,000	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		4.8	mg/Kg	SM 5530 A,D		8/26/98	RC		5114	0.25
Total Radium		11.06	pCi/gm	E 901.1M			DS	---	---	---

***LSR Low surrogate recovery due to matrix.
** Sample extracted 3 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106037

Field Code: TSB-7 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<1260	ug/Kg	S-8260B		9/3/98	AG		5206	1260
Acrylonitrile		<1260	ug/Kg	S-8260B		9/3/98	AG		5206	1260
Benzene		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Carbon tetrachloride		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Chlorobenzene		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
1,2-dichloroethane		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
1,1,2,2-tetrachloroethane		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
1,1,1-trichloroethane		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
1,1,2-trichloroethane		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
1,1,2-trichloroethylene		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Chloroform		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Dichlorobenzene		<504	ug/Kg	S-8260B		9/3/98	AG		5206	504
1,1-dichloroethylene		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Dichloropropenes		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Ethylbenzene		9,900	ug/Kg	S-8260B		9/3/98	AG		5206	252
Bromodichloromethane		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Bromomethane		<1260	ug/Kg	S-8260B		9/3/98	AG		5206	1260
Chloromethane		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Dichlorodifluoromethane		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Dichloromethane		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Trichlorofluorometane		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Tetrachloroethylene		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Toluene		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Trichloroethylene		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Vinyl chloride		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
m,p-xylene		41,000	ug/Kg	S-8260B		9/3/98	AG		5206	252
o-xylene		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
1,1-dichloroethane		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Ethylene dibromide		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
cis-1,2-dichlorethylene		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
trans-1,2-dichloroethylene		<252	ug/Kg	S-8260B		9/3/98	AG		5206	252
Methylene chloride		<1260	ug/Kg	S-8260B		9/3/98	AG		5206	1260
Surr. Dibromofluoromethane		112	%	S-8260B		9/3/98	AG		5206	72-130
Surr. Toluene-d8		105	%	S-8260B		9/3/98	AG		5206	77-127
Surr. 4-Bromofluorobenzene		114	%	S-8260B		9/3/98	AG		5206	72-131
Benzidine		*<50	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	50
Hexachlorobenzene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Pentachlorobenzene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
1,2,4,5-tetrachlorobenzene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5

*Corrected Benzidine misidentification to <50 mg/kg

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106037

Field Code: TSB-7 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
2,4-dichlorophenol		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
2,4,5-trichlorophenol		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
2,4,6-trichlorophenol		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
bis (2-chloroethyl) ether		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
bis (2-chloroisopropyl) ether		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
bis (chloromethyl) ether		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
3,3-dichlorobenzidine		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
2,4-dinitrotoluene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Diphenylhydrazine		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
Hexachlorobutadiene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Hexachlorocyclopentadiene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Isophorone		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
Nitrobenzene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
2,4-dinitro-o-cresol		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
2,4-dinitrophenols		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
n-nitrosodiethylamine		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
N-nitrosodimethylamine		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
N-nitrosodibutylamine		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
N-nitrosodiphenylamine		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
N-nitrosopyrrolidine		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Pentachlorophenol		<6.25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	6.25
Dibutyl phthalate		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
di-2-ethylhexyl phthalate		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Diethyl phthalate		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Dimethyl phthalate		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Anthracene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
3,4-benzofluoranthene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Benzo(k)fluoranthene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Fluoranthene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Fluorene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Phenanthrene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Pyrene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Naphthalene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
1-methylnaphthalene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
2-methylnaphthalene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Benzo-a-pyrene		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Phenol		<5	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	5
Surr. 2-Fluorophenol		53	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	25-121
Surr. Phenol-d6		61	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	24-113
Surr. Nitroobenzene-d5		72	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	23-120
Surr. 2-Fluorobiphenyl		77	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	30-115
Surr. 2,4,6-Tribromophenol		42	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	19-122
Surr. Terphenyl-d14		99	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	28-137

Corrected - Added Phenol result.

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106037

Field Code: TSB-7 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
Chlordane		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
DDT		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
Endrin		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		2	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Barium		600	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Cadmium		0.35	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.10
Chromium		2.8	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Lead		1.8	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471A	8/27/98	8/28/98	MS	4804	5149	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Silver		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Copper		3.4	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Iron		1,600	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Manganese		16	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Zinc		4.5	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Aluminum		3,200	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Boron		13	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	10
Cobalt		5.6	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Molybdenum		2.1	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Nickel		<0.01	mg/Kg	S 6010B	9/11/98	9/15/98	SA	4922	5340	0.01
Cyanide		<0.25	mg/Kg	4500 CN,CE		8/27/98	RC		5128	0.25
Fluoride		8.5	mg/Kg	E 300.0		9/19/98	JS		5420	0.2
Nitrate		<0.2	mg/Kg	E 300.0		9/19/98	JS		5420	0.2
Chloride		760	mg/Kg	E 300.0		9/19/98	JS		5420	2.0
Sulfate		74	mg/Kg	E 300.0		9/19/98	JS		5420	10.0
TDS		2,100	mg/Kg			9/17/98	RS		5371	---
pH		9.1	s.u.	E 150.1		8/26/98	SA		5113	---
TRPHC		22,900	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		4.3	mg/Kg	SM 5530 A,D		8/26/98	RC		5114	0.25
Total Radium		1.01	pCi/gm	E 901.1M			DS	---	---	---

** Sample extracted 3 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 30

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106038

Field Code: TSB-7 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<390	ug/Kg	S-8260B		9/3/98	AG		5206	390
Acrylonitrile		<390	ug/Kg	S-8260B		9/3/98	AG		5206	390
Benzene		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Carbon tetrachloride		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Chlorobenzene		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
1,2-dichloroethane		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
1,1,2,2-tetrachloroethane		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
1,1,1-trichloroethane		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
1,1,2-trichloroethane		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
1,1,2-trichloroethylene		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Chloroform		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Dichlorobenzene		<156	ug/Kg	S-8260B		9/3/98	AG		5206	156
1,1-dichloroethylene		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Dichloropropenes		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Ethylbenzene		600	ug/Kg	S-8260B		9/3/98	AG		5206	78
Bromodichloromethane		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Bromomethane		<390	ug/Kg	S-8260B		9/3/98	AG		5206	390
Chloromethane		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Dichlorodifluoromethane		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Dichloromethane		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Trichlorofluorometane		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Tetrachloroethylene		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Toluene		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Trichloroethylene		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Vinyl chloride		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
m,p-xylene		2,100	ug/Kg	S-8260B		9/3/98	AG		5206	78
o-xylene		89	ug/Kg	S-8260B		9/3/98	AG		5206	78
1,1-dichloroethane		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Ethylene dibromide		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
cis-1,2-dichlorethylene		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
trans-1,2-dichloroethylene		<78	ug/Kg	S-8260B		9/3/98	AG		5206	78
Methylene chloride		<390	ug/Kg	S-8260B		9/3/98	AG		5206	390
Surr. Dibromofluoromethane		107	%	S-8260B		9/3/98	AG		5206	72-130
Surr. Toluene-d8		93	%	S-8260B		9/3/98	AG		5206	77-127
Surr. 4-Bromofluorobenzene		98	%	S-8260B		9/3/98	AG		5206	72-131
Benzidine		*<250	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	250
Hexachlorobenzene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Pentachlorobenzene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
1,2,4,5-tetrachlorobenzene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25

*Corrected Benzidine misidentification to <250 mg/kg

Corrected

Date: 05-19-99

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106038

Field Code: TSB-7 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
2,4-dichlorophenol		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
2,4,5-trichlorophenol		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
2,4,6-trichlorophenol		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
bis (2-chloroethyl) ether		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
bis (2-chloroisopropyl) ether		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
bis (chloromethyl) ether		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
3,3-dichlorobenzidine		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
2,4-dinitrotoluene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Diphenylhydrazine		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
Hexachlorobutadiene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Hexachlorocyclopentadiene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Isophorone		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
Nitrobenzene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
2,4-dinitro-o-cresol		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
2,4-dinitrophenols		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
n-nitrosodiethylamine		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
N-nitrosodimethylamine		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
N-nitrosodibutylamine		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
N-nitrosodiphenylamine		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
N-nitrosopyrrolidine		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Pentachlorophenol		<125	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	125
Dibutyl phthalate		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
di-2-ethylhexyl phthalate		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Diethyl phthalate		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Dimethyl phthalate		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Anthracene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
3,4-benzofluoranthene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Benzo(k)fluoranthene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Fluoranthene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Fluorene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Phenanthrene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Pyrene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Naphthalene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
1-methylnaphthalene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
2-methylnaphthalene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Benzo-a-pyrene		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Phenol		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
monomethylnaphthalenes		<25	mg/Kg	S-8270C	**9/8/98	9/18/98	JG	4916	5412	25
Surr. 2-Fluorophenol		59	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	25-121
Surr. Phenol-d6		66	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	24-113
Surr. Nitroobenzene-d5		74	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	23-120
Surr. 2-Fluorobiphenyl		81	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	30-115
Surr. 2,4,6-Tribromophenol		46	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	19-122
Surr. Terphenyl-d14		100	%	S-8270C	9/8/98	9/18/98	JG	4916	5412	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488
Sample Number: 106038

Field Code: TSB-7 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
Chlordane		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
DDT		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
Endrin		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S 8080	8/29/98	9/22/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	8/26/98	8/26/98	RC	4796	5112	0.1
Arsenic		2.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Barium		277	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Cadmium		0.32	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.10
Chromium		5.9	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Lead		2.4	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471A	8/27/98	8/28/98	MS	4804	5149	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Silver		<0.50	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Copper		2.5	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Iron		3,900	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Manganese		28	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Zinc		8.3	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	2.0
Aluminum		6,600	mg/Kg	S 6010B	9/11/98	9/17/98	RR	4922	5373	10
Boron		17	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	10
Cobalt		6.3	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	0.50
Molybdenum		2.3	mg/Kg	S 6010B	9/11/98	9/15/98	RR	4922	5340	1.0
Nickel		<0.01	mg/Kg	S 6010B	9/11/98	9/15/98	SA	4922	5340	0.01
Cyanide		<0.25	mg/Kg	4500 CN,CE		8/27/98	RC		5128	0.25
Fluoride		4.2	mg/Kg	E 300.0		9/19/98	JS		5420	0.4
Nitrate		<0.2	mg/Kg	E 300.0		9/19/98	JS		5420	0.2
Chloride		990	mg/Kg	E 300.0		9/19/98	JS		5420	10.0
Sulfate		18	mg/Kg	E 300.0		9/19/98	JS		5420	1.0
TDS		1,800	mg/Kg	E 160.1		9/17/98	RS		5371	---
pH		8.9	s.u.	E 150.1		8/26/98	SA		5113	---
TRPHC		139	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		3.8	mg/Kg	SM 5530 A,D		8/26/98	RC		5114	0.25
Total Radium		3.76	pCi/gm	E 901.1M			DS	---	---	---

** Sample extracted 3 days past hold time

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/1/98		5183
Acrylonitrile		<5	ug/L	5	9/1/98		5183
Benzene		<1	ug/L	1	9/1/98		5183
Carbon tetrachloride		<1	ug/L	1	9/1/98		5183
Chlorobenzene		<1	ug/L	1	9/1/98		5183
1,2-dichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/1/98		5183
1,1,1-trichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2-trichloroethane		<1	ug/L	1	9/1/98		5183
1,1,2-trichloroethylene		<1	ug/L	1	9/1/98		5183
Chloroform		<1	ug/L	1	9/1/98		5183
Dichlorobenzene		<2	ug/L	2	9/1/98		5183
1,1-dichloroethylene		<1	ug/L	1	9/1/98		5183
[illegible]chloropropenes		<1	ug/L	1	9/1/98		5183
Ethylbenzene		<1	ug/L	1	9/1/98		5183
Bromodichloromethane		<1	ug/L	1	9/1/98		5183
Bromomethane		<5	ug/L	5	9/1/98		5183
Chloromethane		<1	ug/L	1	9/1/98		5183
Dichlorodifluoromethane		<1	ug/L	1	9/1/98		5183
Dichloromethane		<1	ug/L	1	9/1/98		5183
Trichlorofluoromethane		<1	ug/L	1	9/1/98		5183
Tetrachloroethylene		<1	ug/L	1	9/1/98		5183
Toluene		<1	ug/L	1	9/1/98		5183
Trichloroethylene		<1	ug/L	1	9/1/98		5183
Vinyl chloride		<1	ug/L	1	9/1/98		5183
m,p-xylene		<1	ug/L	1	9/1/98		5183
o-xylene		<1	ug/L	1	9/1/98		5183
1,1-dichloroethane		<1	ug/L	1	9/1/98		5183
Ethylene dibromide		<1	ug/L	1	9/1/98		5183
cis-1,2-dichlorethylene		<1	ug/L	1	9/1/98		5183
trans-1,2-dichloroethylene		<1	ug/L	1	9/1/98		5183
Methylene chloride		<5	ug/L	5	9/1/98		5183
Surr. Dibromofluoromethane		120	%	72-130	9/1/98		5183
Surr. Toluene-d8		107	%	77-127	9/1/98		5183
Surr. 4-Bromofluorobenzene		99	%	72-131	9/1/98		5183
Acrolein		<125	ug/Kg	125	9/3/98		5205
Acrylonitrile		<125	ug/Kg	125	9/3/98		5205
Benzene		<25	ug/Kg	25	9/3/98		5205
Carbon tetrachloride		<25	ug/Kg	25	9/3/98		5205
[illegible]robenzene		<25	ug/Kg	25	9/3/98		5205

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,2-dichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,1-trichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2-trichloroethane		<25	ug/Kg	25	9/3/98		5205
1,1,2-trichloroethylene		<25	ug/Kg	25	9/3/98		5205
Chloroform		<25	ug/Kg	25	9/3/98		5205
Dichlorobenzene		<50	ug/Kg	****50	9/3/98		5205
1,1-dichloroethylene		<25	ug/Kg	****25	9/3/98		5205
Dichloropropenes		<25	ug/Kg	25	9/3/98		5205
Ethylbenzene		<25	ug/Kg	25	9/3/98		5205
Bromodichloromethane		<25	ug/Kg	25	9/3/98		5205
Bromomethane		<125	ug/Kg	125	9/3/98		5205
Chloromethane		<25	ug/Kg	25	9/3/98		5205
Dichlorodifluoromethane		<25	ug/Kg	25	9/3/98		5205
Dichloromethane		<25	ug/Kg	25	9/3/98		5205
Trichlorofluoromethane		<25	ug/Kg	25	9/3/98		5205
Tetrachloroethylene		<25	ug/Kg	25	9/3/98		5205
Toluene		<25	ug/Kg	25	9/3/98		5205
Trichloroethylene		<25	ug/Kg	25	9/3/98		5205
Vinyl chloride		<25	ug/Kg	25	9/3/98		5205
m,p-xylene		<25	ug/Kg	25	9/3/98		5205
o-xylene		<25	ug/Kg	25	9/3/98		5205
1,1-dichloroethane		<25	ug/Kg	25	9/3/98		5205
Ethylene dibromide		<25	ug/Kg	25	9/3/98		5205
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/3/98		5205
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/3/98		5205
Methylene chloride		<125	ug/Kg	125	9/3/98		5205
Surr. Dibromofluoromethane		101	%	72-130	9/3/98		5205
Surr. Toluene-d8		99	%	77-127	9/3/98		5205
Surr. 4-Bromofluorobenzene		102	%	72-131	9/3/98		5205
Acrolein		<125	ug/Kg	125	9/3/98		5206
Acrylonitrile		<125	ug/Kg	125	9/3/98		5206
Benzene		<25	ug/Kg	25	9/3/98		5206
Carbon tetrachloride		<25	ug/Kg	25	9/3/98		5206
Chlorobenzene		<25	ug/Kg	25	9/3/98		5206
1,2-dichloroethane		<25	ug/Kg	25	9/3/98		5206
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/3/98		5206
1,1,1-trichloroethane		<25	ug/Kg	25	9/3/98		5206
1,1,2-trichloroethane		<25	ug/Kg	25	9/3/98		5206
1,1,2-trichloroethylene		<25	ug/Kg	25	9/3/98		5206
Chloroform		<25	ug/Kg	25	9/3/98		5206
Dichlorobenzene		<50	ug/Kg	2	9/3/98		5206
1,1-dichloroethylene		<25	ug/Kg	50	9/3/98		5206
Dichloropropenes		<25	ug/Kg	25	9/3/98		5206
Ethylbenzene		<25	ug/Kg	25	9/3/98		5206

**** Corrected reporting limit.

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Bromodichloromethane		<25	ug/Kg	25	9/3/98		5206
Bromomethane		<125	ug/Kg	125	9/3/98		5206
Chloromethane		<25	ug/Kg	25	9/3/98		5206
Dichlorodifluoromethane		<25	ug/Kg	25	9/3/98		5206
Dichloromethane		<25	ug/Kg	25	9/3/98		5206
Trichlorofluoromethane		<25	ug/Kg	25	9/3/98		5206
Tetrachloroethylene		<25	ug/Kg	25	9/3/98		5206
Toluene		<25	ug/Kg	25	9/3/98		5206
Trichloroethylene		<25	ug/Kg	25	9/3/98		5206
Vinyl chloride		<25	ug/Kg	25	9/3/98		5206
m,p-xylene		<25	ug/Kg	25	9/3/98		5206
o-xylene		<25	ug/Kg	25	9/3/98		5206
1,1-dichloroethane		<25	ug/Kg	25	9/3/98		5206
Ethylene dibromide		<25	ug/Kg	25	9/3/98		5206
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/3/98		5206
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/3/98		5206
Methylene chloride		<125	ug/Kg	125	9/3/98		5206
Surr. Dibromofluoromethane		99	%	72-130	9/3/98		5206
Surr. Toluene-d8		93	%	77-127	9/3/98		5206
Surr. 4-Bromofluorobenzene		94	%	72-131	9/3/98		5206
Total Mercury		<0.10	mg/Kg	0.1	8/28/98	4804	5149
Cyanide		<0.01	mg/Kg	0.01	8/27/98		5128
Fluoride		<0.2	mg/kg	0.2	9/3/98		5199
Nitrate		<0.2	mg/kg	0.2	9/3/98		5199
Chloride		<1.0	mg/kg	1.0	9/3/98		5199
Fluoride		<0.2	mg/kg	0.2	9/2/98		5192
Nitrate		<0.2	mg/kg	0.2	9/2/98		5192
Chloride		<1.0	mg/kg	1.0	9/2/98		5192
Sulfate		<1.0	mg/kg	1.0	9/3/98		5199
Sulfate		<1.0	mg/kg	1.0	9/19/98		5420
Fluoride		<0.2	mg/kg	0.2	9/19/98		5419
Nitrate		<0.2	mg/kg	0.2	9/19/98		5419
Chloride		<1.0	mg/kg	1.0	9/19/98		5419
Sulfate		<1.0	mg/kg	1.0	9/19/98		5419
Fluoride		<0.2	mg/kg	0.2	9/19/98		5420
Nitrate		<0.2	mg/kg	0.2	9/19/98		5420
Chloride		<1.0	mg/kg	1.0	9/19/98		5420
Sulfate		<1.0	mg/kg	1.0	9/19/98		5420
PCBs		<0.1	mg/kg	0.1	9/3/98	4795	5204
TRPHC		<10.0	mg/kg	10	8/30/98	4810	5168
MTBE		<0.050	mg/kg	0.050	8/20/98		5031
Benzene		<0.050	mg/kg	0.050	8/20/98		5031
Toluene		<0.050	mg/kg	0.050	8/20/98		5031
Ethylbenzene		<0.050	mg/kg	0.050	8/20/98		5031
m,p,o-xylene		<0.050	mg/kg	0.050	8/20/98		5031

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Arsenic		<0.50	mg/kg	0.50	9/15/98	4922	5340
Barium		<0.50	mg/kg	0.50	9/15/98	4922	5340
Cadmium		<0.10	mg/kg	0.10	9/15/98	4922	5340
Chromium		<0.50	mg/kg	0.50	9/15/98	4922	5340
Lead		<0.50	mg/kg	0.50	9/15/98	4922	5340
Selenium		<0.50	mg/kg	0.50	9/15/98	4922	5340
Silver		<0.50	mg/kg	0.50	9/15/98	4922	5340
Uranium		<2.0	mg/kg	2.0	9/15/98	4922	5340
Copper		<1.0	mg/kg	1.0	9/15/98	4922	5340
Iron		<10	mg/kg	10	9/17/98	4922	5373
Manganese		<1.0	mg/kg	1.0	9/15/98	4922	5340
Zinc		<2.0	mg/kg	2.0	9/15/98	4922	5340
Aluminum		<10	mg/kg	10	9/17/98	4922	5373
Boron		<10	mg/kg	10	9/15/98	4922	5340
Cobalt		<0.50	mg/kg	0.50	9/15/98	4922	5340
Molybdenum		<1.0	mg/kg	1.0	9/15/98	4922	5340
Nickel		<0.50	mg/kg	0.50	9/15/98	4922	5340
[illegible]enzidine		<2.5	mg/kg	2.5	9/16/98	4915	5362
Hexachlorobenzene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Pentachlorobenzene		<0.25	mg/kg	0.25	9/16/98	4915	5362
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Hexachloroethane		<0.25	mg/kg	0.25	9/16/98	4915	5362
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/16/98	4915	5362
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/16/98	4915	5362
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/16/98	4915	5362
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/16/98	4915	5362
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/16/98	4915	5362
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/16/98	4915	5362
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/16/98	4915	5362
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Diphenylhydrazine		<1.25	mg/kg	1.25	9/16/98	4915	5362
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Isophorone		<1.25	mg/kg	1.25	9/16/98	4915	5362
Nitrobenzene		<0.25	mg/kg	0.25	9/16/98	4915	5362
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/16/98	4915	5362
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/16/98	4915	5362
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/16/98	4915	5362
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/16/98	4915	5362
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/16/98	4915	5362
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/16/98	4915	5362
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/16/98	4915	5362
Pentachlorophenol		<1.25	mg/kg	1.25	9/16/98	4915	5362
[illegible]Dibutyl phthalate		<0.25	mg/kg	0.25	9/16/98	4915	5362
[illegible]di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/16/98	4915	5362

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Diethyl phthalate		<0.25	mg/kg	0.25	9/16/98	4915	5362
Dimethyl phthalate		<0.25	mg/kg	0.25	9/16/98	4915	5362
Anthracene		<0.25	mg/kg	0.25	9/16/98	4915	5362
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Fluoranthene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Fluorene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Phenanthrene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Pyrene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Naphthalene		<0.25	mg/kg	0.25	9/16/98	4915	5362
1-methylnaphthalene		<0.25	mg/kg	0.25	9/16/98	4915	5362
2-methylnaphthalene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/16/98	4915	5362
Surr. 2-Fluorophenol		51	%	25-121	9/16/98	4915	5362
Surr. Phenol-d6		54	%	24-113	9/16/98	4915	5362
Surr. Nitroobenzene-d5		52	%	23-120	9/16/98	4915	5362
Surr. 2-Fluorobiphenyl		54	%	30-115	9/16/98	4915	5362
urr. 2,4,6-Tribromophenol		72	%	19-122	9/16/98	4915	5362
Surr. Terphenyl-d14		55	%	28-137	9/16/98	4915	5362
Benzidine		<2.5	mg/kg	2.5	9/18/98	4916	5412
Hexachlorobenzene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Pentachlorobenzene		<0.25	mg/kg	0.25	9/18/98	4916	5412
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Hexachloroethane		<0.25	mg/kg	0.25	9/18/98	4916	5412
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/18/98	4916	5412
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/18/98	4916	5412
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/18/98	4916	5412
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Diphenylhydrazine		<1.25	mg/kg	1.25	9/18/98	4916	5412
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Isophorone		<1.25	mg/kg	1.25	9/18/98	4916	5412
Nitrobenzene		<0.25	mg/kg	.0.25	9/18/98	4916	5412
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/18/98	4916	5412
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/18/98	4916	5412
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/18/98	4916	5412
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/18/98	4916	5412
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/18/98	4916	5412
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/18/98	4916	5412
-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/18/98	4916	5412
Pentachlorophenol		<1.25	mg/kg	1.25	9/18/98	4916	5412

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Dibutyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
Diethyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
Dimethyl phthalate		<0.25	mg/kg	0.25	9/18/98	4916	5412
Anthracene		<0.25	mg/kg	0.25	9/18/98	4916	5412
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Fluoranthene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Fluorene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Phenanthrene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Pyrene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Naphthalene		<0.25	mg/kg	0.25	9/18/98	4916	5412
1-methylnaphthalene		<0.25	mg/kg	0.25	9/18/98	4916	5412
2-methylnaphthalene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/18/98	4916	5412
Surr. 2-Fluorophenol		48	%	25-121	9/18/98	4916	5412
Surr. Phenol-d6		51	%	24-113	9/18/98	4916	5412
Surr. Nitroobenzene-d5		52	%	23-120	9/18/98	4916	5412
Surr. 2-Fluorobiphenyl		53	%	30-115	9/18/98	4916	5412
Surr. 2,4,6-Tribromophenol		37	%	19-122	9/18/98	4916	5412
Surr. Terphenyl-d14		59	%	28-137	9/18/98	4916	5412
Benzidine		<2.5	mg/kg	2.5	9/21/98	4916	5480
Hexachlorobenzene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Pentachlorobenzene		<0.25	mg/kg	0.25	9/21/98	4916	5480
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Hexachloroethane		<0.25	mg/kg	0.25	9/21/98	4916	5480
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/21/98	4916	5480
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/21/98	4916	5480
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/21/98	4916	5480
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/21/98	4916	5480
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/21/98	4916	5480
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/21/98	4916	5480
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/21/98	4916	5480
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Diphenylhydrazine		<1.25	mg/kg	1.25	9/21/98	4916	5480
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Isophorone		<1.25	mg/kg	1.25	9/21/98	4916	5480
Nitrobenzene		<0.25	mg/kg	0.25	9/21/98	4916	5480
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/21/98	4916	5480
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/21/98	4916	5480
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/21/98	4916	5480
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/21/98	4916	5480
nitrosodibutylamine		<1.25	mg/kg	1.25	9/21/98	4916	5480
nitrosodiphenylamine		<0.25	mg/kg	0.25	9/21/98	4916	5480

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/21/98	4916	5480
Pentachlorophenol		<1.25	mg/kg	1.25	9/21/98	4916	5480
Dibutyl phthalate		<0.25	mg/kg	0.25	9/21/98	4916	5480
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/21/98	4916	5480
Diethyl phthalate		<0.25	mg/kg	0.25	9/21/98	4916	5480
Dimethyl phthalate		<0.25	mg/kg	0.25	9/21/98	4916	5480
Anthracene		<0.25	mg/kg	0.25	9/21/98	4916	5480
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Fluoranthene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Fluorene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Phenanthrene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Pyrene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Naphthalene		<0.25	mg/kg	0.25	9/21/98	4916	5480
1-methylnaphthalene		<0.25	mg/kg	0.25	9/21/98	4916	5480
2-methylnaphthalene		<0.25	mg/kg	0.25	9/21/98	4916	5480
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/21/98	4916	5480
[illegible]rr. 2-Fluorophenol		49	%	25-121	9/21/98	4916	5480
[illegible]rr. Phenol-d6		52	%	24-113	9/21/98	4916	5480
Surr. Nitroobenzene-d5		53	%	23-120	9/21/98	4916	5480
Surr. 2-Fluorobiphenyl		55	%	30-115	9/21/98	4916	5480
Surr. 2,4,6-Tribromophenol		42	%	19-122	9/21/98	4916	5480
Surr. Terphenyl-d14		53	%	28-137	9/21/98	4916	5480
Benzidine		<2.5	mg/kg	2.5	9/22/98	4911	5502
Hexachlorobenzene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Pentachlorobenzene		<0.25	mg/kg	0.25	9/22/98	4911	5502
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Hexachloroethane		<0.25	mg/kg	0.25	9/22/98	4911	5502
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/22/98	4911	5502
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/22/98	4911	5502
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/22/98	4911	5502
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/22/98	4911	5502
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/22/98	4911	5502
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/22/98	4911	5502
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/22/98	4911	5502
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Diphenylhydrazine		<1.25	mg/kg	1.25	9/22/98	4911	5502
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Isophorone		<1.25	mg/kg	1.25	9/22/98	4911	5502
Nitrobenzene		<0.25	mg/kg	0.25	9/22/98	4911	5502
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/22/98	4911	5502
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/22/98	4911	5502
[illegible]itrosodiethylamine		<0.25	mg/kg	0.25	9/22/98	4911	5502
[illegible]itrosodimethylamine		<0.25	mg/kg	0.25	9/22/98	4911	5502

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/22/98	4911	5502
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/22/98	4911	5502
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/22/98	4911	5502
Pentachlorophenol		<1.25	mg/kg	1.25	9/22/98	4911	5502
Dibutyl phthalate		<0.25	mg/kg	0.25	9/22/98	4911	5502
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/22/98	4911	5502
Diethyl phthalate		<0.25	mg/kg	0.25	9/22/98	4911	5502
Dimethyl phthalate		<0.25	mg/kg	0.25	9/22/98	4911	5502
Anthracene		<0.25	mg/kg	0.25	9/22/98	4911	5502
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Fluoranthene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Fluorene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Phenanthrene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Pyrene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Naphthalene		<0.25	mg/kg	0.25	9/22/98	4911	5502
1-methylnaphthalene		<0.25	mg/kg	0.25	9/22/98	4911	5502
2-methylnaphthalene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/22/98	4911	5502
Surr. 2-Fluorophenol		48	%	25-121	9/22/98	4911	5502
Surr. Phenol-d6		56	%	24-113	9/22/98	4911	5502
Surr. Nitroobenzene-d5		48	%	23-120	9/22/98	4911	5502
Surr. 2-Fluorobiphenyl		59	%	30-115	9/22/98	4911	5502
Surr. 2,4,6-Tribromophenol		41	%	19-122	9/22/98	4911	5502
Surr. Terphenyl-d14		59	%	28-137	9/22/98	4911	5502

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	107	107	9/1/98	5183
1,1-Dichloroethene		100	ug/L	117	117	9/1/98	5183
Chloroform		100	ug/L	103	103	9/1/98	5183
1,2-Dichloropropane		100	ug/L	115	115	9/1/98	5183
Toluene		100	ug/L	119	119	9/1/98	5183
Chlorobenzene		100	ug/L	118	118	9/1/98	5183
Ethylbenzene		100	ug/L	115	115	9/1/98	5183
Vinyl chloride		100	ug/L	104	104	9/3/98	5205
1,1-Dichloroethene		100	ug/L	119	119	9/3/98	5205
`hloroform		100	ug/L	112	112	9/3/98	5205
',2-Dichloropropane		100	ug/L	106	106	9/3/98	5205
Toluene		100	ug/L	115	115	9/3/98	5205
Ethylbenzene		100	ug/L	112	112	9/3/98	5205
Vinyl chloride		100	ug/L	90	90	9/3/98	5206
1,1-Dichloroethene		100	ug/L	91	91	9/3/98	5206
Chloroform		100	ug/L	89	89	9/3/98	5206
1,2-Dichloropropane		100	ug/L	99	99	9/3/98	5206
Toluene		100	ug/L	84	84	9/3/98	5206
Chlorobenzene		100	ug/L	81	81	9/3/98	5206
Ethylbenzene		100	ug/L	80	80	9/3/98	5206
Fluoride		2.5	mg/L	2.445	98	9/3/98	5199
Nitrate		5.0	mg/L	4.9	98	9/3/98	5199
Chloride		12.5	mg/L	11.535	92	9/3/98	5199
Fluoride		2.5	mg/L	2.51	100	9/2/98	5192
Nitrate		5.0	mg/L	5.055	101	9/2/98	5192
Chloride		12.5	mg/L	12.02	96	9/2/98	5192
Sulfate		12.5	mg/L	12.3	98	9/3/98	5199
Sulfate		12.5	mg/L	13.48	108	9/19/98	5420
Fluoride		2.5	mg/L	2.53	101	9/19/98	5419
Nitrate		5.0	mg/L	5.155	103	9/19/98	5419
Chloride		12.5	mg/L	12.62	101	9/19/98	5419
Sulfate		12.5	mg/L	13.195	103	9/19/98	5419
Fluoride		2.5	mg/L	2.51	100	9/19/98	5420
Nitrate		5.0	mg/L	5.195	104	9/19/98	5420
hloride		12.5	mg/L	12.345	99	9/19/98	5420
Sulfate		12.5	mg/L	13.48	108	9/19/98	5420

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Order ID Number: 9808000488

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
PCBs		0.40	mg/L	0.45	112	9/3/98	5204
TRPHC		100	mg/L	99	99	8/30/98	5168
MTBE		0.100	mg/L	0.101	101	8/20/98	5031
Benzene		0.100	mg/L	0.092	92	8/20/98	5031
Toluene		0.100	mg/L	0.092	92	8/20/98	5031
Ethylbenzene		0.100	mg/L	0.092	92	8/20/98	5031
m,p,o-xylene		0.300	mg/L	0.269	90	8/20/98	5031
Arsenic		1.0	mg/L	1.0	100	9/15/98	5340
Barium		1.0	mg/L	0.98	98	9/15/98	5340
Cadmium		1.0	mg/L	0.99	99	9/15/98	5340
Chromium		1.0	mg/L	0.99	99	9/15/98	5340
Lead		1.0	mg/L	1.0	100	9/15/98	5340
Selenium		1.0	mg/L	0.99	99	9/15/98	5340
Silver		1.0	mg/L	0.98	98	9/15/98	5340
Uranium		1.0	mg/L	1.0	100	9/15/98	5340
Copper		1.0	mg/L	1.0	100	9/15/98	5340
Iron		250	mg/L	259	104	9/17/98	5373
Manganese		1.0	mg/L	1.0	100	9/15/98	5340
Zinc		1.0	mg/L	1.0	100	9/15/98	5340
Aluminum		100	mg/L	102	102	9/17/98	5373
Boron		1.0	mg/L	1.0	100	9/15/98	5340
Cobalt		1.0	mg/L	1.0	100	9/15/98	5340
Molybdenum		1.0	mg/L	0.98	98	9/15/98	5340
Nickel		1.0	mg/L	1.0	100	9/15/98	5340
TDS		1,000	mg/L	997	100	9/16/98	5364
TDS		1,000	mg/L	1,009	101	9/17/98	5371
Phenol		80	mg/L	77	96	9/16/98	5362
1,4-Dichlorobenzene		80	mg/L	75	94	9/16/98	5362
2-nitrophenol		80	mg/L	80	100	9/16/98	5362
2,4-Dichlorophenol		80	mg/L	86	108	9/16/98	5362
Hexachlorobutadiene		80	mg/L	74	93	9/16/98	5362
4-Chloro-3-methylphenol		80	mg/L	75	94	9/16/98	5362
2,4,6-Trichlorophenol		80	mg/L	71	89	9/16/98	5362
Acenaphthene		80	mg/L	78	98	9/16/98	5362
n-Nitrosodiphenylamine		80	mg/L	89	111	9/16/98	5362
Pentachlorophenol		80	mg/L	96	120	9/16/98	5362
Fluoranthene		80	mg/L	83	104	9/16/98	5362
Di-n-octylphthalate		80	mg/L	94	118	9/16/98	5362
Benzo(a)pyrene		80	mg/L	80	100	9/16/98	5362
Phenol		80	mg/L	76	95	9/18/98	5412
1,4-Dichlorobenzene		80	mg/L	67	84	9/18/98	5412
2-nitrophenol		80	mg/L	75	94	9/18/98	5412

Order ID Number: 9808000488

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
2,4-Dichlorophenol		80	mg/L	80	100	9/18/98	5412
Hexachlorobutadiene		80	mg/L	64	80	9/18/98	5412
4-Chloro-3-methylphenol		80	mg/L	67	84	9/18/98	5412
2,4,6-Trichlorophenol		80	mg/L	66	83	9/18/98	5412
Acenaphthene		80	mg/L	68	85	9/18/98	5412
n-Nitrosodiphenylamine		80	mg/L	86	104	9/18/98	5412
Pentachlorophenol		80	mg/L	89	111	9/18/98	5412
Fluoranthene		80	mg/L	74	93	9/18/98	5412
Di-n-octylphthalate		80	mg/L	91	114	9/18/98	5412
Benzo(a)pyrene		80	mg/L	69	86	9/18/98	5412
Phenol		80	mg/L	73	91	9/21/98	5480
1,4-Dichlorobenzene		80	mg/L	75	94	9/21/98	5480
2-nitrophenol		80	mg/L	79	99	9/21/98	5480
2,4-Dichlorophenol		80	mg/L	81	101	9/21/98	5480
Hexachlorobutadiene		80	mg/L	69	86	9/21/98	5480
4-Chloro-3-methylphenol		80	mg/L	70	88	9/21/98	5480
2,4,6-Trichlorophenol		80	mg/L	69	86	9/21/98	5480
Acenaphthene		80	mg/L	79	99	9/21/98	5480
n-Nitrosodiphenylamine		80	mg/L	82	102	9/21/98	5480
Pentachlorophenol		80	mg/L	84	105	9/21/98	5480
Fluoranthene		80	mg/L	76	95	9/21/98	5480
Di-n-octylphthalate		80	mg/L	79	99	9/21/98	5480
Benzo(a)pyrene		80	mg/L	78	98	9/21/98	5480
Phenol		80	mg/L	69	86	9/22/98	5502
1,4-Dichlorobenzene		80	mg/L	76	95	9/22/98	5502
2-nitrophenol		80	mg/L	78	98	9/22/98	5502
2,4-Dichlorophenol		80	mg/L	81	101	9/22/98	5502
Hexachlorobutadiene		80	mg/L	68	85	9/22/98	5502
4-Chloro-3-methylphenol		80	mg/L	69	86	9/22/98	5502
2,4,6-Trichlorophenol		80	mg/L	72	90	9/22/98	5502
Acenaphthene		80	mg/L	79	99	9/22/98	5502
n-Nitrosodiphenylamine		80	mg/L	84	105	9/22/98	5502
Pentachlorophenol		80	mg/L	87	109	9/22/98	5502
Fluoranthene		80	mg/L	77	96	9/22/98	5502
Di-n-octylphthalate		80	mg/L	79	99	9/22/98	5502
Benzo(a)pyrene		80	mg/L	78	78	9/22/98	5502

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 44

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	111	111	100	98	98	12	9/1/98		5183
Benzene		ug/L	<1	100	101	101	100	93	93	8.2	9/1/98		5183
Trichloroethene		ug/L	<1	100	96	96	100	90	90	6.5	9/1/98		5183
Toluene		ug/L	<1	100	111	111	100	101	101	9.4	9/1/98		5183
Chlorobenzene		ug/L	<1	100	101	101	100	93	93	8.2	9/1/98		5183
1,1-Dichloroethene		mg/Kg	<25	100	98	98	100	95	95	3.1	9/3/98		5205
Benzene		mg/Kg	<25	100	102	102	100	104	104	1.9	9/3/98		5205
Trichloroethene		mg/Kg	<25	100	108	108	100	108	108	0	9/3/98		5205
Toluene		mg/Kg	<25	100	100	100	100	101	101	1.0	9/3/98		5205
Chlorobenzene		mg/Kg	<25	100	88	88	100	87	87	1.1	9/3/98		5205
1,1-Dichloroethene		mg/Kg	<25	100	99	99	100	120	120	19	9/3/98		5206
enzene		mg/Kg	<25	100	104	104	100	119	119	13	9/3/98		5206
richloroethene		mg/Kg	<25	100	113	113	100	120	120	6.0	9/3/98		5206
Toluene		mg/Kg	<25	100	101	101	100	118	118	16.0	9/3/98		5206
Chlorobenzene		mg/Kg	<25	100	88	88	100	106	106	19	9/3/98		5206
Fluoride		mg/kg	0.42	2.5	2.8	95	2.5	2.84	97	2.1	9/2/98		5192
Nitrate		mg/kg	0.98	5.0	5.91	99	5.0	5.89	98	1.0	9/2/98		5192
Chloride		mg/kg	41	12.5	51.42	83	12.5	52.56	92	10.0	9/2/98		5192
Fluoride		mg/kg	2.2	2.5	4.71	100	2.5	4.75	102	2.0	9/3/98		5199
Nitrate		mg/kg	1.6	5.0	7.25	113	5.0	7.25	113	0.0	9/3/98		5199
Chloride		mg/kg	13.5	12.5	24.83	91	12.5	24.94	92	1.1	9/3/98		5199
Sulfate		mg/kg	28.5	12.5	35.91	59	12.5	36.2	62	5.0	9/3/98		5199
Sulfate		mg/kg	18.08	25	43.77	103	25	44.28	105	1.9	9/19/98		5420
Fluoride		mg/kg	1.1	5	6.03	99	5	5.99	96	3.1	9/19/98		5419
Nitrate		mg/kg	2.3	10.0	13.01	107	10.0	12.02	97	9.8	9/19/98		5419
Chloride		mg/kg	20.53	25.0	45.44	100	25.0	46.72	105	4.9	9/19/98		5419
Sulfate		mg/kg	9.36	25	35.63	105	12.5	36.25	108	2.8	9/19/98		5419
Fluoride		mg/kg	4.51	5	9.03	90	5	8.97	89	1.1	9/19/98		5420
Nitrate		mg/kg	<0.2	10.0	11.76	118	10.0	11.68	117	0.9	9/19/98		5420
Chloride		mg/kg	20.53	25.0	45.44	100	25.0	47.88	109	8.6	9/19/98		5420
Sulfate		mg/kg	18	25	43.77	103	12.5	44.28	105	1.9	9/19/98		5420
PCBs		mg/kg	<1.0	0.5	0.45	90	0.5	0.48	96	6.5	9/4/98	4795	5204
TRPHC		mg/kg	<10.0	250	231	92	250	220	88	4.4	8/30/98	4810	5168
MTBE		mg/kg	<0.050	5.00	4.97	99	5.00	4.73	95	4.1	8/20/98		5031
Benzene		mg/kg	<0.050	5.00	4.55	91	5.00	4.41	88	3.4	8/20/98		5031
Toluene		mg/kg	<0.050	5.00	4.61	92	5.00	4.46	89	3.3	8/20/98		5031
Ethylbenzene		mg/kg	<0.050	5.00	4.61	92	5.00	4.51	90	2.2	8/20/98		5031
m,p,o-xylene		mg/kg	<0.050	15.00	13.4	89	15.00	13.1	87	2.3	8/20/98		5031
Arsenic		mg/kg	<0.50	200	166	83	200	156	78	6.2	9/15/98	4922	5340
arium		mg/kg	<0.50	200	178	89	200	168	84	5.8	9/15/98	4922	5340
Cadmium		mg/kg	<0.10	200	169	85	200	158	79	7.3	9/15/98	4922	5340

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Order ID Number: 9808000488

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Chromium		mg/kg	<0.50	200	178	89	200	167	84	5.8	9/15/98	4922	5340
Lead		mg/kg	<0.50	200	165	83	200	157	79	4.9	9/15/98	4922	5340
Selenium		mg/kg	<0.50	200	156	78	200	150	75	3.9	9/15/98	4922	5340
Silver		mg/kg	<0.50	100	95	95	100	84	84	12	9/15/98	4922	5340
Uranium		mg/kg	<2.0	200	183	92	200	173	87	5.6	9/15/98	4922	5340
Copper		mg/kg	<1.0	200	170	85	200	164	82	3.6	9/15/98	4922	5340
Iron		mg/kg	<10	200	179	90	200	184	92	2.2	9/17/98	4922	5373
Manganese		mg/kg	<1.0	200	173	87	200	163	82	2.9	9/15/98	4922	5340
Zinc		mg/kg	<2.0	200	170	85	200	158	79	7.3	9/15/98	4922	5340
Aluminum		mg/kg	<10	200	209	105	200	215	108	2.8	9/17/98	4922	5373
Boron		mg/kg	<10	200	163	82	200	167	84	2.4	9/15/98	4922	5340
Cobalt		mg/kg	<0.50	200	168	84	200	162	81	3.6	9/15/98	4922	5340
Molybdenum		mg/kg	<1.0	200	174	87	200	160	82	5.9	9/15/98	4922	5340
Nickel		mg/kg	<0.50	200	172	86	200	161	81	6	9/15/98	4922	5340
Phenol		mg/Kg	<0.25	10.00	4.05	41	10.00	3.69	37	10	9/16/98	4915	5362
2-Chlorophenol		mg/Kg	<1.25	10.00	3.82	38	10.00	3.54	35	8.2	9/16/98	4915	5362
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	4.86	49	10.00	4.45	45	8.5	9/16/98	4915	5362
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	4.05	41	10.00	3.74	37	10	9/16/98	4915	5362
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	4.38	44	10.00	4.02	40	9.5	9/16/98	4915	5362
[illegible]Chloro-3-methylphenol		mg/Kg	<1.25	10.00	3.73	37	10.00	3.48	35	5.6	9/16/98	4915	5362
[illegible]enaphthene		mg/Kg	<0.25	10.00	5.04	50	10.00	4.79	48	4.1	9/16/98	4915	5362
4-Nitrophenol		mg/Kg	<1.25	10.00	2.75	28	10.00	2.46	25	11	9/16/98	4915	5362
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	4.59	46	10.00	4.35	44	4.4	9/16/98	4915	5362
Pentachlorophenol		mg/Kg	<1.25	10.00	3.74	37	10.00	3.45	35	5.6	9/16/98	4915	5362
Pyrene		mg/Kg	<0.25	10.00	4.58	46	10.00	4.51	45	2.2	9/16/98	4915	5362
Phenol		mg/Kg	<0.25	10.00	4.05	41	10.00	3.69	37	10	9/18/98	4916	5412
2-Chlorophenol		mg/Kg	<1.25	10.00	3.82	38	10.00	3.54	35	8.2	9/18/98	4916	5412
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	4.86	49	10.00	4.45	45	8.5	9/18/98	4916	5412
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	4.05	41	10.00	3.74	37	10	9/18/98	4916	5412
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	4.38	44	10.00	4.02	40	9.5	9/18/98	4916	5412
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	3.73	37	10.00	3.48	35	5.6	9/18/98	4916	5412
Acenaphthene		mg/Kg	<0.25	10.00	5.04	50	10.00	4.79	48	4.1	9/18/98	4916	5412
4-Nitrophenol		mg/Kg	<1.25	10.00	2.75	28	10.00	2.46	25	11	9/18/98	4916	5412
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	4.59	46	10.00	4.35	44	4.4	9/18/98	4916	5412
Pentachlorophenol		mg/Kg	<1.25	10.00	3.74	37	10.00	3.45	35	5.6	9/18/98	4916	5412
Pyrene		mg/Kg	<0.25	10.00	4.58	46	10.00	4.51	45	2.2	9/18/98	4916	5412
Phenol		mg/Kg	<0.25	10.00	4.05	41	10.00	3.69	37	10	9/21/98	4916	5480
2-Chlorophenol		mg/Kg	<1.25	10.00	3.82	38	10.00	3.54	35	8.2	9/18/98	4916	5480
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	4.86	49	10.00	4.45	45	8.5	9/18/98	4916	5480
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	4.05	41	10.00	3.74	37	10	9/18/98	4916	5480
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	4.38	44	10.00	4.02	40	9.5	9/18/98	4916	5480
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	3.73	37	10.00	3.48	35	5.6	9/18/98	4916	5480
Acenaphthene		mg/Kg	<0.25	10.00	5.04	50	10.00	4.79	48	4.1	9/18/98	4916	5480
4-Nitrophenol		mg/Kg	<1.25	10.00	2.75	28	10.00	2.46	25	11	9/18/98	4916	5480
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	4.59	46	10.00	4.35	44	4.4	9/18/98	4916	5480
Pentachlorophenol		mg/Kg	<1.25	10.00	3.74	37	10.00	3.45	35	5.6	9/18/98	4916	5480
Pyrene		mg/Kg	<0.25	10.00	4.58	46	10.00	4.51	45	2.2	9/18/98	4916	5480
[illegible]nol		mg/Kg	<0.25	10.00	4.05	41	10.00	3.69	37	10	9/22/98	4911	5502

Date: 10-6-98

Order ID Number: 9808000488

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
2-Chlorophenol		mg/Kg	<1.25	10.00	3.82	38	10.00	3.54	35	8.2	9/22/98	4911	5502
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	4.86	49	10.00	4.45	45	8.5	9/22/98	4911	5502
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	4.05	41	10.00	3.74	37	10	9/22/98	4911	5502
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	4.38	44	10.00	4.02	40	9.5	9/22/98	4911	5502
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	3.73	37	10.00	3.48	35	5.6	9/22/98	4911	5502
Acenaphthene		mg/Kg	<0.25	10.00	5.04	50	10.00	4.79	48	4.1	9/22/98	4911	5502
4-Nitrophenol		mg/Kg	<1.25	10.00	2.75	28	10.00	2.46	25	11	9/22/98	4911	5502
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	4.59	46	10.00	4.35	44	4.4	9/22/98	4911	5502
Pentachlorophenol		mg/Kg	<1.25	10.00	3.74	37	10.00	3.45	35	5.6	9/22/98	4911	5502
Pyrene		mg/Kg	<0.25	10.00	4.58	46	10.00	4.51	45	2.2	9/22/98	4911	5502

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000488

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
TDS		mg/Kg	2,100	2,200	4.7	9/16/98		5364
TDS		mg/Kg	1,800	1,760	2.2	9/17/98		5371
pH		s.u.	8	8	0	8/26/98		5113

AMERICAN RADIATION SERVICES, INC.

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American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106029	**ARS Sample I.D.:**	ARS-98-3169
Date Sampled:	8/21/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.02	N/A	pCi/gm	<0.038	N/A	Bq/gm	EPA 901.1M	9/3/98 1503	KH
Ra-228	<0.17	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	9/3/98 1503	KH
Pb-210	<1.16	N/A	pCi/gm	<0.043	N/A	Bq/gm	EPA 901.1M	9/3/98 1503	KH
Total Activity	3.28	N/A	pCi/gm	0.121	N/A	Bq/gm	EPA 901.1M	9/3/98 1503	KH

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106030	**ARS Sample I.D.:**	ARS-98-3170
Date Sampled:	8/21/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.72	1.47	pCi/gm	0.064	0.054	Bq/gm	EPA 901.1M	9/3/98 1607	KH
Ra-228	<0.09	N/A	pCi/gm	<0.003	N/A	Bq/gm	EPA 901.1M	9/3/98 1607	KH
Pb-210	2.21	1.97	pCi/gm	0.082	0.073	Bq/gm	EPA 901.1M	9/3/98 1607	KH
Total Activity	4.75	N/A	pCi/gm	0.176	N/A	Bq/gm	EPA 901.1M	9/3/98 1607	KH

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106031	**ARS Sample I.D.:**	ARS-98-3171
Date Sampled:	8/21/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.11	1.48	pCi/gm	0.078	0.055	Bq/gm	EPA 901.1M	9/3/98 1646	KH
Ra-228	0.65	0.25	pCi/gm	0.024	0.009	Bq/gm	EPA 901.1M	9/3/98 1646	KH
Pb-210	<0.96	N/A	pCi/gm	<0.036	N/A	Bq/gm	EPA 901.1M	9/3/98 1646	KH
Total Activity	9.37	N/A	pCi/gm	0.347	N/A	Bq/gm	EPA 901.1M	9/3/98 1646	KH

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106033	**ARS Sample I.D.:**	ARS-98-3172
Date Sampled:	8/21/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.84	N/A	pCi/gm	<0.031	N/A	Bq/gm	EPA 901.1M	9/3/98 1718	KH
Ra-228	<0.13	N/A	pCi/gm	<0.005	N/A	Bq/gm	EPA 901.1M	9/3/98 1718	KH
Pb-210	<0.90	N/A	pCi/gm	<0.033	N/A	Bq/gm	EPA 901.1M	9/3/98 1718	KH
Total Activity	1.00	N/A	pCi/gm	0.037	N/A	Bq/gm	EPA 901.1M	9/3/98 1718	KH

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106034	**ARS Sample I.D.:**	ARS-98-3173
Date Sampled:	8/21/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.61	1.39	pCi/gm	0.060	0.051	Bq/gm	EPA 901.1M	9/4/98 0827	KH
Ra-228	<0.15	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	9/4/98 0827	KH
Pb-210	<0.81	N/A	pCi/gm	<0.030	N/A	Bq/gm	EPA 901.1M	9/4/98 0827	KH
Total Activity	3.01	N/A	pCi/gm	0.111	N/A	Bq/gm	EPA 901.1M	9/4/98 0827	KH

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106035	**ARS Sample I.D.:**	ARS-98-3174
Date Sampled:	8/21/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Analysis Units	Analysis Result	Analysis Error $\pm 2\sigma$	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.96	N/A	pCi/gm	<0.036	N/A	Bq/gm	EPA 901.1M	9/3/98 1021	KH
Ra-228	0.81	0.38	pCi/gm	0.030	0.014	Bq/gm	EPA 901.1M	9/3/98 1021	KH
Pb-210	<1.07	N/A	pCi/gm	<0.040	N/A	Bq/gm	EPA 901.1M	9/3/98 1021	KH
Total Activity	3.09	N/A	pCi/gm	0.114	N/A	Bq/gm	EPA 901.1M	9/3/98 1021	KH

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106036	**ARS Sample I.D.:**	ARS-98-3175
Date Sampled:	8/21/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Analysis Units	Analysis Result	Analysis Error $\pm 2\sigma$	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.07	N/A	pCi/gm	<0.040	N/A	Bq/gm	EPA 901.1M	9/4/98 1001	KH
Ra-228	<0.17	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	9/4/98 1001	KH
Pb-210	2.52	2.01	pCi/gm	0.093	0.074	Bq/gm	EPA 901.1M	9/4/98 1001	KH
Total Activity	11.06	N/A	pCi/gm	0.409	N/A	Bq/gm	EPA 901.1M	9/4/98 1001	KH

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106037	**ARS Sample I.D.:**	ARS-98-3176
Date Sampled:	8/21/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.85	N/A	pCi/gm	<0.031	N/A	Bq/gm	EPA 901.1M	9/3/98 1052	KH
Ra-228	<0.12	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	9/3/98 1052	KH
Pb-210	<0.91	N/A	pCi/gm	<0.034	N/A	Bq/gm	EPA 901.1M	9/3/98 1052	KH
Total Activity	1.01	N/A	pCi/gm	0.037	N/A	Bq/gm	EPA 901.1M	9/3/98 1052	KH

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106038	**ARS Sample I.D.:**	ARS-98-3177
Date Sampled:	8/21/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.67	1.14	pCi/gm	0.062	0.042	Bq/gm	EPA 901.1M	9/3/98 1125	KH
Ra-228	<0.14	N/A	pCi/gm	<0.005	N/A	Bq/gm	EPA 901.1M	9/3/98 1125	KH
Pb-210	<0.86	N/A	pCi/gm	<0.032	N/A	Bq/gm	EPA 901.1M	9/3/98 1125	KH
Total Activity	3.76	N/A	pCi/gm	0.139	N/A	Bq/gm	EPA 901.1M	9/3/98 1125	KH

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.
1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

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488 1 of

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeffrey Kindley
Phone #: (915) 563-0118
FAX #: (915) 563-9526
Company Name & Address: Philip Services Corporation, 7904 I-H 20 West, Midland, Texas 79706
Project #: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME	BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240/8260	8270	See Attached VOCs
106028	TSB-7 (28-30)	1	4oz Jar		✓					✓			08/21/98	1545	✓	✓								
29	TSB-10 (2-3')	5	4oz Jars		✓					✓			08/21/98	900		✓							✓	
	TSB-10 (2-3')	1	40ml VOA		✓							✓	08/21/98	900										✓
30	TSB-10 (3-5')	5	4oz Jars		✓					✓			08/21/98	909		✓							✓	
	TSB-10 (3-5')	1	40ml VOA		✓							✓	08/21/98	909										✓
31	TSB-10 (8-10')	5	4oz Jars		✓					✓			08/21/98	924		✓							✓	
	TSB-10 (8-10')	1	40ml VOA		✓							✓	08/21/98	924										✓
32	TSB-10 (28-31')	1	4oz Jar		✓					✓			08/21/98	1016	✓	✓								
33	TSB-6 (18-20')	5	4oz Jars		✓					✓			08/21/98	1158		✓							✓	
	TSB-6 (18-20')	1	40ml VOA		✓							✓	08/21/98	1158										✓
106039	Field Blank	1	VOAs	X																				
106040	Trip Blank	2																						

SPECIAL HANDLING	
Turn around # of days	
Fax ASAP	
Hold	

Relinquished by: Jeffrey Kindley Date: August 24, 1998 Time: 1:00 PM
Received by: Helen Shelton 8/24/98 1:00 PM
Relinquished by: Helen Shelton 8/24/98 4:15 PM
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Mell K. Green 8-25-98 9:30am 2°

REMARKS

Normal Turnaround

165 158 9803 Bus

Finished

26 + # not on COC = 30 - HS

488

2 of 2

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeffrey Kindley

Phone #: (915) 563-0118

FAX #: (915) 563-9526

Company Name & Address: Phillip Services Corporation, 7904 I H 20 West, Midland, TX 79706

Project #: 19350

Project Name: Shell Tanker Road

Project Location: Hobbs, New Mexico

Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
108034	TSB-6 (2-3')	5	40z Jars		✓					✓			08/21/98	1123
	TSB-6 (2-3')	1	40ml VOA		✓							✓	08/21/98	1123
35	TSB-6 (3-5')	5	40z Jars		✓					✓			08/21/98	1127
	TSB-6 (3-5')	1	40ml VOA		✓							✓	08/21/98	1127
	~~TSB-6 (18-20')~~ JWK	1	4oz Jars		✓					✓			08/21/98	1158
36	TSB-7 (2-3')	5	40z Jars		✓					✓			08/21/98	1406
	TSB-7 (2-3')	1	40ml VOA		✓							✓	08/21/98	1406
37	TSB-7 (3-5')	5	40z Jars		✓					✓			08/21/98	1412
	TSB-7 (3-5')	1	40ml VOA		✓							✓	08/21/98	1412
38	TSB-7 (8-10')	5	40z Jars		✓					✓			08/21/98	1421
	TSB-7 (8-10')	1	40ml VOA		✓							✓	08/21/98	1421

ANALYSIS REQUEST

BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240/8260	8270	See Attached Volatiles (VOCs)
	✓							✓	✓
	✓							✓	✓
	✓							✓	✓
	✓							✓	✓
✓	✓								✓
	✓							✓	✓
	✓							✓	✓
	✓							✓	✓
	✓							✓	✓
	✓							✓	✓

SPECIAL HANDLING

Turn around # of days

Fax ASAP

Hold

Relinquished by: Jeffrey Kindley Date: August 24, 1998 Time: 1:00 PM

Received by: Helen Shelton 8/24/98 Time: 1:00 PM

Relinquished by: Helen Shelton Date: 8/24/98 Time: 6:15 PM

Received by: Date: Time:

Relinquished by: Date: Time:

Received at Laboratory by: Mell Green 8-25-98 Date: 9:30 Time: 2°

REMARKS

Normal Turnaround

155 758 9803 Bus

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite A Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-14-99
Page # 1

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
106091	TSB-4 2-3'	8/24/98	10:22	8/26/98
106092	TSB-4 3-5'	8/24/98	10:27	8/26/98
106093	TSB-4 18-20'	8/24/98	10:58	8/26/98
106094	TSB-5 2-3'	8/24/98	8:53	8/26/98
106095	TSB-5 3-5'	8/24/98	8:57	8/26/98
106096	TSB-5 18-20'	8/24/98	9:25	8/26/98
106097	TSB-9 2-3'	8/24/98	15:30	8/26/98
106098	TSB-9 3-5'	8/24/98	15:34	8/26/98
106099	TSB-9 18-20'	8/24/98	16:05	8/26/98
106100	TSB-1112-3'	8/24/98	13:06	8/26/98
106101	TSB-11 3-5'	8/24/98	13:11	8/26/98
106102	TSB-11 18-20'	8/24/98	13:40	8/26/98
106103	TSB-11 29-31'	8/24/98	14:30	8/26/98
106104	Trip Blank			8/26/98
106105	Field Blank	8/24/98		8/26/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All data meets quality control criteria with the following exceptions:
Semivolatiles were extracted 2 days past hold time.
Semivolatile 106102 surrogate out of control limits.

Corrections:
1) Semivolatile samples flagged as being extracted past hold time.
2) Phenol results added for samples 106091-103.
3) Flag added for Semivolatile 106102 surrogate out of control limits.

Note:
Two pages were numbered as page 48. The data on both pages is correct.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98
Page # 2

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106105

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Acrylonitrile		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Benzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chlorobenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chloroform		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorobenzene		<2	ug/L	S-8260B		9/7/98	AG		5220	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloropropenes		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylbenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromodichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromomethane		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Chloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Toluene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Vinyl chloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
m,p-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
o-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylene dibromide		<1	ug/L	S-8260B		9/7/98	AG		5220	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Methylene chloride		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Surr. Dibromofluoromethane		105	%	S-8260B		9/7/98	AG		5220	72-130
Surr. Toluene-d8		88	%	S-8260B		9/7/98	AG		5220	77-127
Surr. 4-Bromofluorobenzene		96	%	S-8260B		9/7/98	AG		5220	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106104

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Acrylonitrile		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Benzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chlorobenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chloroform		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorobenzene		<2	ug/L	S-8260B		9/7/98	AG		5220	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloropropenes		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylbenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromodichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromomethane		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Chloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Toluene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Vinyl chloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
m,p-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
o-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylene dibromide		<1	ug/L	S-8260B		9/7/98	AG		5220	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Methylene chloride		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Surr. Dibromofluoromethane		99	%	S-8260B		9/7/98	AG		5220	72-130
Surr. Toluene-d8		88	%	S-8260B		9/7/98	AG		5220	77-127
Surr. 4-Bromofluorobenzene		93	%	S-8260B		9/7/98	AG		5220	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 4

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106091

Field Code: TSB-4 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<225	ug/Kg	S-8260B		9/3/98	AG		5206	225
Acrylonitrile		<225	ug/Kg	S-8260B		9/3/98	AG		5206	225
Benzene		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Carbon tetrachloride		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Chlorobenzene		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
1,2-dichloroethane		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
1,1,2,2-tetrachloroethane		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
1,1,1-trichloroethane		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
1,1,2-trichloroethane		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
1,1,2-trichloroethylene		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Chloroform		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Dichlorobenzene		<90	ug/Kg	S-8260B		9/3/98	AG		5206	90
1,1-dichloroethylene		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Dichloropropenes		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Ethylbenzene		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Bromodichloromethane		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Bromomethane		<225	ug/Kg	S-8260B		9/3/98	AG		5206	225
Chloromethane		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Dichlorodifluoromethane		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Dichloromethane		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Trichlorofluorometane		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Tetrachloroethylene		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Toluene		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Trichloroethylene		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Vinyl chloride		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
m,p-xylene		63	ug/Kg	S-8260B		9/3/98	AG		5206	45
o-xylene		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
1,1-dichloroethane		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Ethylene dibromide		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
cis-1,2-dichlorethylene		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
trans-1,2-dichloroethylene		<45	ug/Kg	S-8260B		9/3/98	AG		5206	45
Methylene chloride		<225	ug/Kg	S-8260B		9/3/98	AG		5206	225
Surr. Dibromofluoromethane		105	%	S-8260B		9/3/98	AG		5206	72-130
Surr. Toluene-d8		89	%	S-8260B		9/3/98	AG		5206	77-127
Surr. 4-Bromofluorobenzene		94	%	S-8260B		9/3/98	AG		5206	72-131
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25

Corrected

Date: 05-19-99

Order ID Number: 9808000510
Sample Number: 106091

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-4 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Surr. 2-Fluorophenol		54	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	25-121
Surr. Phenol-d6		57	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	24-113
Surr. Nitroobenzene-d5		55	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	23-120
Surr. 2-Fluorobiphenyl		60	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	30-115
Surr. 2,4,6-Tribromophenol		53	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	19-122
Surr. Terphenyl-d14		79	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	28-137

**Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 6
Order ID Number: 9808000510
Sample Number: 106091

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-4 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4910	5262	0.1
Arsenic		3.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Barium		470	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cadmium		0.13	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.10
Chromium		6.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Lead		2.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		1.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Copper		2.9	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Iron		5,100	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Manganese		45	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Zinc		17	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Aluminum		8,700	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Boron		16	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	10
Cobalt		8.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Molybdenum		2.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Nickel		8.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 C,E		9/1/98	SA		5186	0.01
Fluoride		8.4	mg/Kg	E 300.0		9/19/98	JS		5421	0.2
Nitrate		2.5	mg/Kg	E 300.0		9/19/98	JS		5421	0.2
Chloride		120	mg/Kg	E 300.0		9/19/98	JS		5421	2.0
Sulfate		140	mg/Kg	E 300.0		9/19/98	JS		5421	2.0
TDS		620	mg/Kg	E 160.1		9/18/98	RS		5400	---
pH		8.2	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		52.3	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC	5356	0.01	0.25
Total Radium		4.39	pCi/gm	E 901.1M		9/4/98	DS	---	---	---

** Sample was extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

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Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106092

Field Code: TSB-4 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<505	ug/Kg	S-8260B		9/3/98	AG		5206	505
Acrylonitrile		<505	ug/Kg	S-8260B		9/3/98	AG		5206	505
Benzene		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Carbon tetrachloride		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Chlorobenzene		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
1,2-dichloroethane		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
1,1,2,2-tetrachloroethane		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
1,1,1-trichloroethane		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
1,1,2-trichloroethane		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
1,1,2-trichloroethylene		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Chloroform		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Dichlorobenzene		<202	ug/Kg	S-8260B		9/3/98	AG		5206	202
1,1-dichloroethylene		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Dichloropropenes		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Ethylbenzene		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Bromodichloromethane		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Bromomethane		<505	ug/Kg	S-8260B		9/3/98	AG		5206	505
Chloromethane		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Dichlorodifluoromethane		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Dichloromethane		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Trichlorofluorometane		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Tetrachloroethylene		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Toluene		270	ug/Kg	S-8260B		9/3/98	AG		5206	101
Trichloroethylene		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Vinyl chloride		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
m,p-xylene		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
o-xylene		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
1,1-dichloroethane		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Ethylene dibromide		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
cis-1,2-dichlorethylene		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
trans-1,2-dichloroethylene		<101	ug/Kg	S-8260B		9/3/98	AG		5206	101
Methylene chloride		<505	ug/Kg	S-8260B		9/3/98	AG		5206	505
Surr. Dibromofluoromethane		105	%	S-8260B		9/3/98	AG		5206	86-118
Surr. Toluene-d8		89	%	S-8260B		9/3/98	AG		5206	88-110
Surr. 4-Bromofluorobenzene		93	%	S-8260B		9/3/98	AG		5206	86-115
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25

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Date: 05-19-99
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Order ID Number: 9808000510
Sample Number: 106092

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-4 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Surr. 2-Fluorophenol		74	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	25-121
Surr. Phenol-d6		74	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	24-113
Surr. Nitroobenzene-d5		71	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	23-120
Surr. 2-Fluorobiphenyl		76	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	30-115
Surr. 2,4,6-Tribromophenol		61	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	19-122
Surr. Terphenyl-d14		85	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	28-137

**Corrected - Added Phenol result.

Corrected

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Order ID Number: 9808000510
Sample Number: 106092

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-4 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4910	5262	0.1
Arsenic		5.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Barium		640	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cadmium		0.25	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.10
Chromium		9.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Lead		5.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		2.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Silver		6.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Copper		3.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Iron		7,500	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Manganese		41	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Zinc		17	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Aluminum		14,000	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Boron		22	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	10
Cobalt		8.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Molybdenum		3.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Nickel		8.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 C,E		9/1/98	SA		5186	0.01
Fluoride		11	mg/Kg	E 300.0		9/19/98	JS		5421	0.2
Nitrate		<0.4	mg/Kg	E 300.0		9/19/98	JS		5421	0.4
Chloride		26	mg/Kg	E 300.0		9/19/98	JS		5421	1.0
Sulfate		140	mg/Kg	E 300.0		9/19/98	JS		5421	2.0
TDS		570	mg/Kg	E 160.1		9/18/98	RS		5400	---
pH		8.3	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		<10	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC	5356	0.01	0.25
Total Radium		11.53	pCi/gm	E 901.1M		9/4/98	DS	---	---	---

** Sample extracted 2 days past hold time

Analytical Results Report

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Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
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Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106093

Field Code: TSB-4 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<140	ug/Kg	S-8260B		9/3/98	AG		5206	140
Acrylonitrile		<140	ug/Kg	S-8260B		9/3/98	AG		5206	140
Benzene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Carbon tetrachloride		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Chlorobenzene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
1,2-dichloroethane		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
1,1,2,2-tetrachloroethane		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
1,1,1-trichloroethane		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
1,1,2-trichloroethane		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
1,1,2-trichloroethylene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Chloroform		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Dichlorobenzene		<56	ug/Kg	S-8260B		9/3/98	AG		5206	56
1,1-dichloroethylene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Dichloropropenes		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Ethylbenzene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Bromodichloromethane		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Bromomethane		<140	ug/Kg	S-8260B		9/3/98	AG		5206	140
Chloromethane		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Dichlorodifluoromethane		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Dichloromethane		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Trichlorofluorometane		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Tetrachloroethylene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Toluene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Trichloroethylene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Vinyl chloride		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
m,p-xylene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
o-xylene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
1,1-dichloroethane		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Ethylene dibromide		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
cis-1,2-dichlorethylene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
trans-1,2-dichloroethylene		<28	ug/Kg	S-8260B		9/3/98	AG		5206	28
Methylene chloride		<140	ug/Kg	S-8260B		9/3/98	AG		5206	140
Surr. Dibromofluoromethane		102	%	S-8260B		9/3/98	AG		5206	86-118
Surr. Toluene-d8		90	%	S-8260B		9/3/98	AG		5206	88-110
Surr. 4-Bromofluorobenzene		94	%	S-8260B		9/3/98	AG		5206	86-115
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25

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Date: 05-19-99
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Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106093

Field Code: TSB-4 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Surr. 2-Fluorophenol		75	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	25-121
Surr. Phenol-d6		79	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	24-113
Surr. Nitroobenzene-d5		78	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	23-120
Surr. 2-Fluorobiphenyl		80	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	30-115
Surr. 2,4,6-Tribromophenol		66	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	19-122
Surr. Terphenyl-d14		93	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 12
Order ID Number: 9808000510
Sample Number: 106093

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-4 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4910	5262	0.1
Arsenic		5.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Barium		340	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cadmium		0.23	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.10
Chromium		2.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Lead		2.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		1.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Copper		3.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Iron		1,700	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Manganese		26	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Zinc		5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Aluminum		3,000	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	10
Cobalt		4.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Molybdenum		1.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Nickel		26	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 C,E		9/1/98	SA		5186	0.01
Fluoride		5	mg/Kg	E 300.0		9/19/98	JS		5421	0.2
Nitrate		2.1	mg/Kg	E 300.0		9/19/98	JS		5421	0.2
Chloride		38	mg/Kg	E 300.0		9/19/98	JS		5421	1.0
Sulfate		180	mg/Kg	E 300.0		9/19/98	JS		5421	2.0
TDS		500	mg/Kg	E 160.1		9/18/98	RS		5400	---
pH		8.5	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		<10	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC	5356	0.01	0.25
Total Radium		3.95	pCi/gm	E 901.1M		9/3/98	DS	---	---	---

** Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 13

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106094

Field Code: TSB-5 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<170	ug/Kg	S-8260B		9/3/98	AG		5206	170
Acrylonitrile		<170	ug/Kg	S-8260B		9/3/98	AG		5206	170
Benzene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Carbon tetrachloride		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Chlorobenzene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
1,2-dichloroethane		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
1,1,2,2-tetrachloroethane		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
1,1,1-trichloroethane		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
1,1,2-trichloroethane		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
1,1,2-trichloroethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Chloroform		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Dichlorobenzene		<68	ug/Kg	S-8260B		9/3/98	AG		5206	68
1,1-dichloroethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Dichloropropenes		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Ethylbenzene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Bromodichloromethane		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Bromomethane		<170	ug/Kg	S-8260B		9/3/98	AG		5206	170
Chloromethane		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Dichlorodifluoromethane		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Dichloromethane		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Trichlorofluorometane		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Tetrachloroethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Toluene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Trichloroethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Vinyl chloride		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
m,p-xylene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
o-xylene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
1,1-dichloroethane		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Ethylene dibromide		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
cis-1,2-dichlorethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
trans-1,2-dichloroethylene		<34	ug/Kg	S-8260B		9/3/98	AG		5206	34
Methylene chloride		<170	ug/Kg	S-8260B		9/3/98	AG		5206	170
Surr. Dibromofluoromethane		104	%	S-8260B		9/3/98	AG		5206	86-118
Surr. Toluene-d8		89	%	S-8260B		9/3/98	AG		5206	88-110
Surr. 4-Bromofluorobenzene		94	%	S-8260B		9/3/98	AG		5206	86-115
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25

Corrected

Date: 05-19-99
Page # 14

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106094

Field Code: TSB-5 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Surr. 2-Fluorophenol		63	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	25-121
Surr. Phenol-d6		65	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	24-113
Surr. Nitroobenzene-d5		65	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	23-120
Surr. 2-Fluorobiphenyl		69	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	30-115
Surr. 2,4,6-Tribromophenol		56	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	19-122
Surr. Terphenyl-d14		79	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 15
Order ID Number: 9808000510
Sample Number: 106094

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-5 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4910	5262	0.1
Arsenic		7.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Barium		184	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cadmium		0.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.10
Chromium		4.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Lead		3.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		3.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Copper		2.9	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Iron		3,500	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Manganese		37	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Zinc		9	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Aluminum		5,700	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Boron		10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	10
Cobalt		5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Molybdenum		1.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Nickel		5.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 C,E		9/1/98	SA		5186	0.01
Fluoride		2.8	mg/Kg	E 300.0		9/19/98	JS		5421	0.2
Nitrate		1.7	mg/Kg	E 300.0		9/19/98	JS		5421	0.2
Chloride		360	mg/Kg	E 300.0		9/19/98	JS		5421	5.0
Sulfate		330	mg/Kg	E 300.0		9/19/98	JS		5421	5.0
TDS		1,400	mg/Kg	E 160.1		9/18/98	RS		5400	---
pH		8.1	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		<10	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC	5356	0.01	0.25
Total Radium		2.32	pCi/gm	E 901.1M		9/4/98	DS	---	---	---

** Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 16

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106095

5 3-5'2 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<300	ug/Kg	S-8260B		9/6/98	AG		5207	300
Acrylonitrile		<300	ug/Kg	S-8260B		9/6/98	AG		5207	300
Benzene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Carbon tetrachloride		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Chlorobenzene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
1,2-dichloroethane		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
1,1,2,2-tetrachloroethane		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
1,1,1-trichloroethane		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
1,1,2-trichloroethane		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
1,1,2-trichloroethylene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Chloroform		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Dichlorobenzene		<120	ug/Kg	S-8260B		9/6/98	AG		5207	120
1,1-dichloroethylene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Dichloropropenes		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Ethylbenzene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Bromodichloromethane		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Bromomethane		<300	ug/Kg	S-8260B		9/6/98	AG		5207	300
Chloromethane		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Dichlorodifluoromethane		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Dichloromethane		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Trichlorofluorometane		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Tetrachloroethylene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Toluene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Trichloroethylene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Vinyl chloride		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
m,p-xylene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
o-xylene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
1,1-dichloroethane		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Ethylene dibromide		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
cis-1,2-dichlorethylene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
trans-1,2-dichloroethylene		<60	ug/Kg	S-8260B		9/6/98	AG		5207	60
Methylene chloride		<300	ug/Kg	S-8260B		9/6/98	AG		5207	300
Surr. Dibromofluoromethane		101	%	S-8260B		9/6/98	AG		5207	86-118
Surr. Toluene-d8		88	%	S-8260B		9/6/98	AG		5207	88-110
Surr. 4-Bromofluorobenzene		94	%	S-8260B		9/6/98	AG		5207	86-115
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25

Corrected

Date: 05-19-99

Order ID Number: 9808000510
Sample Number: 106095

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

5 3-5'2 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Surr. 2-Fluorophenol		68	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	25-121
Surr. Phenol-d6		69	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	24-113
Surr. Nitroobenzene-d5		66	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	23-120
Surr. 2-Fluorobiphenyl		73	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	30-115
Surr. 2,4,6-Tribromophenol		61	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	19-122
Surr. Terphenyl-d14		86	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 18
Order ID Number: 9808000510
Sample Number: 106095

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

5 3-5'2 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4910	5262	0.1
Arsenic		3.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Barium		165	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cadmium		0.22	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.10
Chromium		5.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Lead		2.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Copper		2.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Iron		3,600	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Manganese		37	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Zinc		9.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Aluminum		6,000	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Boron		11	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	10
Cobalt		6.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Molybdenum		1.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Nickel		6.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 C,E		9/1/98	SA		5186	0.01
Fluoride		3.5	mg/Kg	E 300.0		9/19/98	JS		5422	0.2
Nitrate		1.7	mg/Kg	E 300.0		9/19/98	JS		5422	0.2
Chloride		290	mg/Kg	E 300.0		9/19/98	JS		5422	5.0
Sulfate		370	mg/Kg	E 300.0		9/19/98	JS		5422	5.0
TDS		1,100	mg/Kg	E 160.1		9/18/98	RS		5400	---
pH		8.2	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		<10	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC	5356	0.01	0.25
Total Radium		5.24	pCi/gm	E 901.1M		9/4/98	DS	---	---	---

** Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 19

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106096

Field Code: TSB-5 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<270	ug/Kg	S-8260B		9/6/98	AG		5207	270
Acrylonitrile		<270	ug/Kg	S-8260B		9/6/98	AG		5207	270
Benzene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Carbon tetrachloride		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Chlorobenzene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
1,2-dichloroethane		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
1,1,2,2-tetrachloroethane		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
1,1,1-trichloroethane		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
1,1,2-trichloroethane		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
1,1,2-trichloroethylene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Chloroform		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Dichlorobenzene		<108	ug/Kg	S-8260B		9/6/98	AG		5207	108
1,1-dichloroethylene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Dichloropropenes		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Ethylbenzene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Bromodichloromethane		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Bromomethane		<270	ug/Kg	S-8260B		9/6/98	AG		5207	270
Chloromethane		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Dichlorodifluoromethane		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Dichloromethane		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Trichlorofluorometane		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Tetrachloroethylene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Toluene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Trichloroethylene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Vinyl chloride		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
m,p-xylene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
o-xylene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
1,1-dichloroethane		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Ethylene dibromide		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
cis-1,2-dichlorethylene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
trans-1,2-dichloroethylene		<54	ug/Kg	S-8260B		9/6/98	AG		5207	54
Methylene chloride		<270	ug/Kg	S-8260B		9/6/98	AG		5207	270
Surr. Dibromofluoromethane		102	%	S-8260B		9/6/98	AG		5207	86-118
Surr. Toluene-d8		88	%	S-8260B		9/6/98	AG		5207	88-110
Surr. 4-Bromofluorobenzene		94	%	S-8260B		9/6/98	AG		5207	86-115
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25

Corrected

Date: 05-19-99
Page # 20
Order ID Number: 9808000510
Sample Number: 106096

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-5 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Surr. 2-Fluorophenol		64	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	25-121
Surr. Phenol-d6		66	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	24-113
Surr. Nitroobenzene-d5		65	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	23-120
Surr. 2-Fluorobiphenyl		70	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	30-115
Surr. 2,4,6-Tribromophenol		59	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	19-122
Surr. Terphenyl-d14		79	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 21
Order ID Number: 9808000510
Sample Number: 106096

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-5 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4910	5262	0.1
Arsenic		3.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Barium		45	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cadmium		0.18	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.10
Chromium		2.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Lead		1.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		0.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Copper		5.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Iron		1,200	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Manganese		21	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Zinc		4.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Aluminum		2,000	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	10
Cobalt		4.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Molybdenum		1.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Nickel		4.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 C,E		9/1/98	SA		5186	0.01
Fluoride		3.8	mg/Kg	E 300.0		9/19/98	JS		5422	0.2
Nitrate		1.7	mg/Kg	E 300.0		9/19/98	JS		5422	0.2
Chloride		110	mg/Kg	E 300.0		9/19/98	JS		5422	5.0
Sulfate		290	mg/Kg	E 300.0		9/19/98	JS		5422	5.0
TDS		710	mg/Kg	E 160.1		9/18/98	RS		5400	---
pH		8.5	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		102	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC	5356	0.01	0.25
Total Radium		6.17	pCi/gm	E 901.1M		9/4/98	DS	---	---	---

** Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 22

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106097

Field Code: TSB-9 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<345	ug/Kg	S-8260B		9/6/98	AG		5207	345
Acrylonitrile		<345	ug/Kg	S-8260B		9/6/98	AG		5207	345
Benzene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Carbon tetrachloride		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Chlorobenzene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
1,2-dichloroethane		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
1,1,2,2-tetrachloroethane		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
1,1,1-trichloroethane		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
1,1,2-trichloroethane		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
1,1,2-trichloroethylene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Chloroform		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Dichlorobenzene		<138	ug/Kg	S-8260B		9/6/98	AG		5207	138
1,1-dichloroethylene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Dichloropropenes		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Ethylbenzene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Bromodichloromethane		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Bromomethane		<345	ug/Kg	S-8260B		9/6/98	AG		5207	345
Chloromethane		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Dichlorodifluoromethane		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Dichloromethane		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Trichlorofluorometane		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Tetrachloroethylene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Toluene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Trichloroethylene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Vinyl chloride		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
m,p-xylene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
o-xylene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
1,1-dichloroethane		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Ethylene dibromide		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
cis-1,2-dichlorethylene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
trans-1,2-dichloroethylene		<69	ug/Kg	S-8260B		9/6/98	AG		5207	69
Methylene chloride		<345	ug/Kg	S-8260B		9/6/98	AG		5207	345
Surr. Dibromofluoromethane		100	%	S-8260B		9/6/98	AG		5207	86-118
Surr. Toluene-d8		87	%	S-8260B		9/6/98	AG		5207	88-110
Surr. 4-Bromofluorobenzene		93	%	S-8260B		9/6/98	AG		5207	86-115
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25

Corrected

Date: 05-19-99

Order ID Number: 9808000510
Sample Number: 106097

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-9 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Surr. 2-Fluorophenol		65	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	25-121
Surr. Phenol-d6		68	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	24-113
Surr. Nitroobenzene-d5		66	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	23-120
Surr. 2-Fluorobiphenyl		71	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	30-115
Surr. 2,4,6-Tribromophenol		61	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	19-122
Surr. Terphenyl-d14		83	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	28-137

Corrected - Added Phenol result

Corrected

Date: 05-19-99
Page # 24
Order ID Number: 9808000510
Sample Number: 106097

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-9 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4910	5262	0.1
Arsenic		1.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Barium		230	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cadmium		0.15	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.10
Chromium		4.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Lead		2.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Copper		4.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Iron		2,800	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Manganese		35	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Zinc		9.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Aluminum		4,900	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Boron		12	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	10
Cobalt		6.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Molybdenum		1.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Nickel		6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 C,E		9/1/98	SA		5186	0.01
Fluoride		1	mg/Kg	E 300.0		9/19/98	JS		5422	0.2
Nitrate		3.8	mg/Kg	E 300.0		9/19/98	JS		5422	0.2
Chloride		22	mg/Kg	E 300.0		9/19/98	JS		5422	1.0
Sulfate		18	mg/Kg	E 300.0		9/19/98	JS		5422	1.0
TDS		400	mg/Kg	E 160.1		9/18/98	RS		5400	---
pH		8.4	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		97.2	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC	5356	0.01	0.25
Total Radium		0.66	pCi/gm	E 901.1M		9/4/98	DS	---	---	---

** Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 25

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106098

Field Code: TSB-9 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<185	ug/Kg	S-8260B		9/6/98	AG		5207	185
Acrylonitrile		<185	ug/Kg	S-8260B		9/6/98	AG		5207	185
Benzene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Carbon tetrachloride		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Chlorobenzene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,2-dichloroethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,1,2,2-tetrachloroethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,1,1-trichloroethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,1,2-trichloroethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,1,2-trichloroethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Chloroform		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Dichlorobenzene		<74	ug/Kg	S-8260B		9/6/98	AG		5207	74
1,1-dichloroethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Dichloropropenes		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Ethylbenzene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Bromodichloromethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Bromomethane		<185	ug/Kg	S-8260B		9/6/98	AG		5207	185
Chloromethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Dichlorodifluoromethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Dichloromethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Trichlorofluorometane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Tetrachloroethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Toluene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Trichloroethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Vinyl chloride		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
m,p-xylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
o-xylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,1-dichloroethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Ethylene dibromide		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
cis-1,2-dichlorethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
trans-1,2-dichloroethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Methylene chloride		<185	ug/Kg	S-8260B		9/6/98	AG		5207	185
Surr. Dibromofluoromethane		111	%	S-8260B		9/6/98	AG		5207	86-118
Surr. Toluene-d8		88	%	S-8260B		9/6/98	AG		5207	88-110
Surr. 4-Bromofluorobenzene		98	%	S-8260B		9/6/98	AG		5207	86-115
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25

Corrected

Date: 05-19-99

Order ID Number: 9808000510
Sample Number: 106098

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-9 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Surr. 2-Fluorophenol		58	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	25-121
Surr. Phenol-d6		61	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	24-113
Surr. Nitroobenzene-d5		59	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	23-120
Surr. 2-Fluorobiphenyl		65	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	30-115
Surr. 2,4,6-Tribromophenol		53	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	19-122
Surr. Terphenyl-d14		71	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 27
Order ID Number: 9808000510
Sample Number: 106098

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-9 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4910	5262	0.1
Arsenic		1.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Barium		161	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cadmium		0.12	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.10
Chromium		2.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Lead		1.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Copper		2.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Iron		1,800	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Manganese		15	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Zinc		7.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Aluminum		3,600	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	10
Cobalt		4.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Molybdenum		1.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Nickel		4.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 C,E		9/1/98	SA		5186	0.01
Fluoride		11	mg/Kg	E 300.0		9/19/98	JS		5422	0.2
Nitrate		1.8	mg/Kg	E 300.0		9/19/98	JS		5422	0.2
Chloride		18	mg/Kg	E 300.0		9/19/98	JS		5422	1.0
Sulfate		170	mg/Kg	E 300.0		9/19/98	JS		5422	2.0
TDS		440	mg/Kg	E160.1		9/18/98	RS		5400	---
pH		8.5	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		<10	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC	5356	0.01	0.25
Total Radium		1.19	pCi/gm	E 901.1M		9/3/98	DS	---	---	---

** Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 28

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106099

Field Code: TSB-9 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<645	ug/Kg	S-8260B		9/6/98	AG		5207	645
Acrylonitrile		<645	ug/Kg	S-8260B		9/6/98	AG		5207	645
Benzene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Carbon tetrachloride		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Chlorobenzene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
1,2-dichloroethane		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
1,1,2,2-tetrachloroethane		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
1,1,1-trichloroethane		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
1,1,2-trichloroethane		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
1,1,2-trichloroethylene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Chloroform		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Dichlorobenzene		<258	ug/Kg	S-8260B		9/6/98	AG		5207	258
1,1-dichloroethylene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Dichloropropenes		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Ethylbenzene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Bromodichloromethane		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Bromomethane		<645	ug/Kg	S-8260B		9/6/98	AG		5207	645
Chloromethane		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Dichlorodifluoromethane		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Dichloromethane		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Trichlorofluorometane		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Tetrachloroethylene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Toluene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Trichloroethylene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Vinyl chloride		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
m,p-xylene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
o-xylene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
1,1-dichloroethane		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Ethylene dibromide		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
cis-1,2-dichlorethylene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
trans-1,2-dichloroethylene		<129	ug/Kg	S-8260B		9/6/98	AG		5207	129
Methylene chloride		<645	ug/Kg	S-8260B		9/6/98	AG		5207	645
Surr. Dibromofluoromethane		109	%	S-8260B		9/6/98	AG		5207	86-118
Surr. Toluene-d8		88	%	S-8260B		9/6/98	AG		5207	88-110
Surr. 4-Bromofluorobenzene		97	%	S-8260B		9/6/98	AG		5207	86-115
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25

Corrected

Date: 05-19-99
Page # 29
Order ID Number: 9808000510
Sample Number: 106099

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-9 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Surr. 2-Fluorophenol		62	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	25-121
Surr. Phenol-d6		64	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	24-113
Surr. Nitroobenzene-d5		65	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	23-120
Surr. 2-Fluorobiphenyl		69	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	30-115
Surr. 2,4,6-Tribromophenol		57	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	19-122
Surr. Terphenyl-d14		79	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 30
Order ID Number: 9808000510
Sample Number: 106099

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-9 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/15/98	10/15/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4910	5262	0.1
Arsenic		3.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Barium		146	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cadmium		0.19	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.10
Chromium		2.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Lead		1.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Copper		4.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Iron		1,800	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Manganese		23	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Zinc		7.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Aluminum		3,300	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	10
Cobalt		4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Molybdenum		1.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Nickel		4.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 C,E		9/1/98	SA		5186	0.01
Fluoride		3.8	mg/Kg	E 300.0		9/19/98	JS		5423	0.4
Nitrate		<0.2	mg/Kg	E 300.0		9/19/98	JS		5423	0.2
Chloride		260	mg/Kg	E 300.0		9/19/98	JS		5423	5.0
Sulfate		270	mg/Kg	E 300.0		9/19/98	JS		5423	5.0
TDS		850	mg/Kg	E 160.1		9/19/98	RS		5417	---
pH		8.4	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		117	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC	5356	0.01	0.25
Total Radium		7.38	pCi/gm	E 901.1M		9/4/98	DS	---	---	---

** Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 31

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106100

Field Code: TSB-11 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<515	ug/Kg	S-8260B		9/6/98	AG		5207	515
Acrylonitrile		<515	ug/Kg	S-8260B		9/6/98	AG		5207	515
Benzene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Carbon tetrachloride		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Chlorobenzene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
1,2-dichloroethane		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
1,1,2,2-tetrachloroethane		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
1,1,1-trichloroethane		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
1,1,2-trichloroethane		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
1,1,2-trichloroethylene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Chloroform		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Dichlorobenzene		<206	ug/Kg	S-8260B		9/6/98	AG		5207	206
1,1-dichloroethylene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Dichloropropenes		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Ethylbenzene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Bromodichloromethane		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Bromomethane		<515	ug/Kg	S-8260B		9/6/98	AG		5207	515
Chloromethane		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Dichlorodifluoromethane		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Dichloromethane		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Trichlorofluorometane		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Tetrachloroethylene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Toluene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Trichloroethylene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Vinyl chloride		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
m,p-xylene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
o-xylene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
1,1-dichloroethane		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Ethylene dibromide		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
cis-1,2-dichlorethylene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
trans-1,2-dichloroethylene		<103	ug/Kg	S-8260B		9/6/98	AG		5207	103
Methylene chloride		<515	ug/Kg	S-8260B		9/6/98	AG		5207	515
Surr. Dibromofluoromethane		106	%	S-8260B		9/6/98	AG		5207	86-118
Surr. Toluene-d8		96	%	S-8260B		9/6/98	AG		5207	88-110
Surr. 4-Bromofluorobenzene		96	%	S-8260B		9/6/98	AG		5207	86-115
Benzidine		<12.5	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	12.5
Hexachlorobenzene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Pentachlorobenzene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
1,2,4,5-tetrachlorobenzene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25

Corrected

Date: 05-19-99
Page # 32
Order ID Number: 9808000510
Sample Number: 106100

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-11 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dichlorophenol		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
2,4,5-trichlorophenol		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
2,4,6-trichlorophenol		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
bis (2-chloroethyl) ether		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
bis (2-chloroisopropyl) ether		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
bis (chloromethyl) ether		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
3,3-dichlorobenzidine		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
2,4-dinitrotoluene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Diphenylhydrazine		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
Hexachlorobutadiene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Hexachlorocyclopentadiene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Isophorone		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
Nitrobenzene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitro-o-cresol		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
2,4-dinitrophenols		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
n-nitrosodiethylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodimethylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodibutylamine		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
N-nitrosodiphenylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosopyrrolidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Pentachlorophenol		<6.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	6.25
Dibutyl phthalate		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
di-2-ethylhexyl phthalate		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Diethyl phthalate		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Dimethyl phthalate		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Anthracene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
3,4-benzofluoranthene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Benzo(k)fluoranthene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Fluoranthene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Fluorene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Phenanthrene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Pyrene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Naphthalene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
1-methylnaphthalene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2-methylnaphthalene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Benzo-a-pyrene		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Phenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Surr. 2-Fluorophenol		53	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	25-121
Surr. Phenol-d6		53	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	24-113
Surr. Nitroobenzene-d5		59	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	23-120
Surr. 2-Fluorobiphenyl		66	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	30-115
Surr. 2,4,6-Tribromophenol		48	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	19-122
Surr. Terphenyl-d14		75	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 33

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106100

Field Code: TSB-11 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4910	5262	0.1
Arsenic		1.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Barium		256	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cadmium		0.14	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.10
Chromium		3.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Lead		2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		0.89	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Copper		3.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Iron		2,900	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Manganese		36	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Zinc		9.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	2.0
Aluminum		5,200	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5040	5373	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	10
Cobalt		6.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Molybdenum		1.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	1.0
Nickel		7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5040	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 C,E		9/1/98	SA		5186	0.01
Fluoride		2	mg/Kg	E 300.0		9/19/98	JS		5423	0.2
Nitrate		2	mg/Kg	E 300.0		9/19/98	JS		5423	0.2
Chloride		35	mg/Kg	E 300.0		9/19/98	JS		5423	1.0
Sulfate		300	mg/Kg	E 300.0		9/21/98	JS		5480	5.0
TDS		716	mg/Kg	E 160.1		9/19/98	RS		5417	---
pH		8.1	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		1,210	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC	5356	0.01	0.25
Total Radium		6.56	pCi/gm	E 901.1M		9/4/98	DS	---	---	---

** Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 34

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106101

Field Code: TSB-11 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<290	ug/Kg	S-8260B		9/6/98	AG		5207	290
Acrylonitrile		<290	ug/Kg	S-8260B		9/6/98	AG		5207	290
Benzene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Carbon tetrachloride		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Chlorobenzene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
1,2-dichloroethane		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
1,1,2,2-tetrachloroethane		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
1,1,1-trichloroethane		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
1,1,2-trichloroethane		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
1,1,2-trichloroethylene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Chloroform		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Dichlorobenzene		<116	ug/Kg	S-8260B		9/6/98	AG		5207	116
1,1-dichloroethylene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Dichloropropenes		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Ethylbenzene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Bromodichloromethane		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Bromomethane		<290	ug/Kg	S-8260B		9/6/98	AG		5207	290
Chloromethane		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Dichlorodifluoromethane		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Dichloromethane		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Trichlorofluorometane		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Tetrachloroethylene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Toluene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Trichloroethylene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Vinyl chloride		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
m,p-xylene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
o-xylene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
1,1-dichloroethane		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Ethylene dibromide		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
cis-1,2-dichlorethylene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
trans-1,2-dichloroethylene		<58	ug/Kg	S-8260B		9/6/98	AG		5207	58
Methylene chloride		<290	ug/Kg	S-8260B		9/6/98	AG		5207	290
Surr. Dibromofluoromethane		109	%	S-8260B		9/6/98	AG		5207	86-118
Surr. Toluene-d8		86	%	S-8260B		9/6/98	AG		5207	88-110
Surr. 4-Bromofluorobenzene		100	%	S-8260B		9/6/98	AG		5207	86-115
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25

Corrected

Date: 05-19-99
Page # 35
Order ID Number: 9808000510
Sample Number: 106101

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-11 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/19/98	DG	4920	5455	0.25
Surr. 2-Fluorophenol		59	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	25-121
Surr. Phenol-d6		62	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	24-113
Surr. Nitroobenzene-d5		69	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	23-120
Surr. 2-Fluorobiphenyl		70	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	30-115
Surr. 2,4,6-Tribromophenol		59	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	19-122
Surr. Terphenyl-d14		80	%	S-8270C	9/9/98	9/19/98	DG	4920	5455	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99

Order ID Number: 9808000510
Sample Number: 106101

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-11 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/16/98	10/19/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4911	5263	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Barium		350	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cadmium		0.17	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.10
Chromium		4.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Lead		1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Copper		3.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Iron		3,300	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	0.50
Manganese		23	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Zinc		8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Aluminum		6,600	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	0.50
Boron		13	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	10
Cobalt		6.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Molybdenum		2.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Nickel		8.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/1/98	SA		5185	0.01
Fluoride		6.5	mg/Kg	E 300.0		9/19/98	JS		5423	0.2
Nitrate		<0.4	mg/Kg	E 300.0		9/19/98	JS		5423	0.4
Chloride		45	mg/Kg	E 300.0		9/19/98	JS		5423	1.0
Sulfate		180	mg/Kg	E 300.0		9/21/98	JS		5480	5.0
TDS		770	mg/Kg	E 160.1		9/19/98	RS		5417	---
pH		8.3	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		1,940	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC		5357	0.25
Total Radium		6.85	pCi/gm	E 901.1M		9/4/98	DS	---	---	---

** Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 37

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106102

Field Code: TSB-11 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<1900	ug/Kg	S-8260B		9/6/98	AG		5207	1900
Acrylonitrile		<1900	ug/Kg	S-8260B		9/6/98	AG		5207	1900
Benzene		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Carbon tetrachloride		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Chlorobenzene		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
1,2-dichloroethane		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
1,1,2,2-tetrachloroethane		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
1,1,1-trichloroethane		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
1,1,2-trichloroethane		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
1,1,2-trichloroethylene		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Chloroform		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
ichlorobenzene		<760	ug/Kg	S-8260B		9/6/98	AG		5207	760
1,1-dichloroethylene		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Dichloropropenes		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Ethylbenzene		1,400	ug/Kg	S-8260B		9/6/98	AG		5207	380
Bromodichloromethane		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Bromomethane		<1900	ug/Kg	S-8260B		9/6/98	AG		5207	1900
Chloromethane		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Dichlorodifluoromethane		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Dichloromethane		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Trichlorofluorometane		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Tetrachloroethylene		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Toluene		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Trichloroethylene		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Vinyl chloride		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
m,p-xylene		4,400	ug/Kg	S-8260B		9/6/98	AG		5207	380
o-xylene		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
1,1-dichloroethane		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Ethylene dibromide		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
cis-1,2-dichlorethylene		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
trans-1,2-dichloroethylene		<380	ug/Kg	S-8260B		9/6/98	AG		5207	380
Methylene chloride		<1900	ug/Kg	S-8260B		9/6/98	AG		5207	1900
Surr. Dibromofluoromethane		113	%	S-8260B		9/6/98	AG		5207	86-118
Surr. Toluene-d8		88	%	S-8260B		9/6/98	AG		5207	88-110
Surr. 4-Bromofluorobenzene		102	%	S-8260B		9/6/98	AG		5207	86-115
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	2.5
exachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
entachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25

Corrected

Date: 05-13-99
Page # 38
Order ID Number: 9808000510
Sample Number: 106102

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-11 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Anthracene		2.97	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Fluorene		1.64	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Naphthalene		8.02	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
1-methylnaphthalene		14.9	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
2-methylnaphthalene		8.02	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Surr. 2-Fluorophenol		84	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	25-121
Surr. Phenol-d6		46	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	24-113
Surr. Nitroobenzene-d5		91	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	23-120
Surr. 2-Fluorobiphenyl		*125	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	30-115
Surr. 2,4,6-Tribromophenol		94	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	19-122
Surr. Terphenyl-d14		95	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	28-137

** Corrected - Added Phenol result.
* Surrogate out of control limits.

Corrected

Date: 05-19-99
Page # 39
Order ID Number: 9808000510
Sample Number: 106102

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-11 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4911	5263	0.1
Arsenic		2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Barium		87	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cadmium		0.16	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.10
Chromium		2.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Lead		1.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Copper		3.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Iron		1,500	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	0.50
Manganese		14	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Zinc		4.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Aluminum		2,400	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	0.50
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	10
Cobalt		2.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Molybdenum		1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Nickel		2.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/1/98	SA		5185	0.01
Fluoride		1.3	mg/Kg	E 300.0		9/19/98	JS		5423	0.2
Nitrate		<0.2	mg/Kg	E 300.0		9/19/98	JS		5423	0.2
Chloride		180	mg/Kg	E 300.0		9/19/98	JS		5423	5.0
Sulfate		12	mg/Kg	E 300.0		9/19/98	JS		5423	1.0
TDS		450	mg/Kg	E 160.1		9/19/98	RS		5417	---
pH		8.8	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		22,700	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		1.31	mg/Kg	SM 5530 A,D		9/16/98	RC		5357	0.25
Total Radium		2.71	pCi/gm	E 901.1M		9/5/98	DS	---	---	---

** Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-19-99
Page # 40

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510
Sample Number: 106103

Field Code: TSB-11 29-31'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<185	ug/Kg	S-8260B		9/6/98	AG		5207	185
Acrylonitrile		<185	ug/Kg	S-8260B		9/6/98	AG		5207	185
Benzene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Carbon tetrachloride		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Chlorobenzene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,2-dichloroethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,1,2,2-tetrachloroethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,1,1-trichloroethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,1,2-trichloroethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,1,2-trichloroethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Chloroform		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Dichlorobenzene		<74	ug/Kg	S-8260B		9/6/98	AG		5207	74
1,1-dichloroethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Dichloropropenes		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Ethylbenzene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Bromodichloromethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Bromomethane		<185	ug/Kg	S-8260B		9/6/98	AG		5207	185
Chloromethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Dichlorodifluoromethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Dichloromethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Trichlorofluorometane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Tetrachloroethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Toluene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Trichloroethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Vinyl chloride		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
m,p-xylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
o-xylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
1,1-dichloroethane		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Ethylene dibromide		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
cis-1,2-dichlorethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
trans-1,2-dichloroethylene		<37	ug/Kg	S-8260B		9/6/98	AG		5207	37
Methylene chloride		<185	ug/Kg	S-8260B		9/6/98	AG		5207	185
Surr. Dibromofluoromethane		105	%	S-8260B		9/6/98	AG		5207	86-118
Surr. Toluene-d8		85	%	S-8260B		9/6/98	AG		5207	88-110
Surr. 4-Bromofluorobenzene		94	%	S-8260B		9/6/98	AG		5207	86-115
Benzidine		<2.5	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25

Corrected

Date: 05-19-99
Page # 41
Order ID Number: 9808000510
Sample Number: 106103

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-11 29-31'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/9/98	9/20/98	DG	4921	5470	0.25
Surr. 2-Fluorophenol		70	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	25-121
Surr. Phenol-d6		73	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	24-113
Surr. Nitroobenzene-d5		69	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	23-120
Surr. 2-Fluorobiphenyl		91	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	30-115
Surr. 2,4,6-Tribromophenol		59	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	19-122
Surr. Terphenyl-d14		82	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-19-99
Page # 42
Order ID Number: 9808000510
Sample Number: 106103

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-11 29-31'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	8/29/98	9/22/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4911	5263	0.1
Arsenic		1.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Barium		30	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cadmium		0.21	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.10
Chromium		3.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Lead		1.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Total Mercury		<0.1	mg/Kg	S 7471	8/27/98	8/28/98	MS	4804	5149	0.1
Selenium		2.9	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Copper		1.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Iron		2,400	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	0.50
Manganese		1.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Zinc		4.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Aluminum		2,400	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	0.50
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	10
Cobalt		2.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Nickel		2.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/1/98	SA		5185	0.01
Fluoride		2.4	mg/Kg	E 300.0		9/21/98	JS		5481	0.2
Nitrate		1.8	mg/Kg	E 300.0		9/21/98	JS		5481	0.2
Chloride		120	mg/Kg	E 300.0		9/21/98	JS		5481	2.0
Sulfate		20	mg/Kg	E 300.0		9/21/98	JS		5481	1.0
TDS		150	mg/Kg	E 160.1		9/19/98	RS		5417	---
pH		9.3	s.u.	E 150.1		8/27/98	SA		5134	---
TRPHC		127	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4809	5160	10
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC		5357	0.25
Total Radium		6.90	pCi/gm	E 901.1M		9/5/98	DS	---	---	---

** Sample extracted past hold time

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/7/98		5220
Acrylonitrile		<5	ug/L	5	9/7/98		5220
Benzene		<1	ug/L	1	9/7/98		5220
Carbon tetrachloride		<1	ug/L	1	9/7/98		5220
Chlorobenzene		<1	ug/L	1	9/7/98		5220
1,2-dichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/7/98		5220
1,1,1-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethylene		<1	ug/L	1	9/7/98		5220
Chloroform		<1	ug/L	1	9/7/98		5220
Dichlorobenzene		<2	ug/L	2	9/7/98		5220
1,1-dichloroethylene		<1	ug/L	1	9/7/98		5220
Dichloropropenes		<1	ug/L	1	9/7/98		5220
Ethylbenzene		<1	ug/L	1	9/7/98		5220
Bromodichloromethane		<1	ug/L	1	9/7/98		5220
Bromomethane		<5	ug/L	5	9/7/98		5220
Chloromethane		<1	ug/L	1	9/7/98		5220
Dichlorodifluoromethane		<1	ug/L	1	9/7/98		5220
Dichloromethane		<1	ug/L	1	9/7/98		5220
Trichlorofluoromethane		<1	ug/L	1	9/7/98		5220
Tetrachloroethylene		<1	ug/L	1	9/7/98		5220
Toluene		<1	ug/L	1	9/7/98		5220
Trichloroethylene		<1	ug/L	1	9/7/98		5220
Vinyl chloride		<1	ug/L	1	9/7/98		5220
m,p-xylene		<1	ug/L	1	9/7/98		5220
o-xylene		<1	ug/L	1	9/7/98		5220
1,1-dichloroethane		<1	ug/L	1	9/7/98		5220
Ethylene dibromide		<1	ug/L	1	9/7/98		5220
cis-1,2-dichlorethylene		<1	ug/L	1	9/7/98		5220
trans-1,2-dichloroethylene		<1	ug/L	1	9/7/98		5220
Methylene chloride		<5	ug/L	5	9/7/98		5220
Surr. Dibromofluoromethane		96	%	86-118	9/7/98		5220
Surr. Toluene-d8		89	%	88-110	9/7/98		5220
Surr. 4-Bromofluorobenzene		86	%	86-115	9/7/98		5220
Acrolein		<125	ug/Kg	125	9/3/98		5206
Acrylonitrile		<125	ug/Kg	125	9/3/98		5206
Benzene		<25	ug/Kg	25	9/3/98		5206
Carbon tetrachloride		<25	ug/Kg	25	9/3/98		5206
Chlorobenzene		<25	ug/Kg	25	9/3/98		5206

Date: 10-6-98
Page # 44
Order ID Number: 9808000510

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,2-dichloroethane		<25	ug/Kg	25	9/3/98		5206
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/3/98		5206
1,1,1-trichloroethane		<25	ug/Kg	25	9/3/98		5206
1,1,2-trichloroethane		<25	ug/Kg	25	9/3/98		5206
1,1,2-trichloroethylene		<25	ug/Kg	25	9/3/98		5206
Chloroform		<25	ug/Kg	25	9/3/98		5206
Dichlorobenzene		<50	ug/Kg	50	9/3/98		5206
1,1-dichloroethylene		<25	ug/Kg	25	9/3/98		5206
Dichloropropenes		<25	ug/Kg	25	9/3/98		5206
Ethylbenzene		<25	ug/Kg	25	9/3/98		5206
Bromodichloromethane		<25	ug/Kg	25	9/3/98		5206
Bromomethane		<125	ug/Kg	125	9/3/98		5206
Chloromethane		<25	ug/Kg	25	9/3/98		5206
Dichlorodifluoromethane		<25	ug/Kg	25	9/3/98		5206
Dichloromethane		<25	ug/Kg	25	9/3/98		5206
Trichlorofluoromethane		<25	ug/Kg	25	9/3/98		5206
Tetrachloroethylene		<25	ug/Kg	25	9/3/98		5206
Toluene		<25	ug/Kg	25	9/3/98		5206
Trichloroethylene		<25	ug/Kg	25	9/3/98		5206
Vinyl chloride		<25	ug/Kg	25	9/3/98		5206
m,p-xylene		<25	ug/Kg	25	9/3/98		5206
o-xylene		<25	ug/Kg	25	9/3/98		5206
1,1-dichloroethane		<25	ug/Kg	25	9/3/98		5206
Ethylene dibromide		<25	ug/Kg	25	9/3/98		5206
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/3/98		5206
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/3/98		5206
Methylene chloride		<125	ug/Kg	125	9/3/98		5206
Surr. Dibromofluoromethane		99	%	86-118	9/3/98		5206
Surr. Toluene-d8		93	%	88-110	9/3/98		5206
Surr. 4-Bromofluorobenzene		94	%	86-115	9/3/98		5206
Acrolein		<125	ug/Kg	125	9/6/98		5207
Acrylonitrile		<125	ug/Kg	125	9/6/98		5207
Benzene		<25	ug/Kg	25	9/6/98		5207
Carbon tetrachloride		<25	ug/Kg	25	9/6/98		5207
Chlorobenzene		<25	ug/Kg	25	9/6/98		5207
1,2-dichloroethane		<25	ug/Kg	25	9/6/98		5207
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/6/98		5207
1,1,1-trichloroethane		<25	ug/Kg	25	9/6/98		5207
1,1,2-trichloroethane		<25	ug/Kg	25	9/6/98		5207
1,1,2-trichloroethylene		<25	ug/Kg	25	9/6/98		5207
Chloroform		<25	ug/Kg	25	9/6/98		5207
Dichlorobenzene		<50	ug/Kg	50	9/6/98		5207
1,1-dichloroethylene		<25	ug/Kg	25	9/6/98		5207
Dichloropropenes		<25	ug/Kg	25	9/6/98		5207
Ethylbenzene		<25	ug/Kg	25	9/6/98		5207
Bromodichloromethane		<25	ug/Kg	25	9/6/98		5207

Date: 10-6-98
Page # 45
Order ID Number: 9808000510

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Bromomethane		<125	ug/Kg	125	9/6/98		5207
Chloromethane		<25	ug/Kg	25	9/6/98		5207
Dichlorodifluoromethane		<25	ug/Kg	25	9/6/98		5207
Dichloromethane		<25	ug/Kg	25	9/6/98		5207
Trichlorofluoromethane		<25	ug/Kg	25	9/6/98		5207
Tetrachloroethylene		<25	ug/Kg	25	9/6/98		5207
Toluene		<25	ug/Kg	25	9/6/98		5207
Trichloroethylene		<25	ug/Kg	25	9/6/98		5207
Vinyl chloride		<25	ug/Kg	25	9/6/98		5207
m,p-xylene		<25	ug/Kg	25	9/6/98		5207
o-xylene		<25	ug/Kg	25	9/6/98		5207
1,1-dichloroethane		<25	ug/Kg	25	9/6/98		5207
Ethylene dibromide		<25	ug/Kg	25	9/6/98		5207
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/6/98		5207
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/6/98		5207
Methylene chloride		<125	ug/Kg	125	9/6/98		5207
Surr. Dibromofluoromethane		101	%	86-118	9/6/98		5207
Surr. Toluene-d8		89	%	88-110	9/6/98		5207
Surr. 4-Bromofluorobenzene		92	%	86-115	9/6/98		5207
PCB		<0.1	mg/Kg	0.1	9/9/98	4910	5262
PCB		<0.1	mg/Kg	0.1	9/9/98	4911	5263
Total Phenols		<0.25	mg/Kg	0.25	9/16/98		5356
Total Phenols		<0.25	mg/Kg	0.25	9/16/98		5357
Arsenic		<0.50	mg/Kg	0.50	9/16/98	5040	5354
Barium		<0.50	mg/Kg	0.50	9/16/98	5040	5354
Cadmium		<0.10	mg/Kg	0.10	9/16/98	5040	5354
Chromium		<0.50	mg/Kg	0.50	9/16/98	5040	5354
Lead		<0.50	mg/Kg	0.50	9/16/98	5040	5354
Selenium		<0.50	mg/Kg	0.50	9/16/98	5040	5354
Silver		<0.50	mg/Kg	0.50	9/16/98	5040	5354
Uranium		<2.0	mg/Kg	2.0	9/16/98	5040	5354
Copper		<1.0	mg/Kg	1.0	9/16/98	5040	5354
Iron		<10	mg/Kg	10	9/17/98	5040	5373
Manganese		<1.0	mg/Kg	1.0	9/16/98	5040	5354
Zinc		<2.0	mg/Kg	2.0	9/16/98	5040	5354
Aluminum		<0.50	mg/Kg	10	9/17/98	5040	5373
Boron		<10	mg/Kg	10	9/16/98	5040	5354
Cobalt		<0.50	mg/Kg	0.50	9/16/98	5040	5354
Molybdenum		<1.0	mg/Kg	1.0	9/16/98	5040	5354
Nickel		<0.50	mg/Kg	0.50	9/16/98	5040	5354
Arsenic		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Barium		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Cadmium		<0.10	mg/Kg	0.10	9/16/98	5041	5355
Chromium		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Lead		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Selenium		<0.50	mg/Kg	0.50	9/16/98	5041	5355

Date: 10-6-98
Page # 46
Order ID Number: 9808000510

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Silver		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Uranium		<2.0	mg/Kg	2.0	9/16/98	5041	5355
Copper		<1.0	mg/Kg	1.0	9/16/98	5041	5355
Iron		<10	mg/Kg	10	9/17/98	5041	5374
Manganese		<1.0	mg/Kg	1.0	9/16/98	5041	5355
Zinc		<2.0	mg/Kg	2.0	9/16/98	5041	5355
Aluminum		<0.50	mg/Kg	10	9/16/98	5041	5374
Boron		<10	mg/Kg	10	9/16/98	5041	5355
Cobalt		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Molybdenum		<1.0	mg/Kg	1.0	9/16/98	5041	5355
Nickel		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Fluoride		<0.2	mg/Kg	0.2	9/19/98		5421
Chloride		<1.0	mg/Kg	1	9/19/98		5421
Nitrate		<0.2	mg/Kg	0.2	9/19/98		5421
Sulfate		<1.0	mg/Kg	1	9/19/98		5421
Fluoride		<0.2	mg/Kg	0.2	9/19/98		5422
Chloride		<1.0	mg/Kg	1	9/19/98		5422
Nitrate		<0.2	mg/Kg	0.2	9/19/98		5422
Sulfate		<1.0	mg/Kg	1	9/19/98		5422
Fluoride		<0.2	mg/Kg	0.2	9/19/98		5423
Chloride		<1.0	mg/Kg	1.0	9/19/98		5423
Nitrate		<0.2	mg/Kg	0.2	9/19/98		5423
Sulfate		<1.0	mg/Kg	1.0	9/19/98		5423
Sulfate		<1.0	mg/Kg	1.0	9/21/98		5480
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5481
Chloride		<1.0	mg/Kg	1.0	9/21/98		5481
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5481
Sulfate		<1.0	mg/Kg	1.0	9/21/98		5481
Benzidine		<2.5	mg/kg	2.5	9/9/98	4920	5455
Hexachlorobenzene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Pentachlorobenzene		<0.25	mg/kg	0.25	9/9/98	4920	5455
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Hexachloroethane		<0.25	mg/kg	0.25	9/9/98	4920	5455
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/9/98	4920	5455
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/9/98	4920	5455
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/9/98	4920	5455
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/9/98	4920	5455
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/9/98	4920	5455
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/9/98	4920	5455
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/9/98	4920	5455
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Diphenylhydrazine		<1.25	mg/kg	1.25	9/9/98	4920	5455
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Isophorone		<1.25	mg/kg	1.25	9/9/98	4920	5455
Nitrobenzene		<0.25	mg/kg	0.25	9/9/98	4920	5455

Order ID Number: 9808000510

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/9/98	4920	5455
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/9/98	4920	5455
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/9/98	4920	5455
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/9/98	4920	5455
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/9/98	4920	5455
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/9/98	4920	5455
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/9/98	4920	5455
Pentachlorophenol		<1.25	mg/kg	1.25	9/9/98	4920	5455
Dibutyl phthalate		<0.25	mg/kg	0.25	9/9/98	4920	5455
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/9/98	4920	5455
Diethyl phthalate		<0.25	mg/kg	0.25	9/9/98	4920	5455
Dimethyl phthalate		<0.25	mg/kg	0.25	9/9/98	4920	5455
Anthracene		<0.25	mg/kg	0.25	9/9/98	4920	5455
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Fluoranthene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Fluorene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Phenanthrene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Pyrene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Naphthalene		<0.25	mg/kg	0.25	9/9/98	4920	5455
1-methylnaphthalene		<0.25	mg/kg	0.25	9/9/98	4920	5455
2-methylnaphthalene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/9/98	4920	5455
Surr. 2-Fluorophenol		61	%	25-121	9/9/98	4920	5455
Surr. Phenol-d6		64	%	24-113	9/9/98	4920	5455
Surr. Nitroobenzene-d5		48	%	23-120	9/9/98	4920	5455
Surr. 2-Fluorobiphenyl		73	%	30-115	9/9/98	4920	5455
Surr. 2,4,6-Tribromophenol		56	%	19-122	9/9/98	4920	5455
Surr. Terphenyl-d14		56	%	28-137	9/9/98	4920	5455
Benzidine		<2.5	mg/kg	2.5	9/20/98	4921	5470
Hexachlorobenzene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Pentachlorobenzene		<0.25	mg/kg	0.25	9/20/98	4921	5470
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Hexachloroethane		<0.25	mg/kg	0.25	9/20/98	4921	5470
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/20/98	4921	5470
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/20/98	4921	5470
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/20/98	4921	5470
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/20/98	4921	5470
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/20/98	4921	5470
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/20/98	4921	5470
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/20/98	4921	5470
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Diphenylhydrazine		<1.25	mg/kg	1.25	9/20/98	4921	5470
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Isophorone		<1.25	mg/kg	1.25	9/20/98	4921	5470

Order ID Number: 9808000510

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Nitrobenzene		<0.25	mg/kg	0.25	9/20/98	4921	5470
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/20/98	4921	5470
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/20/98	4921	5470
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/20/98	4921	5470
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/20/98	4921	5470
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/20/98	4921	5470
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/20/98	4921	5470
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/20/98	4921	5470
Pentachlorophenol		<1.25	mg/kg	1.25	9/20/98	4921	5470
Dibutyl phthalate		<0.25	mg/kg	0.25	9/20/98	4921	5470
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/20/98	4921	5470
Diethyl phthalate		<0.25	mg/kg	0.25	9/20/98	4921	5470
Dimethyl phthalate		<0.25	mg/kg	0.25	9/20/98	4921	5470
Anthracene		<0.25	mg/kg	0.25	9/20/98	4921	5470
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Fluoranthene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Fluorene		<0.25	mg/kg	0.25	9/20/98	4921	5470
henanthrene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Pyrene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Naphthalene		<0.25	mg/kg	0.25	9/20/98	4921	5470
1-methylnaphthalene		<0.25	mg/kg	0.25	9/20/98	4921	5470
2-methylnaphthalene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Surr. 2-Fluorophenol		61	%	25-121	9/20/98	4921	5470
Surr. Phenol-d6		64	%	24-113	9/20/98	4921	5470
Surr. Nitroobenzene-d5		48	%	23-120	9/20/98	4921	5470
Surr. 2-Fluorobiphenyl		73	%	30-115	9/20/98	4921	5470
Surr. 2,4,6-Tribromophenol		56	%	19-122	9/20/98	4921	5470
Surr. Terphenyl-d14		56	%	28-137	9/20/98	4921	5470
Cyanide		<0.01	mg/kg	0.01	9/1/98		5185
Cyanide		<0.01	mg/kg	0.01	9/1/98		5186
TRPHC		<10	mg/kg	10	8/29/98	4809	5160

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
1,1-Dichloroethene		100	ug/L	120	120	9/7/98	5220
Chloroform		100	ug/L	111	111	9/7/98	5220
1,2-Dichloropropane		100	ug/L	101	101	9/7/98	5220
Toluene		100	ug/L	113	113	9/7/98	5220
Chlorobenzene		100	ug/L	110	110	9/7/98	5220
Ethylbenzene		100	ug/L	109	109	9/7/98	5220
Vinyl chloride		100	ug/L	90	90	9/3/98	5206
1,1-Dichloroethene		100	ug/L	91	91	9/3/98	5206
Chloroform		100	ug/L	89	89	9/3/98	5206
,2-Dichloropropane		100	ug/L	99	99	9/3/98	5206
Toluene		100	ug/L	84	84	9/3/98	5206
Chlorobenzene		100	ug/L	81	81	9/3/98	5206
Ethylbenzene		100	ug/L	80	80	9/3/98	5206
Vinyl chloride		100	ug/L	92	92	9/6/98	5207
1,1-Dichloroethene		100	ug/L	98	98	9/6/98	5207
Chloroform		100	ug/L	91	91	9/6/98	5207
1,2-Dichloropropane		100	ug/L	82	82	9/6/98	5207
Toluene		100	ug/L	86	86	9/6/98	5207
Chlorobenzene		100	ug/L	87	87	9/6/98	5207
Ethylbenzene		100	ug/L	86	86	9/6/98	5207
PCB		0.40	mg/L	0.39	98	9/9/98	5262
PCB		0.40	mg/L	0.38	95	9/9/98	5263
Total Phenols		0.80	mg/L	0.81	101	9/16/98	5356
Total Phenols		0.80	mg/L	0.80	100	9/16/98	5357
TDS		1,000	mg/L	960	96	9/19/98	5417
TDS		1,000	mg/L	996	100	9/18/98	5400
Arsenic		1.0	mg/L	1.0	100	9/16/98	5354
Barium		1.0	mg/L	0.99	99	9/16/98	5354
Cadmium		1.0	mg/L	0.99	99	9/16/98	5354
Chromium		1.0	mg/L	1.0	100	9/16/98	5354
Lead		1.0	mg/L	1.0	100	9/16/98	5354
Selenium		1.0	mg/L	1.0	100	9/16/98	5354
Silver		1.0	mg/L	0.90	90	9/16/98	5354
Uranium		1.0	mg/L	1.0	100	9/16/98	5354
Copper		1.0	mg/L	0.99	99	9/16/98	5354
Iron		100.0	mg/L	101.0	101	9/17/98	5373

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Page # 50
Order ID Number: 9808000510

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Manganese		1.0	mg/L	0.99	99	9/16/98	5354
Zinc		1.0	mg/L	0.93	93	9/16/98	5354
Aluminum		250.0	mg/L	259.0	104	9/17/98	5373
Boron		1.0	mg/L	0.99	99	9/16/98	5354
Cobalt		1.0	mg/L	0.99	99	9/16/98	5354
Molybdenum		1.0	mg/L	0.95	95	9/16/98	5354
Nickel		1.0	mg/L	0.97	97	9/16/98	5354
Arsenic		1.0	mg/L	1.0	100	9/16/98	5355
Barium		1.0	mg/L	1.0	100	9/16/98	5355
Cadmium		1.0	mg/L	1.0	100	9/16/98	5355
Chromium		1.0	mg/L	1.0	100	9/16/98	5355
Lead		1.0	mg/L	1.0	100	9/16/98	5355
Selenium		1.0	mg/L	1.0	100	9/16/98	5355
Silver		1.0	mg/L	0.98	98	9/16/98	5355
Uranium		1.0	mg/L	1.0	100	9/16/98	5355
Copper		1.0	mg/L	1.0	100	9/16/98	5355
Iron		100.0	mg/L	101.0	101	9/17/98	5374
Manganese		1.0	mg/L	1.0	100	9/16/98	5355
Zinc		1.0	mg/L	1.0	100	9/16/98	5355
Aluminum		250.0	mg/L	259.0	104	9/17/98	5374
Boron		1.0	mg/L	1.0	100	9/16/98	5355
Cobalt		1.0	mg/L	1.0	100	9/16/98	5355
Molybdenum		1.0	mg/L	1.0	100	9/16/98	5355
Nickel		1.0	mg/L	1.0	100	9/16/98	5355
Fluoride		2.5	mg/L	2.505	100	9/19/98	5421
Chloride		1.5	mg/L	12.255	98	9/19/98	5421
Nitrate		5	mg/L	5.215	104	9/19/98	5421
Sulfate		12.5	mg/L	13.22	106	9/19/98	5421
Fluoride		2.5	mg/L	2.5	100	9/19/98	5422
Chloride		12.5	mg/L	12.24	98	9/19/98	5422
Nitrate		5	mg/L	5.18	104	9/19/98	5422
Sulfate		12.5	mg/L	13.35	107	9/19/98	5422
Sulfate		12.5	mg/L	11.815	95	9/21/98	5480
Fluoride		2.5	mg/L	2.365	95	9/21/98	5481
Chloride		1.5	mg/L	11.685	93	9/21/98	5481
Nitrate		5	mg/L	4.79	96	9/21/98	5481
Sulfate		12.5	mg/L	11.815	95	9/21/98	5481
Phenol		80	mg/L	77	96	9/19/98	5455
1,4-Dichlorobenzene		80	mg/L	67	84	9/19/98	5455
2-nitrophenol		80	mg/L	77	96	9/19/98	5455
2,4-Dichlorophenol		80	mg/L	79	99	9/19/98	5455
Hexachlorobutadiene		80	mg/L	67	84	9/19/98	5455
4-Chloro-3-methylphenol		80	mg/L	68	85	9/19/98	5455

Project Number: 19350
Order ID Number: 9808000510
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
2,4,6-Trichlorophenol		80	mg/L	69	86	9/19/98	5455
Acenaphthene		80	mg/L	69	86	9/19/98	5455
n-Nitrosodiphenylamine		80	mg/L	80	100	9/19/98	5455
Pentachlorophenol		80	mg/L	86	108	9/19/98	5455
Fluoranthene		80	mg/L	71	88	9/19/98	5455
Di-n-octylphthalate		80	mg/L	84	105	9/19/98	5455
Benzo(a)pyrene		80	mg/L	69	86	9/19/98	5455
Phenol		80	mg/L	79	99	9/20/98	5470
1,4-Dichlorobenzene		80	mg/L	76	95	9/20/98	5470
2-nitrophenol		80	mg/L	76	95	9/20/98	5470
2,4-Dichlorophenol		80	mg/L	83	104	9/20/98	5470
Hexachlorobutadiene		80	mg/L	73	91	9/20/98	5470
4-Chloro-3-methylphenol		80	mg/L	76	95	9/20/98	5470
2,4,6-Trichlorophenol		80	mg/L	82	103	9/20/98	5470
Acenaphthene		80	mg/L	77	96	9/20/98	5470
n-Nitrosodiphenylamine		80	mg/L	76	95	9/20/98	5470
Pentachlorophenol		80	mg/L	64	82	9/20/98	5470
Fluoranthene		80	mg/L	64	82	9/20/98	5470
Di-n-octylphthalate		80	mg/L	79	99	9/20/98	5470
Benzo(a)pyrene		80	mg/L	66	83	9/20/98	5470
Cyanide		0.12	mg/L	0.11	92	9/1/98	5185
Cyanide		0.12	mg/L	0.12	100	9/1/98	5186
TRPHC		100	mg/L	101	101	8/29/98	5160

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
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Midland, TX 79706

Date: 10-6-98
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Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	102	102	100	96	96	6.1	9/7/98		5220
Benzene		ug/L	<1	100	102	102	100	104	104	1.9	9/7/98		5220
Trichloroethene		ug/L	<1	100	117	117	100	117	117	0.0	9/7/98		5220
Toluene		ug/L	<1	100	101	101	100	102	102	1.0	9/7/98		5220
Chlorobenzene		ug/L	<1	100	88	88	100	87	87	1.8	9/7/98		5220
1,1-Dichloroethene		mg/Kg	<25	100	99	99	100	120	120	19	9/3/98		5206
Benzene		mg/Kg	<25	100	104	104	100	119	119	13	9/3/98		5206
Trichloroethene		mg/Kg	<25	100	113	113	100	120	120	6.0	9/3/98		5206
Toluene		mg/Kg	<25	100	101	101	100	118	118	16.0	9/3/98		5206
Chlorobenzene		mg/Kg	<25	100	88	88	100	106	106	19	9/3/98		5206
1,1-Dichloroethene		mg/Kg	<69	100	97	97	100	97	97	0	9/6/98		5207
Benzene		mg/Kg	<69	100	104	104	100	105	105	0.96	9/6/98		5207
Trichloroethene		mg/Kg	<69	100	117	117	100	116	116	0.9	9/6/98		5207
Toluene		mg/Kg	<69	100	104	104	100	104	104	0.0	9/6/98		5207
Chlorobenzene		mg/Kg	<69	100	90	90	100	89	89	1.1	9/6/98		5207
PCB		mg/Kg	<0.1	0.40	0.40	100	0.40	0.38	95	5.1	9/9/98	4910	5262
PCB		mg/Kg	<0.1	0.40	0.40	100	0.40	0.38	95	5.1	9/9/98	4911	5263
Total Phenols		mg/Kg	<0.01	20.00	20.50	103	20.00	20.75	104	0.97	9/16/98		5356
Total Phenols		mg/Kg	<0.25	20.00	24.55	123	20.00	25.03	125	1.6	9/16/98		5357
Arsenic		mg/Kg	<0.50	200	160	80	200	163	82	2.5	9/16/98	5041	5355
Barium		mg/Kg	<0.50	200	171	86	200	175	88	2.3	9/16/98	5041	5355
Cadmium		mg/Kg	<0.10	200	163	82	200	165	83	1.2	9/16/98	5041	5355
Chromium		mg/Kg	<0.50	200	173	87	200	169	85	2.3	9/16/98	5041	5355
Lead		mg/Kg	<0.50	200	163	83	200	163	82	1.2	9/16/98	5041	5355
Selenium		mg/Kg	<0.50	200	150	75	200	150	75	0	9/16/98	5041	5355
Silver		mg/Kg	<0.50	100	88	88	100	90	90	2.2	9/16/98	5041	5355
Uranium		mg/Kg	<2.0	200	176	88	200	163	90	2.2	9/16/98	5041	5355
Copper		mg/Kg	<1.0	200	167	84	200	173	87	3.5	9/16/98	5041	5355
Manganese		mg/Kg	<1.0	200	168	84	200	167	84	0	9/16/98	5041	5355
Zinc		mg/Kg	<2.0	200	160	80	200	159	80	0	9/16/98	5041	5355
Boron		mg/Kg	<10	200	156	78	200	156	78	0	9/16/98	5041	5355
Cobalt		mg/Kg	<0.50	200	156	78	200	163	82	5.0	9/16/98	5041	5355
Molybdenum		mg/Kg	<1.0	200	160	80	200	166	83	3.7	9/16/98	5041	5355
Nickel		mg/Kg	<0.50	200	160	80	200	160	80	0	9/16/98	5041	5355
Fluoride		mg/Kg	2.8	5	7.49	94	5	7.51	94	0	9/19/98		5421

Date: 10-6-98
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Order ID Number: 9808000510

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Chloride		mg/Kg	14	25	39.6	102	25	39.66	103	0.98	9/19/98		5421
Nitrate		mg/Kg	1.7	10	11.67	100	10	11.79	101	1.0	9/19/98		5421
Sulfate		mg/Kg	8.62	25	34.82	105	25	34.92	105	0	9/19/98		5421
Fluoride		mg/Kg	11	5	15.9	98	5	16.11	102	4.0	9/19/98		5422
Chloride		mg/Kg	18	25	41.67	95	25	41.41	94	1.1	9/19/98		5422
Nitrate		mg/Kg	1.8	10	11.98	102	10	11.48	97	5.0	9/19/98		5422
Sulfate		mg/Kg	8.62	25	34.77	105	25	34.35	103	1.9	9/19/98		5422
Sulfate		mg/Kg	97.71	25	118.1	82	25	117.34	78	5.0	9/21/98		5480
Fluoride		mg/Kg	2.79	5	7.48	94	5	7.53	95	1.1	9/21/98		5481
Chloride		mg/Kg	20.62	25	45.27	99	25	45.13	98	1.0	9/21/98		5481
Nitrate		mg/Kg	6.9	10	16.43	95	10	16.42	95	0	9/21/98		5481
Sulfate		mg/Kg	97.71	25	118.1	82	25	117.34	78	5.0	9/21/98		5481
Phenol		mg/Kg	<0.25	10.00	5.23	52	10.00	5.66	57	9.2	9/19/98	4920	5455
2-Chlorophenol		mg/Kg	<1.25	10.00	4.89	49	10.00	5.17	52	5.9	9/19/98	4920	5455
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	6.21	62	10.00	6.51	65	4.7	9/19/98	4920	5455
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	5.12	51	10.00	5.44	54	5.7	9/19/98	4920	5455
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	5.99	60	10.00	6.11	61	1.7	9/19/98	4920	5455
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	5.11	51	10.00	5.45	55	7.5	9/19/98	4920	5455
Acenaphthene		mg/Kg	<0.25	10.00	6.46	65	10.00	7.06	71	8.8	9/19/98	4920	5455
4-Nitrophenol		mg/Kg	<1.25	10.00	3.54	35	10.00	4.3	43	20	9/19/98	4920	5455
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	5.89	59	10.00	6.52	65	9.7	9/19/98	4920	5455
Pentachlorophenol		mg/Kg	<1.25	10.00	5.61	56	10.00	6.1	61	8.5	9/19/98	4920	5455
Pyrene		mg/Kg	<0.25	10.00	6.73	67	10.00	7.13	71	5.8	9/19/98	4920	5455
Phenol		mg/Kg	<0.25	10.00	5.77	58	10.00	6.19	62	6.7	9/20/98	4921	5470
2-Chlorophenol		mg/Kg	<1.25	10.00	5.78	58	10.00	6.08	61	5.0	9/20/98	4921	5470
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	7.21	72	10.00	7.41	74	2.7	9/20/98	4921	5470
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	6.52	65	10.00	7.03	70	7.4	9/20/98	4921	5470
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	6.59	66	10.00	6.86	69	4.4	9/20/98	4921	5470
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	5.7	57	10.00	5.99	60	5.1	9/20/98	4921	5470
Acenaphthene		mg/Kg	<0.25	10.00	7.7	77	10.00	8	80	3.8	9/20/98	4921	5470
4-Nitrophenol		mg/Kg	<1.25	10.00	4.19	42	3.00	3.57	36	15	9/20/98	4921	5470
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	6.67	67	10.00	7.2	72	1.4	9/20/98	4921	5470
Pentachlorophenol		mg/Kg	<1.25	10.00	3.7	37	10.00	4.32	43	17	9/20/98	4921	5470
Pyrene		mg/Kg	<0.25	10.00	6.94	69	10.00	7.36	74	7.0	9/20/98	4921	5470
Cyanide	LCS	mg/Kg	<0.01	0.12	0.12	100	0.12	0.12	100	0	9/1/98		5185
Cyanide	LCS	mg/Kg	<0.01	0.12	0.11	92	0.12	0.12	100	8.3	9/1/98		5186
TRPHC		mg/Kg	<10	250	269	108	250	249	100	7.7	8/29/98	4809	5160

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-6-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000510

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
TDS		mg/Kg	716	761	6.1	9/19/98		5417
TDS		mg/Kg	400	384	3.8	9/18/98		5400
Ph		s.u.	8.0	8.1	12	8/27/98		5134

AMERICAN RADIATION SERVICES, INC.

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American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106091	**ARS Sample I.D.:**	ARS-98-3178
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.21	1.45	pCi/gm	0.082	0.054	Bq/gm	EPA 901.1M	9/4/98 1033	KH
Ra-228	0.40	0.19	pCi/gm	0.015	0.007	Bq/gm	EPA 901.1M	9/4/98 1033	KH
Pb-210	<0.95	N/A	pCi/gm	<0.035	N/A	Bq/gm	EPA 901.1M	9/4/98 1033	KH
Total Activity	4.39	N/A	pCi/gm	0.162	N/A	Bq/gm	EPA 901.1M	9/4/98 1033	KH

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106092	**ARS Sample I.D.:**	ARS-98-3179
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.66	1.55	pCi/gm	0.061	0.057	Bq/gm	EPA 901.1M	9/4/98 1105	KH
Ra-228	0.48	0.23	pCi/gm	0.018	0.009	Bq/gm	EPA 901.1M	9/4/98 1105	KH
Pb-210	<0.90	N/A	pCi/gm	<0.033	N/A	Bq/gm	EPA 901.1M	9/4/98 1105	KH
Total Activity	11.53	N/A	pCi/gm	0.427	N/A	Bq/gm	EPA 901.1M	9/4/98 1105	KH

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106093	**ARS Sample I.D.:**	ARS-98-3180
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.16	1.92	pCi/gm	0.080	0.071	Bq/gm	EPA 901.1M	9/3/98 1156	KH
Ra-228	<0.12	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	9/3/98 1156	KH
Pb-210	<1.08	N/A	pCi/gm	<0.040	N/A	Bq/gm	EPA 901.1M	9/3/98 1156	KH
Total Activity	3.95	N/A	pCi/gm	0.146	N/A	Bq/gm	EPA 901.1M	9/3/98 1156	KH

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106094	**ARS Sample I.D.:**	ARS-98-3181
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.57	N/A	pCi/gm	<0.021	N/A	Bq/gm	EPA 901.1M	9/4/98 1136	KH
Ra-228	<0.06	N/A	pCi/gm	<0.002	N/A	Bq/gm	EPA 901.1M	9/4/98 1136	KH
Pb-210	<0.79	N/A	pCi/gm	<0.029	N/A	Bq/gm	EPA 901.1M	9/4/98 1136	KH
Total Activity	2.32	N/A	pCi/gm	0.086	N/A	Bq/gm	EPA 901.1M	9/4/98 1136	KH

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106095	**ARS Sample I.D.:**	ARS-98-3182
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.77	N/A	pCi/gm	<0.028	N/A	Bq/gm	EPA 901.1M	9/4/98 1403	KH
Ra-228	0.30	0.16	pCi/gm	0.011	0.006	Bq/gm	EPA 901.1M	9/4/98 1403	KH
Pb-210	<0.90	N/A	pCi/gm	<0.033	N/A	Bq/gm	EPA 901.1M	9/4/98 1403	KH
Total Activity	5.24	N/A	pCi/gm	0.194	N/A	Bq/gm	EPA 901.1M	9/4/98 1403	KH

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106096	**ARS Sample I.D.:**	ARS-98-3183
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.97	1.85	pCi/gm	0.073	0.068	Bq/gm	EPA 901.1M	9/4/98 1435	KH
Ra-228	<0.19	N/A	pCi/gm	<0.007	N/A	Bq/gm	EPA 901.1M	9/4/98 1435	KH
Pb-210	2.42	2.06	pCi/gm	0.090	0.076	Bq/gm	EPA 901.1M	9/4/98 1435	KH
Total Activity	6.17	N/A	pCi/gm	0.228	N/A	Bq/gm	EPA 901.1M	9/4/98 1435	KH

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106097	**ARS Sample I.D.:**	ARS-98-3184
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.84	N/A	pCi/gm	<0.031	N/A	Bq/gm	EPA 901.1M	9/4/98 1507	KH
Ra-228	<0.08	N/A	pCi/gm	<0.003	N/A	Bq/gm	EPA 901.1M	9/4/98 1507	KH
Pb-210	<0.92	N/A	pCi/gm	<0.034	N/A	Bq/gm	EPA 901.1M	9/4/98 1507	KH
Total Activity	0.66	N/A	pCi/gm	0.024	N/A	Bq/gm	EPA 901.1M	9/4/98 1507	KH

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106098	**ARS Sample I.D.:**	ARS-98-3185
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.71	N/A	pCi/gm	<0.026	N/A	Bq/gm	EPA 901.1M	9/3/98 1242	KH
Ra-228	<0.08	N/A	pCi/gm	<0.003	N/A	Bq/gm	EPA 901.1M	9/3/98 1242	KH
Pb-210	<0.84	N/A	pCi/gm	<0.031	N/A	Bq/gm	EPA 901.1M	9/3/98 1242	KH
Total Activity	1.19	N/A	pCi/gm	0.044	N/A	Bq/gm	EPA 901.1M	9/3/98 1242	KH

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106099	**ARS Sample I.D.:**	ARS-98-3186
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.29	1.39	pCi/gm	0.085	0.051	Bq/gm	EPA 901.1M	9/4/98 1539	KH
Ra-228	0.35	0.18	pCi/gm	0.013	0.007	Bq/gm	EPA 901.1M	9/4/98 1539	KH
Pb-210	2.51	2.07	pCi/gm	0.093	0.077	Bq/gm	EPA 901.1M	9/4/98 1539	KH
Total Activity	7.38	N/A	pCi/gm	0.273	N/A	Bq/gm	EPA 901.1M	9/4/98 1539	KH

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106100	**ARS Sample I.D.:**	ARS-98-3187
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.48	1.41	pCi/gm	0.092	0.052	Bq/gm	EPA 901.1M	9/4/98 1651	KH
Ra-228	0.38	0.17	pCi/gm	0.014	0.006	Bq/gm	EPA 901.1M	9/4/98 1651	KH
Pb-210	1.53	1.52	pCi/gm	0.057	0.056	Bq/gm	EPA 901.1M	9/4/98 1651	KH
Total Activity	6.56	N/A	pCi/gm	0.243	N/A	Bq/gm	EPA 901.1M	9/4/98 1651	KH

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106101	**ARS Sample I.D.:**	ARS-98-3188
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.91	1.52	pCi/gm	0.071	0.056	Bq/gm	EPA 901.1M	9/4/98 1724	KH
Ra-228	<0.15	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	9/4/98 1724	KH
Pb-210	2.62	1.82	pCi/gm	0.097	0.067	Bq/gm	EPA 901.1M	9/4/98 1724	KH
Total Activity	6.85	N/A	pCi/gm	0.253	N/A	Bq/gm	EPA 901.1M	9/4/98 1724	KH

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106102	**ARS Sample I.D.:**	ARS-98-3189
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.34	1.08	pCi/gm	0.050	0.040	Bq/gm	EPA 901.1M	9/5/98 0920	MK
Ra-228	<0.13	N/A	pCi/gm	<0.005	N/A	Bq/gm	EPA 901.1M	9/5/98 0920	MK
Pb-210	<0.78	N/A	pCi/gm	<0.029	N/A	Bq/gm	EPA 901.1M	9/5/98 0920	MK
Total Activity	2.71	N/A	pCi/gm	0.100	N/A	Bq/gm	EPA 901.1M	9/5/98 0920	MK

Notes:

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ARS Tracking Number:	ARS-98-0872	**P.O. Number:**	
Client I.D.:	Sample No. 106103	**ARS Sample I.D.:**	ARS-98-3190
Date Sampled:	8/24/98	**Date Received:**	8/27/98
Time Sampled:	N/A	**Time Received:**	1051
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.55	1.21	pCi/gm	0.057	0.045	Bq/gm	EPA 901.1M	9/5/98 0954	MK
Ra-228	<0.09	N/A	pCi/gm	<0.003	N/A	Bq/gm	EPA 901.1M	9/5/98 0954	MK
Pb-210	<0.77	N/A	pCi/gm	<0.028	N/A	Bq/gm	EPA 901.1M	9/5/98 0954	MK
Total Activity	6.90	N/A	pCi/gm	0.255	N/A	Bq/gm	EPA 901.1M	9/5/98 0954	MK

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 510 / 511

Company Name: Phillip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West, Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeff Kindley
Invoice to: (If different from above) Sam
Project #: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffy Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
106091	TSB-4 (2-3')	5	4oz Jars		✓					✓			08/24/98	1022
	TSB-4 (2-3')	1	40ml VOA		✓							✓	08/24/98	1022
92	TSB-4 (3-5')	5	4oz Jars		✓					✓			08/24/98	1017
	TSB-4 (3-5')	1	40ml VOA		✓							✓	08/24/98	1017
93	TSB-4 (18-20')	5	4oz Jars		✓					✓			08/24/98	1058
	TSB-4 (18-20')	1	40ml VOA		✓							✓	08/24/98	1058
94	TSB-5 (2-3')	5	4oz Jars		✓					✓			08/24/98	0853
	TSB-5 (2-3')	1	40ml VOA		✓							✓	08/24/98	0853
95	TSB-5 (3-5')	5	4oz Jars		✓					✓			08/24/98	0857
	TSB-5 (3-5')	1	40ml VOA		✓							✓	08/24/98	0857
96	TSB-5 (18-20')	5	4oz Jars		✓					✓			08/24/98	0925

ANALYSIS REQUEST (Circle or Specify Method No.)	
MTBE 8020/602	
BTEX 8020/602	
TPH (418.1)	✓
PAH 8270	
Total Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Volatiles	
TCLP Semi Volatiles	
RCI	
GC.MS Vol. 8240/8260/624	
GC/MS Semi. Vol. 8270/625	
PCB's 8080/608	
Pest. 8080/608	
BOD, TSS, PH	✓
See Attached	✓
VOCs	✓
Turn Around Time if different from standard	
Hold	

Relinquished by: Jeffy Kindley Date: August 25, 1998 Time: 700Am
Received by: Date: Time:
Relinquished by: Date: Time:
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Vicki Wadkins Date: 8-26-98 Time: 9:00Am

LAB USE ONLY
Intact Y N
Headspace Y / N
Temp 4 °
Log-in Review

REMARKS:
Normal Turnaround

Carrier # BUS 901 984 607 7

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

510/511 2 of 3

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeffrey Kindley
Phone #: (915) 563-0118
FAX #: (915) 563-9526

Company Name & Address: Philip Services Corporation
7904 IH 20 West, Midland, Tx 79706

Project #: 19350
Project Name: Skull Tasker Road

Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
106096	TSB-5 (18-20')	1	40ml VOA		✓							✓	08/24/98	0925
97	TSB-9 (2-3')	5	4 oz Jars		✓					✓			08/24/98	1530
	TSB-9 (2-3')	1	40ml VOA		✓							✓	08/24/98	1530
98	TSB-9 (3-5')	5	4 oz Jars		✓					✓			08/24/98	1534
	TSB-9 (3-5')	1	40ml VOA		✓							✓	08/24/98	1534
99	TSB-9 (18-20')	5	4 oz Jars		✓					✓			08/24/98	1605
	TSB-9 (18-20')	1	40ml VOA		✓							✓	08/24/98	1605
100	TSB-11 (2-3')	5	4 oz Jars		✓					✓			08/24/98	1306
	TSB-11 (2-3')	1	40ml VOA		✓							✓	08/24/98	1306
101	TSB-11 (3-5')	5	4 oz Jars		✓					✓			08/24/98	1311
	TSB-11 (3-5')	1	40ml VOA		✓							✓	08/24/98	1311

ANALYSIS REQUEST

BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240 / 8260	8270	See Attached	VOC's
										✓
	✓								✓	
	.									✓
	✓								✓	
										✓
	✓								✓	
										✓
	✓								✓	
										✓
	✓								✓	
										✓

SPECIAL HANDLING

Turn around # of days
Fax ASAP
Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	08/24/98	700 AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Whitaker	Date: 8-26-98	Time: 9:00 am

REMARKS

Normal Turnaround

510/511 3 of 3

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeffrey Kindley
Phone #: (915) 563-0118
FAX #: (915) 563-9526

Company Name & Address: Philip Services Corporation
7904 IH 20 West
Midland, Tx 79706

Project #: 19350

Project Name: Shell Tasker Road

Project Location: Hobbs, New Mexico

Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
106102	TSB - 11 (18-20')	5	40ml VOA		✓					✓			08/24/98	1340
	TSB - 11 (18-20')	1	40ml VOA		✓							✓	08/24/98	1340
103	TSB - 11 (29-31')	5	40ml VOA		✓					✓			08/24/98	1430
	TSB - 11 (29-31')	1	40ml VOA		✓							✓	08/24/98	1430
106104	Trip Blank	2		✓										
106105	Field Blank	2		✓										

ANALYSIS REQUEST

BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240 / 8260	8270	See Attached	VOCs		
	✓								✓			
									✓	✓		
	✓								✓			
										✓		
							✓					
							✓					

SPECIAL HANDLING

Turn around # of days
Fax ASAP
Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	08/25/98	700 AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Vicki Windham	8-26-98	9:00am

REMARKS

Normal Turnaround.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 1

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
106196	TSB-3 2-3'	8/25/98	13:35	8/27/98
106197	TSB-3 3-5'	8/25/98	13:42	8/27/98
106198	TSB-3 18-20'	8/25/98	14:06	8/27/98
106199	TSB-12 2-3'	8/25/98	8:44	8/27/98
106200	TSB-12 3-5'	8/25/98	8:47	8/27/98
106201	TSB-12 18-20'	8/25/98	9:26	8/27/98
106202	TSB-9 48-50'	8/25/98	11:24	8/27/98
106203	Trip Blank			8/27/98
106204	Field Blank	8/25/98	16:30	8/27/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

This data meets all quality control criteria with the exceptions:
106196 - 106202 Pesticide samples extracted past hold time
106196 - 109202 Pesticide samples middle and closing CCVs were out of acceptance criteria, biased high
106196 - 106202 Pesticide samples RPD out of acceptance criteria

Corrections:
1) Phenol result added for samples 106196-202.
2) Dichlorobenzene and 1,1-dichloroethylene reporting limits corrected for samples 106199-202.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98
Page # 2

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544
Sample Number: 106204

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Acrylonitrile		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Benzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chlorobenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chloroform		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorobenzene		<2	ug/L	S-8260B		9/7/98	AG		5220	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloropropenes		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylbenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromodichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromomethane		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Chloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Toluene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Vinyl chloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
m,p-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
o-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylene dibromide		<1	ug/L	S-8260B		9/7/98	AG		5220	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Methylene chloride		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Surr. Dibromofluoromethane		106	%	S-8260B		9/7/98	AG		5220	72-130
Surr. Toluene-d8		88	%	S-8260B		9/7/98	AG		5220	77-127
Surr. 4-Bromofluorobenzene		96	%	S-8260B		9/7/98	AG		5220	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98
Page # 3

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544
Sample Number: 106203

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Acrylonitrile		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Benzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chlorobenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chloroform		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorobenzene		<2	ug/L	S-8260B		9/7/98	AG		5220	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloropropenes		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylbenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromodichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromomethane		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Chloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Toluene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Vinyl chloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
m,p-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
o-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylene dibromide		<1	ug/L	S-8260B		9/7/98	AG		5220	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Methylene chloride		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Surr. Dibromofluoromethane		107	%	S-8260B		9/7/98	AG		5220	72-130
Surr. Toluene-d8		88	%	S-8260B		9/7/98	AG		5220	77-127
Surr. 4-Bromofluorobenzene		97	%	S-8260B		9/7/98	AG		5220	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 4

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544
Sample Number: 106196

Field Code: TSB-3 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<435	ug/Kg	S-8260B		9/6/98	AG		5207	435
Acrylonitrile		<435	ug/Kg	S-8260B		9/6/98	AG		5207	435
Benzene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Carbon tetrachloride		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Chlorobenzene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
1,2-dichloroethane		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
1,1,2,2-tetrachloroethane		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
1,1,1-trichloroethane		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
1,1,2-trichloroethane		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
1,1,2-trichloroethylene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Chloroform		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Dichlorobenzene		<174	ug/Kg	S-8260B		9/6/98	AG		5207	174
1,1-dichloroethylene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Dichloropropenes		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Ethylbenzene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Bromodichloromethane		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Bromomethane		<435	ug/Kg	S-8260B		9/6/98	AG		5207	435
Chloromethane		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Dichlorodifluoromethane		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Dichloromethane		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Trichlorofluorometane		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Tetrachloroethylene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Toluene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Trichloroethylene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Vinyl chloride		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
m,p-xylene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
o-xylene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
1,1-dichloroethane		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Ethylene dibromide		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
cis-1,2-dichlorethylene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
trans-1,2-dichloroethylene		<87	ug/Kg	S-8260B		9/6/98	AG		5207	87
Methylene chloride		<435	ug/Kg	S-8260B		9/6/98	AG		5207	435
Surr. Dibromofluoromethane		105	%	S-8260B		9/6/98	AG		5207	72-130
Surr. Toluene-d8		86	%	S-8260B		9/6/98	AG		5207	77-127
Surr. 4-Bromofluorobenzene		91	%	S-8260B		9/6/98	AG		5207	72-131
Benzidine		<2.5	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25

Corrected

Date: 05-20-99

Order ID Number: 9808000544
Sample Number: 106196

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-3 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenol		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Surr. 2-Fluorophenol		70	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	25-121
Surr. Phenol-d6		73	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	24-113
Surr. Nitroobenzene-d5		69	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	23-120
Surr. 2-Fluorobiphenyl		90	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	30-115
Surr. 2,4,6-Tribromophenol		60	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	19-122
Surr. Terphenyl-d14		79	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-20-99
Page # 6
Order ID Number: 9808000544
Sample Number: 106196

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs. NM

Field Code: TSB-3 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Chlordane	**	<75	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
DDT	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Dieldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endosulfan	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Heptachlor	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4911	5263	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Barium		109	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cadmium		0.23	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.10
Chromium		1.9	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Lead		1.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/27/98	9/1/98	SA		5185	0.01
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Copper		2.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Iron		1,300	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Manganese		9.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Zinc		3.9	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Aluminum		2,200	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	10
Cobalt		3.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Nickel		4.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cyanide		<0.01	mg/Kg	SM 4500 C,E		9/1/98	SA		5185	0.01
Fluoride		1.4	mg/Kg	E 300.0		9/21/98	JS		5481	0.2
Nitrate		7.6	mg/Kg	E 300.0		9/21/98	JS		5481	0.2
Chloride		200	mg/Kg	E 300.0		9/21/98	JS		5481	5.0
Sulfate		150	mg/Kg	E 300.0		9/21/98	JS		5481	2.0
TDS		630	mg/Kg	E 160.1		9/19/98	RS		5417	---
pH		7.7	s.u.	E 150.1		8/28/98	SA		5154	7.1
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4810	5168	10.0
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC		5357	0.25
Total Radium		1.31	pCi/gm	E 901.1M		10/1/98	DS	---	---	---

** Pesticide sample extracted past hold time. Middle and closing CCVs were out of acceptance criteria,biased high. Relative Percent Difference between MS and MSD out of acceptance criteria.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544
Sample Number: 106197

Field Code: TSB-3 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<175	ug/Kg	S-8260B		9/6/98	AG		5207	175
Acrylonitrile		<175	ug/Kg	S-8260B		9/6/98	AG		5207	175
Benzene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Carbon tetrachloride		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Chlorobenzene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
1,2-dichloroethane		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
1,1,2,2-tetrachloroethane		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
1,1,1-trichloroethane		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
1,1,2-trichloroethane		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
1,1,2-trichloroethylene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Chloroform		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Dichlorobenzene		<70	ug/Kg	S-8260B		9/6/98	AG		5207	70
1,1-dichloroethylene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Dichloropropenes		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Ethylbenzene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Bromodichloromethane		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Bromomethane		<175	ug/Kg	S-8260B		9/6/98	AG		5207	175
Chloromethane		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Dichlorodifluoromethane		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Dichloromethane		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Trichlorofluorometane		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Tetrachloroethylene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Toluene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Trichloroethylene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Vinyl chloride		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
m,p-xylene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
o-xylene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
1,1-dichloroethane		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Ethylene dibromide		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
cis-1,2-dichlorethylene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
trans-1,2-dichloroethylene		<35	ug/Kg	S-8260B		9/6/98	AG		5207	35
Methylene chloride		<175	ug/Kg	S-8260B		9/6/98	AG		5207	175
Surr. Dibromofluoromethane		104	%	S-8260B		9/6/98	AG		5207	86-118
Surr. Toluene-d8		86	%	S-8260B		9/6/98	AG		5207	88-110
Surr. 4-Bromofluorobenzene		91	%	S-8260B		9/6/98	AG		5207	86-115
Benzidine		<2.5	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25

Corrected

Date: 05-20-99

Order ID Number: 9808000544
Sample Number: 106197

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-3 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenol		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Surr. 2-Fluorophenol		26	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	25-121
Surr. Phenol-d6		73	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	24-113
Surr. Nitroobenzene-d5		68	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	23-120
Surr. 2-Fluorobiphenyl		88	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	30-115
Surr. 2,4,6-Tribromophenol		63	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	19-122
Surr. Terphenyl-d14		87	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-20-99
Page # 9
Order ID Number: 9808000544
Sample Number: 106197

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-3 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Chlordane	**	<75	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
DDT	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Dieldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endosulfan	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Heptachlor	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4911	5263	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Barium		315	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cadmium		0.14	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.10
Chromium		4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Lead		1.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/27/98	9/1/98	SA		5185	0.01
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Copper		3.9	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Iron		2,600	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Manganese		25	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Zinc		6.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Aluminum		5,200	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Boron		12	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	10
Cobalt		5.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Molybdenum		3.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Nickel		8.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cyanide		<0.01	mg/Kg	m 4500 CN,CE		9/1/98	SA		5185	0.01
Fluoride		2.8	mg/Kg	E 300.0		9/21/98	JS		5481	0.2
Nitrate		6.9	mg/Kg	E 300.0		9/21/98	JS		5481	0.2
Chloride		170	mg/Kg	E 300.0		9/21/98	JS		5481	2.0
Sulfate		98	mg/Kg	E 300.0		9/21/98	JS		5481	1.0
TDS		400	mg/Kg			9/19/98	RS		5417	---
pH		8.3	s.u.	E 150.1		8/28/98	SA		5154	7.1
TRPHC		11.7	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4810	5168	10.0
Total Phenols		0.99	mg/Kg	SM 5530 A,D		9/16/98	RC		5357	0.25
Total Radium		2.81	pCi/gm	E 901.1M		10/1/98	DS	---	---	---

** Pesticide sample extracted past hold time. Middle and closing CCVs were out of acceptance criteria, biased high. Relative Percent Difference between MS and MSD out of acceptance criteria.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98
Page # 10

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544
Sample Number: 106198

Field Code: TSB-3 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	AG		5230	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Surr. Dibromofluoromethane		115	%	S-8260B		9/8/98	AG		5230	86-118
Surr. Toluene-d8		85	%	S-8260B		9/8/98	AG		5230	88-110
Surr. 4-Bromofluorobenzene		97	%	S-8260B		9/8/98	AG		5230	86-115
Benzidine		<2.5	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25

Corrected

Date: 05-20-99

Order ID Number: 9808000544
Sample Number: 106198

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-3 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenol		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Surr. 2-Fluorophenol		74	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	25-121
Surr. Phenol-d6		75	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	24-113
Surr. Nitroobenzene-d5		71	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	23-120
Surr. 2-Fluorobiphenyl		91	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	30-115
Surr. 2,4,6-Tribromophenol		63	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	19-122
Surr. Terphenyl-d14		80	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-20-99
Page # 12
Order ID Number: 9808000544
Sample Number: 106198

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-3 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Chlordane	**	<75	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
DDT	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Dieldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endosulfan	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Heptachlor	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4911	5263	0.1
Arsenic		1.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Barium		286	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cadmium		0.15	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.10
Chromium		2.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Lead		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/27/98	9/1/98	SA		5185	0.01
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Copper		2.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Iron		1,900	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Manganese		21	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Zinc		5.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Aluminum		3,300	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	10
Cobalt		4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Molybdenum		1.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Nickel		3.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cyanide		<0.01	mg/L	335.2		9/1/98	SA		5185	0.01
Fluoride		4.1	mg/Kg	E 300.0		9/21/98	JS		5482	0.2
Nitrate		2.1	mg/Kg	E 300.0		9/21/98	JS		5482	0.2
Chloride		180	mg/Kg	E 300.0		9/21/98	JS		5482	2.0
Sulfate		110	mg/Kg	E 300.0		9/21/98	JS		5482	2.0
TDS		540	mg/Kg			9/19/98	RS		5417	---
pH		8.7	s.u.	E 150.1		8/28/98	SA		5154	7.1
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4810	5168	10.0
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		10/1/98	RC		5357	0.25
Total Radium		9.63	pCi/gm	E 901.1M			DS	---	---	---

** Pesticide sample extracted past hold time. Middle and closing CCVs were out of acceptance criteria, biased high. Relative Percent Difference between MS and MSD out of acceptance criteria.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 13

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544
Sample Number: 106199

Field Code: TSB-12 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	AG		5230	*50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	*25
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Surr. Dibromofluoromethane		109	%	S-8260B		9/8/98	AG		5230	86-118
Surr. Toluene-d8		86	%	S-8260B		9/8/98	AG		5230	88-110
Surr. 4-Bromofluorobenzene		97	%	S-8260B		9/8/98	AG		5230	86-115
Benzidine		<2.5	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25

Corrected

Date: 05-20-99
Page # 14
Order ID Number: 9808000544
Sample Number: 106199

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-12 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenol		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Surr. 2-Fluorophenol		72	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	25-121
Surr. Phenol-d6		84	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	24-113
Surr. Nitroobenzene-d5		71	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	23-120
Surr. 2-Fluorobiphenyl		88	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	30-115
Surr. 2,4,6-Tribromophenol		71	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	19-122
Surr. Terphenyl-d14		82	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-20-99

Order ID Number: 9808000544
Sample Number: 106199

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-12 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Chlordane	**	<75	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
DDT	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Dieldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endosulfan	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Heptachlor	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4911	5263	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Barium		277	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cadmium		0.16	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.10
Chromium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Lead		0.92	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/27/98	9/1/98	SA		5185	0.01
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Copper		2.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Iron		2,000	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Manganese		21	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Zinc		6.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Aluminum		3,900	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	10
Cobalt		5.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Molybdenum		1.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Nickel		5.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cyanide		<0.01	mg/L	335.2		9/1/98	SA		5185	0.01
Fluoride		4.7	mg/Kg	E 300.0		9/21/98	JS		5482	0.2
Nitrate		10	mg/Kg	E 300.0		9/21/98	JS		5482	0.2
Chloride		33	mg/Kg	E 300.0		9/21/98	JS		5482	1.0
Sulfate		460	mg/Kg	E 300.0		9/21/98	JS		5482	5.0
TDS		890	mg/Kg			9/19/98	RS		5417	---
pH		8.1	s.u.	E 150.1		8/28/98	SA		5154	7.1
TRPHC		1,160	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4810	5168	10.0
Total Phenols		<0.25	mg/Kg	SM 5530 A,D		9/16/98	RC		5357	0.25
Total Radium		0.35	pCi/gm	E 901.1M		10/1/98	DS	---	---	---

** Pesticide sample extracted past hold time. Middle and closing CCVs were out of acceptance criteria, biased high. Relative Percent Difference between MS and MSD out of acceptance criteria.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 16

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544
Sample Number: 106200

Field Code: TSB-12 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	AG		5230	*50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	*25
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Surr. Dibromofluoromethane		91	%	S-8260B		9/8/98	AG		5230	86-118
Surr. Toluene-d8		85	%	S-8260B		9/8/98	AG		5230	88-110
Surr. 4-Bromofluorobenzene		90	%	S-8260B		9/8/98	AG		5230	86-115
Benzidine		<2.5	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25

* Reporting limit corrected

Corrected

Date: 05-20-99

Order ID Number: 9808000544
Sample Number: 106200

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-12 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenol		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Surr. 2-Fluorophenol		67	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	25-121
Surr. Phenol-d6		70	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	24-113
Surr. Nitroobenzene-d5		69	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	23-120
Surr. 2-Fluorobiphenyl		88	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	30-115
Surr. 2,4,6-Tribromophenol		50	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	19-122
Surr. Terphenyl-d14		79	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-20-99
Page # 18
Order ID Number: 9808000544
Sample Number: 106200

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-12 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Chlordane	**	<75	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
DDT	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Dieldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endosulfan	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Heptachlor	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4911	5263	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Barium		328	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cadmium		0.25	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.10
Chromium		4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Lead		1.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/27/98	9/1/98	SA		5185	0.01
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Copper		2.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Iron		2,800	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Manganese		93	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Zinc		13	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Aluminum		4,900	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Boron		10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	10
Cobalt		6.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Molybdenum		1.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Nickel		836	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cyanide		<0.01	mg/L	335.2		9/1/98	SA		5185	0.01
Fluoride		9	mg/Kg	E 300.0		9/21/98	JS		5482	0.2
Nitrate		1.7	mg/Kg	E 300.0		9/21/98	JS		5482	0.2
Chloride		27	mg/Kg	E 300.0		9/21/98	JS		5482	1.0
Sulfate		360	mg/Kg	E 300.0		9/21/98	JS		5482	5.0
TDS		930	mg/Kg			9/19/98	RS		5418	---
pH		8.1	s.u.	E 150.1		8/28/98	SA		5154	7.1
TRPHC		7,800	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4810	5168	10.0
Total Phenols		1.5	mg/Kg	SM 5530 A,D		9/16/98	RC		5357	0.25
Total Radium		0.50	pCi/gm	E 901.1M		10/1/98	DS	---	---	---

** Pesticide sample extracted past hold time. Middle and closing CCvs were out of acceptance criteria, biased high. Relative Percent Difference between MS and MSD out of acceptance criteria.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 19

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544
Sample Number: 106201

Field Code: TSB-12 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	AG		5230	*50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	*25
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Surr. Dibromofluoromethane		80	%	S-8260B		9/8/98	AG		5230	86-118
Surr. Toluene-d8		82	%	S-8260B		9/8/98	AG		5230	88-110
Surr. 4-Bromofluorobenzene		114	%	S-8260B		9/8/98	AG		5230	86-115
Benzidine		<2.5	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25

* Reporting limit corrected.

Corrected

Date: 05-20-99
Page # 20
Order ID Number: 9808000544
Sample Number: 106201

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-12 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluorene		0.832	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenanthrene		2.41	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1-methylnaphthalene		4.99	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2-methylnaphthalene		3.75	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenol		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Surr. 2-Fluorophenol		36	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	25-121
Surr. Phenol-d6		81	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	24-113
Surr. Nitroobenzene-d5		81	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	23-120
Surr. 2-Fluorobiphenyl		98	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	30-115
Surr. 2,4,6-Tribromophenol		65	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	19-122
Surr. Terphenyl-d14		86	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-20-99
Page # 21
Order ID Number: 9808000544
Sample Number: 106201

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-12 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin	**	<100	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	100
Chlordane	**	<150	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	150
DDT	**	<100	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	100
Dieldrin	**	<100	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	100
Endosulfan	**	<100	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	100
Endrin	**	<100	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	100
Heptachlor	**	<100	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	100
PCB's		<0.1	mg/Kg	S 8082						
Arsenic		2.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Barium		105	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cadmium		0.17	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.10
Chromium		2.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Lead		0.71	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/27/98	9/1/98	SA		5185	0.01
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Copper		4.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Iron		1,700	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Manganese		25	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Zinc		5.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Aluminum		3,000	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	10
Cobalt		4.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Molybdenum		1.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Nickel		4.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cyanide		<0.01	mg/L	335.2		9/1/98	SA		5185	0.01
Fluoride		4.5	mg/Kg	E 300.0		9/21/98	JS		5483	0.2
Nitrate		1.7	mg/Kg	E 300.0		9/21/98	JS		5483	0.2
Chloride		160	mg/Kg	E 300.0		9/21/98	JS		5483	2.0
Sulfate		71	mg/Kg	E 300.0		9/21/98	JS		5483	1.0
TDS		770	mg/Kg			9/19/98	RS		5418	---
pH		9.0	s.u.	E 150.1		8/28/98	SA		5154	7.1
TRPHC		14,700	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4810	5168	10.0
Total Phenols		1.15	mg/Kg	SM 5530 A,D		9/16/98	RC		5357	0.25
Total Radium		2.51	pCi/gm	E 901.1M		10/1/98	DS	---	---	---

** Pesticide extracted past hold time. Middle and closing CCVs were out of acceptance criteria, biased high. Relative Percent Difference between MS and MSD out of acceptance criteria.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 22

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544
Sample Number: 106202

Field Code: TSB-12 48-50'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	AG		5230	*50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	*25
ichloropropenes		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
thylbenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Surr. Dibromofluoromethane		81	%	S-8260B		9/8/98	AG		5230	86-118
Surr. Toluene-d8		81	%	S-8260B		9/8/98	AG		5230	88-110
Surr. 4-Bromofluorobenzene		83	%	S-8260B		9/8/98	AG		5230	86-115
Benzidine		<2.5	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25

* Reporting limit corrected.

Corrected

Date: 05-20-99

Order ID Number: 9808000544
Sample Number: 106202

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-12 48-50'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Phenol		<0.25	mg/Kg	S-8270C	9/9/98	9/20/98	DG	4921	5470	0.25
Surr. 2-Fluorophenol		58	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	25-121
Surr. Phenol-d6		63	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	24-113
Surr. Nitroobenzene-d5		57	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	23-120
Surr. 2-Fluorobiphenyl		78	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	30-115
Surr. 2,4,6-Tribromophenol		64	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	19-122
Surr. Terphenyl-d14		87	%	S-8270C	9/9/98	9/20/98	DG	4921	5470	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-20-99

Order ID Number: 9808000544
Sample Number: 106202

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: TSB-12 48-50'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Chlordane	**	<75	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
DDT	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Dieldrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endosulfan	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Endrin	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
Heptachlor	**	<50	ug/Kg	S-8081A	10/2/98	10/9/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/8/98	9/9/98	RC	4911	5263	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Barium		10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cadmium		0.12	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.10
Chromium		3.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Lead		2.2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/27/98	9/1/98	SA		5185	0.01
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Copper		1.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Iron		2,200	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Manganese		24	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Zinc		4.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	2.0
Aluminum		2,100	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5041	5374	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	10
Cobalt		2.9	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	1.0
Nickel		2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5041	5354	0.50
Cyanide		<0.01	mg/L	335.2		9/1/98	SA		5185	0.01
Fluoride		1.1	mg/Kg	E 300.0		9/21/98	JS		5483	0.2
Nitrate		<0.4	mg/Kg	E 300.0		9/21/98	JS		5483	0.4
Chloride		56	mg/Kg	E 300.0		9/21/98	JS		5483	1.0
Sulfate		14	mg/Kg	E 300.0		9/21/98	JS		5483	1.0
TDS		270	mg/Kg			9/19/98	RS		5418	---
pH		8.8	s.u.	E 150.1		8/28/98	SA		5154	7.1
TRPHC		20.3	mg/Kg	S 418.1	8/27/98	8/29/98	SR	4810	5168	10.0
Total Phenols		6.08	mg/Kg	SM 5530 A,D		9/16/98	RC		5357	0.25
Total Radium		3.16	pCi/gm	E 901.1M		10/1/98	DS	---	---	---

** Pesticide sample extractedpast hold time. Middle and closing CCVs were out of acceptance criteria, biased high. Relative Percent Difference between MS and MSD out of acceptance criteria.

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/7/98		5220
Acrylonitrile		<5	ug/L	5	9/7/98		5220
Benzene		<1	ug/L	1	9/7/98		5220
Carbon tetrachloride		<1	ug/L	1	9/7/98		5220
Chlorobenzene		<1	ug/L	1	9/7/98		5220
1,2-dichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/7/98		5220
1,1,1-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethylene		<1	ug/L	1	9/7/98		5220
Chloroform		<1	ug/L	1	9/7/98		5220
Dichlorobenzene		<2	ug/L	2	9/7/98		5220
1,1-dichloroethylene		<1	ug/L	1	9/7/98		5220
Dichloropropenes		<1	ug/L	1	9/7/98		5220
Ethylbenzene		<1	ug/L	1	9/7/98		5220
Bromodichloromethane		<1	ug/L	1	9/7/98		5220
Bromomethane		<5	ug/L	5	9/7/98		5220
Chloromethane		<1	ug/L	1	9/7/98		5220
Dichlorodifluoromethane		<1	ug/L	1	9/7/98		5220
Dichloromethane		<1	ug/L	1	9/7/98		5220
Trichlorofluoromethane		<1	ug/L	1	9/7/98		5220
Tetrachloroethylene		<1	ug/L	1	9/7/98		5220
Toluene		<1	ug/L	1	9/7/98		5220
Trichloroethylene		<1	ug/L	1	9/7/98		5220
Vinyl chloride		<1	ug/L	1	9/7/98		5220
m,p-xylene		<1	ug/L	1	9/7/98		5220
o-xylene		<1	ug/L	1	9/7/98		5220
1,1-dichloroethane		<1	ug/L	1	9/7/98		5220
Ethylene dibromide		<1	ug/L	1	9/7/98		5220
cis-1,2-dichlorethylene		<1	ug/L	1	9/7/98		5220
trans-1,2-dichloroethylene		<1	ug/L	1	9/7/98		5220
Methylene chloride		<5	ug/L	5	9/7/98		5220
Surr. Dibromofluoromethane		96	%	72-130	9/7/98		5220
Surr. Toluene-d8		89	%	77-127	9/7/98		5220
Surr. 4-Bromofluorobenzene		86	%	72-131	9/7/98		5220
Acrolein		<125	ug/Kg	125	9/6/98		5207
Acrylonitrile		<125	ug/Kg	125	9/6/98		5207
Benzene		<25	ug/Kg	25	9/6/98		5207
Carbon tetrachloride		<25	ug/Kg	25	9/6/98		5207
Chlorobenzene		<25	ug/Kg	25	9/6/98		5207

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,2-dichloroethane		<25	ug/Kg	25	9/6/98		5207
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/6/98		5207
1,1,1-trichloroethane		<25	ug/Kg	25	9/6/98		5207
1,1,2-trichloroethane		<25	ug/Kg	25	9/6/98		5207
1,1,2-trichloroethylene		<25	ug/Kg	25	9/6/98		5207
Chloroform		<25	ug/Kg	25	9/6/98		5207
Dichlorobenzene		<50	ug/Kg	50	9/6/98		5207
1,1-dichloroethylene		<25	ug/Kg	25	9/6/98		5207
Dichloropropenes		<25	ug/Kg	25	9/6/98		5207
Ethylbenzene		<25	ug/Kg	25	9/6/98		5207
Bromodichloromethane		<25	ug/Kg	25	9/6/98		5207
Bromomethane		<125	ug/Kg	125	9/6/98		5207
Chloromethane		<25	ug/Kg	25	9/6/98		5207
Dichlorodifluoromethane		<25	ug/Kg	25	9/6/98		5207
Dichloromethane		<25	ug/Kg	25	9/6/98		5207
Trichlorofluoromethane		<25	ug/Kg	25	9/6/98		5207
Tetrachloroethylene		<25	ug/Kg	25	9/6/98		5207
Toluene		<25	ug/Kg	25	9/6/98		5207
Trichloroethylene		<25	ug/Kg	25	9/6/98		5207
Vinyl chloride		<25	ug/Kg	25	9/6/98		5207
m,p-xylene		<25	ug/Kg	25	9/6/98		5207
o-xylene		<25	ug/Kg	25	9/6/98		5207
1,1-dichloroethane		<25	ug/Kg	25	9/6/98		5207
Ethylene dibromide		<25	ug/Kg	25	9/6/98		5207
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/6/98		5207
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/6/98		5207
Methylene chloride		<125	ug/Kg	125	9/6/98		5207
Surr. Dibromofluoromethane		101	%	72-130	9/6/98		5207
Surr. Toluene-d8		89	%	77-127	9/6/98		5207
Surr. 4-Bromofluorobenzene		92	%	72-131	9/6/98		5207
Acrolein		<125	ug/Kg	125	9/8/98		5230
Acrylonitrile		<125	ug/Kg	125	9/8/98		5230
Benzene		<25	ug/Kg	25	9/8/98		5230
Carbon tetrachloride		<25	ug/Kg	25	9/8/98		5230
Chlorobenzene		<25	ug/Kg	25	9/8/98		5230
1,2-dichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,1-trichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2-trichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2-trichloroethylene		<25	ug/Kg	25	9/8/98		5230
Chloroform		<25	ug/Kg	25	9/8/98		5230
Dichlorobenzene		<50	ug/Kg	50	9/8/98		5230
1,1-dichloroethylene		<25	ug/Kg	25	9/8/98		5230
Dichloropropenes		<25	ug/Kg	25	9/8/98		5230
Ethylbenzene		<25	ug/Kg	25	9/8/98		5230
Bromodichloromethane		<25	ug/Kg	25	9/8/98		5230

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Bromomethane		<125	ug/Kg	125	9/8/98		5230
Chloromethane		<25	ug/Kg	25	9/8/98		5230
Dichlorodifluoromethane		<25	ug/Kg	25	9/8/98		5230
Dichloromethane		<25	ug/Kg	25	9/8/98		5230
Trichlorofluoromethane		<25	ug/Kg	25	9/8/98		5230
Tetrachloroethylene		<25	ug/Kg	25	9/8/98		5230
Toluene		<25	ug/Kg	25	9/8/98		5230
Trichloroethylene		<25	ug/Kg	25	9/8/98		5230
Vinyl chloride		<25	ug/Kg	25	9/8/98		5230
m,p-xylene		<25	ug/Kg	25	9/8/98		5230
o-xylene		<25	ug/Kg	25	9/8/98		5230
1,1-dichloroethane		<25	ug/Kg	25	9/8/98		5230
Ethylene dibromide		<25	ug/Kg	25	9/8/98		5230
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/8/98		5230
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/8/98		5230
Methylene chloride		<125	ug/Kg	125	9/8/98		5230
Surr. Dibromofluoromethane		103	%	72-130	9/8/98		5230
Surr. Toluene-d8		90	%	77-127	9/8/98		5230
Surr. 4-Bromofluorobenzene		91	%	72-131	9/8/98		5230
Total Mercury		<0.10	mg/Kg	0.25	8/28/98	4804	5149
Cyanide		<0.01	mg/Kg	0.01	9/1/98		5185
TRPHC		<10.0	mg/Kg	10	8/29/98	4810	5168
PCB		<0.1	mg/Kg	0.1	9/9/98	4911	5263
Total Phenols		<0.25	mg/Kg	0.25	9/16/98		5357
PCB		0.40	mg/Kg	0.41	9/18/98		5401
Arsenic		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Barium		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Cadmium		<0.10	mg/Kg	0.10	9/16/98	5041	5355
Chromium		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Lead		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Selenium		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Silver		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Uranium		<2.0	mg/Kg	2.0	9/16/98	5041	5355
Copper		<1.0	mg/Kg	1.0	9/16/98	5041	5355
Iron		<10	mg/Kg	10	9/17/98	5041	5374
Manganese		<1.0	mg/Kg	1.0	9/16/98	5041	5355
Zinc		<2.0	mg/Kg	2.0	9/16/98	5041	5355
Aluminum		<10	mg/Kg	10	9/17/98	5041	5374
Boron		<10	mg/Kg	10	9/16/98	5041	5355
Cobalt		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Molybdenum		<1.0	mg/Kg	1.0	9/16/98	5041	5355
Nickel		<0.50	mg/Kg	0.50	9/16/98	5041	5355
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5481
Chloride		<1.0	mg/Kg	1.0	9/21/98		5481
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5481
Sulfate		<1.0	mg/Kg	1.0	9/21/98		5481

Date: 10-9-98
Page # 28
Order ID Number: 9808000544

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5482
Chloride		<1.0	mg/Kg	1.0	9/21/98		5482
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5482
Sulfate		<1.0	mg/Kg	1.0	9/21/98		5482
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5483
Chloride		<1.0	mg/Kg	1.0	9/21/98		5483
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5483
Sulfate		<1.0	mg/Kg	1.0	9/21/98		5483
Benzidine		<2.5	mg/kg	2.5	9/20/98	4921	5470
Hexachlorobenzene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Pentachlorobenzene		<0.25	mg/kg	0.25	9/20/98	4921	5470
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Hexachloroethane		<0.25	mg/kg	0.25	9/20/98	4921	5470
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/20/98	4921	5470
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/20/98	4921	5470
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/20/98	4921	5470
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/20/98	4921	5470
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/20/98	4921	5470
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/20/98	4921	5470
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/20/98	4921	5470
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Diphenylhydrazine		<1.25	mg/kg	1.25	9/20/98	4921	5470
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Isophorone		<1.25	mg/kg	1.25	9/20/98	4921	5470
Nitrobenzene		<0.25	mg/kg	0.25	9/20/98	4921	5470
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/20/98	4921	5470
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/20/98	4921	5470
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/20/98	4921	5470
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/20/98	4921	5470
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/20/98	4921	5470
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/20/98	4921	5470
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/20/98	4921	5470
Pentachlorophenol		<1.25	mg/kg	1.25	9/20/98	4921	5470
Dibutyl phthalate		<0.25	mg/kg	0.25	9/20/98	4921	5470
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/20/98	4921	5470
Diethyl phthalate		<0.25	mg/kg	0.25	9/20/98	4921	5470
Dimethyl phthalate		<0.25	mg/kg	0.25	9/20/98	4921	5470
Anthracene		<0.25	mg/kg	0.25	9/20/98	4921	5470
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Fluoranthene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Fluorene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Phenanthrene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Pyrene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Naphthalene		<0.25	mg/kg	0.25	9/20/98	4921	5470

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1-methylnaphthalene		<0.25	mg/kg	0.25	9/20/98	4921	5470
2-methylnaphthalene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/20/98	4921	5470
Surr. 2-Fluorophenol		61	%	25-121	9/20/98	4921	5470
Surr. Phenol-d6		64	%	24-113	9/20/98	4921	5470
Surr. Nitroobenzene-d5		48	%	23-120	9/20/98	4921	5470
Surr. 2-Fluorobiphenyl		73	%	30-115	9/20/98	4921	5470
Surr. 2,4,6-Tribromophenol		56	%	19-122	9/20/98	4921	5470
Surr. Terphenyl-d14		56	%	28-137	9/20/98	4921	5470

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Total Mercury		5.0	mg/l	4.8	96	8/28/98	5149
Cyanide		0.12	mg/l	0.12	100	9/1/98	5185
pH		7.1	mg/l	7.1	100	8/28/98	5154
Vinyl chloride		100	ug/L	92	92	9/6/98	5207
1,1-Dichloroethene		100	ug/L	98	98	9/6/98	5207
Chloroform		100	ug/L	91	91	9/6/98	5207
1,2-Dichloropropane		100	ug/L	82	82	9/6/98	5207
Toluene		100	ug/L	86	86	9/6/98	5207
Chlorobenzene		100	ug/L	87	87	9/6/98	5207
Ethylbenzene		100	ug/L	86	86	9/6/98	5207
Vinyl chloride		100	ug/L	94	94	9/7/98	5220
1,1-Dichloroethene		100	ug/L	120	120	9/7/98	5220
Chloroform		100	ug/L	111	111	9/7/98	5220
1,2-Dichloropropane		100	ug/L	101	101	9/7/98	5220
Toluene		100	ug/L	113	113	9/7/98	5220
Chlorobenzene		100	ug/L	110	110	9/7/98	5220
Ethylbenzene		100	ug/L	109	109	9/7/98	5220
Vinyl chloride		100	ug/L	85	85	9/8/98	5230
1,1-Dichloroethene		100	ug/L	97	97	9/8/98	5230
Chloroform		100	ug/L	98	98	9/8/98	5230
1,2-Dichloropropane		100	ug/L	96	96	9/8/98	5230
Toluene		100	ug/L	106	106	9/8/98	5230
Chlorobenzene		100	ug/L	110	110	9/8/98	5230
Ethylbenzene		100	ug/L	114	114	9/8/98	5230
TRPHC		100	mg/L	101	101	8/29/98	5168
PCB		0.40	mg/L	0.38	95	9/9/98	5263
Total Phenols		0.80	mg/L	0.80	100	9/16/98	5357
TDS		1,000	mg/L	985	99	9/19/98	5418
TDS		1,000	mg/L	960	96	9/19/98	5417
PCB		0.40	mg/L	0.41	103	9/18/98	5401
Arsenic		1.0	mg/L	1.0	100	9/16/98	5355
Barium		1.0	mg/L	1.0	100	9/16/98	5355
Cadmium		1.0	mg/L	1.0	100	9/16/98	5355
Chromium		1.0	mg/L	1.0	100	9/16/98	5355
Lead		1.0	mg/L	1.0	100	9/16/98	5355
Selenium		1.0	mg/L	1.0	100	9/16/98	5355
Silver		1.0	mg/L	0.98	98	9/16/98	5355
Uranium		1.0	mg/L	1.0	100	9/16/98	5355
Copper		1.0	mg/L	1.0	100	9/16/98	5355

Order ID Number: 9808000544

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Iron		100.0	mg/L	101.0	101	9/17/98	5374
Manganese		1.0	mg/L	1.0	100	9/16/98	5355
Zinc		1.0	mg/L	1.0	100	9/16/98	5355
Aluminum		250.0	mg/L	259.0	104	9/17/98	5374
Boron		1.0	mg/L	1.0	100	9/16/98	5355
Cobalt		1.0	mg/L	1.0	100	9/16/98	5355
Molybdenum		1.0	mg/L	1.0	100	9/16/98	5355
Nickel		1.0	mg/L	1.0	100	9/16/98	5355
Fluoride		2.5	mg/L	2.365	95	9/21/98	5481
Chloride		1.5	mg/L	11.685	93	9/21/98	5481
Nitrate		5	mg/L	4.79	96	9/21/98	5481
Sulfate		12.5	mg/L	11.815	95	9/21/98	5481
Fluoride		2.5	mg/L	2.38	95	9/21/98	5482
Chloride		1.5	mg/L	11.535	92	9/21/98	5482
Nitrate		5	mg/L	4.8	96	9/21/98	5482
Sulfate		12.5	mg/L	11.835	95	9/21/98	5482
Fluoride		2.5	mg/L	2.345	94	9/21/98	5483
Chloride		1.5	mg/L	11.535	92	9/21/98	5483
Nitrate		5	mg/L	4.79	96	9/21/98	5483
Sulfate		12.5	mg/L	11.83	95	9/21/98	5483
Phenol		80	mg/L	79	99	9/20/98	5470
1,4-Dichlorobenzene		80	mg/L	76	95	9/20/98	5470
2-nitrophenol		80	mg/L	76	95	9/20/98	5470
2,4-Dichlorophenol		80	mg/L	83	104	9/20/98	5470
Hexachlorobutadiene		80	mg/L	73	91	9/20/98	5470
4-Chloro-3-methylphenol		80	mg/L	76	95	9/20/98	5470
2,4,6-Trichlorophenol		80	mg/L	82	103	9/20/98	5470
Acenaphthene		80	mg/L	77	96	9/20/98	5470
n-Nitrosodiphenylamine		80	mg/L	76	95	9/20/98	5470
Pentachlorophenol		80	mg/L	64	82	9/20/98	5470
Fluoranthene		80	mg/L	64	82	9/20/98	5470
Di-n-octylphthalate		80	mg/L	79	99	9/20/98	5470
Benzo(a)pyrene		80	mg/L	66	83	9/20/98	5470

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date:

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Total Mercury		mg/kg	<0.10	2.5	2.5	100	2.5	2.5	100	0	8/28/98	4804	5149
Cyanide		mg/kg	<0.01	0.12	0.12	100	0.12	0.12	100	0	9/1/98		5185
1,1-Dichloroethene		mg/Kg	<69	100	97	97	100	97	97	0	9/6/98		5207
Benzene		mg/Kg	<69	100	104	104	100	105	105	0.96	9/6/98		5207
Trichloroethene		mg/Kg	<69	100	117	117	100	116	116	0.9	9/6/98		5207
Toluene		mg/Kg	<69	100	104	104	100	104	104	0.0	9/6/98		5207
Chlorobenzene		mg/Kg	<69	100	90	90	100	89	89	1.1	9/6/98		5207
1,1-Dichloroethene		ug/L	<1	100	102	102	100	96	96	6.1	9/7/98		5220
Benzene		ug/L	<1	100	102	102	100	104	104	1.9	9/7/98		5220
Trichloroethene		ug/L	<1	100	117	117	100	117	117	0.0	9/7/98		5220
Toluene		ug/L	<1	100	101	101	100	102	102	1.0	9/7/98		5220
Chlorobenzene		ug/L	<1	100	88	88	100	87	87	1.1	9/8/98		5230
1,1-Dichloroethene		ug/L	<1	100	94	94	100	95	95	1.1	9/8/98		5230
Benzene		ug/L	<1	100	105	105	100	107	107	1.9	9/8/98		5230
Trichloroethene		ug/L	<1	100	115	115	100	116	116	0.9	9/8/98		5230
Toluene		ug/L	<1	100	106	106	100	107	107	0.9	9/8/98		5230
Chlorobenzene		ug/L	<1	100	91	91	100	91	91	0	9/8/98		5230
TRPHC		mg/Kg	<10.0	250	230	92	250	220	88	4.4	8/29/98	4810	5168
PCB		mg/Kg	<0.1	0.40	0.40	100	0.40	0.38	95	5.1	9/9/98	4911	5263
Total Phenols		mg/Kg	<0.25	25.00	24.55	98	25.00	25.03	100	2	9/16/98		5357
PCB		mg/Kg	<0.1	0.40	0.43	108	0.40	0.45	113	4.5	9/18/98	5044	5401
Arsenic		mg/Kg	<0.50	200	160	80	200	163	82	2.5	9/16/98	5041	5355
Barium		mg/Kg	<0.50	200	171	86	200	175	88	2.3	9/16/98	5041	5355
Cadmium		mg/Kg	<0.10	200	163	82	200	165	83	1.2	9/16/98	5041	5355
Chromium		mg/Kg	<0.50	200	173	87	200	169	85	2.3	9/16/98	5041	5355
Lead		mg/Kg	<0.50	200	163	83	200	163	82	1.2	9/16/98	5041	5355
Selenium		mg/Kg	<0.50	200	150	75	200	150	75	0	9/16/98	5041	5355
Silver		mg/Kg	<0.50	100	88	88	100	90	90	2.2	9/16/98	5041	5355
Uranium		mg/Kg	<2.0	200	176	88	200	163	90	2.2	9/16/98	5041	5355
Copper		mg/Kg	<1.0	200	167	84	200	173	87	3.5	9/16/98	5041	5355
Manganese		mg/Kg	<1.0	200	168	84	200	167	84	0	9/16/98	5041	5355
Zinc		mg/Kg	<2.0	200	160	80	200	159	80	0	9/16/98	5041	5355
Boron		mg/Kg	<10	200	156	78	200	156	78	0	9/16/98	5041	5355
Cobalt		mg/Kg	<0.50	200	156	78	200	163	82	5.0	9/16/98	5041	5355
Molybdenum		mg/Kg	<1.0	200	160	80	200	166	83	3.7	9/16/98	5041	5355
Nickel		mg/Kg	<0.50	200	160	80	200	160	80	0	9/16/98	5041	5355
Fluoride		mg/Kg	2.79	5	7.48	94	5	7.53	101	7.2	9/21/98		5481
Chloride		mg/Kg	20.62	25	45.27	99	25	45.13	98	1.0	9/21/98		5481
Nitrate		mg/Kg	6.9	10	16.43	95	10	16.42	95	0	9/21/98		5481

Project Number: 19350
Order ID Number: 9808000544
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Sulfate		mg/Kg	97.71	25	118.1	82	25	117.34	78	5.0	9/21/98		5481
Fluoride		mg/Kg	9	5	13.64	93	5	13.56	91	2.2	9/21/98		5482
Chloride		mg/Kg	27	25	49.46	90	25	50.1	92	2.2	9/21/98		5482
Nitrate		mg/Kg	1.7	10	10.94	92	10	11.3	96	4.3	9/21/98		5482
Sulfate		mg/Kg	7.97	25	34.9	108	25	34.47	106	1.9	9/21/98		5482
Fluoride		mg/Kg	1.77	5	6.42	93	5	6.61	97	4.2	9/21/98		5483
Chloride		mg/Kg	8.37	25	31.56	93	25	32.03	95	2.1	9/21/98		5483
Nitrate		mg/Kg	2.24	10	11.47	92	10	11.73	95	3.2	9/21/98		5483
Sulfate		mg/Kg	59.58	25	81.97	90	25	81.04	86	4.5	9/21/98		5483
Phenol		mg/Kg	<0.25	10.00	5.77	58	10.00	6.19	62	6.7	9/20/98	4921	5470
2-Chlorophenol		mg/Kg	<1.25	10.00	5.78	58	10.00	6.08	61	5.0	9/20/98	4921	5470
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	7.21	72	10.00	7.41	74	2.7	9/20/98	4921	5470
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	6.52	65	10.00	7.03	70	7.4	9/20/98	4921	5470
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	6.59	66	10.00	6.86	69	4.4	9/20/98	4921	5470
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	5.7	57	10.00	5.99	60	5.1	9/20/98	4921	5470
Acenaphthene		mg/Kg	<0.25	10.00	7.7	77	10.00	8	80	3.8	9/20/98	4921	5470
4-Nitrophenol		mg/Kg	<1.25	10.00	4.19	42	3.00	3.57	36	15	9/20/98	4921	5470
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	6.67	67	10.00	7.2	72	7.2	9/20/98	4921	5470
Pentachlorophenol		mg/Kg	<1.25	10.00	3.7	37	10.00	4.32	43	15	9/20/98	4921	5470
Pyrene		mg/Kg	<0.25	10.00	6.94	69	10.00	7.36	74	6.9	9/20/98	4921	5470

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000544

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	8.8	8.7	1.1	8/28/98		5154
TDS		mg/Kg	270	292	7.8	9/19/98		5418
TDS		mg/Kg	716	761	6.1	9/17/98		5417

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ARS
AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0985	**P.O. Number:**	
Client I.D.:	106196	**ARS Sample I.D.:**	ARS-98-3565
Date Sampled:	8/25/98	**Date Received:**	10/1/98
Time Sampled:	N/A	**Time Received:**	1255
Type of Sample:	Solid	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	BDL	N/A	1.06	pCi/gm	EPA 901.1M	10/1/98 1617	dc
Ra-228	0.37	0.18	0.11	pCi/gm	EPA 901.1M	10/1/98 1617	dc
Pb-210	BDL	N/A	1.34	pCi/gm	EPA 901.1M	10/1/98 1617	dc
Total Activity	1.31	N/A	N/A	pCi/gm	EPA 901.1M	10/1/98 1617	dc

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0985	**P.O. Number:**	
Client I.D.:	106197	**ARS Sample I.D.:**	ARS-98-3566
Date Sampled:	8/25/98	**Date Received:**	10/1/98
Time Sampled:	N/A	**Time Received:**	1255
Type of Sample:	Solid	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.12	1.73	0.95	pCi/gm	EPA 901.1M	10/1/98 1700	mk
Ra-228	BDL	N/A	0.22	pCi/gm	EPA 901.1M	10/1/98 1700	mk
Pb-210	BDL	N/A	1.50	pCi/gm	EPA 901.1M	10/1/98 1700	mk
Total Activity	2.81	N/A	N/A	pCi/gm	EPA 901.1M	10/1/98 1700	mk

Quality Assurance Review

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ARS
AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0985	**P.O. Number:**	
Client I.D.:	106198	**ARS Sample I.D.:**	ARS-98-3567
Date Sampled:	8/25/98	**Date Received:**	10/1/98
Time Sampled:	N/A	**Time Received:**	1255
Type of Sample:	Solid	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	3.13	2.30	1.05	pCi/gm	EPA 901.1M	10/1/98 1726	mk
Ra-228	BDL	N/A	0.16	pCi/gm	EPA 901.1M	10/1/98 1726	mk
Pb-210	3.89	3.26	1.28	pCi/gm	EPA 901.1M	10/1/98 1726	mk
Total Activity	9.63	N/A	N/A	pCi/gm	EPA 901.1M	10/1/98 1726	mk

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0985	**P.O. Number:**	
Client I.D.:	106199	**ARS Sample I.D.:**	ARS-98-3568
Date Sampled:	8/25/98	**Date Received:**	10/1/98
Time Sampled:	N/A	**Time Received:**	1255
Type of Sample:	Solid	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	BDL	N/A	1.12	pCi/gm	EPA 901.1M	10/1/98 1756	mk
Ra-228	BDL	N/A	0.15	pCi/gm	EPA 901.1M	10/1/98 1756	mk
Pb-210	BDL	N/A	1.66	pCi/gm	EPA 901.1M	10/1/98 1756	mk
Total Activity	0.35	N/A	N/A	pCi/gm	EPA 901.1M	10/1/98 1756	mk

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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ARS Tracking Number:	ARS-98-0985	**P.O. Number:**	
Client I.D.:	106200	**ARS Sample I.D.:**	ARS-98-3569
Date Sampled:	8/25/98	**Date Received:**	10/1/98
Time Sampled:	N/A	**Time Received:**	1255
Type of Sample:	Solid	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	BDL	N/A	1.31	pCi/gm	EPA 901.1M	10/1/98 1750	mk
Ra-228	BDL	N/A	0.19	pCi/gm	EPA 901.1M	10/1/98 1750	mk
Pb-210	BDL	N/A	1.49	pCi/gm	EPA 901.1M	10/1/98 1750	mk
Total Activity	0.50	N/A	N/A	pCi/gm	EPA 901.1M	10/1/98 1750	mk

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0985	**P.O. Number:**	
Client I.D.:	106201	**ARS Sample I.D.:**	ARS-98-3570
Date Sampled:	8/25/98	**Date Received:**	10/1/98
Time Sampled:	N/A	**Time Received:**	1255
Type of Sample:	Solid	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	BDL	N/A	1.22	pCi/gm	EPA 901.1M	10/1/98 1821	mk
Ra-228	BDL	N/A	0.21	pCi/gm	EPA 901.1M	10/1/98 1821	mk
Pb-210	BDL	N/A	1.61	pCi/gm	EPA 901.1M	10/1/98 1821	mk
Total Activity	2.51	N/A	N/A	pCi/gm	EPA 901.1M	10/1/98 1821	mk

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0985	**P.O. Number:**	
Client I.D.:	106202	**ARS Sample I.D.:**	ARS-98-3571
Date Sampled:	8/25/98	**Date Received:**	10/1/98
Time Sampled:	N/A	**Time Received:**	1255
Type of Sample:	Solid	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	BDL	N/A	0.99	pCi/gm	EPA 901.1M	10/1/98 1815	mk
Ra-228	0.33	0.22	0.10	pCi/gm	EPA 901.1M	10/1/98 1815	mk
Pb-210	BDL	N/A	1.24	pCi/gm	EPA 901.1M	10/1/98 1815	mk
Total Activity	3.16	N/A	N/A	pCi/gm	EPA 901.1M	10/1/98 1815	mk

Quality Assurance Review

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ARS
AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 544/545

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West, Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeff Kindley
Invoice to: (If different from above) Same
Project #: 19350
Project Name: Shell Tasker Read
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	methanol	SAMPLING: DATE	TIME
106196	TSB-3 (2-3')	5	4 oz Jars		✓					✓			08/25/98	1335
	TSB-3 (2-3')	1	40ml VOA		✓							✓	08/25/98	1335
106203	Trip Blank	2	40ml VOA	✓						✓			08/25/98	
106204	Field Blank	2	40ml VOA	✓				✓				✓	08/25/98	1630
97	TSB-3 (3-5')	5	4 oz Jars		✓					✓			08/25/98	1342
	TSB-3 (3-5')	1	40ml VOA		✓							✓	08/25/98	1342
98	TSB-3 (18-20')	5	4 oz Jars		✓					✓			08/25/98	1416
	TSB-3 (18-20')	1	40ml VOA		✓							✓	08/25/98	1416
99	TSB-12 (2-3')	5	4 oz Jars		✓					✓			08/25/98	0844
	TSB-12 (2-3')	1	40ml VOA		✓							✓	08/25/98	0844
200	TSB-12 (3-5')	5	4 oz Jars		✓					✓			08/25/98	0847

ANALYSIS REQUEST (Circle or Specify Method No.)	
MTBE 8020/602	
BTEX 8020/602	
TPH (418.1)	✓
PAH 8270	
Total Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Volatiles	
TCLP Semi Volatiles	
RCI	
GC.MS Vol. 8240/8260/624	
GC/MS Semi. Vol. 8270/625	
PCB's 8080/608	
Pest. 8080/608	
BOD, TSS, PH	
see Attached	✓
VOC's	✓
Turn Around Time if different from standard	
Hold	

Relinquished by: August 26, 1998 Jeffrey Kindley Date: Time: 700AM
Received by: Date: Time:

Relinquished by: Date: Time:
Received by: Date: Time:

Relinquished by: Date: Time:
Received at Laboratory by: Victoria Wood Date: 8-27-98 Time: 9:10 AM

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY
Intact (Y / N)
Headspace Y / N
Temp 2 °
Log-in Review AVB

REMARKS:
Normal Turnaround

Carrier # Bus 901 984 6085

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID #_____

Company Name: Phillips Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West, Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeff Kindley
Invoice to: (If different from above) Same
Project #: 19350
Project Name: Shell Tosken Road
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	methanol	SAMPLING: DATE	TIME
106200	TSB-12 (3-5')	1	4oz Jars		✓							✓	08/25/98	0847
201	TSB-12 (18-20')	5	40z Jars		✓					✓			08/25/98	0926
	TSB-12 (18-20')	1	40ml VOA		✓							✓	08/25/98	0926
202	TSB-12 (48-50')	5	4oz Jars		✓					✓			08/25/98	1124
	TSB-12 (48-50')	1	40ml VOA		✓							✓	08/25/98	1124
~~203~~	~~Trip~~													
~~204~~	~~Field~~													

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	See Attached	VOC's		Turn Around Time if different from standard	Hold
		✓												✓				
															✓			
		✓												✓				
															✓			

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	08/26/98	700AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Vicki Wortham	8-27-98	9:10 am

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 2 °
Log-in Review

REMARKS:
Normal Turnaround.

Carrier #_____

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-14-99
Page # 1

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
106259	GSB-7 2-3'	8/25/98	15:13	8/28/98
106260	GSB-7 33-35'	8/26/98	9:00	8/28/98
106261	GSB-7 58-60'	8/26/98	11:11	8/28/98
106262	GSB-5 2-3'	8/26/98	13:18	8/28/98
106263	GSB-5 18-20'	8/26/98	14:29	8/28/98
106264	GSB-5 38-40'	8/26/98	15:55	8/28/98
106265	GSB-7 48-50'			8/28/98
106266	Field Blank	8/26/98	16:30	8/28/98
106267	Trip Blank			8/28/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrected:
1) Order ID Numbers corrected on pages 2 - 13.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-14-99
Page # 2

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568*
Sample Number: 106266

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Acrylonitrile		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Benzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chlorobenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chloroform		<1	ug/L	S-8260B		9/7/98	AG		5220	1
ichlorobenzene		<2	ug/L	S-8260B		9/7/98	AG		5220	2
,1-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloropropenes		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylbenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromodichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromomethane		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Chloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichlorofluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Toluene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Vinyl chloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
m,p-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
o-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylene dibromide		<1	ug/L	S-8260B		9/7/98	AG		5220	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Methylene chloride		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Surr. Dibromofluoromethane		112	%	S-8260B		9/7/98	AG		5220	72-130
Surr. Toluene-d8		88	%	S-8260B		9/7/98	AG		5220	77-127
Surr. 4-Bromofluorobenzene		98	%	S-8260B		9/7/98	AG		5220	72-131

* Order ID Number Corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-14-99
Page # 3

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568*
Sample Number: 106267

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Acrylonitrile		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Benzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chlorobenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chloroform		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorobenzene		<2	ug/L	S-8260B		9/7/98	AG		5220	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloropropenes		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylbenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromodichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromomethane		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Chloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Toluene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Vinyl chloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
m,p-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
o-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylene dibromide		<1	ug/L	S-8260B		9/7/98	AG		5220	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Methylene chloride		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Surr. Dibromofluoromethane		113	%	S-8260B		9/7/98	AG		5220	72-130
Surr. Toluene-d8		87	%	S-8260B		9/7/98	AG		5220	77-127
Surr. 4-Bromofluorobenzene		98	%	S-8260B		9/7/98	AG		5220	72-131

* Order ID Number corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-14-99
Page # 4

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568*
Sample Number: 106259

Field Code: GSB-7 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	AG		5230	2
1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	50
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Surr. Dibromofluoromethane		80	%	S-8260B		9/8/98	AG		5230	72-130
Surr. Toluene-d8		81	%	S-8260B		9/8/98	AG		5230	77-127
Surr. 4-Bromofluorobenzene		82	%	S-8260B		9/8/98	AG		5230	72-131
Benzidine		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25

Order ID Number Corrected.

Corrected

Date: 06-14-99
Page # 5
Order ID Number: 9808000568*
Sample Number: 106259

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GSB-7 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
monomethylnaphthalenes		<0.25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	0.25
Surr. 2-Fluorophenol		50	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	25-121
Surr. Phenol-d6		61	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	24-113
Surr. Nitroobenzene-d5		48	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	23-120
Surr. 2-Fluorobiphenyl		55	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	30-115
Surr. 2,4,6-Tribromophenol		39	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	19-122
Surr. Terphenyl-d14		46	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	28-137

Order ID Number Corrected.

Corrected

Date: 06-14-99

Order ID Number: 9808000568*
Sample Number: 106259

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GSB-7 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Barium		187	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Cadmium		0.31	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.10
Chromium		3.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Lead		1.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/31/98	9/1/98	MS	4826	5180	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	2.0
Copper		2.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Iron		2,200	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5050	5376	10
Manganese		28	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Zinc		44	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	2.0
Aluminum		3,800	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5050	5376	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	10
Cobalt		6.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Molybdenum		1.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Nickel		5.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/3/98	SA		5200	0.01
Fluoride		1.2	mg/Kg	E 300.0		9/21/98	JS		5483	0.2
Nitrate		2.8	mg/Kg	E 300.0		9/21/98	JS		5483	0.2
Chloride		16	mg/Kg	E 300.0		9/21/98	JS		5483	0.4
Sulfate		450	mg/Kg	E 300.0		9/21/98	JS		5483	5.0
TDS		1,200	mg/Kg	E 160.1		9/19/98	RS		5418	---
pH		8.0	s.u.	E 150.1		8/28/98	SA		5155	---
TRPHC		217	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		2.9	mg/Kg	SM 5530 A,D		9/16/98	RC		5355	0.25
Total Radium		5.30	pCi/gm	E 901.1M		9/7/98	DS	---	---	---

* Order ID Number Corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-14-99
Page # 7

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568*
Sample Number: 106260

Field Code: GSB-7 33-35'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
Benzene		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
Toluene		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
Ethylbenzene		0.433	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
m,p,o-xylene		2.42	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
TRPHC		692	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Chloride		37	mg/Kg	E 300.0		9/16/98	JS		5360	2

* Order ID Number Corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-14-99
Page # 8

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568*
Sample Number: 106261

Field Code: GSB-7 58-60'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050		E 8021B		9/2/98	CS		5197	0.050
Benzene		<0.050		E 8021B		9/2/98	CS		5197	0.050
Toluene		<0.050		E 8021B		9/2/98	CS		5197	0.050
Ethylbenzene		<0.050		E 8021B		9/2/98	CS		5197	0.050
m,p,o-xylene		<0.050		E 8021B		9/2/98	CS		5197	0.050
TRPHC		<10.0		S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Chloride		11		E 300.0		9/16/98	JS		5360	2

* Order ID Number Corrected.

Analytical Results Report

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Corrected

Date: 06-14-99
Page # 9

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568'
Sample Number: 106262

Field Code: GSB-5 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98			5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98			5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98			5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98			5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98			5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98			5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98			5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98			5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98			5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98			5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98			5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98			5230	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98			5230	25
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98			5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98			5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98			5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98			5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98			5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98			5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98			5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98			5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98			5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98			5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98			5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98			5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98			5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98			5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98			5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98			5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98			5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98			5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98			5230	125
Surr. Dibromofluoromethane		80	%	S-8260B		9/8/98			5230	72-130
Surr. Toluene-d8		82	%	S-8260B		9/8/98			5230	77-127
Surr. 4-Bromofluorobenzene		83	%	S-8260B		9/8/98			5230	72-131
Benzidine		<25	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	25
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5

Order ID Number corrected.

Corrected

Date: 06-14-99

Order ID Number: 9808000568*
Sample Number: 106262

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GSB-5 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
2,4-dichlorophenol		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
bis (2-chloroethyl) ether		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Isophorone		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
n-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
[illegible]-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
[illegible]-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	12.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Anthracene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Fluorene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Pyrene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
2-methylnaphthalene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	9/2/98	9/15/98	DG	4849	5339	2.5
Surr. 2-Fluorophenol		63	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	25-121
Surr. Phenol-d6		71	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	24-113
Surr. Nitroobenzene-d5		76	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	23-120
Surr. 2-Fluorobiphenyl		111	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	30-115
Surr. 2,4,6-Tribromophenol		42	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	19-122
Surr. Terphenyl-d14		105	%	S-8270C	9/2/98	9/15/98	DG	4849	5339	28-137

* Order ID Number corrected.

Corrected

Date: 06-14-99
Page # 11
Order ID Number: 9808000568*
Sample Number: 106262

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GSB-5 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		2.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Barium		312	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Cadmium		0.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.10
Chromium		2.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Lead		0.78	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/31/98	9/1/98	MS	4826	5180	<0.10
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	2.0
Copper		2.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Iron		1,500	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5050	5376	10
Manganese		11	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Zinc		4.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	2.0
Aluminum		2,800	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5050	5376	10
Boron		10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	10
Cobalt		4.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Molybdenum		1.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Nickel		5.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/3/98	sa		5200	0.01
Fluoride		1.8	mg/Kg	E 300.0		9/21/98	JS		5483	0.2
Nitrate		2.2	mg/Kg	E 300.0		9/21/98	JS		5483	0.2
Chloride		8.4	mg/Kg	E 300.0		9/21/98	JS		5483	1.0
Sulfate		60	mg/Kg	E 300.0		9/21/98	JS		5483	1.0
TDS		290	mg/Kg	E 160.1		9/19/98	RS		5418	---
pH		8.5	s.u.	E 150.1		8/28/98	SA		5155	7.0
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		21.2	mg/Kg	SM 5530 A,D		9/16/98	RC		5355	0.25
Total Radium		0.96	pCi/gm	E 901.1M		9/7/98	DS	---	---	---

* Order ID Number corrected.

Analytical Results Report

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Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-14-99
Page # 12

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568*
Sample Number: 106263

Field Code: GSB-5 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
Benzene		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
Toluene		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
Ethylbenzene		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
m,p,o-xylene		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Chloride		150	mg/Kg	E 8021B		9/16/98	JS		5360	2.000

* Order ID Number corrected.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-14-99
Page # 13

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568*
Sample Number: 106264

Field Code: GSB-5 38-40'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
Benzene		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
Toluene		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
Ethylbenzene		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
m,p,o-xylene		<0.050	mg/Kg	E 8021B		9/2/98	CS		5197	0.050
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Chloride		120	mg/Kg	E 300.0		9/16/98	JS		5360	2

* Order ID Number corrected.

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/7/98		5220
Acrylonitrile		<5	ug/L	5	9/7/98		5220
Benzene		<1	ug/L	1	9/7/98		5220
Carbon tetrachloride		<1	ug/L	1	9/7/98		5220
Chlorobenzene		<1	ug/L	1	9/7/98		5220
1,2-dichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/7/98		5220
1,1,1-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethylene		<1	ug/L	1	9/7/98		5220
Chloroform		<1	ug/L	1	9/7/98		5220
Dichlorobenzene		<2	ug/L	2	9/7/98		5220
1,1-dichloroethylene		<1	ug/L	1	9/7/98		5220
Dichloropropenes		<1	ug/L	1	9/7/98		5220
Ethylbenzene		<1	ug/L	1	9/7/98		5220
Bromodichloromethane		<1	ug/L	1	9/7/98		5220
Bromomethane		<5	ug/L	5	9/7/98		5220
Chloromethane		<1	ug/L	1	9/7/98		5220
Dichlorodifluoromethane		<1	ug/L	1	9/7/98		5220
Dichloromethane		<1	ug/L	1	9/7/98		5220
Trichlorofluoromethane		<1	ug/L	1	9/7/98		5220
Tetrachloroethylene		<1	ug/L	1	9/7/98		5220
Toluene		<1	ug/L	1	9/7/98		5220
Trichloroethylene		<1	ug/L	1	9/7/98		5220
Vinyl chloride		<1	ug/L	1	9/7/98		5220
m,p-xylene		<1	ug/L	1	9/7/98		5220
o-xylene		<1	ug/L	1	9/7/98		5220
1,1-dichloroethane		<1	ug/L	1	9/7/98		5220
Ethylene dibromide		<1	ug/L	1	9/7/98		5220
cis-1,2-dichlorethylene		<1	ug/L	1	9/7/98		5220
trans-1,2-dichloroethylene		<1	ug/L	1	9/7/98		5220
Methylene chloride		<5	ug/L	5	9/7/98		5220
Surr. Dibromofluoromethane		96	%	72-130	9/7/98		5220
Surr. Toluene-d8		89	%	77-127	9/7/98		5220
Surr. 4-Bromofluorobenzene		86	%	72-131	9/7/98		5220
Acrolein		<125	ug/Kg	125	9/8/98		5230
Acrylonitrile		<125	ug/Kg	125	9/8/98		5230
Benzene		<25	ug/Kg	25	9/8/98		5230
Carbon tetrachloride		<25	ug/Kg	25	9/8/98		5230
Chlorobenzene		<25	ug/Kg	25	9/8/98		5230

Order ID Number: 9808000568

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,2-dichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,1-trichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2-trichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2-trichloroethylene		<25	ug/Kg	25	9/8/98		5230
Chloroform		<25	ug/Kg	25	9/8/98		5230
Dichlorobenzene		<50	ug/Kg	50	9/8/98		5230
1,1-dichloroethylene		<25	ug/Kg	25	9/8/98		5230
Dichloropropenes		<25	ug/Kg	25	9/8/98		5230
Ethylbenzene		<25	ug/Kg	25	9/8/98		5230
Bromodichloromethane		<25	ug/Kg	25	9/8/98		5230
Bromomethane		<125	ug/Kg	125	9/8/98		5230
Chloromethane		<25	ug/Kg	25	9/8/98		5230
Dichlorodifluoromethane		<25	ug/Kg	25	9/8/98		5230
Dichloromethane		<25	ug/Kg	25	9/8/98		5230
Trichlorofluoromethane		<25	ug/Kg	25	9/8/98		5230
Tetrachloroethylene		<25	ug/Kg	25	9/8/98		5230
Toluene		<25	ug/Kg	25	9/8/98		5230
Trichloroethylene		<25	ug/Kg	25	9/8/98		5230
Vinyl chloride		<25	ug/Kg	25	9/8/98		5230
m,p-xylene		<25	ug/Kg	25	9/8/98		5230
o-xylene		<25	ug/Kg	25	9/8/98		5230
1,1-dichloroethane		<25	ug/Kg	25	9/8/98		5230
Ethylene dibromide		<25	ug/Kg	25	9/8/98		5230
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/8/98		5230
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/8/98		5230
Methylene chloride		<125	ug/Kg	125	9/8/98		5230
Surr. Dibromofluoromethane		103	%	72-130	9/8/98		5230
Surr. Toluene-d8		90	%	77-127	9/8/98		5230
Surr. 4-Bromofluorobenzene		91	%	72-131	9/8/98		5230
Total Mercury		<0.10	mg/Kg	0.25	9/1/98	4826	5180
TRPHC		<10.0	mg/Kg	10	8/30/98	4810	5168
Cyanide		<0.01	mg/Kg	0.01	9/3/98		5200
MTBE		<0.050	mg/Kg	0.050	9/2/98		5197
Benzene		<0.050	mg/Kg	0.050	9/2/98		5197
Toluene		<0.050	mg/Kg	0.050	9/2/98		5197
Ethylbenzene		<0.050	mg/Kg	0.050	9/2/98		5197
m,p,o-xylene		<0.050	mg/Kg	0.050	9/2/98		5197
Total Phenols		<0.25	mg/Kg	0.25	9/16/98		5355
Chloride		<2.0	mg/kg	2	9/16/98		5360
PCB		0.1	mg/Kg	0.1	9/18/98	5044	5401
Arsenic		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Barium		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Cadmium		<0.10	mg/Kg	0.10	9/16/98	5050	5358
Chromium		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Lead		<0.50	mg/Kg	0.50	9/16/98	5050	5358

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Order ID Number: 9808000568

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Selenium		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Silver		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Uranium		<2.0	mg/Kg	2.0	9/16/98	5050	5358
Copper		<1.0	mg/Kg	1.0	9/16/98	5050	5358
Iron		<10	mg/Kg	10	9/17/98	5050	5376
Manganese		<1.0	mg/Kg	1.0	9/16/98	5050	5358
Zinc		<2.0	mg/Kg	2.0	9/16/98	5050	5358
Aluminum		<10	mg/Kg	10	9/17/98	5050	5376
Boron		<10	mg/Kg	10	9/16/98	5050	5358
Cobalt		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Molybdenum		<1.0	mg/Kg	1.0	9/16/98	5050	5358
Nickel		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5483
Chloride		<1.0	mg/Kg	1	9/21/98		5483
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5483
Sulfate		<1.0	mg/Kg	1	9/21/98		5483
Benzidine		<2.5	mg/kg	2.5	9/15/98	4849	5339
Hexachlorobenzene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Pentachlorobenzene		<0.25	mg/kg	0.25	9/15/98	4849	5339
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Hexachloroethane		<0.25	mg/kg	0.25	9/15/98	4849	5339
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/15/98	4849	5339
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/15/98	4849	5339
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/15/98	4849	5339
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/15/98	4849	5339
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/15/98	4849	5339
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/15/98	4849	5339
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/15/98	4849	5339
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Diphenylhydrazine		<1.25	mg/kg	1.25	9/15/98	4849	5339
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Isophorone		<1.25	mg/kg	1.25	9/15/98	4849	5339
Nitrobenzene		<0.25	mg/kg	0.25	9/15/98	4849	5339
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/15/98	4849	5339
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/15/98	4849	5339
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/15/98	4849	5339
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/15/98	4849	5339
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/15/98	4849	5339
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/15/98	4849	5339
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/15/98	4849	5339
Pentachlorophenol		<1.25	mg/kg	1.25	9/15/98	4849	5339
Dibutyl phthalate		<0.25	mg/kg	0.25	9/15/98	4849	5339
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/15/98	4849	5339
Diethyl phthalate		<0.25	mg/kg	0.25	9/15/98	4849	5339
Dimethyl phthalate		<0.25	mg/kg	0.25	9/15/98	4849	5339

Order ID Number: 9808000568

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Anthracene		<0.25	mg/kg	0.25	9/15/98	4849	5339
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Fluoranthene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Fluorene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Phenanthrene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Pyrene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Naphthalene		<0.25	mg/kg	0.25	9/15/98	4849	5339
1-methylnaphthalene		<0.25	mg/kg	0.25	9/15/98	4849	5339
2-methylnaphthalene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/15/98	4849	5339
Surr. 2-Fluorophenol		39	%	25-121	9/15/98	4849	5339
Surr. Phenol-d6		28	%	24-113	9/15/98	4849	5339
Surr. Nitroobenzene-d5		52	%	23-120	9/15/98	4849	5339
Surr. 2-Fluorobiphenyl		60	%	30-115	9/15/98	4849	5339
Surr. 2,4,6-Tribromophenol		47	%	19-122	9/15/98	4849	5339
Surr. Terphenyl-d14		52	%	28-137	9/15/98	4849	5339

Quality Control Report
Continuing Calibration Verification Standard

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Date: 9-30-98
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Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Cyanide		0.12	mg/L	0.12	100	9/3/98	5200
Total Mercury		5	mg/L	4.9	98	9/1/98	5180
Vinyl chloride		100	ug/L	94	94	9/7/98	5220
1,1-Dichloroethene		100	ug/L	120	120	9/7/98	5220
Chloroform		100	ug/L	111	111	9/7/98	5220
1,2-Dichloropropane		100	ug/L	101	101	9/7/98	5220
Toluene		100	ug/L	113	113	9/7/98	5220
Chlorobenzene		100	ug/L	110	110	9/7/98	5220
Ethylbenzene		100	ug/L	109	109	9/7/98	5220
1,1-Dichloroethene		100	ug/L	97	97	9/8/98	5230
Chloroform		100	ug/L	98	98	9/8/98	5230
1,2-Dichloropropane		100	ug/L	96	96	9/8/98	5230
Toluene		100	ug/L	106	106	9/8/98	5230
Chlorobenzene		100	ug/L	110	110	9/8/98	5230
Ethylbenzene		100	ug/L	114	114	9/8/98	5230
TRPHC		100.0	mg/L	99.0	99	8/30/98	5168
MTBE		0.100	mg/L	0.101	101	9/2/98	5197
Benzene		0.100	mg/L	0.091	91	9/2/98	5197
Toluene		0.100	mg/L	0.091	91	9/2/98	5197
Ethylbenzene		0.100	mg/L	0.092	92	9/2/98	5197
m,p,o-xylene		0.300	mg/L	0.269	90	9/2/98	5197
Total Phenols		0.80	mg/L	0.81	101	9/16/98	5355
Chloride		500	mg/L	499	100	9/16/98	5360
TDS		1000	mg/L	985	99	9/19/98	5418
PCB		0.40	mg/L	0.41	103	9/18/98	5401
Arsenic		1.0	mg/L	1.0	100	9/16/98	5355
Barium		1.0	mg/L	1.0	100	9/16/98	5355
Cadmium		1.0	mg/L	1.0	100	9/16/98	5355
Chromium		1.0	mg/L	1.0	100	9/16/98	5355
Lead		1.0	mg/L	1.0	100	9/16/98	5355
Selenium		1.0	mg/L	1.0	100	9/16/98	5355
Silver		1.0	mg/L	1.0	98	9/16/98	5355
Uranium		1.0	mg/L	1.0	100	9/16/98	5355
Copper		1.0	mg/L	0.97	97	9/16/98	5355
Iron		100	mg/L	100	100	9/17/98	5376
Manganese		1.0	mg/L	1.0	100	9/16/98	5355
Zinc		1.0	mg/L	0.99	99	9/16/98	5355
Aluminum		250	mg/L	257	103	9/17/98	5376
Boron		1.0	mg/L	1.0	100	9/16/98	5355

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Order ID Number: 9808000568

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Cobalt		1.0	mg/L	1.0	100	9/16/98	5355
Molybdenum		1.0	mg/L	1.0	100	9/16/98	5355
Nickel		1.0	mg/L	1.0	100	9/16/98	5355
Fluoride		2.5	mg/L	2.345	94	9/21/98	5483
Chloride		1.5	mg/L	11.535	92	9/21/98	5483
Nitrate		5	mg/L	4.79	96	9/21/98	5483
Sulfate		12.5	mg/L	11.83	95	9/21/98	5483
Phenol		80	mg/L	83	104	9/15/98	5339
1,4-Dichlorobenzene		80	mg/L	75	94	9/15/98	5339
2-nitrophenol		80	mg/L	84	105	9/15/98	5339
2,4-Dichlorophenol		80	mg/L	86	108	9/15/98	5339
Hexachlorobutadiene		80	mg/L	78	98	9/15/98	5339
4-Chloro-3-methylphenol		80	mg/L	67	84	9/15/98	5339
2,4,6-Trichlorophenol		80	mg/L	85	106	9/15/98	5339
Acenaphthene		80	mg/L	84	105	9/15/98	5339
n-Nitrosodiphenylamine		80	mg/L	74	93	9/15/98	5339
Pentachlorophenol		80	mg/L	71	89	9/15/98	5339
Fluoranthene		80	mg/L	67	84	9/15/98	5339
Di-n-octylphthalate		80	mg/L	83	104	9/15/98	5339
Benzo(a)pyrene		80	mg/L	76	95	9/15/98	5339

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

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Date: 9-30-98
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Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Cyanide		mg/L	<0.01	0.12	0.12	100	0.12	0.12	100	0	9/3/98		5200
Total Mercury		mg/kg	<0.10	2.6	2.7	104	2.6	2.7	104	0	9/1/98		5180
1,1-Dichloroethene		ug/L	<1	100	102	102	100	96	96	2.3	9/7/98		5220
Benzene		ug/L	<1	100	102	102	100	104	104	1.9	9/7/98		5220
Trichloroethene		ug/L	<1	100	117	117	100	117	117	0	9/7/98		5220
Toluene		ug/L	<1	100	101	101	100	102	102	0.99	9/7/98		5220
Chlorobenzene		ug/L	<1	100	88	88	100	87	87	1.1	9/7/98		5220
1,1-Dichloroethene		ug/L	<1	100	94	94	100	95	95	1.1	9/8/98		5230
Benzene		ug/L	<1	100	105	105	100	107	107	1.9	9/8/98		5230
Trichloroethene		ug/L	<1	100	115	115	100	116	116	0.87	9/8/98		5230
Toluene		ug/L	<1	100	106	106	100	107	107	0.9	9/8/98		5230
Chlorobenzene		ug/L	<1	100	91	91	100	91	91	0	9/8/98		5230
TRPHC		mg/kg	<10.0	250	231	92	250	220	88	4.4	8/30/98	4810	5168
MTBE		mg/kg	<0.050	5.00	4.77	95	5.00	4.88	98	3.1	9/2/98		5197
Benzene		mg/kg	<0.050	5.00	4.44	89	5.00	4.54	91	2.2	9/2/98		5197
Toluene		mg/kg	<0.050	5.00	4.53	91	5.00	4.62	92	1.1	9/2/98		5197
Ethylbenzene		mg/kg	<0.050	5.00	4.53	91	5.00	4.64	93	2.2	9/2/98		5197
m,p,o-xylene		mg/kg	<0.050	15.00	13.2	88	15.00	13.5	90	2.2	9/2/98		5197
Total Phenols		mg/kg	6.9	25	27.1	81	25	27.4	82	1.2	9/16/98		5355
Chloride		mg/kg	2,400	50000	57211	110	50000	57017	109	0.9	9/16/98		5360
PCB		mg/Kg	<0.1	0.400	0.430	108	0.400	0.450	113	4.5	9/18/98	5044	5401
Arsenic		mg/Kg	<0.50	200	170	85	200	174	87	2.3	9/16/98	5050	5358
Barium		mg/Kg	<0.50	200	176	88	200	180	90	2.2	9/16/98	5050	5358
Cadmium		mg/Kg	<0.10	200	174	87	200	177	86	1.2	9/16/98	5050	5358
Chromium		mg/Kg	<0.50	200	177	89	200	177	86	3.4	9/16/98	5050	5358
Lead		mg/Kg	<0.50	200	170	85	200	174	87	2.3	9/16/98	5050	5358
Selenium		mg/Kg	<0.50	200	154	77	200	155	76	1.3	9/16/98	5050	5358
Silver		mg/Kg	<0.50	100	109	109	100	112	112	1.8	9/16/98	5050	5358
Uranium		mg/Kg	<2.0	200	194	97	200	199	100	3.0	9/16/98	5050	5358
Copper		mg/Kg	<1.0	200	172	86	200	177	89	3.4	9/16/98	5050	5358
Manganese		mg/Kg	<1.0	200	176	88	200	180	90	2.2	9/16/98	5050	5358
Zinc		mg/Kg	<2.0	200	173	87	200	174	87	0	9/16/98	5050	5358
Boron		mg/Kg	<10	200	165	83	200	167	84	1.2	9/16/98	5050	5358
Cobalt		mg/Kg	<0.50	200	171	86	200	174	87	1.2	9/16/98	5050	5358
Molybdenum		mg/Kg	<1.0	200	177	86	200	181	91	5.6	9/16/98	5050	5358
Nickel		mg/Kg	<0.50	200	166	83	200	173	87	4.7	9/16/98	5050	5358
Aluminum		mg/Kg	<10	200	178	89	200	173	87	2.3	9/17/98	5050	5376
Iron		mg/Kg	<10	200	202	101	200	198	99	2.0	9/17/98	5050	5376
Fluoride		mg/Kg	1.77	5	6.42	93	5	6.61	97	4.2	9/21/98		5483

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Chloride		mg/Kg	8.37	25	31.56	93	25	32.03	95	2.1	9/21/98		5483
Nitrate		mg/Kg	2.24	10	11.47	92	10	11.73	95	3.2	9/21/98		5483
Sulfate		mg/Kg	59.58	25	81.97	90	25	81.04	86	4.5	9/21/98		5483
Phenol		mg/Kg	<0.25	10.00	6.67	67	10.00	7.36	74	9.9	9/15/98	4849	5339
2-Chlorophenol		mg/Kg	<1.25	10.00	5.91	59	10.00	6.48	65	9.7	9/15/98	4849	5339
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	7.3	73	10.00	7.82	78	6.6	9/15/98	4849	5339
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	6.77	68	10.00	7.88	79	15	9/15/98	4849	5339
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	7.19	72	10.00	8.06	81	12	9/15/98	4849	5339
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	6.52	65	10.00	7.32	73	12	9/15/98	4849	5339
Acenaphthene		mg/Kg	<0.25	10.00	8.14	81	10.00	9.29	93	14	9/15/98	4849	5339
4-Nitrophenol		mg/Kg	<1.25	10.00	4.35	44	10.00	5.43	54	20	9/15/98	4849	5339
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	7.4	74	10.00	8.65	87	16	9/15/98	4849	5339
Pentachlorophenol		mg/Kg	<1.25	10.00	5.39	54	10.00	6.36	64	17	9/15/98	4849	5339
Pyrene		mg/Kg	<0.25	10.00	7.95	80	10.00	8.68	87	8.4	9/15/98	4849	5339

Quality Control Report
Duplicate

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7904 IH 20 West
Midland, TX 79706

Date: 9-30-98

Project Number: 19350
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000568

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	8.5	9	0	8/28/98		5155
TDS		mg/Kg	270	292	7.8	9/19/98		5418

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0888	**P.O. Number:**	
Client I.D.:	Sample No. 106259	**ARS Sample I.D.:**	ARS-98-3238
Date Sampled:	8/26/98	**Date Received:**	9/4/98
Time Sampled:	N/A	**Time Received:**	0915
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.35	1.29	pCi/gm	0.050	0.048	Bq/gm	EPA 901.1M	9/7/98 1045	SW
Ra-228	<0.14	N/A	pCi/gm	<0.005	N/A	Bq/gm	EPA 901.1M	9/7/98 1045	SW
Pb-210	<0.98	N/A	pCi/gm	<0.036	N/A	Bq/gm	EPA 901.1M	9/7/98 1045	SW
Total Activity	5.30	N/A	pCi/gm	0.196	N/A	Bq/gm	EPA 901.1M	9/7/98 1045	SW

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0888	**P.O. Number:**	
Client I.D.:	Sample No. 106262	**ARS Sample I.D.:**	ARS-98-3239
Date Sampled:	8/26/98	**Date Received:**	9/4/98
Time Sampled:	N/A	**Time Received:**	0915
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.83	N/A	pCi/gm	<0.031	N/A	Bq/gm	EPA 901.1M	9/7/98 1117	SW
Ra-228	<0.15	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	9/7/98 1117	SW
Pb-210	<0.85	N/A	pCi/gm	<0.031	N/A	Bq/gm	EPA 901.1M	9/7/98 1117	SW
Total Activity	0.96	N/A	pCi/gm	0.036	N/A	Bq/gm	EPA 901.1M	9/7/98 1117	SW

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeffrey Kindley
Phone #: (915) 563-0118
FAX #: (915) 563-9526

Company Name & Address: Philip Services Corporation, 7904 IH 20 West, Midland, Tx 79706

Project #: 19349
Project Name: Shell Grimes Tank Battery

Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME	BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240 / 8260	8270	Chlorides (~~300~~) (300)	See Attached	Mac's Pest
106259	GSB-7 (2-3')	5	40ml VOA		✓					✓			08/25/98	1513		✓								✓	✓	✓
	GSB-7 (2-3')	1	40ml VOA		✓							✓	08/25/98	1513											✓	
106266	Field Blank	2	40ml VOA	✓				✓					08/26/98	1630										✓		
106267	Trip Blank	2	40ml VOA	✓						✓			08/26/98											✓		
106260	GSB-7 (33-35') (Combined 34-36)	2	40ml VOA		✓					✓			08/26/98	0900	✓	✓								✓		
61	GSB-7 (58-60')	2	40ml VOA		✓					✓			08/26/98	1111	✓	✓								✓		
62	GSB-5 (2-3')	5	40ml VOA		✓					✓			08/26/98	1318		✓								✓	✓	✓
	GSB-5 (2-3')	1	40ml VOA		✓							✓	08/26/98	1318											✓	
63	GSB-5 (18-20')	2	40ml VOA		✓					✓			08/26/98	1429	✓	✓								✓		
64	GSB-5 (38-40')	2	40ml VOA		✓					✓			08/26/98	1555	✓	✓								✓		
65	GSB 7-48-50' not on COC	DON'T NEED TO RUN 10/2265 per JK																								

SPECIAL HANDLING: Turn around # of days; Fax ASAP; Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	08/27/98	700 AM			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Wrather	Date: 8-28-98	Time: 9:00 AM

REMARKS: Normal Turnaround

8/31/98

Bus 901 984 6099

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000598

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
106342	GMW-10 3-5'	8/27/98	8:58	8/29/98
106343	GMW-10 63-65'	8/27/98	15:08	8/29/98
106344	GMW-10D 63-65'	8/27/98		8/29/98
106345	Trip Blank			8/29/98
106346	Field Blank	8/27/98	16:30	8/29/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All data meets quality control criteria with the exceptions:
Semivolatiles extracted 3 days past hold time

Corrections:
1) SemiVolatiles flagged as being extracted past hold time.
2) Phenol result added for samples 106342-43.
3) Analyst initials added for samples 106343-44.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 2

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000598
Sample Number: 106346

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Acrylonitrile		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Benzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chlorobenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chloroform		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorobenzene		<2	ug/L	S-8260B		9/7/98	AG		5220	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloropropenes		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylbenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromodichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromomethane		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Chloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Toluene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Vinyl chloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
m,p-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
o-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylene dibromide		<1	ug/L	S-8260B		9/7/98	AG		5220	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Methylene chloride		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Surr. Dibromofluoromethane		114	%	S-8260B		9/7/98	AG		5220	71-132
Surr. Toluene-d8		87	%	S-8260B		9/7/98	AG		5220	82-124
Surr. 4-Bromofluorobenzene		100	%	S-8260B		9/7/98	AG		5220	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000598
Sample Number: 106345

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Acrylonitrile		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Benzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chlorobenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chloroform		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorobenzene		<2	ug/L	S-8260B		9/7/98	AG		5220	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloropropenes		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylbenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromodichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromomethane		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Chloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Toluene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Vinyl chloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
m,p-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
o-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylene dibromide		<1	ug/L	S-8260B		9/7/98	AG		5220	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Methylene chloride		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Surr. Dibromofluoromethane		114	%	S-8260B		9/7/98	AG		5220	71-132
Surr. Toluene-d8		87	%	S-8260B		9/7/98	AG		5220	82-124
Surr. 4-Bromofluorobenzene		100	%	S-8260B		9/7/98	AG		5220	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 4

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000598
Sample Number: 106342

Field Code: GMW-10 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	AG		5230	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Surr. Dibromofluoromethane		85	%	S-8260B		9/8/98	AG		5230	71-132
Surr. Toluene-d8		85	%	S-8260B		9/8/98	AG		5230	82-124
Surr. 4-Bromofluorobenzene		81	%	S-8260B		9/8/98	AG		5230	76-126
Benzidine		<125	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	125
Hexachlorobenzene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5

Corrected

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Date: 05-20-99
Page # 5
Order ID Number: 9808000598
Sample Number: 106342

Field Code: GMW-10 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Pentachlorobenzene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
1,2,4,5-tetrachlorobenzene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Hexachloroethane		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
2,4-dichlorophenol		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
2,4,5-trichlorophenol		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
2,4,6-trichlorophenol		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
bis (2-chloroethyl) ether		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
bis (2-chloroisopropyl) ether		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
bis (chloromethyl) ether		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
3,3-dichlorobenzidine		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
2,4-dinitrotoluene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Diphenylhydrazine		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
Hexachlorobutadiene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Hexachlorocyclopentadiene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Isophorone		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
Nitrobenzene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
2,4-dinitro-o-cresol		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
2,4-dinitrophenols		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
n-nitrosodiethylamine		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
N-nitrosodimethylamine		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
N-nitrosodibutylamine		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
N-nitrosodiphenylamine		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
N-nitrosopyrrolidine		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Pentachlorophenol		<62.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	62.5
Dibutyl phthalate		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
di-2-ethylhexyl phthalate		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Diethyl phthalate		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Dimethyl phthalate		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Anthracene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
3,4-benzofluoranthene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Benzo(k)fluoranthene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Fluoranthene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Fluorene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Phenanthrene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Pyrene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Naphthalene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
1-methylnaphthalene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
2-methylnaphthalene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Benzo-a-pyrene		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Phenol		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
monomethylnaphthalenes		<12.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	12.5
Surr. 2-Fluorophenol		56	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	25-121
Surr. Phenol-d6		40	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	24-113

Corrected - Added Phenol result.

Corrected

Date: 05-20-99
Page # 6
Order ID Number: 9808000598
Sample Number: 106342

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GMW-10 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Surr. Nitroobenzene-d5		72	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	23-120
Surr. 2-Fluorobiphenyl		69	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	30-115
Surr. 2,4,6-Tribromophenol		39	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	19-122
Surr. Terphenyl-d14		82	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	28-137
Aldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Barium		618	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Cadmium		0.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.10
Chromium		3.4	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Lead		1.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/31/98	9/1/98	MS	4826	5180	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	2.0
Copper		1.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Iron		2,200	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5050	5376	10
Manganese		20	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Zinc		6.8	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	2.0
Aluminum		4,000	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5050	5376	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	10
Cobalt		5.9	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Molybdenum		1.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Nickel		6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Cyanide		<0.01	mg/Kg	Sm 4500 CN,CE		9/3/98	SA		5200	0.01
Fluoride		9.5	mg/Kg	E 300.0		9/21/98	JS		5484	0.2
Nitrate		8.6	mg/Kg	E 300.0		9/21/98	JS		5484	0.2
Chloride		27	mg/Kg	E 300.0		9/21/98	JS		5484	1.0
Sulfate		180	mg/Kg	E 300.0		9/21/98	JS		5484	2.0
TDS		900	mg/Kg	E 160.1		9/19/98	RS		5418	---
pH		7.9	s.u.	E 150.1		8/31/98	SA		5170	---
TRPHC		4,180	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		5.1	mg/Kg	SM 5530 A,D		9/16/98	RC		5355	0.25
Total Radium		3.08	pCi/gm	E 901.1M		9/7/98	DS	---	---	---

** Sample extracted 3 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 7

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000598
Sample Number: 106343

Field Code: GMW-10 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	*AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	*AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	*AG		5230	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	*AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	*AG		5230	125
Surr. Dibromofluoromethane		81	%	S-8260B		9/8/98	*AG		5230	71-132
Surr. Toluene-d8		83	%	S-8260B		9/8/98	*AG		5230	82-124
Surr. 4-Bromofluorobenzene		80	%	S-8260B		9/8/98	*AG		5230	76-126
Benzidine		<2.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25

* Added analyst initials.

Corrected

Date: 05-20-99
Page # 8
Order ID Number: 9808000598
Sample Number: 106343

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GMW-10 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Phenol		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Surr. 2-Fluorophenol		44	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	25-121
Surr. Phenol-d6		51	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	24-113

Corrected - Added Phenol result

Corrected

Date: 05-20-99
Page # 9

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000598
Sample Number: 106343

Field Code: GMW-10 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Surr. Nitroobenzene-d5		48	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	23-120
Surr. 2-Fluorobiphenyl		60	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	30-115
Surr. 2,4,6-Tribromophenol		58	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	19-122
Surr. Terphenyl-d14		68	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	28-137
Aldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Barium		17	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Cadmium		0.42	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.10
Chromium		3.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Lead		1.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/31/98	9/1/98	MS	4826	5180	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	2.0
Copper		2.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Iron		2,300	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5050	5376	10
Manganese		22	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Zinc		6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	2.0
Aluminum		2,300	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5050	5376	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	10
Cobalt		2.7	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Molybdenum		1.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Nickel		2	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Cyanide		<0.01	mg/Kg	Sm 4500 CN,CE		9/3/98	SA		5200	0.01
Fluoride		1.2	mg/Kg	E 300.0		9/21/98	JS		5484	0.2
Nitrate		1.8	mg/Kg	E 300.0		9/21/98	JS		5484	0.2
Chloride		20	mg/Kg	E 300.0		9/21/98	JS		5484	1.0
Sulfate		73	mg/Kg	E 300.0		9/21/98	JS		5484	1.0
TDS		470	mg/Kg	E 160.1		9/19/98	RS		5418	---
pH		8.7	s.u.	E 150.1		8/31/98	SA		5170	---
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		23.4	mg/Kg	SM 5530 A,D		9/16/98	RC		5355	0.25
Total Radium		7.04	pCi/gm	E 901.1M		9/7/98	DS	---	---	---

** Sample extracted 3 days past hold time

Analytical Results Report

Corrected

Date: 05-20-99
Page # 10

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000598
Sample Number: 106344

Field Code: GMW-10D 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	*AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	*AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	*AG		5230	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	*AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	*AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	*AG		5230	125
Surr. Dibromofluoromethane		84	%	S-8260B		9/8/98	*AG		5230	71-132
Surr. Toluene-d8		83	%	S-8260B		9/8/98	*AG		5230	82-124
Surr. 4-Bromofluorobenzene		85	%	S-8260B		9/8/98	*AG		5230	76-126
Benzidine		<2.5	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25

* Added analyst initials.

Corrected

Date: 05-20-99
Page # 11
Order ID Number: 9808000598
Sample Number: 106344

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GMW-10D 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Isophorone		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Anthracene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Fluorene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Pyrene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
monomethylnaphthalenes		<0.25	mg/Kg	S-8270C	**9/14/98	9/18/98	DG	5030	5410	0.25
Surr. 2-Fluorophenol		62	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	25-121
Surr. Phenol-d6		67	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	24-113
Surr. Nitroobenzene-d5		59	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	23-120
Surr. 2-Fluorobiphenyl		75	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	30-115
Surr. 2,4,6-Tribromophenol		42	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	19-122
Surr. Terphenyl-d14		62	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	28-137
Idrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50

Corrected

Date: 05-20-99
Page # 12
Order ID Number: 9808000598
Sample Number: 106344

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GMW-10D 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Chlordane		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Barium		11	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Cadmium		0.63	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.10
Chromium		4.9	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Lead		1.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Total Mercury		<0.10	mg/Kg	S 7471	8/31/98	9/1/98	MS	4826	5180	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Silver		<0.50	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	2.0
Copper		2.1	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Iron		3,500	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5050	5376	10
Manganese		25	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Zinc		8.5	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	2.0
Aluminum		2,900	mg/Kg	S 6010B	9/15/98	9/17/98	RR	5050	5376	10
Boron		<10	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	10
Cobalt		2.9	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Molybdenum		1.3	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	1.0
Nickel		2.6	mg/Kg	S 6010B	9/15/98	9/16/98	RR	5050	5358	0.50
Cyanide		<0.01	mg/Kg	Sm 4500 CN,CE		9/3/98	SA		5200	0.01
Fluoride		1.3	mg/Kg	E 300.0		9/21/98	JS		5484	0.2
Nitrate		1.6	mg/Kg	E 300.0		9/21/98	JS		5484	0.2
Chloride		11	mg/Kg	E 300.0		9/21/98	JS		5484	1.0
Sulfate		120	mg/Kg	E 300.0		9/21/98	JS		5484	2.0
TDS		480	mg/Kg	E 160.1		9/19/98	RS		5418	---
pH		9.0	s.u.	E 150.1		8/31/98	SA		5170	---
TRPHC		<10.0	mg/Kg	S 418.1	8/27/98	8/30/98	SR	4810	5168	10.0
Total Phenols		6.9	mg/Kg	SM 5530 A,D		9/16/98	RC		5355	0.25
Total Radium		11.55	pCi/gm	E 901.1M		9/7/98	DS	---	---	---

** Sample extracted 3 days past hold time

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000598

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Total Mercury		<0.10	mg/Kg	0.25	9/1/98	4826	51880
Cyanide		<0.01	mg/Kg	0.01	9/3/98		5200
Acrolein		<5	ug/L	5	9/7/98		5220
Acrylonitrile		<5	ug/L	5	9/7/98		5220
Benzene		<1	ug/L	1	9/7/98		5220
Carbon tetrachloride		<1	ug/L	1	9/7/98		5220
Chlorobenzene		<1	ug/L	1	9/7/98		5220
1,2-dichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/7/98		5220
1,1,1-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethylene		<1	ug/L	1	9/7/98		5220
Chloroform		<1	ug/L	1	9/7/98		5220
Dichlorobenzene		<2	ug/L	2	9/7/98		5220
1,1-dichloroethylene		<1	ug/L	1	9/7/98		5220
Dichloropropenes		<1	ug/L	1	9/7/98		5220
Ethylbenzene		<1	ug/L	1	9/7/98		5220
Bromodichloromethane		<1	ug/L	1	9/7/98		5220
Bromomethane		<5	ug/L	5	9/7/98		5220
Chloromethane		<1	ug/L	1	9/7/98		5220
Dichlorodifluoromethane		<1	ug/L	1	9/7/98		5220
Dichloromethane		<1	ug/L	1	9/7/98		5220
Trichlorofluoromethane		<1	ug/L	1	9/7/98		5220
Tetrachloroethylene		<1	ug/L	1	9/7/98		5220
Toluene		<1	ug/L	1	9/7/98		5220
Trichloroethylene		<1	ug/L	1	9/7/98		5220
Vinyl chloride		<1	ug/L	1	9/7/98		5220
m,p-xylene		<1	ug/L	1	9/7/98		5220
o-xylene		<1	ug/L	1	9/7/98		5220
1,1-dichloroethane		<1	ug/L	1	9/7/98		5220
Ethylene dibromide		<1	ug/L	1	9/7/98		5220
cis-1,2-dichlorethylene		<1	ug/L	1	9/7/98		5220
trans-1,2-dichloroethylene		<1	ug/L	1	9/7/98		5220
Methylene chloride		<5	ug/L	5	9/7/98		5220
Surr. Dibromofluoromethane		96	%	71-132	9/7/98		5220
Surr. Toluene-d8		89	%	82-124	9/7/98		5220
Surr. 4-Bromofluorobenzene		86	%	76-126	9/7/98		5220
Acrolein		<125	ug/Kg	125	9/8/98		5230
Acrylonitrile		<125	ug/Kg	125	9/8/98		5230

Date: 10-1-98
Page # 14
Order ID Number: 9808000598

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Benzene		<25	ug/Kg	25	9/8/98		5230
Carbon tetrachloride		<25	ug/Kg	25	9/8/98		5230
Chlorobenzene		<25	ug/Kg	25	9/8/98		5230
1,2-dichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,1-trichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2-trichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2-trichloroethylene		<25	ug/Kg	25	9/8/98		5230
Chloroform		<25	ug/Kg	25	9/8/98		5230
Dichlorobenzene		<50	ug/Kg	50	9/8/98		5230
1,1-dichloroethylene		<25	ug/Kg	25	9/8/98		5230
Dichloropropenes		<25	ug/Kg	25	9/8/98		5230
Ethylbenzene		<25	ug/Kg	25	9/8/98		5230
Bromodichloromethane		<25	ug/Kg	25	9/8/98		5230
Bromomethane		<125	ug/Kg	125	9/8/98		5230
Chloromethane		<25	ug/Kg	25	9/8/98		5230
Dichlorodifluoromethane		<25	ug/Kg	25	9/8/98		5230
Dichloromethane		<25	ug/Kg	25	9/8/98		5230
Trichlorofluoromethane		<25	ug/Kg	25	9/8/98		5230
Tetrachloroethylene		<25	ug/Kg	25	9/8/98		5230
Toluene		<25	ug/Kg	25	9/8/98		5230
Trichloroethylene		<25	ug/Kg	25	9/8/98		5230
Vinyl chloride		<25	ug/Kg	25	9/8/98		5230
m,p-xylene		<25	ug/Kg	25	9/8/98		5230
o-xylene		<25	ug/Kg	25	9/8/98		5230
1,1-dichloroethane		<25	ug/Kg	25	9/8/98		5230
Ethylene dibromide		<25	ug/Kg	25	9/8/98		5230
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/8/98		5230
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/8/98		5230
Methylene chloride		<125	ug/Kg	125	9/8/98		5230
Surr. Dibromofluoromethane		103	%	71-132	9/8/98		5230
Surr. Toluene-d8		90	%	82-124	9/8/98		5230
Surr. 4-Bromofluorobenzene		91	%	76-126	9/8/98		5230
TRPHC		<10.0	mg/Kg	10	8/30/98	4810	5168
Total Phenols		<0.25	mg/Kg	0.25	9/16/98		5355
PCB		0.1	mg/Kg	0.1	9/18/98	5044	5401
Arsenic		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Barium		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Cadmium		<0.10	mg/Kg	0.10	9/16/98	5050	5358
Chromium		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Lead		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Selenium		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Silver		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Uranium		<2.0	mg/Kg	2.0	9/16/98	5050	5358
Copper		<1.0	mg/Kg	1.0	9/16/98	5050	5358
Iron		<10	mg/Kg	10	9/17/98	5050	5376

Date: 10-1-98
Page # 15
Order ID Number: 9808000598

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Manganese		<1.0	mg/Kg	1.0	9/16/98	5050	5358
Zinc		<2.0	mg/Kg	2.0	9/16/98	5050	5358
Aluminum		<10	mg/Kg	10	9/17/98	5050	5376
Boron		<10	mg/Kg	10	9/16/98	5050	5358
Cobalt		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Molybdenum		<1.0	mg/Kg	1.0	9/16/98	5050	5358
Nickel		<0.50	mg/Kg	0.50	9/16/98	5050	5358
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5484
Chloride		<1.0	mg/Kg	1	9/21/98		5484
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5484
Sulfate		<1.0	mg/Kg	1	9/21/98		5484
Benzidine		<2.5	mg/kg	2.5	9/18/98	5030	5410
Hexachlorobenzene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Pentachlorobenzene		<0.25	mg/kg	0.25	9/18/98	5030	5410
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Hexachloroethane		<0.25	mg/kg	0.25	9/18/98	5030	5410
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/18/98	5030	5410
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/18/98	5030	5410
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/18/98	5030	5410
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/18/98	5030	5410
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/18/98	5030	5410
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/18/98	5030	5410
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/18/98	5030	5410
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Diphenylhydrazine		<1.25	mg/kg	1.25	9/18/98	5030	5410
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Isophorone		<1.25	mg/kg	1.25	9/18/98	5030	5410
Nitrobenzene		<0.25	mg/kg	0.25	9/18/98	5030	5410
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/18/98	5030	5410
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/18/98	5030	5410
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/18/98	5030	5410
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/18/98	5030	5410
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/18/98	5030	5410
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/18/98	5030	5410
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/18/98	5030	5410
Pentachlorophenol		<1.25	mg/kg	1.25	9/18/98	5030	5410
Dibutyl phthalate		<0.25	mg/kg	0.25	9/18/98	5030	5410
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/18/98	5030	5410
Diethyl phthalate		<0.25	mg/kg	0.25	9/18/98	5030	5410
Dimethyl phthalate		<0.25	mg/kg	0.25	9/18/98	5030	5410
Anthracene		<0.25	mg/kg	0.25	9/18/98	5030	5410
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Fluoranthene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Fluorene		<0.25	mg/kg	0.25	9/18/98	5030	5410

Order ID Number: 9808000598

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Phenanthrene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Pyrene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Naphthalene		<0.25	mg/kg	0.25	9/18/98	5030	5410
1-methylnaphthalene		<0.25	mg/kg	0.25	9/18/98	5030	5410
2-methylnaphthalene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/18/98	5030	5410
monomethylnaphthalenes		<0.25	mg/kg	0.25	9/18/98	5030	5410
Surr. 2-Fluorophenol		61	%	25-121	9/18/98	5030	5410
Surr. Phenol-d6		64	%	24-113	9/18/98	5030	5410
Surr. Nitroobenzene-d5		48	%	23-120	9/18/98	5030	5410
Surr. 2-Fluorobiphenyl		73	%	30-115	9/18/98	5030	5410
Surr. 2,4,6-Tribromophenol		56	%	19-122	9/18/98	5030	5410
Surr. Terphenyl-d14		56	%	28-137	9/18/98	5030	5410

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000598

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Cyanide		0.12	mg/L	0.12	100	9/3/98	5200
Total Mercury		5.0	mg/kg	4.9	98	9/1/98	5180
pH		7.0	s.u.	7.0	100	8/31/98	5170
Vinyl chloride		100	ug/L	94	94	9/7/98	5220
1,1-Dichloroethene		100	ug/L	120	120	9/7/98	5220
Chloroform		100	ug/L	111	111	9/7/98	5220
1,2-Dichloropropane		100	ug/L	101	101	9/7/98	5220
Toluene		100	ug/L	113	113	9/7/98	5220
Chlorobenzene		100	ug/L	110	110	9/7/98	5220
Ethylbenzene		100	ug/L	109	109	9/7/98	5220
1,1-Dichloroethene		100	ug/L	97	97	9/8/98	5230
Chloroform		100	ug/L	98	98	9/8/98	5230
1,2-Dichloropropane		100	ug/L	96	96	9/8/98	5230
Toluene		100	ug/L	106	106	9/8/98	5230
Chlorobenzene		100	ug/L	110	110	9/8/98	5230
Ethylbenzene		100	ug/L	114	114	9/8/98	5230
TRPHC		100	mg/L	99	99	8/30/98	5168
Total Phenols		0.80	mg/L	0.81	101	9/16/98	5355
TDS		1000	mg/L	985	99	9/19/98	5418
PCB		0.40	mg/L	0.41	103	9/18/98	5401
Arsenic		1.0	mg/L	1.0	100	9/16/98	5355
Barium		1.0	mg/L	1.0	100	9/16/98	5355
Cadmium		1.0	mg/L	1.0	100	9/16/98	5355
Chromium		1.0	mg/L	1.0	100	9/16/98	5355
Lead		1.0	mg/L	1.0	100	9/16/98	5355
Selenium		1.0	mg/L	1.0	100	9/16/98	5355
Silver		1.0	mg/L	1.0	98	9/16/98	5355
Uranium		1.0	mg/L	1.0	100	9/16/98	5355
Copper		1.0	mg/L	0.97	97	9/16/98	5355
Iron		100.0	mg/L	100.0	100	9/17/98	5376
Manganese		1.0	mg/L	1.0	100	9/16/98	5355
Zinc		1.0	mg/L	0.99	99	9/16/98	5355
Aluminum		250.0	mg/L	257.0	103	9/17/98	5376
Boron		1.0	mg/L	1.0	100	9/16/98	5355
Cobalt		1.0	mg/L	1.0	100	9/16/98	5355
Molybdenum		1.0	mg/L	1.0	100	9/16/98	5355

Order ID Number: 9808000598

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Nickel		1.0	mg/L	1.0	100	9/16/98	5355
Fluoride		2.5	mg/L	2.34	94	9/21/98	5484
Chloride		12.5	mg/L	11.52	92	9/21/98	5484
Nitrate		5	mg/L	4.775	96	9/21/98	5484
Sulfate		12.5	mg/L	11.77	94	9/21/98	5484
Phenol		80	mg/L	81	101	9/18/98	5410
1,4-Dichlorobenzene		80	mg/L	78	98	9/18/98	5410
2-nitrophenol		80	mg/L	81	101	9/18/98	5410
2,4-Dichlorophenol		80	mg/L	87	109	9/18/98	5410
Hexachlorobutadiene		80	mg/L	80	100	9/18/98	5410
4-Chloro-3-methylphenol		80	mg/L	70	88	9/18/98	5410
2,4,6-Trichlorophenol		80	mg/L	84	105	9/18/98	5410
Acenaphthene		80	mg/L	84	105	9/18/98	5410
n-Nitrosodiphenylamine		80	mg/L	74	93	9/18/98	5410
Pentachlorophenol		80	mg/L	76	95	9/18/98	5410
Fluoranthene		80	mg/L	71	89	9/18/98	5410
Di-n-octylphthalate		80	mg/L	74	93	9/18/98	5410
Benzo(a)pyrene		80	mg/L	75	94	9/18/98	5410

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000598

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Cyanide		mg/kg	<0.01	0.12	0.096	80	0.12	0.091	76	5.1	9/3/98		5200
Total Mercury		mg/kg	<0.10	2.5	2.7	108	2.5	2.7	108	0	9/1/98	4826	5180
1,1-Dichloroethene		ug/L	<1	100	102	102	100	96	96	6.1	9/7/98		5220
Benzene		ug/L	<1	100	102	102	100	104	104	1.9	9/7/98		5220
Trichloroethene		ug/L	<1	100	117	117	100	117	117	0.0	9/7/98		5220
Toluene		ug/L	<1	100	101	101	100	102	102	1.0	9/7/98		5220
Chlorobenzene		ug/L	<1	100	88	88	100	87	87	1.1	9/7/98		5220
1,1-Dichloroethene		ug/L	<1	100	94	94	100	95	95	1.1	9/8/98		5230
Benzene		ug/L	<1	100	105	105	100	107	107	1.9	9/8/98		5230
Trichloroethene		ug/L	<1	100	115	115	100	116	116	0.9	9/8/98		5230
Toluene		ug/L	<1	100	106	106	100	107	107	0.9	9/8/98		5230
Chlorobenzene		ug/L	<1	100	91	91	100	91	91	0	9/8/98		5230
TRPHC		mg/Kg	<10.0	250	231	92	250	220	88	4.4	8/30/98	4810	5168
Total Phenols		mg/Kg	6.9	25	27.1	81	25	27.4	82	1.2	9/16/98		5355
PCB		mg/Kg	<0.1	0.40	0.43	108	0.40	0.45	113	4.5	9/18/98	5044	5401
Arsenic		mg/Kg	<0.50	200	170	85	200	174	87	2.3	9/16/98	5050	5358
Barium		mg/Kg	<0.50	200	176	88	200	180	90	2.2	9/16/98	5050	5358
Cadmium		mg/Kg	<0.10	200	174	87	200	177	89	2.3	9/16/98	5050	5358
Chromium		mg/Kg	<0.50	200	177	89	200	177	89	0	9/16/98	5050	5358
Lead		mg/Kg	<0.50	200	170	85	200	174	87	2.3	9/16/98	5050	5358
Selenium		mg/Kg	<0.50	200	154	77	200	155	78	1.3	9/16/98	5050	5358
Silver		mg/Kg	<0.50	100	109	109	100	112	112	2.7	9/16/98	5050	5358
Uranium		mg/Kg	<2.0	200	194	97	200	199	100	3.0	9/16/98	5050	5358
Copper		mg/Kg	<1.0	200	172	86	200	177	89	3.4	9/16/98	5050	5358
Manganese		mg/Kg	<1.0	200	176	88	200	180	90	2.2	9/16/98	5050	5358
Zinc		mg/Kg	<2.0	200	173	87	200	174	87	0	9/16/98	5050	5358
Boron		mg/Kg	<10	200	165	83	200	167	84	1.2	9/16/98	5050	5358
Cobalt		mg/Kg	<0.50	200	171	86	200	174	87	1.2	9/16/98	5050	5358
Molybdenum		mg/Kg	<1.0	200	177	89	200	181	91	2.2	9/16/98	5050	5358
Nickel		mg/Kg	<0.50	200	166	83	200	173	87	4.7	9/16/98	5050	5358
Aluminum		mg/Kg	<10	200	178	89	200	173	87	2.3	9/17/98	5050	5376
Iron		mg/Kg	<10	200	202	101	200	198	99	2.0	9/17/98	5050	5376
Fluoride		mg/Kg	1.3	5	5.94	92	5	5.96	93	1.1	9/21/98		5484
Chloride		mg/Kg	11	25	33.89	92	25	34.49	94	2.2	9/21/98		5484
Nitrate		mg/Kg	1.6	10	10.82	92	10	11.13	95	3.2	9/21/98		5484
Sulfate		mg/Kg	6.18	25	33.68	110	25	32.94	107	2.8	9/21/98		5484
Phenol		mg/Kg	<0.25	10.00	5.56	56	10.00	5.94	59	5.2	9/18/98	5030	5410
2-Chlorophenol		mg/Kg	<1.25	10.00	5.52	55	10.00	5.74	57	3.6	9/18/98	5030	5410
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	6.58	66	10.00	6.85	69	4.4	9/18/98	5030	5410

Date: 10-1-98

Order ID Number: 9808000598

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	7.21	72	10.00	8.33	83	14	9/18/98	5030	5410
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	6.36	64	10.00	6.75	68	6.1	9/18/98	5030	5410
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	5.25	53	10.00	5.86	59	11	9/18/98	5030	5410
Acenaphthene		mg/Kg	<0.25	10.00	6.77	68	10.00	7.24	72	5.7	9/18/98	5030	5410
4-Nitrophenol		mg/Kg	<1.25	10.00	3.9	39	10.00	4.49	45	14	9/18/98	5030	5410
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	5.74	57	10.00	6.42	64	12	9/18/98	5030	5410
Pentachlorophenol		mg/Kg	<1.25	10.00	3.76	38	10.00	4.55	46	19	9/18/98	5030	5410
Pyrene		mg/Kg	<0.25	10.00	5.76	58	10.00	6.34	63	8.3	9/18/98	5030	5410

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000598

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		mg/kg	9.0	9.1	1.1	8/31/98		5170
TDS		mg/Kg	270	292	7.8	9/19/98		5418

AMERICAN RADIATION SERVICES, INC.

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American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0888	**P.O. Number:**	
Client I.D.:	Sample No. 106342	**ARS Sample I.D.:**	ARS-98-3235
Date Sampled:	8/27/98	**Date Received:**	9/4/98
Time Sampled:	N/A	**Time Received:**	0915
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.59	N/A	pCi/gm	<0.022	N/A	Bq/gm	EPA 901.1M	9/6/98 1158	SW
Ra-228	0.29	0.15	pCi/gm	0.011	0.006	Bq/gm	EPA 901.1M	9/6/98 1158	SW
Pb-210	1.50	1.25	pCi/gm	0.055	0.046	Bq/gm	EPA 901.1M	9/6/98 1158	SW
Total Activity	3.08	N/A	pCi/gm	0.114	N/A	Bq/gm	EPA 901.1M	9/6/98 1158	SW

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0888	**P.O. Number:**	
Client I.D.:	Sample No. 106343	**ARS Sample I.D.:**	ARS-98-3236
Date Sampled:	8/27/98	**Date Received:**	9/4/98
Time Sampled:	N/A	**Time Received:**	0915
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.50	N/A	pCi/gm	<0.019	N/A	Bq/gm	EPA 901.1M	9/6/98 1243	SW
Ra-228	0.29	0.11	pCi/gm	0.011	0.004	Bq/gm	EPA 901.1M	9/6/98 1243	SW
Pb-210	<0.61	N/A	pCi/gm	<0.023	N/A	Bq/gm	EPA 901.1M	9/6/98 1243	SW
Total Activity	7.04	N/A	pCi/gm	0.260	N/A	Bq/gm	EPA 901.1M	9/6/98 1243	SW

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0888	**P.O. Number:**	
Client I.D.:	Sample No. 106344	**ARS Sample I.D.:**	ARS-98-3237
Date Sampled:	8/27/98	**Date Received:**	9/4/98
Time Sampled:	N/A	**Time Received:**	0915
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.31	1.24	pCi/gm	0.048	0.046	Bq/gm	EPA 901.1M	9/7/98 1014	SW
Ra-228	0.40	0.21	pCi/gm	0.015	0.008	Bq/gm	EPA 901.1M	9/7/98 1014	SW
Pb-210	<0.97	N/A	pCi/gm	<0.036	N/A	Bq/gm	EPA 901.1M	9/7/98 1014	SW
Total Activity	11.55	N/A	pCi/gm	0.427	N/A	Bq/gm	EPA 901.1M	9/7/98 1014	SW

Notes:

Quality Assurance Review

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Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeffrey Kindley
Phone #: (915) 563-0118
FAX #: (915) 563-9526
Company Name & Address: Phillips Services Corporation, 7904 IH 20 West, Midland, Tx 79706
Project #: 19349
Project Name: Shell Grimes Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
106342	GMW-10 (3-5')	1	4oz Jars		✓					✓			08/27/98	0858
	GMW-10 (3-5')	1	40ml VOA		✓							✓	08/27/98	0858
343	GMW-10 (63-65')	1	4oz Jars		✓					✓			08/27/98	1508
	GMW-10 (63-65')	1	40ml VOA		✓							✓	08/27/98	1508
344	GMW-10D (63-65')	1	4oz Jars		✓					✓			08/27/98	
	GMW-10D (63-65')	1	40ml VOA		✓							✓	08/27/98	
345	Trip Blank	2	40ml VOA	✓						✓			08/27/98	
346	Field Blank	2	40ml VOA	✓				✓					08/27/98	1630

ANALYSIS REQUEST: BTEX, MTBE; TPH (418.1); Total Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Metals Ag As Ba Cd Cr Pb Hg Se; TCLP Volatiles; TCLP Semi Volatiles; RCI; 8240 / 8260; 8270; See Attached; Voc's

SPECIAL HANDLING: Turn around # of days; Fax ASAP; Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	08/28/98	0700 AM		8-29-98	0945
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:

REMARKS
Normal Turnaround

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9809000027

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
106457	GMW-9 8-10'	8/31/98	8:51	9/2/98
106458	GMW-9 63-65'	8/31/98	13:48	9/2/98
106459	GMS-9D 63-65'	8/31/98		9/2/98
106460	Field Blank	8/31/98	16:30	9/2/98
106461	Trip Blank			9/2/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All data meets quality control criteria with the exceptions:
Semivolatile samples extracted 4 days past hold time

Corrections:
1) Semivolatile samples flagged as being extracted past hold time.
2) Phenol results added for samples 106457-59.
3) Total Phenol results added for samples 106457-59.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9809000027
Sample Number: 106460

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Acrylonitrile		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Benzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chlorobenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chloroform		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorobenzene		<2	ug/L	S-8260B		9/7/98	AG		5220	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloropropenes		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylbenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromodichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromomethane		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Chloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Toluene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Vinyl chloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
m,p-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
o-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylene dibromide		<1	ug/L	S-8260B		9/7/98	AG		5220	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Methylene chloride		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Surr. Dibromofluoromethane		114	%	S-8260B		9/7/98	AG		5220	71-132
Surr. Toluene-d8		88	%	S-8260B		9/7/98	AG		5220	82-124
Surr. 4-Bromofluorobenzene		100	%	S-8260B		9/7/98	AG		5220	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9809000027
Sample Number: 106461

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Acrylonitrile		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Benzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chlorobenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chloroform		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorobenzene		<2	ug/L	S-8260B		9/7/98	AG		5220	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloropropenes		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylbenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromodichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromomethane		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Chloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Toluene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Vinyl chloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
m,p-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
o-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylene dibromide		<1	ug/L	S-8260B		9/7/98	AG		5220	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Methylene chloride		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Surr. Dibromofluoromethane		117	%	S-8260B		9/7/98	AG		5220	71-132
Surr. Toluene-d8		89	%	S-8260B		9/7/98	AG		5220	82-124
Surr. 4-Bromofluorobenzene		101	%	S-8260B		9/7/98	AG		5220	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 4

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9809000027
Sample Number: 106457

Field Code: GMW-9 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	AG		5230	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Surr. Dibromofluoromethane		84	%	S-8260B		9/8/98	AG		5230	71-132
Surr. Toluene-d8		81	%	S-8260B		9/8/98	AG		5230	82-124
Surr. 4-Bromofluorobenzene		86	%	S-8260B		9/8/98	AG		5230	76-126
Benzidine		<12.5	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	12.5
Hexachlorobenzene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Pentachlorobenzene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
1,2,4,5-tetrachlorobenzene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25

Corrected

Date: 05-20-99
Page # 5
Order ID Number: 9809000027
Sample Number: 106457

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GMW-9 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
2,4-dichlorophenol		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
2,4,5-trichlorophenol		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
2,4,6-trichlorophenol		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
bis (2-chloroethyl) ether		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
bis (2-chloroisopropyl) ether		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
bis (chloromethyl) ether		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
3,3-dichlorobenzidine		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
2,4-dinitrotoluene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Diphenylhydrazine		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
Hexachlorobutadiene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Hexachlorocyclopentadiene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Isophorone		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
Nitrobenzene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
2,4-dinitro-o-cresol		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
2,4-dinitrophenols		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
n-nitrosodiethylamine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
N-nitrosodimethylamine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
N-nitrosodibutylamine		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
N-nitrosodiphenylamine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
N-nitrosopyrrolidine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Pentachlorophenol		<6.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	6.25
Dibutyl phthalate		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
di-2-ethylhexyl phthalate		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Diethyl phthalate		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Dimethyl phthalate		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Anthracene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
3,4-benzofluoranthene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Benzo(k)fluoranthene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Fluoranthene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Fluorene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Phenanthrene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Pyrene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Naphthalene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
1-methylnaphthalene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
2-methylnaphthalene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Benzo-a-pyrene		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Phenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Surr. 2-Fluorophenol		77	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	25-121
Surr. Phenol-d6		97	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	24-113
Surr. Nitroobenzene-d5		71	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	23-120
Surr. 2-Fluorobiphenyl		118	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	30-115
Surr. 2,4,6-Tribromophenol		76	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	19-122
Surr. Terphenyl-d14		104	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	28-137

Corrected - Added Phenol result

Corrected

Date: 05-20-99

Order ID Number: 9809000027
Sample Number: 106457

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GMW-9 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	10/1/98	10/1/98	RC	521	5602	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Barium		230	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Cadmium		0.12	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.10
Chromium		6.1	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Lead		2.4	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471	9/3/98	9/4/98	MS	4877	5201	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Silver		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	2.0
Copper		1.3	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	1.0
Iron		4,300	mg/Kg	S 6010B	9/16/98	9/28/98	RR	5001	5499	5.00
Manganese		37	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	1.0
Zinc		12	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	2.0
Aluminum		7,100	mg/Kg	S 6010B	9/16/98	9/28/98	RR	5001	5499	5.00
Boron		15	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	10
Cobalt		7.1	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Molybdenum		2.1	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	1.0
Nickel		6.8	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/8/98	SA		5240	0.01
Fluoride		9.9	mg/Kg	E 300.0		9/21/98	JS		5491	0.2
Nitrate		1.7	mg/Kg	E 300.0		9/21/98	JS		5491	0.2
Chloride		16	mg/Kg	E 300.0		9/21/98	JS		5491	1.0
Sulfate		140	mg/Kg	E 300.0		9/21/98	JS		5491	2.0
TDS		880	mg/Kg	E 160.1		9/19/98	RS		5418	---
pH		8.1	s.u.	E 150.1		9/2/98	SA		5196	---
TRPHC		11,900	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Total Radium		14.47	pCi/gm	E 901.1M		9/7/98	DS	---	---	---
Total Phenol		2.4	mg/Kg	SM5530 A,D		10/2/98	RC			0.25

*Sample extracted 4 days past hold time
Corrected - Added Total Phenol result.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 7

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9809000027
Sample Number: 106458

Field Code: GMW-9 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	AG		5230	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Surr. Dibromofluoromethane		87	%	S-8260B		9/8/98	AG		5230	71-132
Surr. Toluene-d8		81	%	S-8260B		9/8/98	AG		5230	82-124
Surr. 4-Bromofluorobenzene		92	%	S-8260B		9/8/98	AG		5230	76-126
Benzidine		<2.5	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25

Corrected

Date: 05-20-99

Order ID Number: 9809000027
Sample Number: 106458

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GMW-9 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Isophorone		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Anthracene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Fluorene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Pyrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	*99/18/98	9/19/98	DG	5101	5431	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Phenol		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Surr. 2-Fluorophenol		59	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	25-121
Surr. Phenol-d6		66	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	24-113
Surr. Nitroobenzene-d5		60	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	23-120
Surr. 2-Fluorobiphenyl		76	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	30-115
Surr. 2,4,6-Tribromophenol		65	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	19-122
Surr. Terphenyl-d14		73	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-20-99
Page # 9
Order ID Number: 9809000027
Sample Number: 106458

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GMW-9 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	10/1/98	10/1/98	RC	521	5602	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Barium		15	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Cadmium		<0.10	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.10
Chromium		2.4	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Lead		1.2	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471	9/3/98	9/4/98	MS	4877	5201	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Silver		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	2.0
Copper		<1.0	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	1.0
Iron		2,000	mg/Kg	S 6010B	9/16/98	9/28/98	RR	5001	5499	5.00
Manganese		19	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	1.0
Zinc		4.6	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	2.0
Aluminum		1,630	mg/Kg	S 6010B	9/16/98	9/28/98	RR	5001	5499	5.00
Boron		<10	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	10
Cobalt		2.5	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	1.0
Nickel		2.2	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/8/98	SA		5240	0.01
Fluoride		1.2	mg/Kg	E 300.0		9/21/98	JS		5492	0.2
Nitrate		1.7	mg/Kg	E 300.0		9/21/98	JS		5492	0.2
Chloride		25	mg/Kg	E 300.0		9/21/98	JS		5492	1.0
Sulfate		7.2	mg/Kg	E 300.0		9/21/98	JS		5492	1.0
TDS		150	mg/Kg	E 160.1		9/20/98	RS		5435	---
pH		8.9	s.u.	E 150.1		9/2/98	SA		5196	7.0
TRPHC		206	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Total Radium		5.84	pCi/gm	E 901.1M		9/7/98	DS	---	---	---
Total Phenol		3.8	mg/Kg	SM5530 A,D		10/2/98	RC			0.25

Corrected - Added Total Phenol result.
* Sample extracted 4 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 10

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9809000027
Sample Number: 106459

Field Code: GMW-9D 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Benzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Chloroform		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/8/98	AG		5230	50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloropropenes		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Bromomethane		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Chloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Dichloromethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Toluene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
m,p-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
o-xylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/8/98	AG		5230	25
Methylene chloride		<125	ug/Kg	S-8260B		9/8/98	AG		5230	125
Surr. Dibromofluoromethane		80	%	S-8260B		9/8/98	AG		5230	71-132
Surr. Toluene-d8		83	%	S-8260B		9/8/98	AG		5230	82-124
Surr. 4-Bromofluorobenzene		83	%	S-8260B		9/8/98	AG		5230	76-126
Benzidine		<2.5	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25

Corrected

Date: 05-20-99
Page # 11
Order ID Number: 9809000027
Sample Number: 106459

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GMW-9D 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Isophorone		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Anthracene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Fluorene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Pyrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Phenol		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	DG	5101	5431	0.25
Surr. 2-Fluorophenol		65	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	25-121
Surr. Phenol-d6		73	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	24-113
Surr. Nitroobenzene-d5		62	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	23-120
Surr. 2-Fluorobiphenyl		82	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	30-115
Surr. 2,4,6-Tribromophenol		60	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	19-122
Surr. Terphenyl-d14		72	%	S-8270C	9/18/98	9/19/98	DG	5101	5431	28-137

Corrected - Added Phenol result.

Corrected

Date: 05-20-99
Page # 12
Order ID Number: 9809000027
Sample Number: 106459

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Field Code: GMW-9D 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/5/98	9/21/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	10/1/98	10/1/98	RC	521	5602	0.1
Arsenic		0.59	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Barium		19	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Cadmium		0.21	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.10
Chromium		4.0	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Lead		1.2	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Total Mercury		<0.10	mg/Kg	S 7471	9/3/98	9/4/98	MS	4877	5201	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Silver		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	2.0
Copper		1.0	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	1.0
Iron		2,300	mg/Kg	S 6010B	9/16/98	9/28/98	RR	5001	5499	5.00
Manganese		23	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	1.0
Zinc		5.1	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	2.0
Aluminum		1,900	mg/Kg	S 6010B	9/16/98	9/28/98	RR	5001	5499	5.00
Boron		<10	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	10
Cobalt		2.7	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	1.0
Nickel		2.4	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5001	5340	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/8/98	SA		5240	0.01
Fluoride		1.3	mg/Kg	E 300.0		9/21/98	JS		5492	0.2
Nitrate		<0.4	mg/Kg	E 300.0		9/21/98	JS		5492	0.4
Chloride		21	mg/Kg	E 300.0		9/21/98	JS		5492	1.0
Sulfate		9.8	mg/Kg	E 300.0		9/21/98	JS		5492	1.0
TDS		252	mg/Kg	E 160.1		9/20/98	RS		5435	---
pH		8.7	s.u.	E 150.1		9/2/98	SA		5196	7.0
TRPHC		688	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Total Radium		4.92	pCi/gm	E 901.1M		9/7/98	DS	---	---	---
Total Phenol		1.8	mg/Kg	SM5530 A,D		10/2/98	RC			0.25

Corrected - Added Total Phenol result.
* Sample extracted 4 days past hold time

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9809000027

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/7/98		5220
Acrylonitrile		<5	ug/L	5	9/7/98		5220
Benzene		<1	ug/L	1	9/7/98		5220
Carbon tetrachloride		<1	ug/L	1	9/7/98		5220
Chlorobenzene		<1	ug/L	1	9/7/98		5220
1,2-dichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/7/98		5220
1,1,1-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethylene		<1	ug/L	1	9/7/98		5220
Chloroform		<1	ug/L	1	9/7/98		5220
Dichlorobenzene		<2	ug/L	2	9/7/98		5220
1,1-dichloroethylene		<1	ug/L	1	9/7/98		5220
Dichloropropenes		<1	ug/L	1	9/7/98		5220
Ethylbenzene		<1	ug/L	1	9/7/98		5220
Bromodichloromethane		<1	ug/L	1	9/7/98		5220
Bromomethane		<5	ug/L	5	9/7/98		5220
Chloromethane		<1	ug/L	1	9/7/98		5220
Dichlorodifluoromethane		<1	ug/L	1	9/7/98		5220
Dichloromethane		<1	ug/L	1	9/7/98		5220
Trichlorofluoromethane		<1	ug/L	1	9/7/98		5220
Tetrachloroethylene		<1	ug/L	1	9/7/98		5220
Toluene		<1	ug/L	1	9/7/98		5220
Trichloroethylene		<1	ug/L	1	9/7/98		5220
Vinyl chloride		<1	ug/L	1	9/7/98		5220
m,p-xylene		<1	ug/L	1	9/7/98		5220
o-xylene		<1	ug/L	1	9/7/98		5220
1,1-dichloroethane		<1	ug/L	1	9/7/98		5220
Ethylene dibromide		<1	ug/L	1	9/7/98		5220
cis-1,2-dichlorethylene		<1	ug/L	1	9/7/98		5220
trans-1,2-dichloroethylene		<1	ug/L	1	9/7/98		5220
Methylene chloride		<5	ug/L	5	9/7/98		5220
Surr. Dibromofluoromethane		96	%	71-132	9/7/98		5220
Surr. Toluene-d8		89	%	82-124	9/7/98		5220
Surr. 4-Bromofluorobenzene		86	%	76-126	9/7/98		5220
Acrolein		<125	ug/Kg	125	9/8/98		5230
Acrylonitrile		<125	ug/Kg	125	9/8/98		5230
Benzene		<25	ug/Kg	25	9/8/98		5230
Carbon tetrachloride		<25	ug/Kg	25	9/8/98		5230
Chlorobenzene		<25	ug/Kg	25	9/8/98		5230

Order ID Number: 9809000027

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,2-dichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,1-trichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2-trichloroethane		<25	ug/Kg	25	9/8/98		5230
1,1,2-trichloroethylene		<25	ug/Kg	25	9/8/98		5230
Chloroform		<25	ug/Kg	25	9/8/98		5230
Dichlorobenzene		<50	ug/Kg	50	9/8/98		5230
1,1-dichloroethylene		<25	ug/Kg	25	9/8/98		5230
Dichloropropenes		<25	ug/Kg	25	9/8/98		5230
Ethylbenzene		<25	ug/Kg	25	9/8/98		5230
Bromodichloromethane		<25	ug/Kg	25	9/8/98		5230
Bromomethane		<125	ug/Kg	125	9/8/98		5230
Chloromethane		<25	ug/Kg	25	9/8/98		5230
Dichlorodifluoromethane		<25	ug/Kg	25	9/8/98		5230
Dichloromethane		<25	ug/Kg	25	9/8/98		5230
Trichlorofluoromethane		<25	ug/Kg	25	9/8/98		5230
Tetrachloroethylene		<25	ug/Kg	25	9/8/98		5230
Toluene		<25	ug/Kg	25	9/8/98		5230
[redacted]richloroethylene		<25	ug/Kg	25	9/8/98		5230
[redacted]nyl chloride		<25	ug/Kg	25	9/8/98		5230
m,p-xylene		<25	ug/Kg	25	9/8/98		5230
o-xylene		<25	ug/Kg	25	9/8/98		5230
1,1-dichloroethane		<25	ug/Kg	25	9/8/98		5230
Ethylene dibromide		<25	ug/Kg	25	9/8/98		5230
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/8/98		5230
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/8/98		5230
Methylene chloride		<125	ug/Kg	125	9/8/98		5230
Surr. Dibromofluoromethane		103	%	71-132	9/8/98		5230
Surr. Toluene-d8		90	%	82-124	9/8/98		5230
Surr. 4-Bromofluorobenzene		91	%	76-126	9/8/98		5230
Cyanide		<0.010	mg/Kg	0.01	9/8/98		5240
TRPHC		<10.0	mg/Kg	10	9/10/98	4915	5270
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5491
Nitrate		<0.2	mg/Kg	2	9/21/98		5491
Chloride		<1.0	mg/Kg	1	9/21/98		5491
Sulfate		<1.0	mg/Kg	1	9/21/98		5491
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5492
Nitrate		<0.2	mg/Kg	2	9/21/98		5492
Chloride		<1.0	mg/Kg	1	9/21/98		5492
Sulfate		<1.0	mg/Kg	1	9/21/98		5492
Benzidine		<2.5	mg/kg	2.5	9/19/98	5101	5431
Hexachlorobenzene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Pentachlorobenzene		<0.25	mg/kg	0.25	9/19/98	5101	5431
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/19/98	5101	5431
[redacted]exachloroethane		<0.25	mg/kg	0.25	9/19/98	5101	5431

Order ID Number: 9809000027

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/19/98	5101	5431
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/19/98	5101	5431
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/19/98	5101	5431
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/19/98	5101	5431
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/19/98	5101	5431
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/19/98	5101	5431
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/19/98	5101	5431
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Diphenylhydrazine		<1.25	mg/kg	1.25	9/19/98	5101	5431
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Isophorone		<1.25	mg/kg	1.25	9/19/98	5101	5431
Nitrobenzene		<0.25	mg/kg	0.25	9/19/98	5101	5431
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/19/98	5101	5431
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/19/98	5101	5431
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/19/98	5101	5431
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/19/98	5101	5431
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/19/98	5101	5431
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/19/98	5101	5431
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/19/98	5101	5431
Pentachlorophenol		<1.25	mg/kg	1.25	9/19/98	5101	5431
Dibutyl phthalate		<0.25	mg/kg	0.25	9/19/98	5101	5431
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/19/98	5101	5431
Diethyl phthalate		<0.25	mg/kg	0.25	9/19/98	5101	5431
Dimethyl phthalate		<0.25	mg/kg	0.25	9/19/98	5101	5431
Anthracene		<0.25	mg/kg	0.25	9/19/98	5101	5431
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Fluoranthene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Fluorene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Phenanthrene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Pyrene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Naphthalene		<0.25	mg/kg	0.25	9/19/98	5101	5431
1-methylnaphthalene		<0.25	mg/kg	0.25	9/19/98	5101	5431
2-methylnaphthalene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/19/98	5101	5431
Surr. 2-Fluorophenol		32	%	25-121	9/19/98	5101	5431
Surr. Phenol-d6		90	%	24-113	9/19/98	5101	5431
Surr. Nitroobenzene-d5		74	%	23-120	9/19/98	5101	5431
Surr. 2-Fluorobiphenyl		99	%	30-115	9/19/98	5101	5431
Surr. 2,4,6-Tribromophenol		91	%	19-122	9/19/98	5101	5431
Surr. Terphenyl-d14		93	%	28-137	9/19/98	5101	5431
Arsenic		<0.50	mg/kg	0.50	9/16/98	5001	5240
Barium		<0.50	mg/kg	0.50	9/16/98	5001	5240
Cadmium		<0.10	mg/kg	0.10	9/16/98	5001	5240
Chromium		<0.50	mg/kg	0.50	9/16/98	5001	5240

Date: 10-1-98
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Order ID Number: 9809000027

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Lead		<0.50	mg/kg	0.50	9/16/98	5001	5240
Total Mercury		<0.10	mg/kg	0.10	9/4/98	4872	5201
Selenium		<0.50	mg/kg	0.50	9/16/98	5001	5240
Silver		<0.50	mg/kg	0.50	9/16/98	5001	5240
Uranium		<2.0	mg/kg	2.0	9/16/98	5001	5240
Copper		<1.0	mg/kg	1.0	9/16/98	5001	5240
Iron		<0.50	mg/kg	0.50	9/16/98	5001	5240
Manganese		<1.0	mg/kg	1.0	9/16/98	5001	5240
Zinc		<2.0	mg/kg	2.0	9/16/98	5001	5240
Aluminum		<0.50	mg/kg	0.50	9/16/98	5001	5240
Boron		<10	mg/kg	10	9/16/98	5001	5240
Cobalt		<0.50	mg/kg	0.50	9/16/98	5001	5240
Molybdenum		<1.0	mg/kg	1.0	9/16/98	5001	5240
Nickel		<0.50	mg/kg	0.50	9/16/98	5001	5240

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9809000027

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
pH		7.0	s.u.	7.0	100	9/2/98	5196
Vinyl chloride		100	ug/L	94	94	9/7/98	5220
1,1-Dichloroethene		100	ug/L	120	120	9/7/98	5220
Chloroform		100	ug/L	111	111	9/7/98	5220
1,2-Dichloropropane		100	ug/L	101	101	9/7/98	5220
Toluene		100	ug/L	113	113	9/7/98	5220
Chlorobenzene		100	ug/L	110	110	9/7/98	5220
Ethylbenzene		100	ug/L	109	109	9/7/98	5220
1,1-Dichloroethene		100	ug/L	97	97	9/8/98	5230
Chloroform		100	ug/L	98	98	9/8/98	5230
1,2-Dichloropropane		100	ug/L	96	96	9/8/98	5230
Toluene		100	ug/L	106	106	9/8/98	5230
Chlorobenzene		100	ug/L	110	110	9/8/98	5230
Ethylbenzene		100	ug/L	114	114	9/8/98	5230
Cyanide		0	mg/L	0.12	100	9/8/98	5240
TRPHC		100.0	mg/L	102.0	102	9/10/98	5270
Fluoride		2.50	mg/L	2.34	94	9/21/98	5491
Nitrate		5	mg/L	4.775	96	9/21/98	5491
Chloride		12.5	mg/L	11.52	92	9/21/98	5491
Sulfate		12.5	mg/L	11.77	94	9/21/98	5491
Fluoride		2.50	mg/L	2.435	97	9/21/98	5492
Nitrate		5	mg/L	5.065	101	9/21/98	5492
Chloride		12.5	mg/L	12.255	98	9/21/98	5492
Sulfate		12.5	mg/L	12.61	101	9/21/98	5492
Phenol		80	mg/L	81	101	9/19/98	5431
1,4-Dichlorobenzene		80	mg/L	78	98	9/19/98	5431
2-nitrophenol		80	mg/L	81	101	9/19/98	5431
2,4-Dichlorophenol		80	mg/L	87	109	9/19/98	5431
Hexachlorobutadiene		80	mg/L	80	100	9/19/98	5431
4-Chloro-3-methylphenol		80	mg/L	70	88	9/19/98	5431
2,4,6-Trichlorophenol		80	mg/L	84	105	9/19/98	5431
Acenaphthene		80	mg/L	84	105	9/19/98	5431
n-Nitrosodiphenylamine		80	mg/L	74	93	9/19/98	5431
Pentachlorophenol		80	mg/L	76	95	9/19/98	5431
Fluoranthene		80	mg/L	71	89	9/19/98	5431
Di-n-octylphthalate		80	mg/L	74	93	9/19/98	5431

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Benzo(a)pyrene		80	mg/L	75	94	9/19/98	5431
TDS		1,000	mg/L	985	99	9/19/98	5418
TDS		1,000	mg/L	999	100	9/20/98	5435
Arsenic		1.0	mg/L	1.0	100	9/16/98	5240
Barium		1.0	mg/L	1.0	100	9/16/98	5240
Cadmium		1.0	mg/L	1.0	100	9/16/98	5240
Chromium		1.0	mg/L	1.0	100	9/16/98	5240
Lead		1.0	mg/L	1.0	100	9/16/98	5240
Total Mercury		5.0	mg/L	4.9	98	9/4/98	5201
Selenium		1.0	mg/L	1.0	100	9/16/98	5240
Silver		1.0	mg/L	0.92	92	9/16/98	5240
Uranium		1.0	mg/L	1.0	100	9/16/98	5240
Copper		1.0	mg/L	1.0	100	9/16/98	5240
Iron		1.0	mg/L	1.0	100	9/16/98	5240
Manganese		1.0	mg/L	1.0	100	9/16/98	5240
Zinc		1.0	mg/L	1.0	100	9/16/98	5240
Aluminum		1.0	mg/L	1.0	100	9/16/98	5240
Boron		1.0	mg/L	1.0	100	9/16/98	5240
Cobalt		1.0	mg/L	1.0	100	9/16/98	5240
Molybdenum		1.0	mg/L	1.0	100	9/16/98	5240
Nickel		1.0	mg/L	1.0	100	9/16/98	5240

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20.West
Midland, TX 79706

Date: 10-1-98
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Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9809000027

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	102	102	100	96	96	6.1	9/7/98		5220
Benzene		ug/L	<1	100	102	102	100	104	104	1.9	9/7/98		5220
Trichloroethene		ug/L	<1	100	117	117	100	117	117	0.0	9/7/98		5220
Toluene		ug/L	<1	100	101	101	100	102	102	0.99	9/7/98		5220
Chlorobenzene		ug/L	<1	100	88	88	100	87	87	1.1	9/7/98		5220
1,1-Dichloroethene		ug/Kg	<25	100	94	94	100	95	95	1.1	9/8/98		5230
Benzene		ug/Kg	<25	100	105	105	100	107	107	1.9	9/8/98		5230
Trichloroethene		ug/Kg	<25	100	115	115	100	116	116	0.87	9/8/98		5230
Toluene		ug/Kg	<25	100	106	106	100	107	107	0.94	9/8/98		5230
Chlorobenzene		ug/Kg	<25	100	91	91	100	91	91	0	9/8/98		5230
Cyanide		mg/Kg	<0.010	0.12	0.10	83	0.12	0.10	83	0	9/8/98		5240
TRPHC		mg/Kg	<10.0	250	224	90	250	206	82	8.3	9/10/98	4915	5270
Fluoride		mg/Kg	1.27	5.0	5.940	93	5.0	5.960	94	1.1	9/21/98		5491
Nitrate		mg/Kg	1.64	10	10.82	92	10	11.13	95	3.2	9/21/98		5491
Chloride		mg/Kg	10.69	25	33.89	93	25	34.49	95	2.1	9/21/98		5491
Sulfate		mg/Kg	9.63	25	33.68	96	25	32.94	93	3.2	9/21/98		5491
Fluoride		mg/Kg	1.32	5.0	6.270	99	5.0	6.360	101	2.0	9/22/98		5492
Nitrate		mg/Kg	<0.2	10	11.39	114	10	11.42	114	0	9/22/98		5492
Chloride		mg/Kg	22.01	25	47.65	103	25	47.77	103	0	9/21/98		5492
Sulfate		mg/Kg	5.33	25	30.58	101	25	30.26	100	1.0	9/21/98		5492
Phenol		mg/Kg	<0.25	10.00	4.05	41	10.00	3.69	37	10	9/18/98	4916	5412
2-Chlorophenol		mg/Kg	<1.25	10.00	3.82	38	10.00	3.54	35	8.2	9/18/98	4916	5412
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	4.86	49	10.00	4.45	44	11	9/18/98	4916	5412
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	4.05	41	10.00	3.74	37	10	9/18/98	4916	5412
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	4.38	44	10.00	4.02	40	9.5	9/18/98	4916	5412
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	3.73	37	10.00	3.48	35	5.6	9/18/98	4916	5412
Acenaphthene		mg/Kg	<0.25	10.00	5.04	50	10.00	4.79	48	4.1	9/18/98	4916	5412
4-Nitrophenol		mg/Kg	<1.25	10.00	2.75	28	10.00	2.46	25	11	9/18/98	4916	5412
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	4.59	46	10.00	4.35	44	4.4	9/18/98	4916	5412
Pentachlorophenol		mg/Kg	<1.25	10.00	3.74	37	10.00	3.45	35	5.6	9/18/98	4916	5412
Pyrene		mg/Kg	<0.25	10.00	4.58	46	10.00	4.51	45	2.2	9/18/98	4916	5412
Arsenic		mg/Kg	<0.50	200	158	79	200	160	80	1.3	9/16/98	5001	5240
Barium		mg/Kg	<0.50	200	180	90	200	174	87	3.4	9/16/98	5001	5240
Cadmium		mg/Kg	<0.50	200	150	75	200	150	75	0	9/16/98	5001	5240
Chromium		mg/Kg	<0.50	200	159	80	200	159	80	0	9/16/98	5001	5240

Order ID Number: 9809000027

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Lead		mg/Kg	<0.50	200	150	75	200	150	75	0	9/16/98	5001	5240
Total Mercury		mg/Kg	<0.10	2.5	2.8	112	2.5	2.7	108	3.6	9/16/98	5001	5240
Selenium		mg/Kg	<0.50	200	150	75	200	150	75	0	9/16/98	5001	5240
Silver		mg/Kg	<0.50	100	108	108	100	106	106	1.9	9/16/98	5001	5240
Uranium		mg/Kg	<0.50	200	170	85	200	189	95	11	9/16/98	5001	5240
Copper		mg/Kg	<0.50	200	177	89	200	167	84	5.8	9/16/98	5001	5240
Iron		mg/Kg	<5.0	200	220	110	200	215	108	1.2	9/16/98	5001	5240
Manganese		mg/Kg	<0.50	200	193	97	200	189	95	2.1	9/16/98	5001	5240
Zinc		mg/Kg	<0.50	200	167	84	200	167	84	0	9/16/98	5001	5240
Aluminum		mg/Kg	<0.50	200	216	108	200	203	102	5.7	9/28/98	5001	5499
Boron		mg/Kg	<0.50	200	169	85	200	174	87	2.3	9/16/98	5001	5240
Cobalt		mg/Kg	<0.50	200	152	76	200	150	75	1.3	9/16/98	5001	5240
Molybdenum		mg/Kg	<0.50	200	159	80	200	153	77	3.8	9/16/98	5001	5240
Nickel		mg/Kg	<0.50	200	150	75	200	154	77	2.6	9/16/98	5001	5240

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
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Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9809000027

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	8.3	8.4	1.2	9/2/98		5196
TDS		mg/Kg	270	292	7.8	9/19/98		5418
TDS		mg/Kg	252	270	6.9	9/20/98		5435

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ARS
AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0888	**P.O. Number:**	
Client I.D.:	Sample No. 106457	**ARS Sample I.D.:**	ARS-98-3240
Date Sampled:	8/31/98	**Date Received:**	9/4/98
Time Sampled:	N/A	**Time Received:**	0915
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.75	1.49	pCi/gm	0.065	0.055	Bq/gm	EPA 901.1M	9/7/98 1151	SW
Ra-228	0.56	0.26	pCi/gm	0.021	0.010	Bq/gm	EPA 901.1M	9/7/98 1151	SW
Pb-210	2.34	2.24	pCi/gm	0.087	0.083	Bq/gm	EPA 901.1M	9/7/98 1151	SW
Total Activity	14.47	N/A	pCi/gm	0.535	N/A	Bq/gm	EPA 901.1M	9/7/98 1151	SW

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0888	**P.O. Number:**	
Client I.D.:	Sample No. 106458	**ARS Sample I.D.:**	ARS-98-3241
Date Sampled:	8/31/98	**Date Received:**	9/4/98
Time Sampled:	N/A	**Time Received:**	0915
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.76	N/A	pCi/gm	<0.028	N/A	Bq/gm	EPA 901.1M	9/7/98 1222	SW
Ra-228	<0.08	N/A	pCi/gm	<0.003	N/A	Bq/gm	EPA 901.1M	9/7/98 1222	SW
Pb-210	<0.95	N/A	pCi/gm	<0.035	N/A	Bq/gm	EPA 901.1M	9/7/98 1222	SW
Total Activity	5.84	N/A	pCi/gm	0.216	N/A	Bq/gm	EPA 901.1M	9/7/98 1222	SW

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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ARS Tracking Number:	ARS-98-0888	**P.O. Number:**	
Client I.D.:	Sample No. 106459	**ARS Sample I.D.:**	ARS-98-3242
Date Sampled:	8/31/98	**Date Received:**	9/4/98
Time Sampled:	N/A	**Time Received:**	0915
Type of Sample:	Soil	**Date of Report:**	9/8/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.62	N/A	pCi/gm	<0.023	N/A	Bq/gm	EPA 901.1M	9/7/98 1254	SW
Ra-228	<0.08	N/A	pCi/gm	<0.003	N/A	Bq/gm	EPA 901.1M	9/7/98 1254	SW
Pb-210	<0.83	N/A	pCi/gm	<0.031	N/A	Bq/gm	EPA 901.1M	9/7/98 1254	SW
Total Activity	4.92	N/A	pCi/gm	0.182	N/A	Bq/gm	EPA 901.1M	9/7/98 1254	SW

Notes:

Quality Assurance Review

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Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

otes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 27

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 I H 20 West, Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley / Sharon Hall
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Grimes Tank Battery
Project Location: Hobbs, NM
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
106457	GMW-9 (8-10')	5	4oz Jars		✓					✓			08/31/98	0851
	GMW-9 (8-10')	1	40ml VOA		✓							✓	08/31/98	0851
106460 106459	Field Blank	2	40ml VOA	✓				✓					08/31/98	1630
106461	Trip Blank	2	40ml VOA	✓						✓			08/31/98	
106458	GMW-9 (63-65')	5	4oz Jars		✓					✓			08/31/98	1348
	GMW-9 (63-65')	1	40ml VOA		✓							✓	08/31/98	1348
106459	GMW-9D (63-65')	5	4oz Jars		✓					✓			08/31/98	
	GMW-9D (63-65')	1	40ml VOA		✓							✓	08/31/98	

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	See Attached	VOC's			Turn Around Time if different from standard	Hold
		✓												✓					
															✓				
														✓					
														✓					
		✓												✓					
															✓				
		✓												✓					
		.													✓				

Relinquished by: Jeffrey Kindley Date: Sept 1, 1998 Time: 0700AM
Received by: Date: Time:
Relinquished by: Date: Time:
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Richard Lindbaum Date: 9-2-98 Time: 8:30 AM

LAB USE ONLY
Intact (Y) / N
Headspace Y (N)
Temp 3 °
Log-in Review MM

REMARKS: Normal Turnaround.

Carrier # Bus 901 4984 6132

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-14-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
106786	GSB-9 2-3'	9/2/98	9:30	9/4/98
106787	GSB-9 13-15'	9/2/98	10:00	9/4/98
106788	GSB-9 50-52'	9/2/98	11:59	9/4/98
106789	GSB-10 2-3'	9/2/98	13:54	9/4/98
106790	GSB-10 3-5'	9/2/98	14:00	9/4/98
106791	GSB-10 50-52'	9/2/98	16:41	9/4/98
106792	Field Blank	9/2/98	16:50	9/4/98
106793	Trip Blank			9/4/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All data meets quality control criteria with the following exception:
106786, 106789 Semivolatiles extracted 2 days past hold time

Corrections:
1) Flagged Semivolatile samples 106786 and 106789 as being extracted past hold time.
2) Order ID Number corrected.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 2

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108
Sample Number: 106786

Sample Description: GSB-9 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<180	ug/Kg	S-8260B		9/9/98	AG		5264	*180
Acrylonitrile		<180	ug/Kg	S-8260B		9/9/98	AG		5264	*180
Benzene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Carbon tetrachloride		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Chlorobenzene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
1,2-dichloroethane		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
1,1,2,2-tetrachloroethane		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
1,1,1-trichloroethane		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
1,1,2-trichloroethane		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
1,1,2-trichloroethylene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Chloroform		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Dichlorobenzene		<72	ug/Kg	S-8260B		9/9/98	AG		5264	*72
1,1-dichloroethylene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Dichloropropenes		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Ethylbenzene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Bromodichloromethane		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Bromomethane		<180	ug/Kg	S-8260B		9/9/98	AG		5264	*180
Chloromethane		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Dichlorodifluoromethane		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Dichloromethane		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Trichlorofluorometane		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Tetrachloroethylene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Toluene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Trichloroethylene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Vinyl chloride		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
m,p-xylene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
o-xylene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
1,1-dichloroethane		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Ethylene dibromide		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
cis-1,2-dichlorethylene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
trans-1,2-dichloroethylene		<36	ug/Kg	S-8260B		9/9/98	AG		5264	*36
Methylene chloride		<180	ug/Kg	S-8260B		9/9/98	AG		5264	180
Dibromofluoromethane		86	%	S-8260B		9/9/98	AG		5264	71-132
Toluene-d8		84	%	S-8260B		9/9/98	AG		5264	82-124
4-Bromofluorobenzene		84	%	S-8260B		9/9/98	AG		5264	76-126
Benzidine		<2.5	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25

Corrected

Date: 05-20-99
Page # 3
Order ID Number: 9809000108
Sample Number: 106786

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GSB-9 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Isophorone		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
2,4-dinitro-o-cresol		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
i-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
N-nitrosodibutylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
Phenol		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Anthracene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Fluorene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Pyrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Surr. 2-Fluorophenol		43	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	25-121
Surr. Phenol-d6		47	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	24-113
Surr. Nitroobenzene-d5		42	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	23-120
Surr. 2-Fluorobiphenyl		53	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	30-115
Surr. 2,4,6-Tribromophenol		41	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	19-122
Surr. Terphenyl-d14		52	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	28-137

Corrected

Date: 05-20-99
Page # 4

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108
Sample Number: 106786

Sample Description: GSB-9 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		2.6	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Barium		100	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cadmium		0.17	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.10
Chromium		3.8	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Lead		1.3	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Total Mercury		<0.10	mg/Kg	S 7471A	9/9/98	9/10/98	MS	4916	5274	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Silver		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	2.0
Copper		2.3	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Iron		3,000	mg/Kg	S 6010B	9/16/98	9/20/98	RR	5065	5460	10
Manganese		33	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Zinc		5.8	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	2.0
Aluminum		4,300	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5460	10
Boron		<10	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	10
Cobalt		5.3	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Molybdenum		1.7	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Nickel		5	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		5.4	mg/Kg	E 300.0		9/21/98	JS		5486	0.2
Nitrate		<0.4	mg/Kg	E 300.0		9/21/98	JS		5486	0.2
Chloride		19	mg/Kg	E 300.0		9/21/98	JS		5486	1.0
Sulfate		110	mg/Kg	E 300.0		9/21/98	JS		5486	2.0
TDS		400	mg/Kg	E 160.1		9/20/98	RS		5435	---
pH		8.4	s.u.	E 150.1		9/8/98	SA		5241	---
TRPHC		24.1	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Total Radium		11.01	pCi/gm	E 901.1M		10/1/98	DS	---	---	---
Total Phenol		1.2	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25

* Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108
Sample Number: 106787

Sample Description: GSB-9 13-15'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Toluene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Ethylbenzene		0.93	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
m,p,o-xylene		6.48	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
TRPHC		2,050	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Chloride		32	mg/Kg	E 300.0		9/16/98	JS		5360	2

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108
Sample Number: 106788

Sample Description: GSB-9 50-52'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Toluene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Ethylbenzene		0.546	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
m,p,o-xylene		4.24	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
TRPHC		2,310	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Chloride		96	mg/Kg	E 300.0		9/16/98	JS		5360	2

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
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Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108
Sample Number: 106789

Sample Description: GSB-10 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<470	ug/Kg	S-8260B		9/9/98	AG		5264	470
Acrylonitrile		<470	ug/Kg	S-8260B		9/9/98	AG		5264	470
Benzene		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Carbon tetrachloride		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Chlorobenzene		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
1,2-dichloroethane		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
1,1,2,2-tetrachloroethane		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
1,1,1-trichloroethane		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
1,1,2-trichloroethane		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
1,1,2-trichloroethylene		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Chloroform		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Dichlorobenzene		<188	ug/Kg	S-8260B		9/9/98	AG		5264	188
1,1-dichloroethylene		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Dichloropropenes		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Ethylbenzene		3,100	ug/Kg	S-8260B		9/9/98	AG		5264	94
Bromodichloromethane		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Bromomethane		<470	ug/Kg	S-8260B		9/9/98	AG		5264	180
Chloromethane		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Dichlorodifluoromethane		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Dichloromethane		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Trichlorofluorometane		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Tetrachloroethylene		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Toluene		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Trichloroethylene		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Vinyl chloride		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
m,p-xylene		15,000	ug/Kg	S-8260B		9/9/98	AG		5264	94
o-xylene		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
1,1-dichloroethane		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Ethylene dibromide		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
cis-1,2-dichlorethylene		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
trans-1,2-dichloroethylene		<94	ug/Kg	S-8260B		9/9/98	AG		5264	94
Methylene chloride		<470	ug/Kg	S-8260B		9/9/98	AG		5264	470
Dibromofluoromethane		87	%	S-8260B		9/9/98	AG		5264	71-132
Toluene-d8		92	%	S-8260B		9/9/98	AG		5264	82-124
4-Bromofluorobenzene		102	%	S-8260B		9/9/98	AG		5264	76-126
Benzidine		<2.5	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25

Corrected

Date: 06-14-99
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Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000108**
Sample Number: 106789

Sample Description: GSB-10 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Isophorone		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
2,4-dinitro-o-cresol		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
i-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
'-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	1.25
Phenol		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Anthracene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Fluorene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Pyrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
1-methylnaphthalene		2.3	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
2-methylnaphthalene		2.2	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	*9/18/98	9/19/98	MB	5100	5430	0.25
Surr. 2-Fluorophenol		67	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	25-121
Surr. Phenol-d6		48	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	24-113
Surr. Nitroobenzene-d5		64	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	23-120
Surr. 2-Fluorobiphenyl		83	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	30-115
Surr. 2,4,6-Tribromophenol		65	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	19-122
Surr. Terphenyl-d14		73	%	S-8270C	9/18/98	9/19/98	MB	5100	5430	28-137

** Order ID Number corrected.

Corrected

Date: 05-20-99
Page # 9
Order ID Number: 9809000108
Sample Number: 106789

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GSB-10 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/2/98	10/9/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		0.75	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Barium		315	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cadmium		0.13	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.10
Chromium		5.3	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Lead		2.2	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Total Mercury		<0.10	mg/Kg	E 7471A	9/9/98	9/10/98	MS	4916	5274	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Silver		<0.50	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	2.0
Copper		2.7	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Iron		4,100	mg/Kg	S 6010B	9/16/98	9/20/98	RR	5065	5460	10
Manganese		57	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Zinc		9.9	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	2 0
Aluminum		5,400	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5460	10
Boron		<10	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	10
Cobalt		5.4	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Molybdenum		1.2	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Nickel		4.9	mg/Kg	S 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		8.5	mg/Kg	E 300.0		9/21/98	JS		5485	0.2
Nitrate		1.8	mg/Kg	E 300.0		9/21/98	JS		5485	0.2
Chloride		100	mg/Kg	E 300.0		9/21/98	JS		5485	1.0
Sulfate		920	mg/Kg	E 300.0		9/21/98	JS		5485	10.0
TDS		1,600	mg/Kg	E 160.1		9/20/98	RS		5435	---
pH		8.2	s.u.	E 150.1		9/8/98	SA		5241	---
TRPHC		1,960	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Total Radium		2.98	pCi/gm	E 901.1M		8/18/98	DS	---	---	---
Total Phenol		1.8	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25

* Sample extracted 2 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108
Sample Number: 106790

Sample Description: GSB-10 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Benzene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Toluene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Ethylbenzene		2.48	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
m,p,o-xylene		15.8	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
TRPHC		3,960	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Chloride		150	mg/Kg	E 300.0		9/16/98	JS		5360	2

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108
Sample Number: 106791

Sample Description: GSB-10 50-52'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Toluene		0.092	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Ethylbenzene		0.577	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
m,p,o-xylene		4.31	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
TRPHC		2,920	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Chloride		54	mg/Kg	E 300.0		9/20/98	JS		5421	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108
Sample Number: 106792

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Acrylonitrile		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Benzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chlorobenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Chloroform		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorobenzene		<2	ug/L	S-8260B		9/7/98	AG		5220	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloropropenes		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylbenzene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromodichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Bromomethane		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Chloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Dichloromethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Toluene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Trichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Vinyl chloride		<1	ug/L	S-8260B		9/7/98	AG		5220	1
m,p-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
o-xylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Ethylene dibromide		<1	ug/L	S-8260B		9/7/98	AG		5220	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/7/98	AG		5220	1
Methylene chloride		<5	ug/L	S-8260B		9/7/98	AG		5220	5
Surr. Dibromofluoromethane		119	%	S-8260B		9/7/98	AG		5220	71-132
Surr. Toluene-d8		87	%	S-8260B		9/7/98	AG		5220	82-124
Surr. 4-Bromofluorobenzene		103	%	S-8260B		9/7/98	AG		5220	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108
Sample Number: 106793

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Acrylonitrile		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Benzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chlorobenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chloroform		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorobenzene		<2	ug/L	S-8260B		9/17/98	AG		5377	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloropropenes		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylbenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromodichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromomethane		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Chloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Toluene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Vinyl chloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
m,p-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
o-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylene dibromide		<1	ug/L	S-8260B		9/17/98	AG		5377	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Methylene chloride		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Surr. Dibromofluoromethane		109	%	S-8260B		9/17/98	AG		5377	71-132
Surr. Toluene-d8		98	%	S-8260B		9/17/98	AG		5377	82-124
Surr. 4-Bromofluorobenzene		102	%	S-8260B		9/17/98	AG		5377	76-126

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/7/98		5220
Acrylonitrile		<5	ug/L	5	9/7/98		5220
Benzene		<1	ug/L	1	9/7/98		5220
Carbon tetrachloride		<1	ug/L	1	9/7/98		5220
Chlorobenzene		<1	ug/L	1	9/7/98		5220
1,2-dichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/7/98		5220
1,1,1-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethane		<1	ug/L	1	9/7/98		5220
1,1,2-trichloroethylene		<1	ug/L	1	9/7/98		5220
Chloroform		<1	ug/L	1	9/7/98		5220
Dichlorobenzene		<2	ug/L	2	9/7/98		5220
1,1-dichloroethylene		<1	ug/L	1	9/7/98		5220
Dichloropropenes		<1	ug/L	1	9/7/98		5220
Ethylbenzene		<1	ug/L	1	9/7/98		5220
Bromodichloromethane		<1	ug/L	1	9/7/98		5220
Bromomethane		<5	ug/L	5	9/7/98		5220
Chloromethane		<1	ug/L	1	9/7/98		5220
Dichlorodifluoromethane		<1	ug/L	1	9/7/98		5220
Dichloromethane		<1	ug/L	1	9/7/98		5220
Trichlorofluoromethane		<1	ug/L	1	9/7/98		5220
Tetrachloroethylene		<1	ug/L	1	9/7/98		5220
Toluene		<1	ug/L	1	9/7/98		5220
Trichloroethylene		<1	ug/L	1	9/7/98		5220
Vinyl chloride		<1	ug/L	1	9/7/98		5220
m,p-xylene		<1	ug/L	1	9/7/98		5220
o-xylene		<1	ug/L	1	9/7/98		5220
1,1-dichloroethane		<1	ug/L	1	9/7/98		5220
Ethylene dibromide		<1	ug/L	1	9/7/98		5220
cis-1,2-dichlorethylene		<1	ug/L	1	9/7/98		5220
trans-1,2-dichloroethylene		<1	ug/L	1	9/7/98		5220
Methylene chloride		<5	ug/L	5	9/7/98		5220
Surr. Dibromofluoromethane		107	%	71-132	9/7/98		5220
Surr. Toluene-d8		112	%	82-124	9/7/98		5220
Surr. 4-Bromofluorobenzene		110	%	76-126	9/7/98		5220
Acrolein		<5	ug/L	5	9/17/98		5377
Acrylonitrile		<5	ug/L	5	9/17/98		5377
Benzene		<1	ug/L	1	9/17/98		5377
Carbon tetrachloride		<1	ug/L	1	9/17/98		5377
Chlorobenzene		<1	ug/L	1	9/17/98		5377
1,2-dichloroethane		<1	ug/L	1	9/17/98		5377

Corrected

Date: 05-26-99
Page # 15
Order ID Number: 9809000108

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/17/98		5377
1,1,1-trichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2-trichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2-trichloroethylene		<1	ug/L	1	9/17/98		5377
Chloroform		<1	ug/L	1	9/17/98		5377
Dichlorobenzene		<2	ug/L	2	9/17/98		5377
1,1-dichloroethylene		<1	ug/L	1	9/17/98		5377
Dichloropropenes		<1	ug/L	1	9/17/98		5377
Ethylbenzene		<1	ug/L	1	9/17/98		5377
Bromodichloromethane		<1	ug/L	1	9/17/98		5377
Bromomethane		<5	ug/L	5	9/17/98		5377
Chloromethane		<1	ug/L	1	9/17/98		5377
Dichlorodifluoromethane		<1	ug/L	1	9/17/98		5377
Dichloromethane		<1	ug/L	1	9/17/98		5377
Trichlorofluoromethane		<1	ug/L	1	9/17/98		5377
Tetrachloroethylene		<1	ug/L	1	9/17/98		5377
Toluene		<1	ug/L	1	9/17/98		5377
Trichloroethylene		<1	ug/L	1	9/17/98		5377
Vinyl chloride		<1	ug/L	1	9/17/98		5377
m,p-xylene		<1	ug/L	1	9/17/98		5377
o-xylene		<1	ug/L	1	9/17/98		5377
1,1-dichloroethane		<1	ug/L	1	9/17/98		5377
Ethylene dibromide		<1	ug/L	1	9/17/98		5377
cis-1,2-dichlorethylene		<1	ug/L	1	9/17/98		5377
trans-1,2-dichloroethylene		<1	ug/L	1	9/17/98		5377
Methylene chloride		<5	ug/L	5	9/17/98		5377
Surr. Dibromofluoromethane		111	%	71-132	9/17/98		5377
Surr. Toluene-d8		96	%	82-124	9/17/98		5377
Surr. 4-Bromofluorobenzene		103	%	76-126	9/17/98		5377
Acrolein		<125	ug/Kg	125	9/9/98		5264
Acrylonitrile		<125	ug/Kg	125	9/9/98		5264
Benzene		<25	ug/Kg	25	9/9/98		5264
Carbon tetrachloride		<25	ug/Kg	25	9/9/98		5264
Chlorobenzene		<25	ug/Kg	25	9/9/98		5264
1,2-dichloroethane		<25	ug/Kg	25	9/9/98		5264
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/9/98		5264
1,1,1-trichloroethane		<25	ug/Kg	25	9/9/98		5264
1,1,2-trichloroethane		<25	ug/Kg	25	9/9/98		5264
1,1,2-trichloroethylene		<25	ug/Kg	25	9/9/98		5264
Chloroform		<25	ug/Kg	25	9/9/98		5264
Dichlorobenzene		<50	ug/Kg	**50	9/9/98		5264
1,1-dichloroethylene		<25	ug/Kg	**25	9/9/98		5264
Dichloropropenes		<25	ug/Kg	25	9/9/98		5264
Ethylbenzene		<25	ug/Kg	25	9/9/98		5264
Bromodichloromethane		<25	ug/Kg	25	9/9/98		5264
Bromomethane		<125	ug/Kg	125	9/9/98		5264
Chloromethane		<25	ug/Kg	25	9/9/98		5264

** Reporting limit corrected

Order ID Number: 9809000108

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Dichlorodifluoromethane		<25	ug/Kg	25	9/9/98		5264
Dichloromethane		<25	ug/Kg	25	9/9/98		5264
Trichlorofluoromethane		<25	ug/Kg	25	9/9/98		5264
Tetrachloroethylene		<25	ug/Kg	25	9/9/98		5264
Toluene		<25	ug/Kg	25	9/9/98		5264
Trichloroethylene		<25	ug/Kg	25	9/9/98		5264
Vinyl chloride		<25	ug/Kg	25	9/9/98		5264
m,p-xylene		<25	ug/Kg	25	9/9/98		5264
o-xylene		<25	ug/Kg	25	9/9/98		5264
1,1-dichloroethane		<25	ug/Kg	25	9/9/98		5264
Ethylene dibromide		<25	ug/Kg	25	9/9/98		5264
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/9/98		5264
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/9/98		5264
Methylene chloride		<125	ug/Kg	125	9/9/98		5264
Surr. Dibromofluoromethane		83	%	71-132	9/9/98		5264
Surr. Toluene-d8		84	%	82-124	9/9/98		5264
Surr. 4-Bromofluorobenzene		85	%	76-126	9/9/98		5264
PCB		0.1	mg/Kg	0.1	9/18/98	5044	5401
Cyanide		<0.01	mg/Kg	0.01	9/15/98		5330
rsenic		<0.50	mg/Kg	0.50	9/16/98	5065	5361
Barium		<0.50	mg/Kg	0.50	9/16/98	5065	5361
Cadmium		<0.10	mg/Kg	0.10	9/16/98	5065	5361
Chromium		<0.50	mg/Kg	0.50	9/16/98	5065	5361
Lead		<0.50	mg/Kg	0.50	9/16/98	5065	5361
Selenium		<0.50	mg/Kg	0.50	9/16/98	5065	5361
Silver		<0.50	mg/Kg	0.50	9/16/98	5065	5361
Uranium		<2.0	mg/Kg	2.0	9/16/98	5065	5361
Copper		<1.0	mg/Kg	1.0	9/16/98	5065	5361
Iron		<10	mg/Kg	10	9/20/98	5065	5460
Manganese		<1.0	mg/Kg	1.0	9/16/98	5065	5361
Zinc		<2.0	mg/Kg	2.0	9/16/98	5065	5361
Aluminum		<10	mg/Kg	10	9/20/98	5065	5460
Boron		<10	mg/Kg	10	9/16/98	5065	5361
Cobalt		<0.50	mg/Kg	0.50	9/16/98	5065	5361
Molybdenum		<1.0	mg/Kg	1.0	9/16/98	5065	5361
Nickel		<0.50	mg/Kg	0.50	9/16/98	5065	5361
Benzidine		<2.5	mg/Kg	2.5	9/19/98	5100	5430
Hexachlorobenzene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Pentachlorobenzene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Hexachloroethane		<0.25	mg/Kg	0.25	9/19/98	5100	5430
2,4-dichlorophenol		<1.25	mg/Kg	1.25	9/19/98	5100	5430
2,4,5-trichlorophenol		<1.25	mg/Kg	1.25	9/19/98	5100	5430
2,4,6-trichlorophenol		<1.25	mg/Kg	1.25	9/19/98	5100	5430
bis (2-chloroethl) ether		<1.25	mg/Kg	1.25	9/19/98	5100	5430
is (2-chloroisopropyl) ether		<1.25	mg/Kg	1.25	9/19/98	5100	5430
Jis (chloromethyl) ether		<1.25	mg/Kg	1.25	9/19/98	5100	5430

Date: 10-20-98
Page # 17
Order ID Number: 9809000108

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
3,3-dichlorobenzidine		<1.25	mg/Kg	1.25	9/19/98	5100	5430
2,4-dinitrotoluene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Diphenylhydrazine		<1.25	mg/Kg	1.25	9/19/98	5100	5430
Hexachlorobutadiene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Hexachlorocyclopentadiene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Isophorone		<1.25	mg/Kg	1.25	9/19/98	5100	5430
Nitrobenzene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
2,4-dinitro-o-cresol		<0.25	mg/Kg	0.25	9/19/98	5100	5430
2,4-dinitrophenols		<1.25	mg/Kg	1.25	9/19/98	5100	5430
i-nitrosodiethylamine		<0.25	mg/Kg	0.25	9/19/98	5100	5430
N-nitrosodimethylamine		<0.25	mg/Kg	0.25	9/19/98	5100	5430
N-nitrosodibutylamine		<1.25	mg/Kg	1.25	9/19/98	5100	5430
N-nitrosodiphenylamine		<0.25	mg/Kg	0.25	9/19/98	5100	5430
N-nitrosopyrrolidine		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Pentachlorophenol		<1.25	mg/Kg	1.25	9/19/98	5100	5430
Phenol		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Dibutyl phthalate		<0.25	mg/Kg	0.25	9/19/98	5100	5430
bis(2-ethylhexyl) phthalate		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Diethyl phthalate		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Dimethyl phthalate		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Anthracene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Fluoranthene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Fluorene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Phenanthrene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Pyrene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Naphthalene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
1-methylnaphthalene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
2-methylnaphthalene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Benzo-a-pyrene		<0.25	mg/Kg	0.25	9/19/98	5100	5430
Surr. 2-Fluorophenol		52	%	25-121	9/19/98	5100	5430
Surr. Phenol-d6		61	%	24-113	9/19/98	5100	5430
Surr. Nitroobenzene-d5		55	%	23-120	9/19/98	5100	5430
Surr. 2-Fluorobiphenyl		62	%	30-115	9/19/98	5100	5430
Surr. 2,4,6-Tribromophenol		86	%	19-122	9/19/98	5100	5430
Surr. Terphenyl-d14		67	%	28-137	9/19/98	5100	5430
MTBE		<0.050	mg/Kg	0.050	9/9/98		5263
Benzene		<0.050	mg/Kg	0.050	9/9/98		5263
Toluene		<0.050	mg/Kg	0.050	9/9/98		5263
Ethylbenzene		<0.050	mg/Kg	0.050	9/9/98		5263
m,p,o-xylene		<0.050	mg/Kg	0.050	9/9/98		5263
TRPHC		<10.0	mg/Kg	10	9/10/98	4915	5270
Chloride		<2.0	mg/kg	2	9/16/98		5360
Chloride		<2.0	mg/Kg	2	9/20/98		5421
Total Phenol		<0.25	mg/Kg	0.25	9/20/98		5450
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5485

Order ID Number: 9809000108

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Chloride		<1.0	mg/Kg	1	9/21/98		5485
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5485
Sulfate		<1.0	mg/Kg	1	9/21/98		5485
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5486
Chloride		<1.0	mg/Kg	1	9/21/98		5486
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5486
Sulfate		<1.0	mg/Kg	1	9/21/98		5486

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 19

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	94	94	9/7/98	5220
1,1-Dichloroethene		100	ug/L	120	120	9/7/98	5220
Chloroform		100	ug/L	111	111	9/7/98	5220
1,2-Dichloropropane		100	ug/L	101	101	9/7/98	5220
Toluene		100	ug/L	113	113	9/7/98	5220
Chlorobenzene		100	ug/L	110	110	9/7/98	5220
Ethylbenzene		100	ug/L	109	109	9/7/98	5220
Vinyl chloride		100	ug/L	85	85	9/9/98	5264
1,1-Dichloroethene		100	ug/L	94	94	9/9/98	5264
Chloroform		100	ug/L	83	83	9/9/98	5264
1,2-Dichloropropane		100	ug/L	86	86	9/9/98	5264
Toluene		100	ug/L	96	96	9/9/98	5264
Chlorobenzene		100	ug/L	99	99	9/9/98	5264
Ethylbenzene		100	ug/L	99	99	9/9/98	5264
Vinyl chloride		100	ug/L	120	120	9/14/98	5377
1,1-Dichloroethene		100	ug/L	118	118	9/14/98	5377
Chloroform		100	ug/L	116	116	9/14/98	5377
1,2-Dichloropropane		100	ug/L	114	114	9/14/98	5377
Toluene		100	ug/L	115	115	9/14/98	5377
Chlorobenzene		100	ug/L	113	113	9/14/98	5377
Ethylbenzene		100	ug/L	114	114	9/14/98	5377
PCB		0.40	mg/L	0.41	103	9/18/98	5401
Cyanide		0.12	mg/L	0.11	92	9/15/98	5330
Arsenic		1.0	mg/L	1.0	100	9/16/98	5361
Barium		1.0	mg/L	1.0	100	9/16/98	5361
Cadmium		1.0	mg/L	1.0	100	9/16/98	5361
Chromium		1.0	mg/L	1.0	100	9/16/98	5361
Lead		1.0	mg/L	1.0	100	9/16/98	5361
Selenium		1.0	mg/L	1.0	100	9/16/98	5361
Silver		1.0	mg/L	0.9	92	9/16/98	5361
Uranium		1.0	mg/L	1.0	100	9/16/98	5361
Copper		1.0	mg/L	1.0	100	9/16/98	5361
Iron		100	mg/L	108	108	9/20/98	5460
Manganese		1.0	mg/L	1.0	100	9/16/98	5361
Zinc		1.0	mg/L	1.0	100	9/16/98	5361
Aluminum		250	mg/L	248	99	9/20/98	5460
Boron		1.0	mg/L	1.0	100	9/16/98	5361

Date: 10-20-98
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Order ID Number: 9809000108

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Cobalt		1.0	mg/L	1.0	100	9/16/98	5361
Molybdenum		1.0	mg/L	1.0	100	9/16/98	5361
Nickel		1.0	mg/L	1.0	100	9/16/98	5361
Phenol		80	mg/L	81	101	9/19/98	5430
1,4-Dichlorobenzene		80	mg/L	78	98	9/19/98	5430
2-nitrophenol		80	mg/L	81	101	9/19/98	5430
2,4-Dichlorophenol		80	mg/L	87	109	9/19/98	5430
Hexachlorobutadiene		80	mg/L	80	100	9/19/98	5430
4-Chloro-3-methylphenol		80	mg/L	70	88	9/19/98	5430
2,4,6-Trichlorophenol		80	mg/L	84	105	9/19/98	5430
Acenaphthene		80	mg/L	84	105	9/19/98	5430
n-Nitrosodiphenylamine		80	mg/L	74	93	9/19/98	5430
Pentachlorophenol		80	mg/L	76	95	9/19/98	5430
Fluoranthene		80	mg/L	71	89	9/19/98	5430
Di-n-octylphthalate		80	mg/L	74	93	9/19/98	5430
Benzo(a)pyrene		80	mg/L	75	94	9/19/98	5430
pH		7.0	s.u.	7.0	100	9/8/98	5241
MTBE		0.1	mg/L	0.103	103	9/9/98	5263
Benzene		0.1	mg/L	0.106	106	9/9/98	5263
Toluene		0.1	mg/L	0.104	104	9/9/98	5263
Ethylbenzene		0.1	mg/L	0.107	107	9/9/98	5263
m,p,o-xylene		0.3	mg/L	0.313	104	9/9/98	5263
TRPHC		100	mg/L	102.0	102	9/10/98	5270
Chloride		500	mg/L	499	100	9/16/98	5360
Chloride		500	mg/L	499	100	9/20/98	5421
TDS		1,000	mg/L	999	100	9/20/98	5435
Total Phenol		0.80	mg/L	0.79	99	9/20/98	5450
Fluoride		2.5	mg/L	2.48	99	9/21/98	5485
Chloride		12.5	mg/L	12.68	101	9/21/98	5485
Nitrate		5	mg/L	5.07	101	9/21/98	5485
Sulfate		12.5	mg/L	12.91	103	9/21/98	5485
Fluoride		2.5	mg/L	2.435	97	9/21/98	5486
Chloride		12.5	mg/L	12.255	98	9/21/98	5486
Nitrate		5	mg/L	5.065	101	9/21/98	5486
Sulfate		12.5	mg/L	12.61	101	9/21/98	5486

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	102	102	100	96	96	6.1	9/7/98		5220
Benzene		ug/L	<1	100	102	102	100	104	104	1.9	9/7/98		5220
Trichloroethene		ug/L	<1	100	117	117	100	117	117	0.0	9/7/98		5220
Toluene		ug/L	<1	100	101	101	100	102	102	1.0	9/7/98		5220
Chlorobenzene		ug/L	<1	100	88	88	100	87	87	1.1	9/7/98		5220
1,1-Dichloroethene		ug/L	<1	100	136	136	100	119	119	13	9/17/98		5377
Benzene		ug/L	<1	100	121	121	100	110	110	9.5	9/17/98		5377
Trichloroethene		ug/L	<1	100	122	122	100	111	111	9.4	9/17/98		5377
Toluene		ug/L	<1	100	116	116	100	106	106	9.0	9/17/98		5377
Chlorobenzene		ug/L	<1	100	104	104	100	94	94	10.0	9/17/98		5377
PCB		mg/Kg	<0.1	0.40	0.43	108	0.40	0.45	113	4.5	9/18/98	5044	5401
Cyanide	lcs	mg/Kg	<0.01	0.12	0.11	92	0.12	0.10	83	10	9/15/98		5330
1,1-Dichloroethene		mg/Kg	<25	100	80	80	100	81	81	1.2	9/9/98		5264
Benzene		mg/Kg	<25	100	86	86	100	83	83	3.6	9/9/98		5264
Trichloroethene		mg/Kg	<25	100	92	92	100	90	90	2.2	9/9/98		5264
Toluene		mg/Kg	<25	100	83	83	100	80	80	3.7	9/9/98		5264
Chlorobenzene		mg/Kg	<25	100	82	82	100	80	80	2.5	9/9/98		5264
Total Mercury		mg/Kg	<0.10	2.5	2.6	104	2.5	2.7	108	3.8	9/10/98	4916	5274
Phenol		mg/Kg	<0.25	10.00	5.77	58	10.00	5.69	57	1	9/19/98	5100	5430
2-Chlorophenol		mg/Kg	<1.25	10.00	5.01	50	10.00	5.39	54	7	9/19/98	5100	5430
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	6.21	62	10.00	6.77	68	9	9/19/98	5100	5430
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	5.95	60	10.00	6.61	66	11	9/19/98	5100	5430
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	5.99	60	10.00	6.33	63	7	9/19/98	5100	5430
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	5.44	54	10.00	5.62	56	3	9/19/98	5100	5430
Acenaphthene		mg/Kg	<0.25	10.00	7.18	72	10.00	7.71	77	7	9/19/98	5100	5430
4-Nitrophenol		mg/Kg	<1.25	10.00	3.16	32	10.00	3.3	33	4	9/19/98	5100	5430
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	6.95	70	10.00	7.19	72	4	9/19/98	5100	5430
Pentachlorophenol		mg/Kg	<1.25	10.00	3.64	36	10.00	3.83	38	5	9/19/98	5100	5430
Pyrene		mg/Kg	<0.25	10.00	7.85	79	10.00	7.97	80	2	9/19/98	5100	5430
MTBE		mg/Kg	<0.050	5.00	5.19	104	5.00	5.2	104	0	9/9/98		5263
Benzene		mg/Kg	<0.050	5.00	5.48	110	5.00	5.48	110	0	9/9/98		5263
Toluene		mg/Kg	<0.050	5.00	5.41	108	5.00	5.41	108	0	9/9/98		5263
Ethylbenzene		mg/Kg	<0.050	5.00	5.59	112	5.00	5.6	112	0	9/9/98		5263
m,p,o-xylene		mg/Kg	0.64	15.00	16.6	106	15.00	16.6	106	0	9/9/98		5263
TRPHC		mg/Kg	<10.0	250	224	90	250	206	82	9.3	9/10/98	4915	5270
Chloride		mg/Kg	2,400	50000	57211	110	50000	57017	109	0.9	9/16/98		5360
Chloride		mg/Kg	54	4,000	4,251	105	4,000	4,262	105	0	9/20/98		5421
Total Phenol		mg/Kg	6.2	20	26.1	100	20	26.7	103	3.0	9/20/98		5450
Arsenic		mg/Kg	<0.50	200	171	86	200	168	84	2.4	9/16/98	5065	5361
Barium		mg/Kg	<0.50	200	180	90	200	174	87	3.4	9/16/98	5065	5361
Cadmium		mg/Kg	<0.10	200	171	86	200	171	85	1.2	9/16/98	5065	5361
Chromium		mg/Kg	<0.50	200	175	88	200	176	88	0	9/16/98	5065	5361

Order ID Number: 9809000108

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Lead		mg/Kg	<0.50	200	167	84	200	170	85	1.2	9/16/98	5065	5361
Selenium		mg/Kg	<0.50	200	151	76	200	150	75	1.3	9/16/98	5065	5361
Silver		mg/Kg	<0.50	100	108	108	100	101	101	6.7	9/16/98	5065	5361
Uranium		mg/Kg	<2.0	200	170	75	200	189	95	24	9/16/98	5065	5361
Copper		mg/Kg	<1.0	200	167	84	200	174	87	3.5	9/16/98	5065	5361
Manganese		mg/Kg	<1.0	200	176	88	200	174	87	1.1	9/16/98	5065	5361
Zinc		mg/Kg	<2.0	200	167	84	200	167	84	0	9/16/98	5065	5361
Boron		mg/Kg	<10	200	166	83	200	162	81	2.4	9/16/98	5065	5361
Cobalt		mg/Kg	<0.50	200	170	85	200	173	87	2.3	9/16/98	5065	5361
Molybdenum		mg/Kg	<1.0	200	178	89	200	181	90	1.1	9/16/98	5065	5361
Nickel		mg/Kg	<0.50	200	168	84	200	169	85	1.2	9/16/98	5065	5361
Aluminum		mg/Kg	<10	200	214	107	200	218	109	1.9	9/20/98	5065	5460
Iron		mg/Kg	<10	200	157	79	200	160	80	1.3	9/20/98	5065	5460
Fluoride		mg/Kg	1.77	5	6.42	93	5	6.61	97	4.2	9/21/98		5483
Chloride		mg/Kg	8.37	25	31.56	93	25	32.03	95	2.1	9/21/98		5483
Nitrate		mg/Kg	2.24	10	11.47	92	10	11.73	95	3.2	9/21/98		5483
Sulfate		mg/Kg	59.58	25	81.97	90	25	81.04	86	4.5	9/21/98		5483
Fluoride		mg/Kg	9	5	13.93	99	5	13.74	95	4.1	9/21/98		5485
Chloride		mg/Kg	14.02	25	39.2	101	25	39.73	103	2.0	9/21/98		5485
Nitrate		mg/Kg	1.72	10	11.61	99	10	11.81	101	2.0	9/21/98		5485
Sulfate		mg/Kg	55.57	25	81.48	104	25	80.66	100	3.9	9/21/98		5485
Fluoride		mg/Kg	1.3	5	6.27	99	5	6.36	101	2.0	9/21/98		5486
Chloride		mg/Kg	22.01	25	47.65	103	25	47.77	103	0	9/21/98		5486
Nitrate		mg/Kg	<0.2	10	11.39	114	10	11.42	114	0	9/21/98		5486
Sulfate		mg/Kg	5.3	25	30.58	101	25	30.26	100	1.0	9/21/98		5486

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000108

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	8.70	8.7	0	9/8/98		5241
TDS		mg/Kg	252	270	6.9	9/20/98		5435

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

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1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0984	**P.O. Number:**	
Client I.D.:	106786	**ARS Sample I.D.:**	ARS-98-3563
Date Sampled:	9/2/98	**Date Received:**	10/1/98
Time Sampled:	N/A	**Time Received:**	1250
Type of Sample:	Solid	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.09	1.77	0.88	pCi/gm	EPA 901.1M	10/1/98 1555	dc
Ra-228	0.58	0.22	0.11	pCi/gm	EPA 901.1M	10/1/98 1555	dc
Pb-210	2.51	2.45	1.11	pCi/gm	EPA 901.1M	10/1/98 1555	dc
Total Activity	11.01	N/A	N/A	pCi/gm	EPA 901.1M	10/1/98 1555	dc

uality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0984	**P.O. Number:**	
Client I.D.:	106789	**ARS Sample I.D.:**	ARS-98-3564
Date Sampled:	9/2/98	**Date Received:**	10/1/98
Time Sampled:	N/A	**Time Received:**	1250
Type of Sample:	Solid	**Date of Report:**	10/9/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.69	1.56	0.79	pCi/gm	EPA 901.1M	10/1/98 1623	dc
Ra-228	BDL	N/A	0.10	pCi/gm	EPA 901.1M	10/1/98 1623	dc
Pb-210	BDL	N/A	1.14	pCi/gm	EPA 901.1M	10/1/98 1623	dc
Total Activity	2.98	N/A	N/A	pCi/gm	EPA 901.1M	10/1/98 1623	dc

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

es: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

(806) 794-1296 Fax (806) 794-1298
1 (800) [illegible]296

LAB Order ID # 108

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West, Midland, TX 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Shell Crimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Other	SAMPLING: DATE	TIME
106786	GSB-9 (2-3')	5	40z Jars		✓					✓			09/02/98	0930
	GSB-9 (2-3')	1	40ml VOA		✓							✓	09/02/98	0930
87	GSB-9 (13-15')	2	40z Jars		✓					✓			09/02/98	1000
88	GSB-9 (50-52')	2	40z Jars		✓					✓			09/02/98	1159
89	GSB-10 (2-3')	5	40z Jars		✓					✓			09/02/98	1354
	GSB-10 (2-3')	1	40ml VOA		✓							✓	09/02/98	1354
90	GSB-10 (3-5')	2	40z Jars		✓					✓			09/02/98	1400
91	GSB-10 (50-52')	2	40z Jars		✓					✓			09/02/98	1641
92	Field Blank	2	40ml VOA	✓				✓					09/02/98	1650
93	Trip Blank	2	40ml VOA	✓						✓			09/02/98	

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	See Attached	VOC's	Chlorides (300)	Turn Around Time if different from standard	Hold
		✓												✓				
	✓	✓													✓			
	✓	✓														✓		
	✓	✓														✓		
		✓												✓				
															✓	✓		
	✓	✓														✓		
	✓	✓														✓		
														✓				
														✓				

Relinquished by: Jeffrey Kindley Date: 09/03/98 Time: 0700 AM
Received by: Date: Time:

Relinquished by: Date: Time:
Received by: Date: Time:

Relinquished by: Date: Time:
Received at Laboratory by: Vicki Wadkins Date: 9-4-98 Time: 9:30 AM

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 4 °
Log-in Review MA

REMARKS:
Normal Turnaround
9/14/98

Carrier # Bus 901984612 1

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

ORIGINAL COPY

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-09-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000114

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
106823	GMW-2 3'	9/1/98	16:00	9/4/98
106824	TSB-13 2-3'	9/1/98	8:45	9/4/98
106825	TSB-13 3-5'	9/1/98	8:50	9/4/98
106826	TSB-13 8-10'	9/1/98	9:05	9/4/98
106827	TSB-13 23-25'	9/1/98	9:49	9/4/98
106828	GSB-6 2-3'	9/1/98	12:29	9/4/98
106829	GSB-6 18-20'	9/1/98	13:09	9/4/98
106830	GSB-6 38-40'	9/1/98	15:35	9/4/98
106831	Field Blank	9/1/98	16:30	9/4/98
106832	Trip Blank			9/4/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrections:
1) Phenol results added for samples 106824-28.
2) Order ID Number corrected on page 1.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106831

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Acrylonitrile		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Benzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chlorobenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chloroform		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorobenzene		<2	ug/L	S-8260B		9/17/98	AG		5377	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloropropenes		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylbenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromodichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromomethane		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Chloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Toluene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Vinyl chloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
m,p-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
o-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylene dibromide		<1	ug/L	S-8260B		9/17/98	AG		5377	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Methylene chloride		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Surr. Dibromofluoromethane		104	%	S-8260B		9/17/98	AG		5377	71-132
Surr. Toluene-d8		101	%	S-8260B		9/17/98	AG		5377	82-124
Surr. 4-Bromofluorobenzene		103	%	S-8260B		9/17/98	AG		5377	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106832

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Acrylonitrile		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Benzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chlorobenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chloroform		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorobenzene		<2	ug/L	S-8260B		9/17/98	AG		5377	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloropropenes		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylbenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromodichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromomethane		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Chloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Toluene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Vinyl chloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
m,p-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
o-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylene dibromide		<1	ug/L	S-8260B		9/17/98	AG		5377	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Methylene chloride		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Surr. Dibromofluoromethane		110	%	S-8260B		9/17/98	AG		5377	71-132
Surr. Toluene-d8		98	%	S-8260B		9/17/98	AG		5377	82-124
Surr. 4-Bromofluorobenzene		104	%	S-8260B		9/17/98	AG		5377	76-126

Analytical Results Report

Jeff Kindley/Sharon Hall
Phillip Services Corp.
7904 IH 29 West
Midland, Texas 79706

Date: 10-19-98

Project Number : 19350
Project Name: Shell Tasker Roaad
Project Location: Hobbs, NM

Order ID Number: 9806000114
Sample Number: 106823

Sample Description: GMW-2 3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	PREP BATCH#	RUN BATCH#	Reporting Limit
Arsenic		2.7	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	0.50
Barium		514	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	0.50
Cadmium		0.19	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	0.10
Chromium		3.0	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	0.50
Cobalt		6.3	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	0.50
Copper		1.5	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	1.0
Manganese		16	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	1.0
Molybdenum		1.3	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	1.0
Lead		0.91	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	0.50
Mercury		<0.10	mg/kg	E 7471A	09/16/98	09/16/98	MS	4916	5274	0.10
Nickel		6.8	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	0.50
Selenium		<0.50	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	0.50
Silver		<0.50	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	0.50
Iron		2010	mg/kg	E 6010B	09/16/98	10/12/98	RR	5065	5361	5.0
Aluminum		3160	mg/kg	E 6010B	09/16/98	10/12/98	RR	5065	5361	5.0
Zinc		6.6	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	2.0
Boron		<10	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	10
Uranium		<2.0	mg/kg	E 6010B	09/16/98	09/16/98	RR	5065	5361	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 5

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106824

Sample Description: TSB-13 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<125	ug/Kg	S-8260B		9/9/98	AG		5264	125
Acrylonitrile		<125	ug/Kg	S-8260B		9/9/98	AG		5264	125
Benzene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Carbon tetrachloride		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Chlorobenzene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
1,2-dichloroethane		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
1,1,2,2-tetrachloroethane		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
1,1,1-trichloroethane		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
1,1,2-trichloroethane		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
1,1,2-trichloroethylene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Chloroform		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Dichlorobenzene		<50	ug/Kg	S-8260B		9/9/98	AG		5264	*50
1,1-dichloroethylene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	*25
Dichloropropenes		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Ethylbenzene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Bromodichloromethane		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Bromomethane		<125	ug/Kg	S-8260B		9/9/98	AG		5264	125
Chloromethane		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Dichlorodifluoromethane		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Dichloromethane		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Trichlorofluorometane		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Tetrachloroethylene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Toluene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Trichloroethylene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Vinyl chloride		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
m,p-xylene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
o-xylene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
1,1-dichloroethane		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Ethylene dibromide		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
cis-1,2-dichlorethylene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
trans-1,2-dichloroethylene		<25	ug/Kg	S-8260B		9/9/98	AG		5264	25
Methylene chloride		<125	ug/Kg	S-8260B		9/9/98	AG		5264	125
Dibromofluoromethane		86	%	S-8260B		9/9/98	AG		5264	72-130
Toluene-d8		80	%	S-8260B		9/9/98	AG		5264	77-127
4-Bromofluorobenzene		82	%	S-8260B		9/9/98	AG		5264	72-131
Benzidine		<25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	25
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5

Corrected

Date: 05-20-99
Page # 6
Order ID Number: 9809000114
Sample Number: 106824

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: TSB-13 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
2,4-dichlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
bis (2-chloroethyl) ether		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Isophorone		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
n-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
N-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Anthracene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Fluorene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Pyrene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
2-methylnaphthalene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Phenol		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Surr. 2-Fluorophenol		70	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	25-121
Surr. Phenol-d6		43	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	24-113
Surr. Nitroobenzene-d5		61	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	23-120
Surr. 2-Fluorobiphenyl		106	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	30-115
Surr. 2,4,6-Tribromophenol		65	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	19-122
Surr. Terphenyl-d14		96	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	28-137

Corrected-- added Phenol result

Corrected

Date: 05-20-99
Page # 7

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106824

Sample Description: TSB-13 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		<.50	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Barium		173	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cadmium		<0.10	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.10
Chromium		4.1	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Lead		1.3	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Total Mercury		<0.10	mg/Kg	E 7471A	9/9/98	9/10/98	MS	4916	5274	0.10
Selenium		<.50	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Silver		<.50	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Uranium		<1.0	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Copper		1.1	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Iron		3,200	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Manganese		27	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Zinc		7.4	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	2.0
Aluminum		4,800	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Boron		12	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Cobalt		6.1	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Molybdenum		1.5	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Nickel		6.3	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		13	mg/Kg	E 300.0		9/21/98	JS		5487	0.2
Nitrate		<0.4	mg/Kg	E 300.0		9/21/98	JS		5487	0.4
Chloride		21	mg/Kg	E 300.0		9/21/98	JS		5487	1.0
Sulfate		150	mg/Kg	E 300.0		9/21/98	JS		5487	2.0
TDS		550	mg/Kg	E 160.1		9/20/98	RS		5435	---
pH		8.2	s.u.	E 150.1		9/8/98	SA		5241	---
TRPHC		10,800	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Total Phenols		2.8	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25
Total Radium		1.09	pCi/gm	E 901.1M		9/14/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 8

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106825

Sample Description: TSB-13 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<105	ug/Kg	S-8260B		9/9/98	AG		5264	105
Acrylonitrile		<105	ug/Kg	S-8260B		9/9/98	AG		5264	105
Benzene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Carbon tetrachloride		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Chlorobenzene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
1,2-dichloroethane		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
1,1,2,2-tetrachloroethane		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
1,1,1-trichloroethane		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
1,1,2-trichloroethane		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
1,1,2-trichloroethylene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Chloroform		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Dichlorobenzene		<42	ug/Kg	S-8260B		9/9/98	AG		5264	42
1,1-dichloroethylene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Dichloropropenes		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Ethylbenzene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Bromodichloromethane		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Bromomethane		<105	ug/Kg	S-8260B		9/9/98	AG		5264	105
Chloromethane		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Dichlorodifluoromethane		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Dichloromethane		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Trichlorofluorometane		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Tetrachloroethylene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Toluene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Trichloroethylene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Vinyl chloride		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
m,p-xylene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
o-xylene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
1,1-dichloroethane		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Ethylene dibromide		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
cis-1,2-dichlorethylene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
trans-1,2-dichloroethylene		<21	ug/Kg	S-8260B		9/9/98	AG		5264	21
Methylene chloride		<105	ug/Kg	S-8260B		9/9/98	AG		5264	105
Dibromofluoromethane		87	%	S-8260B		9/9/98	AG		5264	72-130
Toluene-d8		81	%	S-8260B		9/9/98	AG		5264	77-127
4-Bromofluorobenzene		83	%	S-8260B		9/9/98	AG		5264	72-131
Benzidine		<25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	25
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5

Corrected

Date: 05-20-99
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Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106825

Sample Description: TSB-13 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Hexachloroethane		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
2,4-dichlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
bis (2-chloroethyl) ether		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Isophorone		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
n-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
N-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	12.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Anthracene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Fluorene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Pyrene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
2-methylnaphthalene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Phenol		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Surr. 2-Fluorophenol		75	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	25-121
Surr. Phenol-d6		76	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	24-113
Surr. Nitroobenzene-d5		61	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	23-120
Surr. 2-Fluorobiphenyl		108	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	30-115
Surr. 2,4,6-Tribromophenol		59	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	19-122
Surr. Terphenyl-d14		101	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	28-137

Corrected-- added Phenol result

Corrected

Date: 05-20-99
Page # 10
Order ID Number: 9809000114
Sample Number: 106825

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: TSB-13 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		<.50	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Barium		537	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cadmium		0.12	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.10
Chromium		5.6	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Lead		2.4	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Total Mercury		<0.10	mg/Kg	E 7471A	9/9/98	9/10/98	MS	4916	5274	0.10
Selenium		<.50	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Silver		<.50	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Uranium		<1.0	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Copper		1.3	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Iron		4,700	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Manganese		48	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Zinc		11	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	2.0
Aluminum		6,900	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Boron		12	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Cobalt		7.7	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Molybdenum		1.5	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Nickel		7	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		15	mg/Kg	E 300.0		9/21/98	JS		5487	0.2
Nitrate		<0.4	mg/Kg	E 300.0		9/21/98	JS		5487	0.4
Chloride		14	mg/Kg	E 300.0		9/21/98	JS		5487	1.0
Sulfate		150	mg/Kg	E 300.0		9/21/98	JS		5487	2.0
TDS		550	mg/Kg	E 160.1		9/20/98	RS		5435	---
pH		8.2	s.u.	E 150.1		9/8/98	SA		5241	---
TRPHC		15,900	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Total Phenols		2.5	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25
Total Radium		5.08	pCi/gm	E 901.1M		9/14/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 11

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106826

Sample Description: TSB-13 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<135	ug/Kg	S-8260B		9/9/98	AG		5264	135
Acrylonitrile		<135	ug/Kg	S-8260B		9/9/98	AG		5264	135
Benzene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Carbon tetrachloride		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Chlorobenzene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
1,2-dichloroethane		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
1,1,2,2-tetrachloroethane		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
1,1,1-trichloroethane		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
1,1,2-trichloroethane		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
1,1,2-trichloroethylene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Chloroform		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Dichlorobenzene		<54	ug/Kg	S-8260B		9/9/98	AG		5264	54
1,1-dichloroethylene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Dichloropropenes		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Ethylbenzene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Bromodichloromethane		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Bromomethane		<135	ug/Kg	S-8260B		9/9/98	AG		5264	135
Chloromethane		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Dichlorodifluoromethane		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Dichloromethane		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Trichlorofluorometane		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Tetrachloroethylene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Toluene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Trichloroethylene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Vinyl chloride		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
m,p-xylene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
o-xylene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
1,1-dichloroethane		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Ethylene dibromide		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
cis-1,2-dichlorethylene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
trans-1,2-dichloroethylene		<27	ug/Kg	S-8260B		9/9/98	AG		5264	27
Methylene chloride		<135	ug/Kg	S-8260B		9/9/98	AG		5264	135
Dibromofluoromethane		87	%	S-8260B		9/9/98	AG		5264	72-130
Toluene-d8		82	%	S-8260B		9/9/98	AG		5264	77-127
4-Bromofluorobenzene		86	%	S-8260B		9/9/98	AG		5264	72-131
Benzidine		<25	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	25
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5

Corrected

Date: 05-20-99
Page # 12

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106826

Sample Description: TSB-13 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
2,4-dichlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
bis (2-chloroethyl) ether		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Isophorone		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
n-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
N-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	12.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Anthracene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Fluorene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Pyrene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
1-methylnaphthalene		6.31	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
2-methylnaphthalene		5.45	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Phenol		<2.5	mg/Kg	S-8270C	9/18/98	9/20/98	DG	5100	5471	2.5
Surr. 2-Fluorophenol		75	%	S-8270C	9/18/98	9/20/98	DG	5100	5471	25-121
Surr. Phenol-d6		72	%	S-8270C	9/18/98	9/20/98	DG	5100	5471	24-113
Surr. Nitroobenzene-d5		56	%	S-8270C	9/18/98	9/20/98	DG	5100	5471	23-120
Surr. 2-Fluorobiphenyl		112	%	S-8270C	9/18/98	9/20/98	DG	5100	5471	30-115
Surr. 2,4,6-Tribromophenol		64	%	S-8270C	9/18/98	9/20/98	DG	5100	5471	19-122
Surr. Terphenyl-d14		105	%	S-8270C	9/18/98	9/20/98	DG	5100	5471	28-137

Corrected: added Phenol result

Corrected

Date: 05-20-99

Order ID Number: 9809000114
Sample Number: 106826

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: TSB-13 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		0.52	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Barium		149	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cadmium		0.15	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.10
Chromium		4.2	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Lead		0.97	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Total Mercury		<0.10	mg/Kg	E 7471A	9/9/98	9/10/98	MS	4916	5274	0.10
Selenium		<.50	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Silver		<.50	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Uranium		<1.0	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Copper		2.7	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Iron		3,200	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Manganese		28	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Zinc		7.7	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	2.0
Aluminum		4,800	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Boron		12	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Cobalt		5.9	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Molybdenum		1.8	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Nickel		6.1	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		9	mg/Kg	E 300.0		9/21/98	JS		5487	0.2
Nitrate		1.7	mg/Kg	E 300.0		9/21/98	JS		5487	0.2
Chloride		14	mg/Kg	E 300.0		9/21/98	JS		5487	1.0
Sulfate		56	mg/Kg	E 300.0		9/21/98	JS		5487	1.0
TDS		440	mg/Kg	E 160.1		9/20/98	RS		5435	---
pH		8.6	s.u.	E 150.1		9/8/98	SA		5241	---
TRPHC		6,250	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Total Phenols		1.5	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25
Total Radium		8.19	pCi/gm	E 901.1M		9/14/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 14

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106827

Sample Description: TSB-13 23-25'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<265	ug/Kg	S-8260B		9/9/98	AG		5264	265
Acrylonitrile		<265	ug/Kg	S-8260B		9/9/98	AG		5264	265
Benzene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Carbon tetrachloride		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Chlorobenzene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
1,2-dichloroethane		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
1,1,2,2-tetrachloroethane		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
1,1,1-trichloroethane		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
1,1,2-trichloroethane		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
1,1,2-trichloroethylene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Chloroform		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Dichlorobenzene		<106	ug/Kg	S-8260B		9/9/98	AG		5264	106
1,1-dichloroethylene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Dichloropropenes		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Ethylbenzene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Bromodichloromethane		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Bromomethane		<180	ug/Kg	S-8260B		9/9/98	AG		5264	265
Chloromethane		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Dichlorodifluoromethane		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Dichloromethane		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Trichlorofluorometane		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Tetrachloroethylene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Toluene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Trichloroethylene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Vinyl chloride		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
m,p-xylene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
o-xylene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
1,1-dichloroethane		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Ethylene dibromide		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
cis-1,2-dichlorethylene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
trans-1,2-dichloroethylene		<53	ug/Kg	S-8260B		9/9/98	AG		5264	53
Methylene chloride		<180	ug/Kg	S-8260B		9/9/98	AG		5264	265
Dibromofluoromethane		84	%	S-8260B		9/9/98	AG		5264	72-130
Toluene-d8		83	%	S-8260B		9/9/98	AG		5264	77-127
4-Bromofluorobenzene		83	%	S-8260B		9/9/98	AG		5264	72-131
Benzidine		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25

Corrected

Date: 05-20-99

Order ID Number: 9809000114
Sample Number: 106827

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: TSB-13 23-25'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Phenol		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Surr. 2-Fluorophenol		65	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	25-121
Surr. Phenol-d6		68	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	24-113
Surr. Nitroobenzene-d5		62	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	23-120
Surr. 2-Fluorobiphenyl		78	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	30-115
Surr. 2,4,6-Tribromophenol		63	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	19-122
Surr. Terphenyl-d14		75	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	28-137

Corrected: added Phenol result

Date: 10-1-98
Page # 16
Order ID Number: 9809000114
Sample Number: 106827

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: TSB-13 23-25'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		3	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Barium		31	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cadmium		0.11	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.10
Chromium		4	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Lead		2.4	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Total Mercury		<0.10	mg/Kg	E 7471A	9/9/98	9/10/98	MS	4916	5274	0.10
Selenium		<.50	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Silver		<.50	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Uranium		<1.0	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Copper		8.4	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Iron		2,500	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Manganese		27	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Zinc		8.2	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	2.0
Aluminum		4,100	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Boron		15	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	10
Cobalt		5.4	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Molybdenum		1.8	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	1.0
Nickel		6	mg/Kg	E 6010B	9/16/98	9/16/98	RR	5065	5361	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		4	mg/Kg	E 300.0		9/21/98	JS		5488	0.2
Nitrate		2.3	mg/Kg	E 300.0		9/21/98	JS		5488	0.2
Chloride		320	mg/Kg	E 300.0		9/21/98	JS		5488	5.0
Sulfate		500	mg/Kg	E 300.0		9/21/98	JS		5488	10.0
TDS		1,500	mg/Kg	E 160.1		9/21/98	JS		5449	---
pH		8.7	s.u.	E 150.1		9/8/98	SA		5241	---
TRPHC		<10.0	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Total Phenols		4.2	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25
Total Radium		1.11	pCi/gm	E 901.1M		9/14/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 17

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106828

Sample Description: GSB-6 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<415	ug/Kg	S-8260B		9/9/98	AG		5264	415
Acrylonitrile		<415	ug/Kg	S-8260B		9/9/98	AG		5264	415
Benzene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Carbon tetrachloride		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Chlorobenzene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
1,2-dichloroethane		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
1,1,2,2-tetrachloroethane		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
1,1,1-trichloroethane		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
1,1,2-trichloroethane		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
1,1,2-trichloroethylene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Chloroform		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Dichlorobenzene		<166	ug/Kg	S-8260B		9/9/98	AG		5264	166
1,1-dichloroethylene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Dichloropropenes		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Ethylbenzene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Bromodichloromethane		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Bromomethane		<415	ug/Kg	S-8260B		9/9/98	AG		5264	415
Chloromethane		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Dichlorodifluoromethane		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Dichloromethane		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Trichlorofluorometane		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Tetrachloroethylene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Toluene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Trichloroethylene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Vinyl chloride		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
m,p-xylene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
o-xylene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
1,1-dichloroethane		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Ethylene dibromide		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
cis-1,2-dichlorethylene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
trans-1,2-dichloroethylene		<83	ug/Kg	S-8260B		9/9/98	AG		5264	83
Methylene chloride		<415	ug/Kg	S-8260B		9/9/98	AG		5264	415
Dibromofluoromethane		84	%	S-8260B		9/9/98	AG		5264	72-130
Toluene-d8		83	%	S-8260B		9/9/98	AG		5264	77-127
4-Bromofluorobenzene		84	%	S-8260B		9/9/98	AG		5264	72-131
Benzidine		<2.5	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25

Corrected

Date: 05-20-99

Order ID Number: 9809000114
Sample Number: 106828

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: GSB-6 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Phenol		<0.25	mg/Kg	S-8270C	9/18/98	9/19/98	DG	5100	5430	0.25
Surr. 2-Fluorophenol		65	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	25-121
Surr. Phenol-d6		72	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	24-113
Surr. Nitroobenzene-d5		64	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	23-120
Surr. 2-Fluorobiphenyl		83	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	30-115
Surr. 2,4,6-Tribromophenol		68	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	19-122
Surr. Terphenyl-d14		76	%	S-8270C	9/18/98	9/19/98	DG	5100	5430	28-137

Corrected: added Phenol result

Date: 05-20-99
Page # 19
Order ID Number: 9809000114
Sample Number: 106828

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: GSB-6 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		1.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Barium		730	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cadmium		0.22	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.10
Chromium		6.3	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Lead		3.2	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Total Mercury		<0.10	mg/Kg	E 7471A	9/9/98	9/10/98	MS	4916	5274	0.10
Selenium		1.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Silver		0.94	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Uranium		<1.0	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Copper		2.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Iron		3210	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	10
Manganese		44	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Zinc		12	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Aluminum		4940	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	10
Boron		16	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	10
Cobalt		8.7	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Molybdenum		2.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Nickel		11	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		6.5	mg/Kg	E 300.0		9/21/98	JS		5488	0.2
Nitrate		1.7	mg/Kg	E 300.0		9/21/98	JS		5488	0.2
Chloride		8.9	mg/Kg	E 300.0		9/21/98	JS		5488	1.0
Sulfate		18	mg/Kg	E 300.0		9/21/98	JS		5488	1.0
TDS		510	mg/Kg	E 160.1		9/21/98	JS		5449	---
pH		8.7	s.u.	E 150.1		9/8/98	SA		5241	---
TRPHC		18.7	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Total Phenols		0.64	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25
Total Radium		19.43	pCi/gm	E 901.1M		9/15/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 20

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106829

Sample Description: GSB-6 18-20'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Benzene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Toluene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Ethylbenzene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
m,p,o-xylene		0.162	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
TRPHC		<10.0	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Chloride		75	mg/Kg	E 300.0		9/20/98	JS		5421	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000114
Sample Number: 106830

Sample Description: GSB-6 38-40'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Benzene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Toluene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
Ethylbenzene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
m,p,o-xylene		<0.050	mg/Kg	S 8021B		9/9/98	JG		5263	0.050
TRPHC		<10.0	mg/Kg	S 418.1	9/9/98	9/10/98	SR	4915	5270	10.0
Chloride		11	mg/Kg	E 300.0		9/20/98	JS		5421	2.0

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000114

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/17/98		5377
Acrylonitrile		<5	ug/L	5	9/17/98		5377
Benzene		<1	ug/L	1	9/17/98		5377
Carbon tetrachloride		<1	ug/L	1	9/17/98		5377
Chlorobenzene		<1	ug/L	1	9/17/98		5377
1,2-dichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/17/98		5377
1,1,1-trichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2-trichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2-trichloroethylene		<1	ug/L	1	9/17/98		5377
Chloroform		<1	ug/L	1	9/17/98		5377
Dichlorobenzene		<2	ug/L	2	9/17/98		5377
1,1-dichloroethylene		<1	ug/L	1	9/17/98		5377
Dichloropropenes		<1	ug/L	1	9/17/98		5377
Ethylbenzene		<1	ug/L	1	9/17/98		5377
Bromodichloromethane		<1	ug/L	1	9/17/98		5377
Bromomethane		<5	ug/L	5	9/17/98		5377
Chloromethane		<1	ug/L	1	9/17/98		5377
Dichlorodifluoromethane		<1	ug/L	1	9/17/98		5377
Dichloromethane		<1	ug/L	1	9/17/98		5377
Trichlorofluoromethane		<1	ug/L	1	9/17/98		5377
Tetrachloroethylene		<1	ug/L	1	9/17/98		5377
Toluene		<1	ug/L	1	9/17/98		5377
Trichloroethylene		<1	ug/L	1	9/17/98		5377
Vinyl chloride		<1	ug/L	1	9/17/98		5377
m,p-xylene		<1	ug/L	1	9/17/98		5377
o-xylene		<1	ug/L	1	9/17/98		5377
1,1-dichloroethane		<1	ug/L	1	9/17/98		5377
Ethylene dibromide		<1	ug/L	1	9/17/98		5377
cis-1,2-dichlorethylene		<1	ug/L	1	9/17/98		5377
trans-1,2-dichloroethylene		<1	ug/L	1	9/17/98		5377
Methylene chloride		<5	ug/L	5	9/17/98		5377
Surr. Dibromofluoromethane		111	%	71-132	9/17/98		5377
Surr. Toluene-d8		96	%	82-124	9/17/98		5377
Surr. 4-Bromofluorobenzene		103	%	76-126	9/17/98		5377
Acrolein		<125	ug/Kg	125	9/9/98		5264
Acrylonitrile		<125	ug/Kg	125	9/9/98		5264
Benzene		<25	ug/Kg	25	9/9/98		5264
Carbon tetrachloride		<25	ug/Kg	25	9/9/98		5264
Chlorobenzene		<25	ug/Kg	25	9/9/98		5264

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,2-dichloroethane		<25	ug/Kg	25	9/9/98		5264
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/9/98		5264
1,1,1-trichloroethane		<25	ug/Kg	25	9/9/98		5264
1,1,2-trichloroethane		<25	ug/Kg	25	9/9/98		5264
1,1,2-trichloroethylene		<25	ug/Kg	25	9/9/98		5264
Chloroform		<25	ug/Kg	25	9/9/98		5264
Dichlorobenzene		<50	ug/Kg	50	9/9/98		5264
1,1-dichloroethylene		<25	ug/Kg	25	9/9/98		5264
Dichloropropenes		<25	ug/Kg	25	9/9/98		5264
Ethylbenzene		<25	ug/Kg	25	9/9/98		5264
Bromodichloromethane		<25	ug/Kg	25	9/9/98		5264
Bromomethane		<125	ug/Kg	125	9/9/98		5264
Chloromethane		<25	ug/Kg	25	9/9/98		5264
Dichlorodifluoromethane		<25	ug/Kg	25	9/9/98		5264
Dichloromethane		<25	ug/Kg	25	9/9/98		5264
Trichlorofluoromethane		<25	ug/Kg	25	9/9/98		5264
Tetrachloroethylene		<25	ug/Kg	25	9/9/98		5264
Toluene		<25	ug/Kg	25	9/9/98		5264
Trichloroethylene		<25	ug/Kg	25	9/9/98		5264
Vinyl chloride		<25	ug/Kg	25	9/9/98		5264
m,p-xylene		<25	ug/Kg	25	9/9/98		5264
o-xylene		<25	ug/Kg	25	9/9/98		5264
1,1-dichloroethane		<25	ug/Kg	25	9/9/98		5264
Ethylene dibromide		<25	ug/Kg	25	9/9/98		5264
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/9/98		5264
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/9/98		5264
Methylene chloride		<125	ug/Kg	125	9/9/98		5264
Surr. Dibromofluoromethane		83	%	71-132	9/9/98		5264
Surr. Toluene-d8		84	%	82-124	9/9/98		5264
Surr. 4-Bromofluorobenzene		85	%	76-126	9/9/98		5264
PCB		0.1	mg/Kg	0.1	9/18/98	5044	5401
Cyanide		<0.01	mg/Kg	0.01	9/15/98		5330
Arsenic		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Barium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Cadmium		<0.10	mg/Kg	0.10	9/18/98	5090	5402
Chromium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Lead		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Selenium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Silver		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Uranium		<2.0	mg/Kg	2.0	9/18/98	5090	5402
Copper		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Iron		<10	mg/Kg	10	9/20/98	5090	5461
Manganese		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Zinc		<2.0	mg/Kg	2.0	9/18/98	5090	5402
Aluminum		<10	mg/Kg	10	9/20/98	5090	5461
Boron		<10	mg/Kg	10	9/18/98	5090	5402
Cobalt		<0.50	mg/Kg	0.50	9/18/98	5090	5402

Order ID Number: 9808000114

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Molybdenum		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Nickel		<0.50	mg/Kg	0.50	9/18/98	5090	5402
TRPHC		<10.0	mg/Kg	10	9/10/98	4915	5270
Benzidine		<2.5	mg/kg	2.5	9/19/98	5100	5430
Hexachlorobenzene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Pentachlorobenzene		<0.25	mg/kg	0.25	9/19/98	5100	5430
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Hexachloroethane		<0.25	mg/kg	0.25	9/19/98	5100	5430
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/19/98	5100	5430
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/19/98	5100	5430
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/19/98	5100	5430
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/19/98	5100	5430
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/19/98	5100	5430
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/19/98	5100	5430
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/19/98	5100	5430
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Diphenylhydrazine		<1.25	mg/kg	1.25	9/19/98	5100	5430
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Isophorone		<1.25	mg/kg	1.25	9/19/98	5100	5430
Nitrobenzene		<0.25	mg/kg	0.25	9/19/98	5100	5430
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/19/98	5100	5430
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/19/98	5100	5430
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/19/98	5100	5430
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/19/98	5100	5430
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/19/98	5100	5430
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/19/98	5100	5430
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/19/98	5100	5430
Pentachlorophenol		<1.25	mg/kg	1.25	9/19/98	5100	5430
Dibutyl phthalate		<0.25	mg/kg	0.25	9/19/98	5100	5430
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/19/98	5100	5430
Diethyl phthalate		<0.25	mg/kg	0.25	9/19/98	5100	5430
Dimethyl phthalate		<0.25	mg/kg	0.25	9/19/98	5100	5430
Anthracene		<0.25	mg/kg	0.25	9/19/98	5100	5430
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Fluoranthene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Fluorene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Phenanthrene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Pyrene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Naphthalene		<0.25	mg/kg	0.25	9/19/98	5100	5430
1-methylnaphthalene		<0.25	mg/kg	0.25	9/19/98	5100	5430
2-methylnaphthalene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/19/98	5100	5430
monomethylnaphthalenes		<0.25	mg/kg	0.25	9/19/98	5100	5430
Surr. 2-Fluorophenol		32	%	25-121	9/19/98	5100	5430
Surr. Phenol-d6		90	%	24-113	9/19/98	5100	5430

Date: 10-1-98
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Order ID Number: 9808000114

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Surr. Nitroobenzene-d5		74	%	23-120	9/19/98	5100	5430
Surr. 2-Fluorobiphenyl		99	%	30-115	9/19/98	5100	5430
Surr. 2,4,6-Tribromophenol		91	%	19-122	9/19/98	5100	5430
Surr. Terphenyl-d14		93	%	28-137	9/19/98	5100	5430
MTBE		<0.050	mg/Kg	0.050	9/9/98		5263
Benzene		<0.050	mg/Kg	0.050	9/9/98		5263
Toluene		<0.050	mg/Kg	0.050	9/9/98		5263
Ethylbenzene		<0.050	mg/Kg	0.050	9/9/98		5263
m,p,o-xylene		<0.050	mg/Kg	0.050	9/9/98		5263
Chloride		<2.0	mg/Kg	2.0	9/20/98		5421
Total Phenols		<0.25	mg/Kg	0.25	9/20/98		5450
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5487
Chloride		<1.0	mg/Kg	1.0	9/21/98		5487
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5487
Sulfate		<1.0	mg/Kg	1.0	9/21/98		5487
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5488
Chloride		<1.0	mg/Kg	1.0	9/21/98		5488
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5488
Sulfate		<1.0	mg/Kg	1.0	9/21/98		5488
Benzidine		<2.5	mg/kg	2.5	9/19/98	5100	5430
Hexachlorobenzene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Pentachlorobenzene		<0.25	mg/kg	0.25	9/19/98	5100	5430
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Hexachloroethane		<0.25	mg/kg	0.25	9/19/98	5100	5430
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/19/98	5100	5430
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/19/98	5100	5430
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/19/98	5100	5430
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/19/98	5100	5430
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/19/98	5100	5430
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/19/98	5100	5430
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/19/98	5100	5430
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Diphenylhydrazine		<1.25	mg/kg	1.25	9/19/98	5100	5430
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Isophorone		<1.25	mg/kg	1.25	9/19/98	5100	5430
Nitrobenzene		<0.25	mg/kg	0.25	9/19/98	5100	5430
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/19/98	5100	5430
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/19/98	5100	5430
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/19/98	5100	5430
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/19/98	5100	5430
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/19/98	5100	5430
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/19/98	5100	5430
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/19/98	5100	5430
Pentachlorophenol		<1.25	mg/kg	1.25	9/19/98	5100	5430
ibutyl phthalate		<0.25	mg/kg	0.25	9/19/98	5100	5430
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/19/98	5100	5430

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Order ID Number: 9808000114

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Diethyl phthalate		<0.25	mg/kg	0.25	9/19/98	5100	5430
Dimethyl phthalate		<0.25	mg/kg	0.25	9/19/98	5100	5430
Anthracene		<0.25	mg/kg	0.25	9/19/98	5100	5430
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Fluoranthene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Fluorene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Phenanthrene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Pyrene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Naphthalene		<0.25	mg/kg	0.25	9/19/98	5100	5430
1-methylnaphthalene		<0.25	mg/kg	0.25	9/19/98	5100	5430
2-methylnaphthalene		<0.25	mg/kg	0.25	9/19/98	5100	5430
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/19/98	5100	5430
monomethylnaphthalenes		<0.25	mg/kg	0.25	9/19/98	5100	5430
Surr. 2-Fluorophenol		32	%	25-121	9/19/98	5100	5430
Surr. Phenol-d6		90	%	24-113	9/19/98	5100	5430
Surr. Nitroobenzene-d5		74	%	23-120	9/19/98	5100	5430
Surr. 2-Fluorobiphenyl		99	%	30-115	9/19/98	5100	5430
Surr. 2,4,6-Tribromophenol		91	%	19-122	9/19/98	5100	5430
Surr. Terphenyl-d14		93	%	28-137	9/19/98	5100	5430
Benzidine		<2.5	mg/kg	2.5	9/20/98	5100	5471
Hexachlorobenzene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Pentachlorobenzene		<0.25	mg/kg	0.25	9/20/98	5100	5471
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Hexachloroethane		<0.25	mg/kg	0.25	9/20/98	5100	5471
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/20/98	5100	5471
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/20/98	5100	5471
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/20/98	5100	5471
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/20/98	5100	5471
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/20/98	5100	5471
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/20/98	5100	5471
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/20/98	5100	5471
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Diphenylhydrazine		<1.25	mg/kg	1.25	9/20/98	5100	5471
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Isophorone		<1.25	mg/kg	1.25	9/20/98	5100	5471
Nitrobenzene		<0.25	mg/kg	0.25	9/20/98	5100	5471
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/20/98	5100	5471
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/20/98	5100	5471
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/20/98	5100	5471
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/20/98	5100	5471
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/20/98	5100	5471
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/20/98	5100	5471
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/20/98	5100	5471
Pentachlorophenol		<1.25	mg/kg	1.25	9/20/98	5100	5471
Dibutyl phthalate		<0.25	mg/kg	0.25	9/20/98	5100	5471

Order ID Number: 9808000114

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/20/98	5100	5471
Diethyl phthalate		<0.25	mg/kg	0.25	9/20/98	5100	5471
Dimethyl phthalate		<0.25	mg/kg	0.25	9/20/98	5100	5471
Anthracene		<0.25	mg/kg	0.25	9/20/98	5100	5471
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Fluoranthene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Fluorene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Phenanthrene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Pyrene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Naphthalene		<0.25	mg/kg	0.25	9/20/98	5100	5471
1-methylnaphthalene		<0.25	mg/kg	0.25	9/20/98	5100	5471
2-methylnaphthalene		<0.25	mg/kg	0.25	9/20/98	5100	5471
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/20/98	5100	5471
monomethylnaphthalenes		<0.25	mg/kg	0.25	9/20/98	5100	5471
Surr. 2-Fluorophenol		76	%	25-121	9/20/98	5100	5471
Surr. Phenol-d6		86	%	24-113	9/20/98	5100	5471
Surr. Nitroobenzene-d5		72	%	23-120	9/20/98	5100	5471
Surr. 2-Fluorobiphenyl		98	%	30-115	9/20/98	5100	5471
Surr. 2,4,6-Tribromophenol		90	%	19-122	9/20/98	5100	5471
Surr. Terphenyl-d14		99	%	28-137	9/20/98	5100	5471

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000114

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	120	120	9/14/98	5377
1,1-Dichloroethene		100	ug/L	118	118	9/14/98	5377
Chloroform		100	ug/L	116	116	9/14/98	5377
1,2-Dichloropropane		100	ug/L	114	114	9/14/98	5377
Toluene		100	ug/L	115	115	9/14/98	5377
Chlorobenzene		100	ug/L	113	113	9/14/98	5377
Ethylbenzene		100	ug/L	114	114	9/14/98	5377
PCB		0.40	mg/L	0.41	103	9/18/98	5401
Cyanide		0.12	mg/L	0.11	92	9/15/98	5330
Total Mercury		5.0	mg/L	5.0	100	9/10/98	5274
Vinyl chloride		100	ug/L	85	85	9/9/98	5264
1,1-Dichloroethene		100	ug/L	94	94	9/9/98	5264
Chloroform		100	ug/L	83	83	9/9/98	5264
1,2-Dichloropropane		100	ug/L	86	86	9/9/98	5264
Toluene		100	ug/L	96	96	9/9/98	5264
Chlorobenzene		100	ug/L	99	99	9/9/98	5264
Ethylbenzene		100	ug/L	99	99	9/9/98	5264
Arsenic		1.0	mg/L	1.0	100	9/18/98	5402
Barium		1.0	mg/L	0.99	99	9/18/98	5402
Cadmium		1.0	mg/L	1.0	100	9/18/98	5402
Chromium		1.0	mg/L	1.0	100	9/18/98	5402
Lead		1.0	mg/L	1.0	100	9/18/98	5402
Selenium		1.0	mg/L	0.99	0.99	9/18/98	5402
Silver		1.0	mg/L	1.0	100	9/18/98	5402
Uranium		1.0	mg/L	0.98	98	9/18/98	5402
Copper		1.0	mg/L	0.99	99	9/18/98	5402
Iron		100.0	mg/L	106.0	106	9/20/98	5461
Manganese		1.0	mg/L	0.99	99	9/18/98	5402
Zinc		1.0	mg/L	1.0	100	9/18/98	5402
Aluminum		250.0	mg/L	251.0	100	9/20/98	5461
Boron		1.0	mg/L	0.99	99	9/18/98	5402
Cobalt		1.0	mg/L	1.0	100	9/18/98	5402
Molybdenum		1.0	mg/L	0.96	96	9/18/98	5402
Nickel		1.0	mg/L	0.99	99	9/18/98	5402
Phenol		80	mg/L	81	101	9/19/98	5430
1,4-Dichlorobenzene		80	mg/L	78	98	9/19/98	5430
2-nitrophenol		80	mg/L	81	101	9/19/98	5430

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Order ID Number: 9808000114

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
2,4-Dichlorophenol		80	mg/L	87	109	9/19/98	5430
Hexachlorobutadiene		80	mg/L	80	100	9/19/98	5430
4-Chloro-3-methylphenol		80	mg/L	70	88	9/19/98	5430
2,4,6-Trichlorophenol		80	mg/L	84	105	9/19/98	5430
Acenaphthene		80	mg/L	84	105	9/19/98	5430
n-Nitrosodiphenylamine		80	mg/L	74	93	9/19/98	5430
Pentachlorophenol		80	mg/L	76	95	9/19/98	5430
Fluoranthene		80	mg/L	71	89	9/19/98	5430
Di-n-octylphthalate		80	mg/L	74	93	9/19/98	5430
Benzo(a)pyrene		80	mg/L	75	94	9/19/98	5430
Phenol		80	mg/L	79	99	9/20/98	5471
1,4-Dichlorobenzene		80	mg/L	76	95	9/20/98	5471
2-nitrophenol		80	mg/L	76	95	9/20/98	5471
2,4-Dichlorophenol		80	mg/L	83	104	9/20/98	5471
Hexachlorobutadiene		80	mg/L	73	91	9/20/98	5471
4-Chloro-3-methylphenol		80	mg/L	76	95	9/20/98	5471
2,4,6-Trichlorophenol		80	mg/L	82	103	9/20/98	5471
Acenaphthene		80	mg/L	77	96	9/20/98	5471
n-Nitrosodiphenylamine		80	mg/L	76	95	9/20/98	5471
Pentachlorophenol		80	mg/L	64	80	9/20/98	5471
Fluoranthene		80	mg/L	64	80	9/20/98	5471
Di-n-octylphthalate		80	mg/L	79	99	9/20/98	5471
Benzo(a)pyrene		80	mg/L	66	83	9/20/98	5471
pH		7.0	mg/L	7.0	100	9/8/98	5241
TRPHC		100	mg/L	102	102	9/10/98	5270
MTBE		0.100	mg/L	0.103	103	9/9/98	5263
Benzene		0.100	mg/L	0.106	106	9/9/98	5263
Toluene		0.100	mg/L	0.104	104	9/9/98	5263
Ethylbenzene		0.100	mg/L	0.107	107	9/9/98	5263
m,p,o-xylene		0.300	mg/L	0.313	104	9/9/98	5263
Chloride		500	mg/L	499	100	9/20/98	5421
TDS		1,000	mg/L	976	98	9/21/98	5449
TDS		1,000	mg/L	999	100	9/20/98	5435
Total Phenols		0.8	mg/L	0.79	99	9/20/98	5450
Fluoride		2.5	mg/L	2.48	99	9/21/98	5487
Chloride		12.5	mg/L	12.68	101	9/21/98	5487
Nitrate		5	mg/L	5.07	101	9/21/98	5487
Sulfate		12.5	mg/L	12.91	103	9/21/98	5487
Fluoride		2.5	mg/L	2.49	100	9/21/98	5488
Chloride		12.5	mg/L	12.755	102	9/21/98	5488
Nitrate		5	mg/L	5.08	101	9/21/98	5488
Sulfate		12.5	mg/L	13.15	105	9/21/98	5488

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000114

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	136	136	100	119	119	13	9/17/98		5377
Benzene		ug/L	<1	100	121	121	100	110	110	9.5	9/17/98		5377
Trichloroethene		ug/L	<1	100	122	122	100	111	111	9.4	9/17/98		5377
Toluene		ug/L	<1	100	116	116	100	106	106	9.0	9/17/98		5377
Chlorobenzene		ug/L	<1	100	104	104	100	94	94	10.0	9/17/98		5377
PCB		mg/Kg	<0.1	0.40	0.43	108	0.40	0.45	113	4.9	9/18/98	5044	5401
Cyanide		mg/Kg	<0.01	0.12	0.11	92	0.12	0.10	83	10	9/15/98		5330
1,1-Dichloroethene		ug/Kg	<25	100	80	80	100	81	81	1.2	9/9/98		5264
Benzene		ug/Kg	<25	100	86	86	100	83	83	3.6	9/9/98		5264
Trichloroethene		ug/Kg	<25	100	92	92	100	90	90	2.2	9/9/98		5264
Toluene		ug/Kg	<25	100	83	83	100	80	80	3.7	9/9/98		5264
Chlorobenzene		ug/Kg	<25	100	82	82	100	80	80	2.5	9/9/98		5264
Total Mercury		mg/Kg	<0.10	2.5	2.6	104	2.5	2.7	108	3.8	9/10/98	4916	5274
Phenol		mg/Kg	<0.25	10.00	5.77	58	10.00	5.69	57	1.7	9/19/98	5100	5430
2-Chlorophenol		mg/Kg	<1.25	10.00	5.01	50	10.00	5.39	54	9.6	9/19/98	5100	5430
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	6.21	62	10.00	6.77	68	9.2	9/19/98	5100	5430
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	5.95	60	10.00	6.61	66	9.5	9/19/98	5100	5430
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	5.99	60	10.00	6.33	63	4.9	9/19/98	5100	5430
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	5.44	54	10.00	5.62	56	3.6	9/19/98	5100	5430
Acenaphthene		mg/Kg	<0.25	10.00	7.18	72	10.00	7.71	77	6.7	9/19/98	5100	5430
4-Nitrophenol		mg/Kg	<1.25	10.00	3.16	32	10.00	3.3	33	3.1	9/19/98	5100	5430
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	6.95	70	10.00	7.19	72	2.8	9/19/98	5100	5430
Pentachlorophenol		mg/Kg	<1.25	10.00	3.64	36	10.00	3.83	38	5.4	9/19/98	5100	5430
Pyrene		mg/Kg	<0.25	10.00	7.85	79	10.00	7.97	80	1.3	9/19/98	5100	5430
Phenol		mg/Kg	<0.25	10.00	5.77	58	10.00	5.69	57	1.7	9/20/98	5100	5471
2-Chlorophenol		mg/Kg	<1.25	10.00	5.01	50	10.00	5.39	54	7.7	9/20/98	5100	5471
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	6.21	62	10.00	6.77	68	9.2	9/20/98	5100	5471
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	5.95	60	10.00	6.61	66	9.5	9/20/98	5100	5471
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	5.99	60	10.00	6.33	63	4.9	9/20/98	5100	5471
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	5.44	54	10.00	5.62	56	3.6	9/20/98	5100	5471
Acenaphthene		mg/Kg	<0.25	10.00	7.18	72	10.00	7.71	77	6.7	9/20/98	5100	5471
4-Nitrophenol		mg/Kg	<1.25	10.00	3.16	32	10.00	3.3	33	3.1	9/20/98	5100	5471
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	6.95	70	10.00	7.19	72	2.8	9/20/98	5100	5471
Pentachlorophenol		mg/Kg	<1.25	10.00	3.64	36	10.00	3.83	38	5.4	9/20/98	5100	5471
Pyrene		mg/Kg	<0.25	10.00	7.85	79	10.00	7.97	80	1.3	9/20/98	5100	5471
TRPHC		mg/Kg	<10.0	250	224	90	250	206	82	8.3	9/10/98	4915	5270

Date: 10-1-98
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Order ID Number: 9808000114

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
MTBE		mg/Kg	<0.050	5.00	5.19	104	5.00	5.2	104	0	9/9/98		5263
Benzene		mg/Kg	<0.050	5.00	5.48	110	5.00	5.48	110	0	9/9/98		5263
Toluene		mg/Kg	<0.050	5.00	5.41	108	5.00	5.41	108	0	9/9/98		5263
Ethylbenzene		mg/Kg	<0.050	5.00	5.59	112	5.00	5.6	112	0	9/9/98		5263
m,p,o-xylene		mg/Kg	0.64	15.00	16.6	106	15.00	16.6	111	4.6	9/9/98		5263
Chloride		mg/Kg	54	4,000	4,251	105	4,000	4,262	105	0	9/20/98		5421
Total Phenols		mg/Kg	6.2	20	26.1	100	20	26.7	102	2.0	9/20/98		5450
Arsenic		mg/Kg	<0.50	200	167	84	200	168	84	0	9/18/98	5090	5402
Barium		mg/Kg	<0.50	200	182	91	200	184	92	1.1	9/18/98	5090	5402
Cadmium		mg/Kg	<0.10	200	175	88	200	173	87	1.1	9/18/98	5090	5402
Chromium		mg/Kg	<0.50	200	182	91	200	182	91	0	9/18/98	5090	5402
Lead		mg/Kg	<0.50	200	175	88	200	173	87	1.1	9/18/98	5090	5402
Selenium		mg/Kg	<0.50	200	165	83	200	161	81	2.4	9/18/98	5090	5402
Silver		mg/Kg	<0.50	350	350	100	350	413	118	17	9/18/98	5090	5402
Uranium		mg/Kg	<2.0	200	192	96	200	190	95	1.0	9/18/98	5090	5402
Copper		mg/Kg	<1.0	200	175	88	200	176	88	0	9/18/98	5090	5402
Manganese		mg/Kg	<1.0	200	179	90	200	178	89	1.1	9/18/98	5090	5402
Zinc		mg/Kg	<2.0	200	178	89	200	176	88	1.1	9/18/98	5090	5402
Boron		mg/Kg	<10	200	170	85	200	166	83	2.4	9/18/98	5090	5402
Cobalt		mg/Kg	<0.50	200	175	88	200	179	90	2.2	9/18/98	5090	5402
Molybdenum		mg/Kg	<1.0	200	176	89	200	173	87	2.3	9/18/98	5090	5402
Nickel		mg/Kg	<0.50	200	172	86	200	173	87	1.2	9/18/98	5090	5402
Aluminum		mg/Kg	<10	200	165	83	200	169	85	2.4	9/20/98	5090	5461
Iron		mg/Kg	<10	200	157	79	200	160	80	1.3	9/20/98	5090	5461
Fluoride		mg/Kg	9	5	13.93	99	5	13.74	95	4.1	9/21/98		5487
Chloride		mg/Kg	14	25	39.2	101	25	39.73	103	2.0	9/21/98		5487
Nitrate		mg/Kg	1.7	10	11.61	99	10	11.81	101	2.0	9/21/98		5487
Sulfate		mg/Kg	56	25	81.48	102	25	80.66	99	2.2	9/21/98		5487
Fluoride		mg/Kg	6.5	5	10.93	89	5	10.93	89	0	9/21/98		5488
Chloride		mg/Kg	8.9	25	32.51	94	25	32.51	94	0	9/21/98		5488
Nitrate		mg/Kg	1.7	10	11.48	98	10	11.85	102	4.0	9/21/98		5488
Sulfate		mg/Kg	18	25	44.27	105	25	44.48	106	0.95	9/21/98		5488

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000114

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	8.7	8.7	0	9/8/98		5241
TDS		mg/Kg	1100	1080	1.8	9/21/98		5449
TDS		mg/Kg	252	270	6.9	9/21/98		5435

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0914	**P.O. Number:**	
Client I.D.:	106824	**ARS Sample I.D.:**	ARS-98-3340
Date Sampled:	9/1/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1000
Type of Sample:	Solid	**Date of Report:**	9/16/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.91	N/A	pCi/gm	<0.034	N/A	Bq/gm	EPA 901.1M	9/14/98 1324	kh
Ra-228	<0.11	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	9/14/98 1324	kh
Pb-210	<1.26	N/A	pCi/gm	<0.047	N/A	Bq/gm	EPA 901.1M	9/14/98 1324	kh
Total Activity	1.09	N/A	pCi/gm	0.040	N/A	Bq/gm	EPA 901.1M	9/14/98 1324	kh

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0914	**P.O. Number:**	
Client I.D.:	106825	**ARS Sample I.D.:**	ARS-98-3341
Date Sampled:	9/1/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1000
Type of Sample:	Solid	**Date of Report:**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.45	1.64	pCi/gm	0.091	0.061	Bq/gm	EPA 901.1M	9/14/98 1550	kh
Ra-228	0.58	0.30	pCi/gm	0.021	0.011	Bq/gm	EPA 901.1M	9/14/98 1550	kh
Pb-210	<1.03	N/A	pCi/gm	<0.038	N/A	Bq/gm	EPA 901.1M	9/14/98 1550	kh
Total Activity	5.08	N/A	pCi/gm	0.188	N/A	Bq/gm	EPA 901.1M	9/14/98 1550	kh

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0914	**P.O. Number:**	
Client I.D.:	106826	**ARS Sample I.D.:**	ARS-98-3342
Date Sampled:	9/1/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1000
Type of Sample:	Solid	**Date of Report:**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.07	1.32	pCi/gm	0.077	0.049	Bq/gm	EPA 901.1M	9/14/98 1624	kh
Ra-228	<0.17	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	9/14/98 1624	kh
Pb-210	3.57	1.68	pCi/gm	0.132	0.062	Bq/gm	EPA 901.1M	9/14/98 1624	kh
Total Activity	8.19	N/A	pCi/gm	0.303	N/A	Bq/gm	EPA 901.1M	9/14/98 1624	kh

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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ARS Tracking Number:	ARS-98-0914	**P.O. Number:**	
Client I.D.:	106827	**ARS Sample I.D.:**	ARS-98-3343
Date Sampled:	9/1/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1000
Type of Sample:	Solid	**Date of Report:**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.81	N/A	pCi/gm	<0.030	N/A	Bq/gm	EPA 901.1M	9/14/98 1656	kh
Ra-228	<0.09	N/A	pCi/gm	<0.003	N/A	Bq/gm	EPA 901.1M	9/14/98 1656	kh
Pb-210	<0.93	N/A	pCi/gm	<0.034	N/A	Bq/gm	EPA 901.1M	9/14/98 1656	kh
Total Activity	1.11	N/A	pCi/gm	0.041	N/A	Bq/gm	EPA 901.1M	9/14/98 1656	kh

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0914	**P.O. Number:**	
Client I.D.:	106828	**ARS Sample I.D.:**	ARS-98-3344
Date Sampled:	9/1/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1000
Type of Sample:	Solid	**Date of Report:**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<1.09	N/A	pCi/gm	<0.040	N/A	Bq/gm	EPA 901.1M	9/15/98 0940	kh
Ra-228	<0.11	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	9/15/98 0940	kh
Pb-210	<1.06	N/A	pCi/gm	<0.039	N/A	Bq/gm	EPA 901.1M	9/15/98 0940	kh
Total Activity	19.43	N/A	pCi/gm	0.719	N/A	Bq/gm	EPA 901.1M	9/15/98 0940	kh

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.
1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 114

Company Name: Philip Environmental Services
Phone #: (915) 563-0118
Address: 7904 IH 20 West Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeff Kindley / Sharon Hall
Invoice to: (If different from above) Same
Project #: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
106823	GMW-2 (3')	1	4oz Jar		✓					✓			09/01/98	1600
106831	Field Blank	2	40ml VOA	✓				✓					09/01/98	1630
106832	Trip Blank	2	40ml VOA	✓						✓			09/01/98	
24	TSB-13 (2-3)	5	4oz Jar		✓					✓			09/01/98	0845
	TSB-13 (2-3)	1	40ml VOA		✓							✓	09/01/98	0845
25	TSB-13 (3-5')	5	4oz Jar		✓					✓			09/01/98	0850
	TSB-13 (3-5')	1	40ml VOA		✓							✓	09/01/98	0850
26	TSB-13 (8-10')	5	4oz Jar		✓					✓			09/01/98	0905
	TSB-13 (8-10')	1	40ml VOA		✓							✓	09/01/98	0905
27	TSB-13 (23-25')	5	4oz Jar		✓					✓			09/01/98	0949
	TSB-13 (23-25')	1	40ml VOA		✓							✓	09/01/98	0949

ANALYSIS REQUEST	MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	See Attached	VOC's	Total Metals	Chloride (300.1)	Turn Around Time if different from standard	Hold
106823			✓												✓	✓	✓			
106831															✓					
106832															✓					
24			✓												✓					
																✓				
25			✓												✓					
																✓				
26			✓												✓					
																✓				
27			✓												✓					
																✓				

Relinquished by: Jeffrey Kindley Date: 09/03/98 Time: 0700 AM
Relinquished by: Date: Time:
Relinquished by: Date: Time:

Received by: Date: Time:
Received by: Date: Time:
Received at Laboratory by: Vicki Winchan 9-4-98 Date: 9:00 am Time:

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 4 °
Log-in Review ga

REMARKS:
Normal Turnaround

Carrier #

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

114 204

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeff Kindley
Phone #: (915) 563-0118
FAX #: (915) 563-9526

Company Name & Address: Phillip Services Corporation 7904 I-H 20 West Midland, Tx 79706

Project #: 19349
Project Name: Grimes Tank Battery

Project Location: Hobbs, N. M.
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME	BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240 / 8260	8270	See Attached Chlorides (300)	VOC's
106828	GSB-6 (2-3')	5	40z Jars		✓					✓			09/01/98	1229		✓							✓		
	GSB-6 (2-3')	1	40ml VOA		✓							✓	09/01/98	1229										✓	✓
29	GSB-6 (18-20')	2	4oz Jars		✓					✓			09/01/98	1309	✓	✓								✓	
30	GSB-6 (38-40')	2	4oz Jars		✓					✓			09/01/98	1335	✓	✓								✓	

SPECIAL HANDLING: Turn around # of days; Fax ASAP; Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	09/03/98	700Am			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Woodard	Date: 9-4-98	Time: 900Am

REMARKS

Normal Turnaround

DW

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Corrected

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-20-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
107002	GSB-4 2-3'	9/4/98	10:25	9/9/98
107003	GSB-4 48-50'	9/4/98	14:20	9/9/98
107004	GSB-4 57-59'	9/4/98	14:51	9/9/98
107005	GSB-4D 57-59'	9/4/98		9/9/98
107006	TSB-8 3-5'	9/4/98	15:37	9/9/98
107007	TSB-8D 3-5'	9/4/98		9/9/98
107008	TSB-8 8-10'	9/4/98	15:46	9/9/98
107009	TSB-8 40-42'	9/4/98	16:10	9/9/98
107010	Field Blank	9/4/98	16:30	9/9/98
107011	Trip Blank			9/9/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All data meets quality control criteria with the exceptions:
107006 Semivolatile has low surrogate recovery due to matrix effect
Sample 107009 result could not be confirmed on bulk soil sample run on 12-16-98

Corrections:
1) Sample 107009 Volatile results flagged as unable to confirm at a later time.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9809000167
Sample Number: 107010

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Acrylonitrile		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Benzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chlorobenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chloroform		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorobenzene		<2	ug/L	S-8260B		9/17/98	AG		5377	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloropropenes		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylbenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromodichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromomethane		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Chloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Toluene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Vinyl chloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
m,p-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
o-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylene dibromide		<1	ug/L	S-8260B		9/17/98	AG		5377	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Methylene chloride		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Surr. Dibromofluoromethane		101	%	S-8260B		9/17/98	AG		5377	71-132
Surr. Toluene-d8		101	%	S-8260B		9/17/98	AG		5377	82-124
Surr. 4-Bromofluorobenzene		101	%	S-8260B		9/17/98	AG		5377	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 3

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9809000167
Sample Number: 107011

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Acrylonitrile		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Benzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chlorobenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
loroform		<1	ug/L	S-8260B		9/17/98	AG		5377	1
chlorobenzene		<2	ug/L	S-8260B		9/17/98	AG		5377	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloropropenes		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylbenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromodichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromomethane		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Chloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Toluene		1.1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Vinyl chloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
m,p-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
o-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylene dibromide		<1	ug/L	S-8260B		9/17/98	AG		5377	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Methylene chloride		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Surr. Dibromofluoromethane		108	%	S-8260B		9/17/98	AG		5377	71-132
Surr. Toluene-d8		99	%	S-8260B		9/17/98	AG		5377	82-124
Surr. 4-Bromofluorobenzene		102	%	S-8260B		9/17/98	AG		5377	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 4

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9809000167
Sample Number: 107002

Sample Description: GSB-4 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<280	ug/Kg	S-8260B		9/9/98	AG		5264	280
Acrylonitrile		<280	ug/Kg	S-8260B		9/9/98	AG		5264	280
Benzene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Carbon tetrachloride		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Chlorobenzene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
1,2-dichloroethane		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
1,1,2,2-tetrachloroethane		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
1,1,1-trichloroethane		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
1,1,2-trichloroethane		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
1,1,2-trichloroethylene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Chloroform		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
ichlorobenzene		<112	ug/Kg	S-8260B		9/9/98	AG		5264	112
1,1-dichloroethylene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Dichloropropenes		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Ethylbenzene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Bromodichloromethane		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Bromomethane		<280	ug/Kg	S-8260B		9/9/98	AG		5264	280
Chloromethane		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Dichlorodifluoromethane		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Dichloromethane		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Trichlorofluorometane		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Tetrachloroethylene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Toluene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Trichloroethylene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Vinyl chloride		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
m,p-xylene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
o-xylene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
1,1-dichloroethane		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Ethylene dibromide		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
cis-1,2-dichlorethylene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
trans-1,2-dichloroethylene		<56	ug/Kg	S-8260B		9/9/98	AG		5264	56
Methylene chloride		<280	ug/Kg	S-8260B		9/9/98	AG		5264	280
Dibromofluoromethane		86	%	S-8260B		9/9/98	AG		5264	71-132
Toluene-d8		83	%	S-8260B		9/9/98	AG		5264	82-124
4-Bromofluorobenzene		81	%	S-8260B		9/9/98	AG		5264	76-126
Benzidine		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
entachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25

Date: 10-1-98
Page # 5
Order ID Number: 9809000167
Sample Number: 107002

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Sample Description: GSB-4 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dinitro-o-cresol		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
N-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Phenol		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Surr. 2-Fluorophenol		51	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	25-121
Surr. Phenol-d6		61	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	24-113
Surr. Nitroobenzene-d5		52	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	23-120
Surr. 2-Fluorobiphenyl		66	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	30-115
Surr. 2,4,6-Tribromophenol		63	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	19-122
Surr. Terphenyl-d14		64	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	28-137

Date: 10-1-98
Page # 6
Order ID Number: 9809000167
Sample Number: 107002

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Sample Description: GSB-4 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/18/98	9/18/98	RC	5044	5401	0.1
Arsenic		2.9	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Barium		166	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cadmium		0.16	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.10
Chromium		5.4	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Lead		2.7	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Total Mercury		<0.10	mg/Kg	E 7471 A	9/9/98	9/10/98	MS	4917	5275	0.10
Selenium		<0.50	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Silver		<0.50	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Uranium		<1.0	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Copper		2.5	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Iron		4,300	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Manganese		51	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Zinc		11	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Aluminum		5,900	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Boron		15	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	10
Cobalt		7.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Molybdenum		2.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Nickel		7.9	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		6	mg/Kg	E 300.0		9/21/98	JS		5488	0.2
Nitrate		9.8	mg/Kg	E 300.0		9/21/98	JS		5488	0.2
Chloride		1,200	mg/Kg	E 300.0		9/21/98	JS		5488	25.0
Sulfate		350	mg/Kg	E 300.0		9/21/98	JS		5488	5.0
TDS		2,700	mg/Kg	E 160.1		9/21/98	RS		5449	---
pH		8.0	s.u.	E 150.1		9/10/98	SA		5271	---
TRPHC		13.5	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Total Phenols		1.8	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25
Total Radium		7.48	pCi/gm	E 901.1M		9/15/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167
Sample Number: 107003

Sample Description: GSB-4 48-50'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.100	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
Benzene		<0.100	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
Toluene		0.400	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
Ethylbenzene		3.21	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
m,p,o-xylene		21.3	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
TRPHC		2,900	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		40	mg/Kg	SM 4500 ClB		9/20/98	JS		5421	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167
Sample Number: 107004

Sample Description: GSB-4 57-59'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.100	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
Benzene		<0.100	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
Toluene		5.54	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
Ethylbenzene		1.79	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
m,p,o-xylene		6.13	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
TRPHC		5,340	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		66	mg/Kg	SM 4500 ClB		9/20/98	JS		5421	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167
Sample Number: 107005

Sample Description: GSB-4D 57-59'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.100	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
Benzene		<0.100	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
Toluene		10.3	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
Ethylbenzene		2.17	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
m,p,o-xylene		9.56	mg/Kg	S 8021B		9/14/98	CS		5321	0.100
TRPHC		5,720	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		77	mg/Kg	SM 4500 ClB		9/20/98	JS		5421	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
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Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167
Sample Number: 107006

Sample Description: TSB-8 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<12,400	ug/Kg	S-8260B		9/9/98	AG		5264	12,400
Acrylonitrile		<12,400	ug/Kg	S-8260B		9/9/98	AG		5264	12,400
Benzene		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Carbon tetrachloride		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Chlorobenzene		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
1,2-dichloroethane		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
1,1,2,2-tetrachloroethane		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
1,1,1-trichloroethane		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
1,1,2-trichloroethane		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
1,1,2-trichloroethylene		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Chloroform		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Dichlorobenzene		<4,960	ug/Kg	S-8260B		9/9/98	AG		5264	4,960
1,1-dichloroethylene		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Dichloropropenes		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Ethylbenzene		12,000	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Bromodichloromethane		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Bromomethane		<12,400	ug/Kg	S-8260B		9/9/98	AG		5264	12,400
Chloromethane		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Dichlorodifluoromethane		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Dichloromethane		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Trichlorofluorometane		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Tetrachloroethylene		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Toluene		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Trichloroethylene		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Vinyl chloride		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
m,p-xylene		36,000	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
o-xylene		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
1,1-dichloroethane		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Ethylene dibromide		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
cis-1,2-dichlorethylene		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
trans-1,2-dichloroethylene		<2,480	ug/Kg	S-8260B		9/9/98	AG		5264	2,480
Methylene chloride		<12,400	ug/Kg	S-8260B		9/9/98	AG		5264	12,400
Dibromofluoromethane		85	%	S-8260B		9/9/98	AG		5264	71-132
Toluene-d8		86	%	S-8260B		9/9/98	AG		5264	82-124
4-Bromofluorobenzene		85	%	S-8260B		9/9/98	AG		5264	76-126
Benzidine		<25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	25
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5

Date: 05-20-99
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Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Corrected

Order ID Number: 9808000167
Sample Number: 107006

Sample Description: TSB-8 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
2,4-dichlorphenol		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
bis (2-chloroethl) ether		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Isophorone		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
2,4-dinitro-o-cresol		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
i-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
N-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Phenol		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Anthracene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Fluorene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Pyrene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
1-methylnaphthalene		5.0	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
2-methylnaphthalene		4.9	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Surr. 2-Fluorophenol	*LSR	9	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	25-121
Surr. Phenol-d6	*LSR	16	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	24-113
Surr. Nitroobenzene-d5		39	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	23-120
Surr. 2-Fluorobiphenyl	*LSR	20	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	30-115
Surr. 2,4,6-Tribromophenol	*LSR	5	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	19-122
Surr. Terphenyl-d14	*LSR	12	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	28-137

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM
Order ID Number: 9808000167
Sample Number: 107006

Sample Description: TSB-8 3-5'

Corrected

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/18/98	9/18/98	RC	5044	5401	0.1
Arsenic		1.4	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Barium		127	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cadmium		0.19	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.10
Chromium		5.8	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Lead		4.1	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Total Mercury		<0.10	mg/Kg	E 7471 A	9/9/98	9/10/98	MS	4917	5275	0.10
Selenium		1.4	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Silver		0.87	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Uranium		<2.0	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Copper		4.1	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Iron		5,300	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Manganese		69	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Zinc		13	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Aluminum		6,200	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Boron		23	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	10
Cobalt		7.9	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Molybdenum		2.1	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Nickel		8	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		6.6	mg/Kg	E 300.0		9/21/98	JS		5489	0.2
Nitrate		3.8	mg/Kg	E 300.0		9/21/98	JS		5489	0.2
Chloride		560	mg/Kg	E 300.0		9/21/98	JS		5489	10.0
Sulfate		71	mg/Kg	E 300.0		9/21/98	JS		5489	1.0
TDS		10,000	mg/Kg	E 160.1		9/21/98	RS		5449	---
pH		9.4	s.u.	E 150.1		9/10/98	SA		5271	---
TRPHC		67,000	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Total Phenols		7.7	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25
Total Radium		8.48	pCi/gm	E 901.1M		9/15/98	DS	---	---	---

*LSR Low surrogate recovery due to matrix.

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
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Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167
Sample Number: 107007

Sample Description: TSB-8D 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<6,250	ug/Kg	S-8260B		9/9/98	AG		5264	6,250
Acrylonitrile		<6,250	ug/Kg	S-8260B		9/9/98	AG		5264	6,250
Benzene		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Carbon tetrachloride		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Chlorobenzene		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
1,2-dichloroethane		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
1,1,2,2-tetrachloroethane		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
1,1,1-trichloroethane		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
1,1,2-trichloroethane		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
1,1,2-trichloroethylene		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Chloroform		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Dichlorobenzene		<2,500	ug/Kg	S-8260B		9/9/98	AG		5264	2,500
1,1-dichloroethylene		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Dichloropropenes		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Ethylbenzene		12,000	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Bromodichloromethane		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Bromomethane		<6,250	ug/Kg	S-8260B		9/9/98	AG		5264	6,250
Chloromethane		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Dichlorodifluoromethane		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Dichloromethane		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Trichlorofluorometane		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Tetrachloroethylene		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Toluene		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Trichloroethylene		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Vinyl chloride		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
m,p-xylene		40,000	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
o-xylene		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
1,1-dichloroethane		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Ethylene dibromide		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
cis-1,2-dichlorethylene		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
trans-1,2-dichloroethylene		<1,250	ug/Kg	S-8260B		9/9/98	AG		5264	1,250
Methylene chloride		<6,250	ug/Kg	S-8260B		9/9/98	AG		5264	6,250
Dibromofluoromethane		81	%	S-8260B		9/9/98	AG		5264	71-132
Toluene-d8		88	%	S-8260B		9/9/98	AG		5264	82-124
4-Bromofluorobenzene		88	%	S-8260B		9/9/98	AG		5264	76-126
Benzidine		<125	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	125
Hexachlorobenzene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Pentachlorobenzene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
1,2,4,5-tetrachlorobenzene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5

Date: 05-20-99
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Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Corrected

Order ID Number: 9808000167
Sample Number: 107007

Sample Description: TSB-8D 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
2,4-dichlorphenol		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
2,4,5-trichlorophenol		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
2,4,6-trichlorophenol		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
bis (2-chloroethl) ether		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
bis (2-chloroisopropyl) ether		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
bis (chloromethyl) ether		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
3,3-dichlorobenzidine		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
2,4-dinitrotoluene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Diphenylhydrazine		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
Hexachlorobutadiene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Hexachlorocyclopentadiene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Isophorone		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
Nitrobenzene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
2,4-dinitrophenols		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
i-nitrosodiethylamine		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
N-nitrosodimethylamine		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
N-nitrosodibutylamine		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
N-nitrosodiphenylamine		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
N-nitrosopyrrolidine		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Pentachlorophenol		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
Phenol		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Dibutyl phthalate		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
di-2-ethylhexyl phthalate		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Diethyl phthalate		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Dimethyl phthalate		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Anthracene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
3,4-benzofluoranthene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Benzo(k)fluoranthene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Fluoranthene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Fluorene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Phenanthrene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Pyrene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Naphthalene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
1-methylnaphthalene		33	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
2-methylnaphthalene		35	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Benzo-a-pyrene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Surr. 2-Fluorophenol		49	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	25-121
Surr. Phenol-d6		29	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	24-113
Surr. Nitroobenzene-d5		80	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	23-120
Surr. 2-Fluorobiphenyl		98	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	30-115
Surr. 2,4,6-Tribromophenol		48	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	19-122
Surr. Terphenyl-d14		87	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	28-137

Quantitation Report

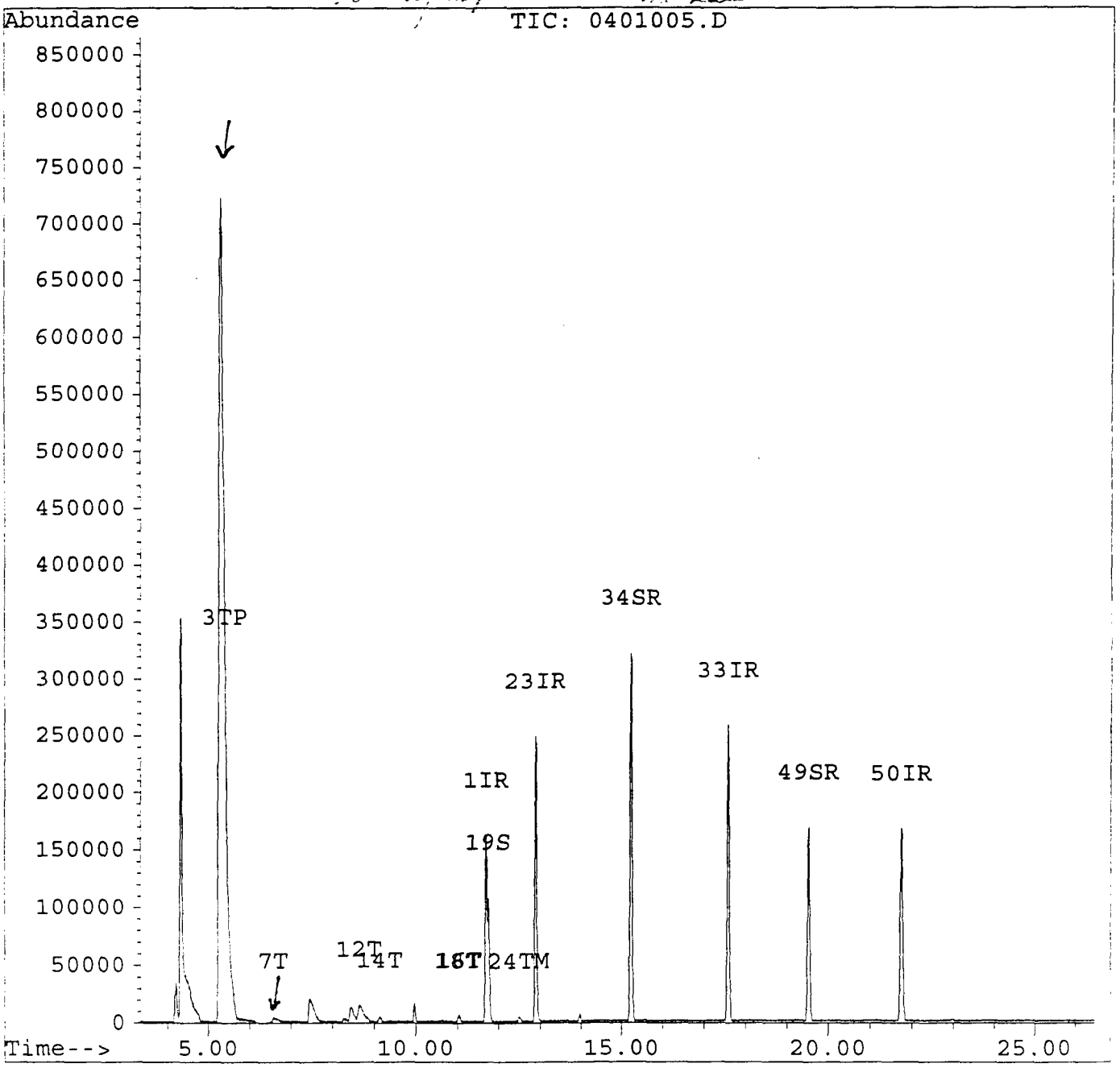
Data File : C:\HPCHEM\1\DATA\OV09208\0401005.D
Acq On : 20 Sep 98 8:21 pm
Sample : 107009 phillips
Misc :
Quant Time: Sep 21 2:17 1998

Vial: 4
Operator:
Inst : 5971
Multiplr: 80.00

TSB-8 40-42

Method : C:\HPCHEM\1\METHODS\8240MB.M
Title : 8240
Last Update : Fri Sep 18 16:46:11 1998
Response via : Multiple Level Calibration

6,600 µg/kg Bromomethane
6,331 µg/kg Chloromethane

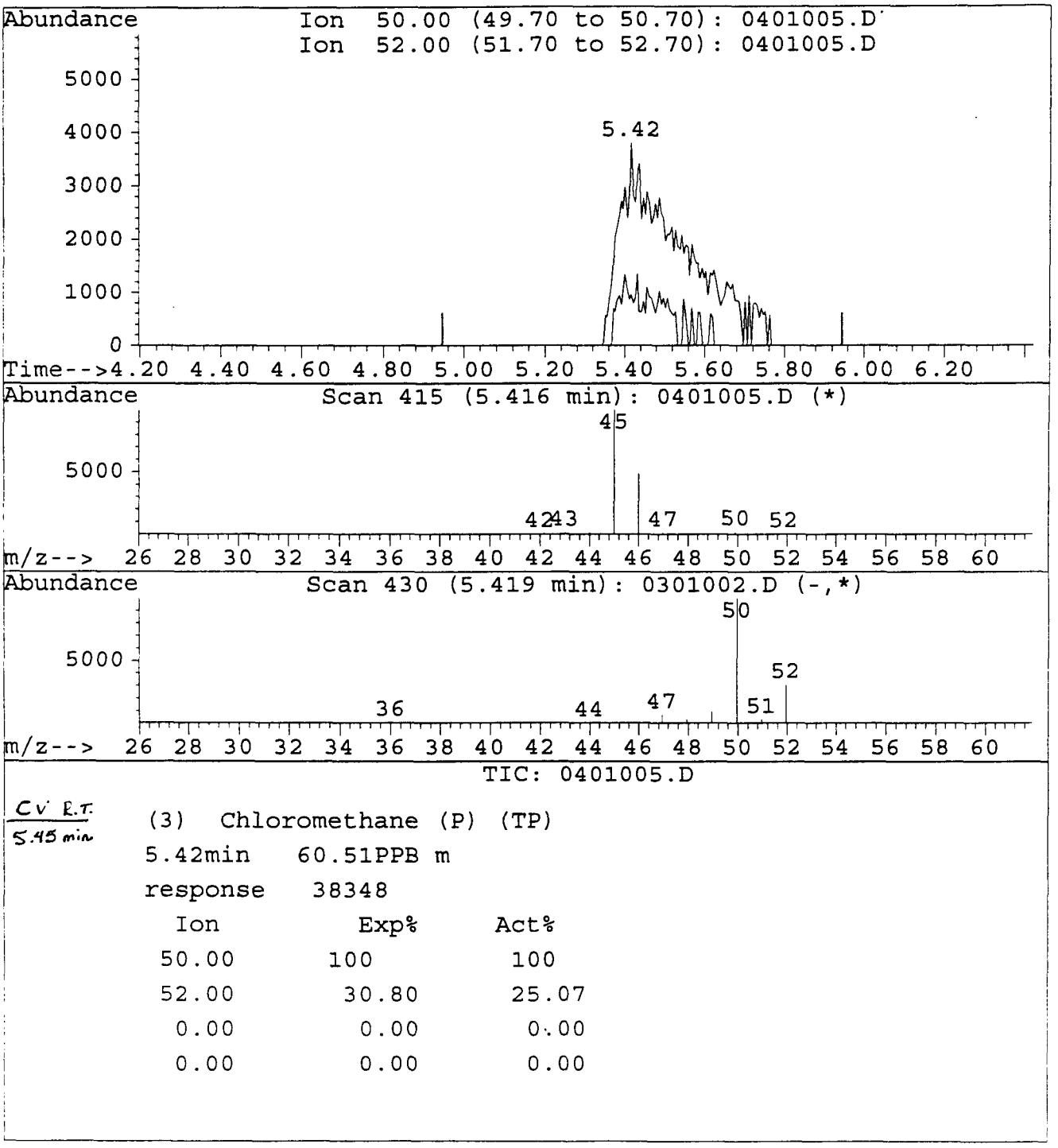


Quantitation Report

Data File : C:\HPCHEM\1\DATA\OV09208\0401005.D
Acq On : 20 Sep 98 8:21 pm
Sample : 107009 phillips
Misc :
Quant Time: Sep 21 2:16 1998

Vial: 4
Operator:
Inst : 5971
Multiplr: 80.00

Method : C:\HPCHEM\1\METHODS\8240MB.M
Title : 8240
Last Update : Fri Sep 18 16:46:11 1998
Response via : Multiple Level Calibration



CV R.T. 5.45 min

(3) Chloromethane (P) (TP)
5.42min 60.51PPB m
response 38348

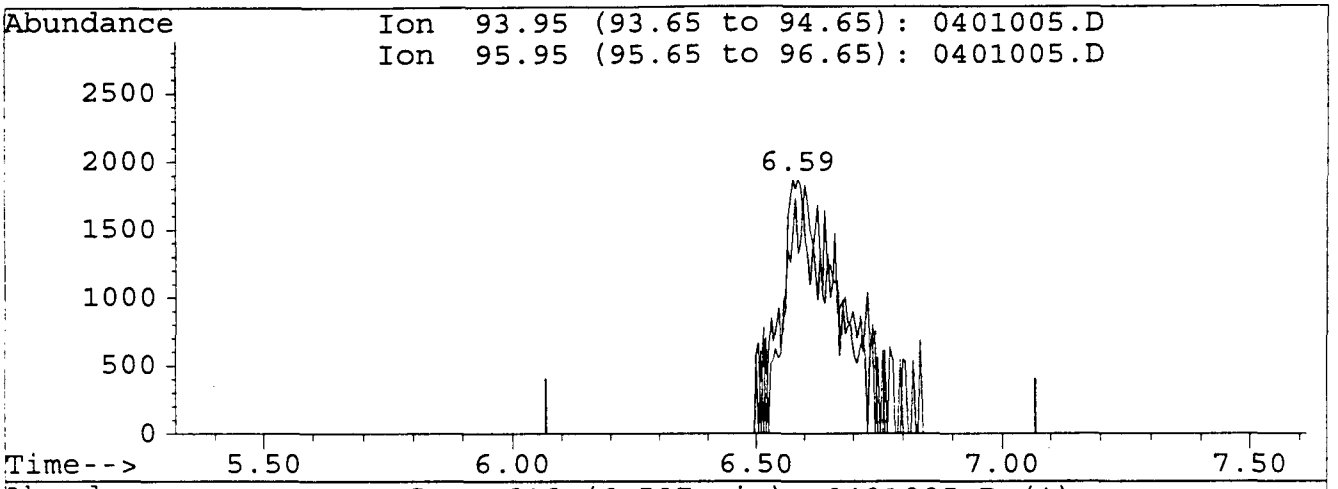
Ion	Exp%	Act%
50.00	100	100
52.00	30.80	25.07
0.00	0.00	0.00
0.00	0.00	0.00

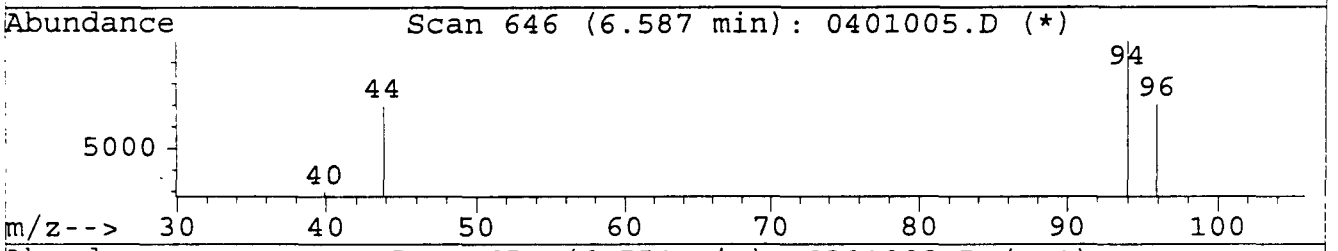
Quantitation Report

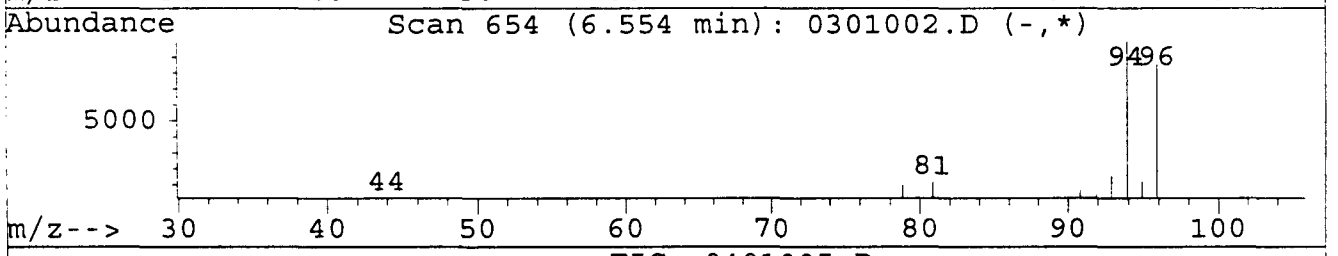
Data File : C:\HPCHEM\1\DATA\OV09208\0401005.D
Acq On : 20 Sep 98 8:21 pm
Sample : 107009 phillips
Misc :
Quant Time: Sep 21 2:17 1998

Vial: 4
Operator:
Inst : 5971
Multiplr: 80.00

Method : C:\HPCHEM\1\METHODS\8240MB.M
Title : 8240
Last Update : Fri Sep 18 16:46:11 1998
Response via : Multiple Level Calibration







TIC: 0401005.D

C.V R.T. 6.60

(7) Bromomethane (T)
6.59min 83.08PPB m
response 16789

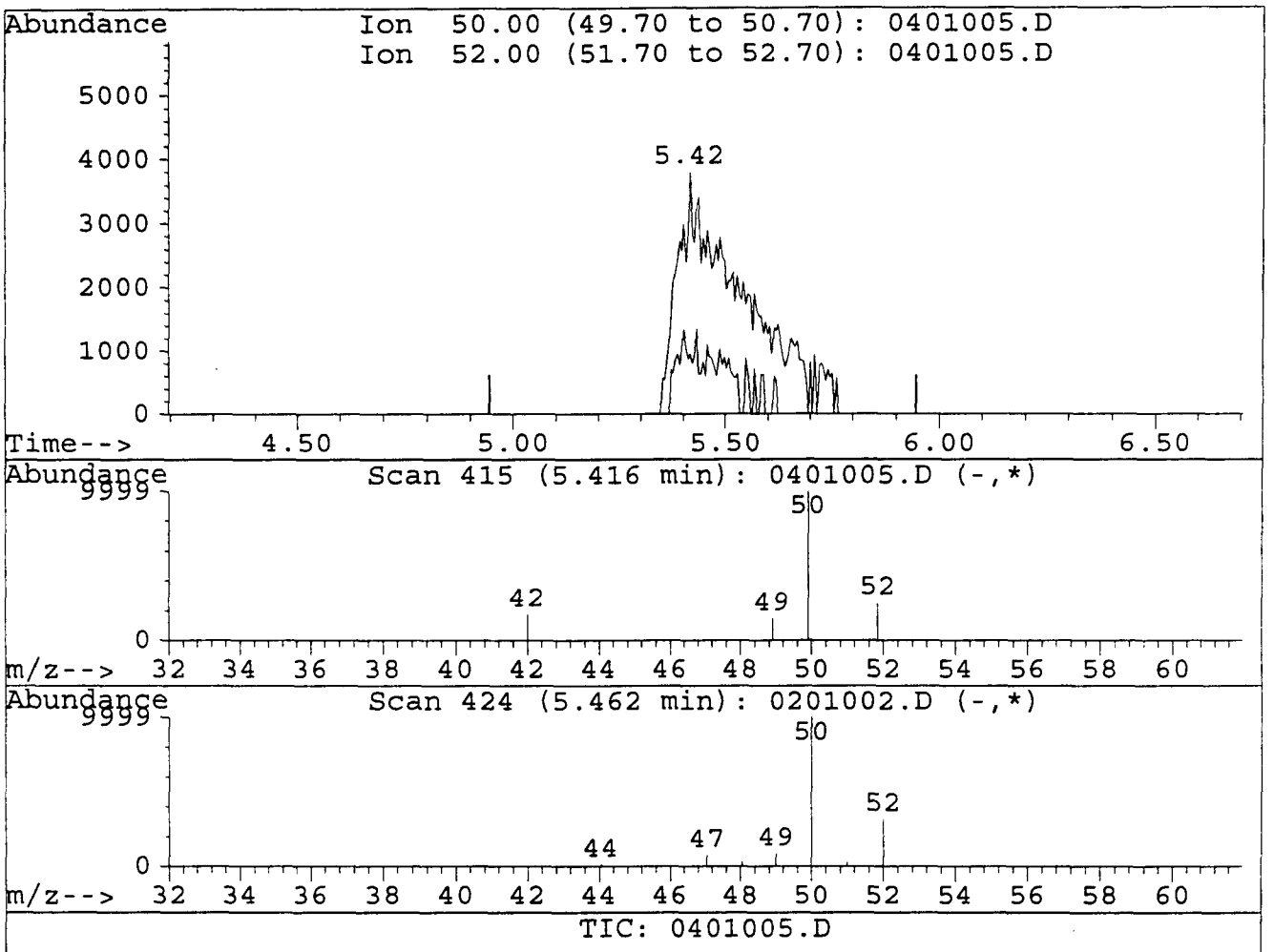
Ion	Exp%	Act%
93.95	100	100
95.95	61.40	70.49
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\HPCHEM\1\DATA\OV09208\0401005.D
Acq On : 20 Sep 98 8:21 pm
Sample : 107009 phillips
Misc :
Quant Time: Sep 21 4:17 1998

Vial: 4
Operator:
Inst : 5971
Multiplr: 80.00

Method : C:\HPCHEM\1\METHODS\8240MB.M
Title : 8240
Last Update : Wed Oct 28 16:35:03 1998
Response via : Multiple Level Calibration



TIC: 0401005.D

(3) Chloromethane (P) (TP)

5.42min 4841.12PPB m

response 38348

Ion	Exp%	Act%
50.00	100	100
52.00	30.80	25.07
0.00	0.00	0.00
0.00	0.00	0.00

Date: 05-20-99
Page # 15
Order ID Number: 9808000167
Sample Number: 107007

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Sample Description: TSB-8D 3-5'

Corrected

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/18/98	9/18/98	RC	5044	5401	0.1
Arsenic		2.3	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Barium		160	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cadmium		<0.10	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.10
Chromium		4.7	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Lead		2.7	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Total Mercury		<0.10	mg/Kg	E 7471 A	9/9/98	9/10/98	MS	4917	5275	0.10
Selenium		1.4	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Silver		<0.50	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Uranium		<2.0	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Copper		3.1	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Iron		4,000	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Manganese		59	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Zinc		11	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Aluminum		4,900	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Boron		16	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	10
Cobalt		7	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Molybdenum		1.8	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Nickel		7.2	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		8.1	mg/Kg	E 300.0		9/21/98	JS		5489	0.2
Nitrate		6	mg/Kg	E 300.0		9/21/98	JS		5489	0.2
Chloride		660	mg/Kg	E 300.0		9/21/98	JS		5489	25.0
Sulfate		180	mg/Kg	E 300.0		9/21/98	JS		5489	2.0
TDS		9,600	mg/Kg	E 160.1		9/21/98	RS		5449	---
pH		7.8	s.u.	E 150.1		9/10/98	SA		5271	---
TRPHC		21,300	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Total Phenols		6.2	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25
Total Radium		6.23	pCi/gm	E 901.1M		9/15/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 16

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167
Sample Number: 107008

Sample Description: TSB-8 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<520	ug/Kg	S-8260B		9/9/98	AG		5264	520
Acrylonitrile		<520	ug/Kg	S-8260B		9/9/98	AG		5264	520
Benzene		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Carbon tetrachloride		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Chlorobenzene		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
1,2-dichloroethane		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
1,1,2,2-tetrachloroethane		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
1,1,1-trichloroethane		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
1,1,2-trichloroethane		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
1,1,2-trichloroethylene		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Chloroform		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Dichlorobenzene		<208	ug/Kg	S-8260B		9/9/98	AG		5264	208
1,1-dichloroethylene		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Dichloropropenes		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Ethylbenzene		2,500	ug/Kg	S-8260B		9/9/98	AG		5264	104
Bromodichloromethane		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Bromomethane		<520	ug/Kg	S-8260B		9/9/98	AG		5264	520
Chloromethane		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Dichlorodifluoromethane		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Dichloromethane		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Trichlorofluorometane		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Tetrachloroethylene		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Toluene		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Trichloroethylene		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Vinyl chloride		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
m,p-xylene		9,800	ug/Kg	S-8260B		9/9/98	AG		5264	104
o-xylene		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
1,1-dichloroethane		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Ethylene dibromide		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
cis-1,2-dichlorethylene		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
trans-1,2-dichloroethylene		<104	ug/Kg	S-8260B		9/9/98	AG		5264	104
Methylene chloride		<520	ug/Kg	S-8260B		9/9/98	AG		5264	520
Dibromofluoromethane		87	%	S-8260B		9/9/98	AG		5264	71-132
Toluene-d8		88	%	S-8260B		9/9/98	AG		5264	82-124
4-Bromofluorobenzene		91	%	S-8260B		9/9/98	AG		5264	76-126
Benzidine		<125	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	125
Hexachlorobenzene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Pentachlorobenzene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
1,2,4,5-tetrachlorobenzene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5

Date: 05-20-99
Page # 17

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Corrected

Order ID Number: 9808000167
Sample Number: 107008

Sample Description: TSB-8 8-10'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
2,4-dichlorphenol		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
2,4,5-trichlorophenol		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
2,4,6-trichlorophenol		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
bis (2-chloroethl) ether		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
bis (2-chloroisopropyl) ether		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
bis (chloromethyl) ether		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
3,3-dichlorobenzidine		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
2,4-dinitrotoluene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Diphenylhydrazine		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
Hexachlorobutadiene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Hexachlorocyclopentadiene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Isophorone		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
Nitrobenzene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
2,4-dinitrophenols		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
i-nitrosodiethylamine		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
N-nitrosodimethylamine		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
N-nitrosodibutylamine		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
N-nitrosodiphenylamine		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
N-nitrosopyrrolidine		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Pentachlorophenol		<62.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	62.5
Phenol		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Dibutyl phthalate		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
di-2-ethylhexyl phthalate		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Diethyl phthalate		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Dimethyl phthalate		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Anthracene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
3,4-benzofluoranthene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Benzo(k)fluoranthene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Fluoranthene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Fluorene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Phenanthrene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Pyrene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Naphthalene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
1-methylnaphthalene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
2-methylnaphthalene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Benzo-a-pyrene		<12.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	12.5
Surr. 2-Fluorophenol		76	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	25-121
Surr. Phenol-d6		50	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	24-113
Surr. Nitroobenzene-d5		100	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	23-120
Surr. 2-Fluorobiphenyl		98	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	30-115
Surr. 2,4,6-Tribromophenol		26	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	19-122
Surr. Terphenyl-d14		88	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	28-137

Date: 05-20-99
Page # 18
Order ID Number: 9808000167
Sample Number: 107008

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Sample Description: TSB-8 8-10'

Corrected

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/18/98	9/18/98	RC	5044	5401	0.1
Arsenic		<0.50	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Barium		99	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cadmium		<0.10	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.10
Chromium		7.3	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Lead		3.4	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Total Mercury		<0.10	mg/Kg	E 7471 A	9/9/98	9/10/98	MS	4917	5275	0.10
Selenium		<0.50	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Silver		<0.50	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Uranium		<2.0	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Copper		2.1	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Iron		6,000	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Manganese		58	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Zinc		14	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Aluminum		7,700	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Boron		21	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	10
Cobalt		8.2	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Molybdenum		2.2	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Nickel		8.8	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		17	mg/Kg	E 300.0		9/21/98	JS		5490	0.2
Nitrate		1.7	mg/Kg	E 300.0		9/21/98	JS		5490	0.2
Chloride		1,900	mg/Kg	E 300.0		9/21/98	JS		5490	25.0
Sulfate		19	mg/Kg	E 300.0		9/21/98	JS		5490	1.0
TDS		3,200	mg/Kg	E 160.1		9/21/98	RS		5449	---
pH		8.6	s.u.	E 150.1		9/10/98	SA		5271	---
TRPHC		15.6	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Total Phenols		2.8	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25
Total Radium		6.23	pCi/gm	E 901.1M		9/15/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 19

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167
Sample Number: 107009

Sample Description: TSB-8 40-42'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<400	ug/Kg	S-8260B		9/20/98	AG		5461	400
Acrylonitrile		<400	ug/Kg	S-8260B		9/20/98	AG		5461	400
Benzene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Carbon tetrachloride		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Chlorobenzene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
1,2-dichloroethane		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
1,1,2,2-tetrachloroethane		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
1,1,1-trichloroethane		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
1,1,2-trichloroethane		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
1,1,2-trichloroethylene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Chloroform		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Dichlorobenzene		<160	ug/Kg	S-8260B		9/20/98	AG		5461	160
1,1-dichloroethylene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Dichloropropenes		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Ethylbenzene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Bromodichloromethane		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Bromomethane		**6,600	ug/Kg	S-8260B		9/20/98	AG		5461	400
Chloromethane		**4,800	ug/Kg	S-8260B		9/20/98	AG		5461	80
Dichlorodifluoromethane		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Dichloromethane		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Trichlorofluorometane		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Tetrachloroethylene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Toluene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Trichloroethylene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Vinyl chloride		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
m,p-xylene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
o-xylene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
1,1-dichloroethane		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Ethylene dibromide		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
cis-1,2-dichlorethylene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
trans-1,2-dichloroethylene		<80	ug/Kg	S-8260B		9/20/98	AG		5461	80
Methylene chloride		<400	ug/Kg	S-8260B		9/20/98	AG		5461	400
Dibromofluoromethane		96	%	S-8260B		9/20/98	AG		5461	71-132
Toluene-d8		102	%	S-8260B		9/20/98	AG		5461	82-124
4-Bromofluorobenzene		101	%	S-8260B		9/20/98	AG		5461	76-126
Benzidine		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167
Sample Number: 107009

Sample Description: TSB-8 40-42'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dinitro-o-cresol		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Phenol		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Surr. 2-Fluorophenol		28	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	25-121
Surr. Phenol-d6		28	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	24-113
Surr. Nitroobenzene-d5		25	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	23-120
Surr. 2-Fluorobiphenyl		32	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	30-115
Surr. 2,4,6-Tribromophenol		28	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	19-122
Surr. Terphenyl-d14		47	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	28-137

Corrected

Date: 05-20-99
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Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167
Sample Number: 107009

Sample Description: TSB-8 40-42'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/15/98	9/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		1.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Barium		730	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cadmium		0.22	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.10
Chromium		6.3	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Lead		3.2	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Total Mercury		<0.10	mg/Kg	E 7471 A	9/9/98	9/10/98	MS	4917	5275	0.10
Selenium		1.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Silver		0.94	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Uranium		<1.0	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Copper		2.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Iron		2,500	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Manganese		44	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Zinc		12	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Aluminum		2,100	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Boron		16	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	10
Cobalt		8.7	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Molybdenum		2.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Nickel		11	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cyanide		<0.010	mg/Kg	M 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		1.5	mg/Kg	E 300.0		9/21/98	JS		5490	0.2
Nitrate		1.7	mg/Kg	E 300.0		9/21/98	JS		5490	0.2
Chloride		550	mg/Kg	E 300.0		9/21/98	JS		5491	10.0
Sulfate		62	mg/Kg	E 300.0		9/21/98	JS		5490	1.0
TDS		1,000	mg/Kg	E 160.1		9/21/98	RS		5449	---
pH		8.4	s.u.	E 150.1		9/10/98	SA		5271	---
TRPHC		15.6	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Total Phenols		0.64	mg/Kg	SM 5530 A,D		9/20/98	RC		5450	0.25
Total Radium		19.93	pCi/gm	E 901.1M		9/15/98	DS	---	---	---

** Sample 107009 result could not be confirmed on bulk soil sample reanalyzed on 12-16-98

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/17/98		5377
Acrylonitrile		<5	ug/L	5	9/17/98		5377
Benzene		<1	ug/L	1	9/17/98		5377
Carbon tetrachloride		<1	ug/L	1	9/17/98		5377
Chlorobenzene		<1	ug/L	1	9/17/98		5377
1,2-dichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/17/98		5377
1,1,1-trichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2-trichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2-trichloroethylene		<1	ug/L	1	9/17/98		5377
Chloroform		<1	ug/L	1	9/17/98		5377
Dichlorobenzene		<2	ug/L	2	9/17/98		5377
1,1-dichloroethylene		<1	ug/L	1	9/17/98		5377
Dichloropropenes		<1	ug/L	1	9/17/98		5377
Ethylbenzene		<1	ug/L	1	9/17/98		5377
Bromodichloromethane		<1	ug/L	1	9/17/98		5377
Bromomethane		<5	ug/L	5	9/17/98		5377
Chloromethane		<1	ug/L	1	9/17/98		5377
Dichlorodifluoromethane		<1	ug/L	1	9/17/98		5377
Dichloromethane		<1	ug/L	1	9/17/98		5377
Trichlorofluoromethane		<1	ug/L	1	9/17/98		5377
Tetrachloroethylene		<1	ug/L	1	9/17/98		5377
Toluene		<1	ug/L	1	9/17/98		5377
Trichloroethylene		<1	ug/L	1	9/17/98		5377
Vinyl chloride		<1	ug/L	1	9/17/98		5377
m,p-xylene		<1	ug/L	1	9/17/98		5377
o-xylene		<1	ug/L	1	9/17/98		5377
1,1-dichloroethane		<1	ug/L	1	9/17/98		5377
Ethylene dibromide		<1	ug/L	1	9/17/98		5377
cis-1,2-dichlorethylene		<1	ug/L	1	9/17/98		5377
trans-1,2-dichloroethylene		<1	ug/L	1	9/17/98		5377
Methylene chloride		<5	ug/L	5	9/17/98		5377
Surr. Dibromofluoromethane		107	%	71-132	9/17/98		5377
Surr. Toluene-d8		112	%	82-124	9/17/98		5377
Surr. 4-Bromofluorobenzene		110	%	76-126	9/17/98		5377
Acrolein		<125	ug/Kg	125	9/9/98		5264
Acrylonitrile		<125	ug/Kg	125	9/9/98		5264
Benzene		<25	ug/Kg	25	9/9/98		5264
Carbon tetrachloride		<25	ug/Kg	25	9/9/98		5264
Chlorobenzene		<25	ug/Kg	25	9/9/98		5264
1,2-dichloroethane		<25	ug/Kg	25	9/9/98		5264

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Date: 10-1-98

Order ID Number: 9808000167

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/9/98		5264
1,1,1-trichloroethane		<25	ug/Kg	25	9/9/98		5264
1,1,2-trichloroethane		<25	ug/Kg	25	9/9/98		5264
1,1,2-trichloroethylene		<25	ug/Kg	25	9/9/98		5264
Chloroform		<25	ug/Kg	25	9/9/98		5264
Dichlorobenzene		<50	ug/Kg	50	9/9/98		5264
1,1-dichloroethylene		<25	ug/Kg	25	9/9/98		5264
Dichloropropenes		<25	ug/Kg	25	9/9/98		5264
Ethylbenzene		<25	ug/Kg	25	9/9/98		5264
Bromodichloromethane		<25	ug/Kg	25	9/9/98		5264
Bromomethane		<125	ug/Kg	125	9/9/98		5264
Chloromethane		<25	ug/Kg	25	9/9/98		5264
Dichlorodifluoromethane		<25	ug/Kg	25	9/9/98		5264
Dichloromethane		<25	ug/Kg	25	9/9/98		5264
Trichlorofluoromethane		<25	ug/Kg	25	9/9/98		5264
Tetrachloroethylene		<25	ug/Kg	25	9/9/98		5264
Toluene		<25	ug/Kg	25	9/9/98		5264
Trichloroethylene		<25	ug/Kg	25	9/9/98		5264
Vinyl chloride		<25	ug/Kg	25	9/9/98		5264
m,p-xylene		<25	ug/Kg	25	9/9/98		5264
o-xylene		<25	ug/Kg	25	9/9/98		5264
1,1-dichloroethane		<25	ug/Kg	25	9/9/98		5264
Ethylene dibromide		<25	ug/Kg	25	9/9/98		5264
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/9/98		5264
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/9/98		5264
Methylene chloride		<125	ug/Kg	125	9/9/98		5264
Surr. Dibromofluoromethane		83	%	71-132	9/9/98		5264
Surr. Toluene-d8		84	%	82-124	9/9/98		5264
Surr. 4-Bromofluorobenzene		85	%	76-126	9/9/98		5264
Acrolein		<125	ug/Kg	125	9/20/98		5461
Acrylonitrile		<125	ug/Kg	125	9/20/98		5461
Benzene		<25	ug/Kg	25	9/20/98		5461
Carbon tetrachloride		<25	ug/Kg	25	9/20/98		5461
Chlorobenzene		<25	ug/Kg	25	9/20/98		5461
1,2-dichloroethane		<25	ug/Kg	25	9/20/98		5461
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/20/98		5461
1,1,1-trichloroethane		<25	ug/Kg	25	9/20/98		5461
1,1,2-trichloroethane		<25	ug/Kg	25	9/20/98		5461
1,1,2-trichloroethylene		<25	ug/Kg	25	9/20/98		5461
Chloroform		<25	ug/Kg	25	9/20/98		5461
Dichlorobenzene		<50	ug/Kg	50	9/20/98		5461
1,1-dichloroethylene		<25	ug/Kg	25	9/20/98		5461
Dichloropropenes		<25	ug/Kg	25	9/20/98		5461
Ethylbenzene		<25	ug/Kg	25	9/20/98		5461
Bromodichloromethane		<25	ug/Kg	25	9/20/98		5461
Bromomethane		<125	ug/Kg	125	9/20/98		5461

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Chloromethane		<25	ug/Kg	25	9/20/98		5461
Dichlorodifluoromethane		<25	ug/Kg	25	9/20/98		5461
Dichloromethane		<25	ug/Kg	25	9/20/98		5461
Trichlorofluoromethane		<25	ug/Kg	25	9/20/98		5461
Tetrachloroethylene		<25	ug/Kg	25	9/20/98		5461
Toluene		<25	ug/Kg	25	9/20/98		5461
Trichloroethylene		<25	ug/Kg	25	9/20/98		5461
Vinyl chloride		<25	ug/Kg	25	9/20/98		5461
m,p-xylene		<25	ug/Kg	25	9/20/98		5461
o-xylene		<25	ug/Kg	25	9/20/98		5461
1,1-dichloroethane		<25	ug/Kg	25	9/20/98		5461
Ethylene dibromide		<25	ug/Kg	25	9/20/98		5461
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/20/98		5461
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/20/98		5461
Methylene chloride		<125	ug/Kg	125	9/20/98		5461
Surr. Dibromofluoromethane		101	%	71-132	9/20/98		5461
Surr. Toluene-d8		99	%	82-124	9/20/98		5461
Surr. 4-Bromofluorobenzene		102	%	76-126	9/20/98		5461
PCB		0.1	mg/Kg	0.1	9/18/98	5044	5401
Cyanide		<0.01	mg/Kg	0.01	9/15/98		5330
Cyanide		<0.01	mg/Kg	0.01	9/15/98		5332
Total Mercury		<0.10	mg/Kg	<0.10	9/10/98	4917	5275
Arsenic		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Barium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Cadmium		<0.10	mg/Kg	0.10	9/18/98	5090	5402
Chromium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Lead		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Selenium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Silver		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Uranium		<2.0	mg/Kg	2.0	9/18/98	5090	5402
Copper		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Iron		<10	mg/Kg	10	9/20/98	5090	5461
Manganese		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Zinc		<2.0	mg/Kg	2.0	9/18/98	5090	5402
Aluminum		<10	mg/Kg	10	9/20/98	5090	5461
Boron		<10	mg/Kg	10	9/18/98	5090	5402
Cobalt		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Molybdenum		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Nickel		<0.50	mg/Kg	0.50	9/18/98	5090	5402
TRPHC		<10.0	mg/Kg	10	9/15/98	4988	5324
Benzidine		<2.5	mg/Kg	2.5	9/18/98	5030	5410
Hexachlorobenzene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Pentachlorobenzene		<0.25	mg/Kg	0.25	9/18/98	5030	5410

Order ID Number: 9808000167

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Hexachloroethane		<0.25	mg/Kg	0.25	9/18/98	5030	5410
2,4-dichlorophenol		<1.25	mg/Kg	1.25	9/18/98	5030	5410
2,4,5-trichlorophenol		<1.25	mg/Kg	1.25	9/18/98	5030	5410
2,4,6-trichlorophenol		<1.25	mg/Kg	1.25	9/18/98	5030	5410
bis (2-chloroethl) ether		<1.25	mg/Kg	1.25	9/18/98	5030	5410
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	1.25	9/18/98	5030	5410
bis (chloromethyl) ether		<1.25	mg/Kg	1.25	9/18/98	5030	5410
3,3-dichlorobenzidine		<1.25	mg/Kg	1.25	9/18/98	5030	5410
2,4-dinitrotoluene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Diphenylhydrazine		<1.25	mg/Kg	1.25	9/18/98	5030	5410
Hexachlorobutadiene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Hexachlorocyclopentadiene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Isophorone		<1.25	mg/Kg	1.25	9/18/98	5030	5410
Nitrobenzene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
2,4-dinitro-o-cresol		<0.25	mg/Kg	0.25	9/18/98	5030	5410
2,4-dinitrophenols		<1.25	mg/Kg	1.25	9/18/98	5030	5410
i-nitrosodiethylamine		<0.25	mg/Kg	0.25	9/18/98	5030	5410
N-nitrosodimethylamine		<0.25	mg/Kg	0.25	9/18/98	5030	5410
-nitrosodibutylamine		<1.25	mg/Kg	1.25	9/18/98	5030	5410
N-nitrosodiphenylamine		<0.25	mg/Kg	0.25	9/18/98	5030	5410
N-nitrosopyrrolidine		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Pentachlorophenol		<1.25	mg/Kg	1.25	9/18/98	5030	5410
Phenol		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Dibutyl phthalate		<0.25	mg/Kg	0.25	9/18/98	5030	5410
bis(2-ethylhexyl) phthalate		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Diethyl phthalate		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Dimethyl phthalate		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Anthracene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Fluoranthene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Fluorene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Phenanthrene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Pyrene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Naphthalene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
1-methylnaphthalene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
2-methylnaphthalene		<50	mg/Kg	0.25	9/18/98	5030	5410
Benzo-a-pyrene		<50	mg/Kg	0.25	9/18/98	5030	5410
Surr. 2-Fluorophenol		52	%	25-121	9/18/98	5030	5410
Surr. Phenol-d6		61	%	24-113	9/18/98	5030	5410
Surr. Nitroobenzene-d5		55	%	23-120	9/18/98	5030	5410
Surr. 2-Fluorobiphenyl		62	%	30-115	9/18/98	5030	5410
Surr. 2,4,6-Tribromophenol		86	%	19-122	9/18/98	5030	5410
Surr. Terphenyl-d14		67	%	28-137	9/18/98	5030	5410
MTBE		<0.050	mg/Kg	0.05	9/14/98		5321

Order ID Number: 9808000167

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Benzene		<0.050	mg/Kg	0.05	9/14/98		5321
Toluene		<0.050	mg/Kg	0.05	9/14/98		5321
Ethylbenzene		<0.050	mg/Kg	0.05	9/14/98		5321
m,p,o-xylene		<0.050	mg/Kg	0.05	9/14/98		5321
Chloride		<2.0	mg/Kg	2	9/20/98		5421
Total Phenols		<0.25	mg/Kg	0.25	9/20/98		5450
Total Phenols		<0.25	mg/Kg	0.25	9/20/98		5451
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5488
Chloride		<1.0	mg/Kg	1.0	9/21/98		5488
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5488
Sulfate		<1.0	mg/Kg	1.0	9/21/98		5488
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5489
Chloride		<1.0	mg/Kg	1.0	9/21/98		5489
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5489
Sulfate		<1.0	mg/Kg	1.0	9/21/98		5489
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5490
Chloride		<1.0	mg/Kg	1.0	9/21/98		5490
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5490
Sulfate		<1.0	mg/Kg	1.0	9/21/98		5490
Chloride		<1.0	mg/Kg	1.0	9/21/98		5491

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	120	120	9/14/98	5377
1,1-Dichloroethene		100	ug/L	118	118	9/14/98	5377
Chloroform		100	ug/L	116	116	9/14/98	5377
1,2-Dichloropropane		100	ug/L	114	114	9/14/98	5377
Toluene		100	ug/L	115	115	9/14/98	5377
Chlorobenzene		100	ug/L	113	113	9/14/98	5377
Ethylbenzene		100	ug/L	114	114	9/14/98	5377
Vinyl chloride		100	ug/L	117	117	9/20/98	5461
1,1-Dichloroethene		100	ug/L	119	119	9/20/98	5461
Chloroform		100	ug/L	109	109	9/20/98	5461
1,2-Dichloropropane		100	ug/L	107	107	9/20/98	5461
Toluene		100	ug/L	116	116	9/20/98	5461
Chlorobenzene		100	ug/L	112	112	9/20/98	5461
Ethylbenzene		100	ug/L	120	120	9/20/98	5461
PCB		0.40	mg/L	0.41	103	9/18/98	5401
Cyanide		0.12	mg/L	0.11	92	9/15/98	5330
Cyanide		0.12	mg/L	0.11	92	9/15/98	5332
Total Mercury		5.0	mg/L	4.8	96	9/10/98	5275
Arsenic		1.0	mg/L	1.0	100	9/18/98	5402
Barium		1.0	mg/L	0.99	99	9/18/98	5402
Cadmium		1.0	mg/L	1.0	100	9/18/98	5402
Chromium		1.0	mg/L	1.0	100	9/18/98	5402
Lead		1.0	mg/L	1.0	100	9/18/98	5402
Selenium		1.0	mg/L	0.99	99	9/18/98	5402
Silver		1.0	mg/L	1.0	100	9/18/98	5402
Uranium		1.0	mg/L	0.98	98	9/18/98	5402
Copper		1.0	mg/L	0.99	99	9/18/98	5402
Iron		100.0	mg/L	106.0	106	9/20/98	5461
Manganese		1.0	mg/L	0.99	99	9/18/98	5402
Zinc		1.0	mg/L	1.0	100	9/18/98	5402
Aluminum		250.0	mg/L	251.0	100	9/20/98	5461
Boron		1.0	mg/L	0.99	99	9/18/98	5402
Cobalt		1.0	mg/L	1.0	100	9/18/98	5402
Molybdenum		1.0	mg/L	0.96	96	9/18/98	5402
Nickel		1.0	mg/L	0.99	99	9/18/98	5402
Vinyl chloride		100	ug/L	85	85	9/9/98	5264
1,1-Dichloroethene		100	ug/L	94	94	9/9/98	5264
Chloroform		100	ug/L	83	83	9/9/98	5264
1,2-Dichloropropane		100	ug/L	86	86	9/9/98	5264
Toluene		100	ug/L	96	96	9/9/98	5264

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000167

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Chlorobenzene		100	ug/L	99	99	9/9/98	5264
Ethylbenzene		100	ug/L	99	99	9/9/98	5264
Fluoride		2.5	mg/L	2.49	100	9/21/98	5488
Chloride		12.5	mg/L	12.755	102	9/21/98	5488
Nitrate		5	mg/L	5.08	102	9/21/98	5488
Sulfate		12.5	mg/L	13.15	105	9/21/98	5488
Fluoride		2.5	mg/L	2.49	100	9/21/98	5489
Chloride		12.5	mg/L	12.67	101	9/21/98	5489
Nitrate		5	mg/L	5.09	101	9/21/98	5489
Sulfate		12.5	mg/L	13.15	105	9/21/98	5489
Fluoride		2.5	mg/L	2.47	100	9/21/98	5490
Chloride		12.5	mg/L	12.31	98	9/21/98	5490
Nitrate		5	mg/L	5.08	101	9/21/98	5490
Sulfate		12.5	mg/L	12.895	103	9/21/98	5490
Chloride		12.5	mg/L	12.63	101	9/21/98	5491
TRPHC		100	mg/L	103	103	9/15/98	5324
Phenol		80	mg/L	81	101	9/18/98	5410
,4-Dichlorobenzene		80	mg/L	78	98	9/18/98	5410
-nitrophenol		80	mg/L	81	101	9/18/98	5410
2,4-Dichlorophenol		80	mg/L	87	109	9/18/98	5410
Hexachlorobutadiene		80	mg/L	80	100	9/18/98	5410
4-Chloro-3-methylphenol		80	mg/L	70	88	9/18/98	5410
2,4,6-Trichlorophenol		80	mg/L	84	105	9/18/98	5410
Acenaphthene		80	mg/L	84	105	9/18/98	5410
n-Nitrosodiphenylamine		80	mg/L	74	93	9/18/98	5410
Pentachlorophenol		80	mg/L	76	95	9/18/98	5410
Fluoranthene		80	mg/L	70	88	9/18/98	5410
Di-n-octylphthalate		80	mg/L	74	93	9/18/98	5410
Benzo(a)pyrene		80	mg/L	75	94	9/18/98	5410
pH		7.0	s.u.	7.0	100	9/10/98	5271
MTBE		0.100	mg/L	0.089	89	9/14/98	5321
Benzene		0.100	mg/L	0.091	91	9/14/98	5321
Toluene		0.100	mg/L	0.089	89	9/14/98	5321
Ethylbenzene		0.100	mg/L	0.092	92	9/14/98	5321
m,p,o-xylene		0.300	mg/L	0.269	90	9/14/98	5321
Chloride		500	mg/L	499	100	9/20/98	5421
TDS		1,000	mg/L	976	98	9/21/98	5449
Total Phenols		0.80	mg/L	0.79	99	9/20/98	5450
Total Phenols		0.80	mg/L	0.80	100	9/20/98	5451

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 29

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	136	136	100	119	119	13	9/17/98		5377
Benzene		ug/L	<1	100	121	121	100	110	110	95	9/17/98		5377
Trichloroethene		ug/L	<1	100	122	122	100	111	111	9.4	9/17/98		5377
Toluene		ug/L	<1	100	116	116	100	106	106	9.9	9/17/98		5377
Chlorobenzene		ug/L	<1	100	104	104	100	94	94	10.0	9/17/98		5377
PCB		mg/Kg	<0.1	0.40	0.43	108	0.40	0.45	113	4.5	9/18/98	5044	5401
Cyanide		mg/Kg	<0.01	0.12	0.11	92	0.12	0.10	83	10	9/15/98		5330
Cyanide		mg/Kg	<0.01	0.12	0.10	83	0.12	0.09	75	10	9/15/98		5332
1,1-Dichloroethene		ug/Kg	<25	100	80	80	100	81	81	1.2	9/9/98		5264
Benzene		ug/Kg	<25	100	86	86	100	83	83	3.6	9/9/98		5264
Trichloroethene		ug/Kg	<25	100	92	92	100	90	90	2.2	9/9/98		5264
Toluene		ug/Kg	<25	100	83	83	100	80	80	3.7	9/9/98		5264
Chlorobenzene		ug/Kg	<25	100	82	82	100	80	80	2.5	9/9/98		5264
1,1-Dichloroethene		mg/Kg	<25	100	127	127	100	127	127	0	9/20/98		5461
Benzene		mg/Kg	<25	100	121	121	100	124	124	2.4	9/20/98		5461
Trichloroethene		mg/Kg	<25	100	124	124	100	124	124	0	9/20/98		5461
Toluene		mg/Kg	<25	100	116	116	100	119	119	2.6	9/20/98		5461
Chlorobenzene		mg/Kg	<25	100	106	106	100	106	106	0	9/20/98		5461
Total Mercury		mg/Kg	<0.10	2.5	2.7	108	2.5	2.7	108	0	9/10/98	4917	5275
TRPHC		mg/Kg	<10.0	250	205	82	250	235	94	14	9/15/98	4988	5324
Phenol		mg/Kg	<0.25	10.00	5.56	56	10.00	5.94	59	5.2	9/18/98	5030	5410
2-Chlorophenol		mg/Kg	<1.25	10.00	5.52	55	10.00	5.74	57	3.6	9/18/98	5030	5410
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	6.58	66	10.00	6.85	69	4.4	9/18/98	5030	5410
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	7.21	72	10.00	8.33	83	14	9/18/98	5030	5410
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	6.36	64	10.00	6.75	68	6.1	9/18/98	5030	5410
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	5.25	53	10.00	5.86	59	11	9/18/98	5030	5410
Acenaphthene		mg/Kg	<0.25	10.00	6.77	68	10.00	7.24	72	5.7	9/18/98	5030	5410
4-Nitrophenol		mg/Kg	<1.25	10.00	3.9	39	10.00	4.49	45	14	9/18/98	5030	5410
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	5.74	57	10.00	6.42	64	12	9/18/98	5030	5410
Pentachlorophenol		mg/Kg	<1.25	10.00	3.76	38	10.00	4.55	46	19	9/18/98	5030	5410
Pyrene		mg/Kg	<0.25	10.00	5.76	58	10.00	6.34	63	8.3	9/18/98	5030	5410
MTBE		mg/Kg	<0.050	5	5.12	102	5	5.26	105	2.9	9/14/98		5321
Benzene		mg/Kg	<0.050	5	5.42	108	5	5.51	110	1.8	9/14/98		5321
Toluene		mg/Kg	<0.050	5	5.39	108	5	5.5	110	1.8	9/14/98		5321
Ethylbenzene		mg/Kg	<0.050	5	5.57	111	5	5.66	113	1.8	9/14/98		5321
m,p,o-xylene		mg/Kg	0.159	15	16.5	109	15	16.9	112	2.7	9/14/98		5321
Chloride		mg/Kg	54	4,000	4,251	105	4,000	4,262	105	0	9/20/98		5421
Total Phenols		mg/Kg	6.2	20	26.1	100	20	26.7	102	2.0	9/20/98		5450
Total Phenols		mg/Kg	2.8	20	22.9	101	20	23.3	103	2.0	9/20/98		5451
Arsenic		mg/Kg	<0.50	200	167	84	200	168	84	0	9/18/98	5090	5402
Barium		mg/Kg	<0.50	200	182	91	200	184	92	1.1	9/18/98	5090	5402
Cadmium		mg/Kg	<0.10	200	175	88	200	173	87	1.1	9/18/98	5090	5402

Order ID Number: 9808000167

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Chromium		mg/Kg	<0.50	200	182	91	200	182	91	0	9/18/98	5090	5402
Lead		mg/Kg	<0.50	200	175	88	200	173	87	1.1	9/18/98	5090	5402
Selenium		mg/Kg	<0.50	200	165	83	200	161	81	2.4	9/18/98	5090	5402
Silver		mg/Kg	<0.50	350	350	100	350	413	118	17	9/18/98	5090	5402
Uranium		mg/Kg	<2.0	200	192	96	200	190	95	1.0	9/18/98	5090	5402
Copper		mg/Kg	<1.0	200	175	88	200	176	88	0	9/18/98	5090	5402
Manganese		mg/Kg	<1.0	200	179	90	200	178	89	1.1	9/18/98	5090	5402
Zinc		mg/Kg	<2.0	200	178	89	200	176	88	1.1	9/18/98	5090	5402
Boron		mg/Kg	<10	200	170	85	200	166	83	2.4	9/18/98	5090	5402
Cobalt		mg/Kg	<0.50	200	175	88	200	179	90	2.2	9/18/98	5090	5402
Molybdenum		mg/Kg	<1.0	200	176	88	200	173	87	1.1	9/18/98	5090	5402
Nickel		mg/Kg	<0.50	200	172	86	200	173	87	1.2	9/18/98	5090	5402
Aluminum		mg/Kg	<10	200	165	83	200	169	85	2.4	9/20/98	5090	5461
Iron		mg/Kg	<10	200	160	80	200	157	79	1.3	9/20/98	5090	5461
Fluoride		mg/Kg	6.5	5	10.93	89	5	10.93	89	0	9/21/98		5488
Chloride		mg/Kg	8.9	25	32.51	94	25	32.51	94	0	9/21/98		5488
Nitrate		mg/Kg	1.7	10	11.48	98	10	11.85	102	4.0	9/21/98		5488
Sulfate		mg/Kg	18	25	44.27	105	25	44.48	106	0.95	9/21/98		5488
Fluoride		mg/Kg	2.45	5	7.27	96	5	7.39	99	3.1	9/21/98		5489
Chloride		mg/Kg	39.9	25	64.49	98	25	64.26	97	1.0	9/21/98		5489
Nitrate		mg/Kg	<0.2	10	10.72	107	10	10.81	108	0.93	9/21/98		5489
Sulfate		mg/Kg	93.1	25	116.26	93	25	113.95	84	10	9/21/98		5489
Fluoride		mg/Kg	5.92	5	10.84	98	5	10.91	100	2.0	9/21/98		5490
Chloride		mg/Kg	86.77	25	107.83	84	25	106.85	101	18	9/21/98		5490
Nitrate		mg/Kg	<0.2	10	11.29	113	10	11.54	115	1.8	9/21/98		5490
Sulfate		mg/Kg	27.22	25	54.06	107	25	53.18	104	2.8	9/21/98		5490
Chloride		mg/Kg	168.9	25	193.53	99	25	187.55	75	3.1	9/21/98		5491

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	7.8	7.7	1.30	9/10/98		5271
TDS		mg/Kg	1100	1080	1.8	9/21/98		5449

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

TraceAnalysis, Inc.
Nell Green
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0914	**P.O. Number:**	
Client I.D.:	107002	**ARS Sample I.D.:**	ARS-98-3345
Date Sampled:	9/4/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1000
Type of Sample:	Solid	**Date of Report:**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.70	1.25	pCi/gm	0.063	0.046	Bq/gm	EPA 901.1M	9/15/98 1015	kh
Ra-228	0.40	0.23	pCi/gm	0.015	0.009	Bq/gm	EPA 901.1M	9/15/98 1015	kh
Pb-210	1.89	1.61	pCi/gm	0.070	0.060	Bq/gm	EPA 901.1M	9/15/98 1015	kh
Total Activity	7.48	N/A	pCi/gm	0.277	N/A	Bq/gm	EPA 901.1M	9/15/98 1015	kh

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0914	**P.O. Number:**	
Client I.D.:	107006	**ARS Sample I.D.:**	ARS-98-3346
Date Sampled:	9/4/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1000
Type of Sample:	Solid	**Date of Report:**	9/15/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Analysis Units	Analysis Result	Analysis Error $\pm 2\sigma$	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.90	N/A	pCi/gm	<0.033	N/A	Bq/gm	EPA 901.1M	9/15/98 1047	kh
Ra-228	<0.10	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	9/15/98 1047	kh
Pb-210	<0.98	N/A	pCi/gm	<0.036	N/A	Bq/gm	EPA 901.1M	9/15/98 1047	kh
Total Activity	8.48	N/A	pCi/gm	0.314	N/A	Bq/gm	EPA 901.1M	9/15/98 1047	kh

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0914	**P.O. Number:**	
Client I.D.:	107007	**ARS Sample I.D.:**	ARS-98-3347
Date Sampled:	9/4/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1000
Type of Sample:	Solid	**Date of Report:**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.95	1.43	pCi/gm	0.072	0.053	Bq/gm	EPA 901.1M	9/15/98 1119	kh
Ra-228	<0.10	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	9/15/98 1119	kh
Pb-210	<0.79	N/A	pCi/gm	<0.029	N/A	Bq/gm	EPA 901.1M	9/15/98 1119	kh
Total Activity	6.23	N/A	pCi/gm	0.230	N/A	Bq/gm	EPA 901.1M	9/15/98 1119	kh

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0914	**P.O. Number:**	
Client I.D.:	107008	**ARS Sample I.D.:**	ARS-98-3348
Date Sampled:	9/4/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1000
Type of Sample:	Solid	**Date of Report:**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.96	N/A	pCi/gm	<0.036	N/A	Bq/gm	EPA 901.1M	9/15/98 1151	kh
Ra-228	0.43	0.24	pCi/gm	0.016	0.009	Bq/gm	EPA 901.1M	9/15/98 1151	kh
Pb-210	<1.39	N/A	pCi/gm	<0.051	N/A	Bq/gm	EPA 901.1M	9/15/98 1151	kh
Total Activity	10.25	N/A	pCi/gm	0.379	N/A	Bq/gm	EPA 901.1M	9/15/98 1151	kh

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0914	**P.O. Number:**	
Client I.D.:	107009	**ARS Sample I.D.:**	ARS-98-3349
Date Sampled:	9/4/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1000
Type of Sample:	Solid	**Date of Report:**	9/15/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	4.36	1.85	pCi/gm	0.161	0.068	Bq/gm	EPA 901.1M	9/15/98 1253	kh
Ra-228	0.43	0.22	pCi/gm	0.016	0.008	Bq/gm	EPA 901.1M	9/15/98 1253	kh
Pb-210	4.13	1.72	pCi/gm	0.153	0.064	Bq/gm	EPA 901.1M	9/15/98 1253	kh
Total Activity	19.93	N/A	pCi/gm	0.737	N/A	Bq/gm	EPA 901.1M	9/15/98 1253	kh

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.
1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

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TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 167

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 I-H 20 West, Midland, Texas 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Shell Grimes
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
107002	GSB-4 (2-3')	5	4oz Jars		✓					✓			09/04/98	1025
	GSB-4 (2-3')	1	40ml VOA		✓							✓	09/04/98	1025
3	GSB-4 (48-50')	2	4oz Jars		✓					✓			09/04/98	1420
4	GSB-4 (57-59')	2	4oz Jars		✓					✓			09/04/98	1451
5	GSB-4D (57-59')	2	4oz Jars		✓					✓			09/04/98	
107010	Field Blank	2	40ml VOA	✓				✓					09/04/98	1630
11	Trip Blank	2	40ml VOA	✓						✓			09/04/98	
6	TSB-8 (3-5')	5	4oz Jars		✓								09/04/98	1537
	TSB-8 (3-5')	1	40ml VOA		✓							✓	09/04/98	1537
7	TSB-8D (3-5')	5	4oz Jars		✓					✓			09/04/98	
	TSB-8D (3-5')	1	40ml VOA		✓							✓	09/04/98	

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	See Attached Chlorides (300) VOCs		Turn Around Time if different from standard.	Hold
		✓												✓			
															✓		
	✓	✓												✓			
	✓	✓												✓			
	✓	✓												✓			
														✓			
														✓			
														✓			
		✓												✓			
															✓		
		✓												✓			
															✓		

Relinquished by: Jeffrey Kindley Date: 09/08/98 Time: 2:45 PM
Received by: Helen Shelton Date: 9/8/98 Time: 2:45 PM
Relinquished by: Helen Shelton Date: 9/8/98 Time: 6:30 PM
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Vicki Wndha Date: 9-9-98 Time: 9:00

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 2 °
Log-in Review MD

REMARKS: Normal Turnaround

159 384 3621

Carrier # Client

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 28 samples

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID #_____

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 I H 20 West, Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Shell Grimes
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	other (methanol)	SAMPLING: DATE	TIME
107008	TSB-8 (8-10')	5	4 oz Jars		✓					✓			09/04/98	1546
	TSB-8 (8-10')	1	40ml VOA		✓							✓	09/04/98	1546
9	TSB-8 (40-42')	5	4 oz Jars		✓					✓			09/04/98	1610
	TSB-8 (40-42')	1	40ml VOA		✓							✓	09/04/98	1610

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	See Attached	Chlorides (300)	VOC's	Turn Around Time if different from standard	Hold
														✓				
																✓		
														✓				
																✓		

Relinquished by: Jeffrey Kindley Date: 09/08/98 Time: 2:45 PM
Received by: Helen Shelton Date: 9/8/98 Time: 2:45 PM
Relinquished by: Helen Shelton Date: 9/8/98 Time: 6:30 PM
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Vicki Wrather Date: 9-9-98 Time: 9:00 am

LAB USE ONLY
Intact (Y / N)
Headspace Y / N
Temp 2 °
Log-in Review MB

REMARKS:
TSB-8 (8-10') (40-42)
Do not need TPH
Have been done already
Normal Turnaround

Carrier # Greyhound

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 12 samples

ORIGINAL COPY

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-20-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
107009	TSB-8 40-42'	9/4/98	16:10	9/9/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All data meets quality control criteria with the exceptions:
Sample 107009 result could not be confirmed on bulk soil sample reanalyzed on 12-16-98
Sample reanalyzed out of hold time for confirmation only

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 2

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167
Sample Number: 107009

Sample Description: TSB-8 40-42'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Bromomethane		**<125	ug/Kg	S-8260B		*12-16-98	JG			125
Chloromethane		**<25	ug/Kg	S-8260B		*12-16-98	JG			25

* 107009 was reanalyzed past hold time
** Result could not confirm the results run on 9-20-98

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 12-21-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Bromomethane		<5	ug/L	5	12/16/98		
Chloromethane		<1	ug/L	1	12/16/98		

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 12-21-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	119	119	12/16/98	
1,1-Dichloroethene		100	ug/L	106	106	12/16/98	
Chloroform		100	ug/L	105	105	12/16/98	
1,2-Dichloropropane		100	ug/L	109	109	12/16/98	
Toluene		100	ug/L	110	110	12/16/98	
Chlorobenzene		100	ug/L	108	108	12/16/98	
Ethylbenzene		100	ug/L	112	112	12/16/98	

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 12-21-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Hobbs, NM

Order ID Number: 9808000167

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	104	104	100	100	100	4	12/16/98		
Benzene		ug/L	<1	100	118	118	100	116	116	2	12/16/98		
Trichloroethene		ug/L	<1	100	113	113	100	112	112	1	12/16/98		
Toluene		ug/L	<1	100	116	116	100	106	106	0	12/16/98		
Chlorobenzene		ug/L	<1	100	110	110	100	110	110	0.0	12/16/98		

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
107012	GSB-3 2-3'	9/3/98	8:25	9/9/98
107013	GSB-3 38-40'	9/3/98	11:21	9/9/98
107014	GSB-3 48-50'	9/3/98	12:18	9/9/98
107015	GSB-3D 48-50'	9/3/98	12:18	9/9/98
107016	GSB-8 2-3'	9/3/98	14:21	9/9/98
107017	GSB-8 43-45'	9/3/98	16:59	9/9/98
107018	GSB-8 57-59'	9/4/98	9:20	9/9/98
107019	GSB-8D 57-59'	9/4/98	9:20	9/9/98
107020	Trip Blank			9/9/98
107021	Field Blank	9/4/98	16:30	9/9/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrections:
1) Dichlorobenzene and 1,1-dichloroethylene blank reporting limits corrected.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107021

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Acrylonitrile		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Benzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chlorobenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chloroform		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorobenzene		<2	ug/L	S-8260B		9/17/98	AG		5377	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloropropenes		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylbenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromodichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromomethane		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Chloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Toluene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Vinyl chloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
m,p-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
o-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylene dibromide		<1	ug/L	S-8260B		9/17/98	AG		5377	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Methylene chloride		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Surr. Dibromofluoromethane		106	%	S-8260B		9/17/98	AG		5377	71-132
Surr. Toluene-d8		100	%	S-8260B		9/17/98	AG		5377	82-124
Surr. 4-Bromofluorobenzene		104	%	S-8260B		9/17/98	AG		5377	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107020

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Acrylonitrile		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Benzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chlorobenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chloroform		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorobenzene		<2	ug/L	S-8260B		9/17/98	AG		5377	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloropropenes		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylbenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromodichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromomethane		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Chloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Toluene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Vinyl chloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
m,p-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
o-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylene dibromide		<1	ug/L	S-8260B		9/17/98	AG		5377	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Methylene chloride		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Surr. Dibromofluoromethane		102	%	S-8260B		9/17/98	AG		5377	71-132
Surr. Toluene-d8		100	%	S-8260B		9/17/98	AG		5377	82-124
Surr. 4-Bromofluorobenzene		102	%	S-8260B		9/17/98	AG		5377	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 4

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107012

Sample Description: GSB-3 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<150	ug/Kg	S-8260B		9/20/98	AG		5461	150
Acrylonitrile		<150	ug/Kg	S-8260B		9/20/98	AG		5461	150
Benzene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Carbon tetrachloride		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Chlorobenzene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
1,2-dichloroethane		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
1,1,2,2-tetrachloroethane		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
1,1,1-trichloroethane		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
1,1,2-trichloroethane		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
1,1,2-trichloroethylene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Chloroform		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Dichlorobenzene		<60	ug/Kg	S-8260B		9/20/98	AG		5461	60
1,1-dichloroethylene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Dichloropropenes		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Ethylbenzene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Bromodichloromethane		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Bromomethane		<150	ug/Kg	S-8260B		9/20/98	AG		5461	150
Chloromethane		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Dichlorodifluoromethane		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Dichloromethane		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Trichlorofluorometane		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Tetrachloroethylene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Toluene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Trichloroethylene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Vinyl chloride		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
m,p-xylene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
o-xylene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
1,1-dichloroethane		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Ethylene dibromide		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
cis-1,2-dichlorethylene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
trans-1,2-dichloroethylene		<30	ug/Kg	S-8260B		9/20/98	AG		5461	30
Methylene chloride		<150	ug/Kg	S-8260B		9/20/98	AG		5461	150
Dibromofluoromethane		93	%	S-8260B		9/20/98	AG		5461	71-132
Toluene-d8		100	%	S-8260B		9/20/98	AG		5461	82-124
4-Bromofluorobenzene		102	%	S-8260B		9/20/98	AG		5461	76-126

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107012

Sample Description: GSB-3 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzidine		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dinitro-o-cresol		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
i-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Phenol		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107012

Sample Description: GSB-3 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Surr. 2-Fluorophenol		54	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	25-121
Surr. Phenol-d6		71	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	24-113
Surr. Nitroobenzene-d5		62	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	23-120
Surr. 2-Fluorobiphenyl		78	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	30-115
Surr. 2,4,6-Tribromophenol		70	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	19-122
Surr. Terphenyl-d14		62	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	28-137
Aldrin		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
Chlordane		<75	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
DDT		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
Endrin		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8081A	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		4.5	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Barium		375	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cadmium		<0.10	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.10
Chromium		3.8	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Lead		1.7	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Total Mercury		<0.10	mg/Kg	E 7471A	9/9/98	9/10/98	MS	4917	5275	0.10
Selenium		0.86	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Silver		<0.50	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Uranium		<2.0	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Copper		3.1	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Iron		2,900	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Manganese		39	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Zinc		6.2	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Aluminum		4,400	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Boron		15	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	10
Cobalt		3.1	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Molybdenum		2.2	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Nickel		6.9	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cyanide		<0.010	mg/Kg	Sm 4500 Cn,CE		9/15/98	SA		5331	0.01
Fluoride		5.9	mg/Kg	E 300.0		9/21/98	JS		5490	0.2
Nitrate		<0.2	mg/Kg	E 300.0		9/21/98	JS		5490	0.2
Chloride		87	mg/Kg	E 300.0		9/21/98	JS		5490	1.0
Sulfate		600	mg/Kg	E 300.0		9/21/98	JS		5491	10.0
TDS		1,100	mg/Kg	E 160.1		9/21/98	RS		5449	---
pH		8.3	s.u.	E 150.1		9/10/98	SA		5270	---
TRPHC		3,130	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Total Phenols		4.0	mg/Kg	SM 5530 A,D		9/20/98	RC		5451	0.25
Total Radium		21.20	pCi/gm	E 901.1M		9/14/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107013

Sample Description: GSB-3 38-40'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Benzene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Toluene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Ethylbenzene		0.321	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
m,p,o-xylene		2.50	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
TRPHC		1,310	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		81	mg/Kg	E 300.0		9/20/98	JS		5421	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107014

Sample Description: GSB-3 48-50'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Benzene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Toluene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Ethylbenzene		1.1	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
m,p,o-xylene		8.0	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
TRPHC		771	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		37	mg/Kg	E 300.0		9/20/98	JS		5421	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107015

Sample Description: GSB-3D 48-50'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Benzene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Toluene		2.07	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Ethylbenzene		2.80	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
m,p,o-xylene		18.4	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
TRPHC		1,890	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		52	mg/Kg	E 300.0		9/20/98	JS		5421	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107016

Sample Description: GSB-8 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<435	ug/Kg	S-8260B		9/20/98	AG		5461	435
Acrylonitrile		<435	ug/Kg	S-8260B		9/20/98	AG		5461	435
Benzene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Carbon tetrachloride		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Chlorobenzene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
1,2-dichloroethane		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
1,1,2,2-tetrachloroethane		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
1,1,1-trichloroethane		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
1,1,2-trichloroethane		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
1,1,2-trichloroethylene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Chloroform		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Dichlorobenzene		<174	ug/Kg	S-8260B		9/20/98	AG		5461	174
1,1-dichloroethylene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Dichloropropenes		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Ethylbenzene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Bromodichloromethane		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Bromomethane		<435	ug/Kg	S-8260B		9/20/98	AG		5461	435
Chloromethane		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Dichlorodifluoromethane		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Dichloromethane		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Trichlorofluorometane		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Tetrachloroethylene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Toluene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Trichloroethylene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Vinyl chloride		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
m,p-xylene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
o-xylene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
1,1-dichloroethane		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Ethylene dibromide		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
cis-1,2-dichlorethylene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
trans-1,2-dichloroethylene		<87	ug/Kg	S-8260B		9/20/98	AG		5461	87
Methylene chloride		<435	ug/Kg	S-8260B		9/20/98	AG		5461	435
Dibromofluoromethane		100	%	S-8260B		9/20/98	AG		5461	71-132
Toluene-d8		99	%	S-8260B		9/20/98	AG		5461	82-124
4-Bromofluorobenzene		104	%	S-8260B		9/20/98	AG		5461	76-126

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107016

Sample Description: GSB-8 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzidine		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dichlorphenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroethl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
[illegible]exachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
[illegible]sophorone		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dinitro-o-cresol		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
i-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Phenol		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
[illegible]-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107016

Sample Description: GSB-8 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Surr. 2-Fluorophenol		43	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	25-121
Surr. Phenol-d6		52	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	24-113
Surr. Nitroobenzene-d5		47	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	23-120
Surr. 2-Fluorobiphenyl		60	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	30-115
Surr. 2,4,6-Tribromophenol		57	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	19-122
Surr. Terphenyl-d14		67	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	28-137
Aldrin		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
Chlordane		<75	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
DDT		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
Endrin		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S 8081A	9/16/98	9/21/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8081A	9/15/98	9/18/98	RC	5044	5401	0.1
Arsenic		5.3	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Barium		276	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cadmium		<0.10	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.10
Chromium		2.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Lead		1.2	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Total Mercury		<0.10	mg/Kg	E 7471A	9/9/98	9/10/98	MS	4917	5275	0.10
Selenium		<0.50	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Silver		<0.50	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Uranium		<2.0	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Copper		2.6	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Iron		1,800	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Manganese		30	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Zinc		5	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Aluminum		3,000	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Boron		10	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	10
Cobalt		5.7	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Molybdenum		2.5	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Nickel		7.1	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cyanide		<0.010	mg/Kg	Sm 4500 Cn,CE		9/15/98	SA		5331	0.01
Fluoride		4.8	mg/Kg	E 300.0		9/21/98	JS		5491	0.2
Nitrate		5.1	mg/Kg	E 300.0		9/21/98	JS		5491	0.2
Chloride		290	mg/Kg	E 300.0		9/21/98	JS		5491	5.0
Sulfate		230	mg/Kg	E 300.0		9/21/98	JS		5491	5.0
TDS		870	mg/Kg	E 160.1		9/21/98	RS		5449	---
pH		8.5	s.u.	E 150.1		9/10/98	SA		5270	<0.10
TRPHC		28	ug/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Total Phenols		1.9	mg/Kg	SM 5530 A,D		9/20/98	RC		5451	0.25
Total Radium		3.80	pCi/gm	E 901.1M		9/14/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107017

Sample Description: GSB-8 43-45'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Benzene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Toluene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Ethylbenzene		0.558	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
m,p,o-xylene		4.04	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
TRPHC		1,350	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		100	mg/Kg	E 300.0		9/20/98	JS		5422	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107018

Sample Description: GSB-8 57-59'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Benzene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Toluene		5.69	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Ethylbenzene		1.78	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
m,p,o-xylene		7.20	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
TRPHC		4,030	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		140	mg/Kg	E 300.0		9/20/98	JS		5422	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168
Sample Number: 107019

Sample Description: GSB-8D 57-59'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Benzene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Toluene		2.81	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
Ethylbenzene		4.27	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
m,p,o-xylene		34.6	mg/Kg	S 8021B		9/14/98	CS		5321	0.050
TRPHC		6,380	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		140	mg/Kg	E 300.0		9/20/98	JS		5422	2.0

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9808000168

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/17/98		5377
Acrylonitrile		<5	ug/L	5	9/17/98		5377
Benzene		<1	ug/L	1	9/17/98		5377
Carbon tetrachloride		<1	ug/L	1	9/17/98		5377
Chlorobenzene		<1	ug/L	1	9/17/98		5377
1,2-dichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/17/98		5377
1,1,1-trichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2-trichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2-trichloroethylene		<1	ug/L	1	9/17/98		5377
Chloroform		<1	ug/L	1	9/17/98		5377
Dichlorobenzene		<2	ug/L	2	9/17/98		5377
1,1-dichloroethylene		<1	ug/L	1	9/17/98		5377
Dichloropropenes		<1	ug/L	1	9/17/98		5377
Ethylbenzene		<1	ug/L	1	9/17/98		5377
Bromodichloromethane		<1	ug/L	1	9/17/98		5377
Bromomethane		<5	ug/L	5	9/17/98		5377
Chloromethane		<1	ug/L	1	9/17/98		5377
Dichlorodifluoromethane		<1	ug/L	1	9/17/98		5377
Dichloromethane		<1	ug/L	1	9/17/98		5377
Trichlorofluoromethane		<1	ug/L	1	9/17/98		5377
Tetrachloroethylene		<1	ug/L	1	9/17/98		5377
Toluene		<1	ug/L	1	9/17/98		5377
Trichloroethylene		<1	ug/L	1	9/17/98		5377
Vinyl chloride		<1	ug/L	1	9/17/98		5377
m,p-xylene		<1	ug/L	1	9/17/98		5377
o-xylene		<1	ug/L	1	9/17/98		5377
1,1-dichloroethane		<1	ug/L	1	9/17/98		5377
Ethylene dibromide		<1	ug/L	1	9/17/98		5377
cis-1,2-dichlorethylene		<1	ug/L	1	9/17/98		5377
trans-1,2-dichloroethylene		<1	ug/L	1	9/17/98		5377
Methylene chloride		<5	ug/L	5	9/17/98		5377
Surr. Dibromofluoromethane		111	%	71-132	9/17/98		5377
Surr. Toluene-d8		96	%	82-124	9/17/98		5377
Surr. 4-Bromofluorobenzene		103	%	76-126	9/17/98		5377
Acrolein		<125	ug/Kg	125	9/20/98		5461
Acrylonitrile		<125	ug/Kg	125	9/20/98		5461
Benzene		<25	ug/Kg	25	9/20/98		5461
Carbon tetrachloride		<25	ug/Kg	25	9/20/98		5461
Chlorobenzene		<25	ug/Kg	25	9/20/98		5461
1,2-dichloroethane		<25	ug/Kg	25	9/20/98		5461

Corrected

Date: 05-20-99

Order ID Number: 9808000168

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/20/98		5461
1,1,1-trichloroethane		<25	ug/Kg	25	9/20/98		5461
1,1,2-trichloroethane		<25	ug/Kg	25	9/20/98		5461
1,1,2-trichloroethylene		<25	ug/Kg	25	9/20/98		5461
Chloroform		<25	ug/Kg	25	9/20/98		5461
Dichlorobenzene		<50	ug/Kg	*50	9/20/98		5461
1,1-dichloroethylene		<25	ug/Kg	*25	9/20/98		5461
Dichloropropenes		<25	ug/Kg	25	9/20/98		5461
Ethylbenzene		<25	ug/Kg	25	9/20/98		5461
Bromodichloromethane		<25	ug/Kg	25	9/20/98		5461
Bromomethane		<125	ug/Kg	125	9/20/98		5461
Chloromethane		<25	ug/Kg	25	9/20/98		5461
Dichlorodifluoromethane		<25	ug/Kg	25	9/20/98		5461
Dichloromethane		<25	ug/Kg	25	9/20/98		5461
Trichlorofluoromethane		<25	ug/Kg	25	9/20/98		5461
Tetrachloroethylene		<25	ug/Kg	25	9/20/98		5461
Toluene		<25	ug/Kg	25	9/20/98		5461
Trichloroethylene		<25	ug/Kg	25	9/20/98		5461
Vinyl chloride		<25	ug/Kg	25	9/20/98		5461
m,p-xylene		<25	ug/Kg	25	9/20/98		5461
o-xylene		<25	ug/Kg	25	9/20/98		5461
1,1-dichloroethane		<25	ug/Kg	25	9/20/98		5461
Ethylene dibromide		<25	ug/Kg	25	9/20/98		5461
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/20/98		5461
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/20/98		5461
Methylene chloride		<125	ug/Kg	125	9/20/98		5461
Surr. Dibromofluoromethane		101	%	71-132	9/20/98		5461
Surr. Toluene-d8		99	%	82-124	9/20/98		5461
Surr. 4-Bromofluorobenzene		102	%	76-126	9/20/98		5461
PCB		0.1	mg/Kg	0.1	9/18/98	5044	5401
Cyanide		<0.01	mg/Kg	0.01	9/15/98		5332
Total Mercury		<0.10	mg/Kg	<0.10	9/10/98	4917	5275
Arsenic		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Barium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Cadmium		<0.10	mg/Kg	0.10	9/18/98	5090	5402
Chromium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Lead		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Selenium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Silver		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Uranium		<2.0	mg/Kg	2.0	9/18/98	5090	5402
Copper		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Iron		<10	mg/Kg	10	9/20/98	5090	5461
Manganese		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Zinc		<2.0	mg/Kg	2.0	9/18/98	5090	5402
Aluminum		<10	mg/Kg	10	9/20/98	5090	5461
Boron		<10	mg/Kg	10	9/18/98	5090	5402
Cobalt		<0.50	mg/Kg	0.50	9/18/98	5090	5402

* Reporting limit corrected.

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Date: 10-1-98

Order ID Number: 9808000168

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Molybdenum		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Nickel		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Benzidine		<2.5	mg/Kg	2.5	9/18/98	5030	5410
Hexachlorobenzene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Pentachlorobenzene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Hexachloroethane		<0.25	mg/Kg	0.25	9/18/98	5030	5410
2,4-dichlorophenol		<1.25	mg/Kg	1.25	9/18/98	5030	5410
2,4,5-trichlorophenol		<1.25	mg/Kg	1.25	9/18/98	5030	5410
2,4,6-trichlorophenol		<1.25	mg/Kg	1.25	9/18/98	5030	5410
bis (2-chloroethl) ether		<1.25	mg/Kg	1.25	9/18/98	5030	5410
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	1.25	9/18/98	5030	5410
bis (chloromethyl) ether		<1.25	mg/Kg	1.25	9/18/98	5030	5410
3,3-dichlorobenzidine		<1.25	mg/Kg	1.25	9/18/98	5030	5410
2,4-dinitrotoluene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Diphenylhydrazine		<1.25	mg/Kg	1.25	9/18/98	5030	5410
Hexachlorobutadiene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Hexachlorocyclopentadiene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Isophorone		<1.25	mg/Kg	1.25	9/18/98	5030	5410
Nitrobenzene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
,4-dinitro-o-cresol		<0.25	mg/Kg	0.25	9/18/98	5030	5410
2,4-dinitrophenols		<1.25	mg/Kg	1.25	9/18/98	5030	5410
i-nitrosodiethylamine		<0.25	mg/Kg	0.25	9/18/98	5030	5410
N-nitrosodimethylamine		<0.25	mg/Kg	0.25	9/18/98	5030	5410
N-nitrosodibutylamine		<1.25	mg/Kg	1.25	9/18/98	5030	5410
N-nitrosodiphenylamine		<0.25	mg/Kg	0.25	9/18/98	5030	5410
N-nitrosopyrrolidine		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Pentachlorophenol		<1.25	mg/Kg	1.25	9/18/98	5030	5410
Phenol		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Dibutyl phthalate		<0.25	mg/Kg	0.25	9/18/98	5030	5410
bis(2-ethylhexyl) phthalate		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Diethyl phthalate		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Dimethyl phthalate		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Anthracene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Benzo(b)fluoranthene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Benzo(k)fluoranthene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Fluoranthene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Fluorene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Phenanthrene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Pyrene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Naphthalene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
1-methylnaphthalene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
2-methylnaphthalene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Benzo-a-pyrene		<0.25	mg/Kg	0.25	9/18/98	5030	5410
Surr. 2-Fluorophenol		60	%	25-121	9/18/98	5030	5410
Surr. Phenol-d6		66	%	24-113	9/18/98	5030	5410
Surr. Nitroobenzene-d5		65	%	23-120	9/18/98	5030	5410

Order ID Number: 9808000168

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Surr. 2-Fluorobiphenyl		69	%	30-115	9/18/98	5030	5410
Surr. 2,4,6-Tribromophenol		54	%	19-122	9/18/98	5030	5410
Surr. Terphenyl-d14		76	%	28-137	9/18/98	5030	5410
TRPHC		<10.0	mg/Kg	10	9/15/98	4988	5324
MTBE		<0.050	mg/Kg	0.05	9/14/98		5321
Benzene		<0.050	mg/Kg	0.05	9/14/98		5321
Toluene		<0.050	mg/Kg	0.05	9/14/98		5321
Ethylbenzene		<0.050	mg/Kg	0.05	9/14/98		5321
m,p,o-xylene		<0.050	mg/Kg	0.05	9/14/98		5321
Chloride		<2.0	mg/Kg	2	9/20/98		5421
Chloride		<2.0	mg/Kg	2	9/20/98		5422
Total Phenols		<0.25	mg/Kg	0.25	9/20/98		5451
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5490
Chloride		<1.0	mg/Kg	1	9/21/98		5490
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5490
Sulfate		<1.0	mg/Kg	1	9/21/98		5490
Fluoride		<0.2	mg/Kg	0.2	9/21/98		5491
Chloride		<1.0	mg/Kg	1	9/21/98		5491
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5491
Sulfate		<1.0	mg/Kg	1	9/21/98		5491

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000168

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	120	120	9/14/98	5377
1,1-Dichloroethene		100	ug/L	118	118	9/14/98	5377
Chloroform		100	ug/L	116	116	9/14/98	5377
1,2-Dichloropropane		100	ug/L	114	114	9/14/98	5377
Toluene		100	ug/L	115	115	9/14/98	5377
Chlorobenzene		100	ug/L	113	113	9/14/98	5377
Ethylbenzene		100	ug/L	114	114	9/14/98	5377
Vinyl chloride		100	ug/L	117	117	9/20/98	5461
1,1-Dichloroethene		100	ug/L	119	119	9/20/98	5461
Chloroform		100	ug/L	109	109	9/20/98	5461
1,2-Dichloropropane		100	ug/L	107	107	9/20/98	5461
Toluene		100	ug/L	116	116	9/20/98	5461
Chlorobenzene		100	ug/L	112	112	9/20/98	5461
Ethylbenzene		100	ug/L	120	120	9/20/98	5461
PCB		0.40	mg/L	0.41	103	9/18/98	5401
Cyanide		0.12	mg/L	0.11	92	9/15/98	5332
Total Mercury		5.0	mg/L	4.8	96	9/10/98	5275
Arsenic		1.0	mg/L	1.0	100	9/18/98	5402
Barium		1.0	mg/L	0.99	99	9/18/98	5402
Cadmium		1.0	mg/L	1.0	100	9/18/98	5402
Chromium		1.0	mg/L	1.0	100	9/18/98	5402
Lead		1.0	mg/L	1.0	100	9/18/98	5402
Selenium		1.0	mg/L	0.99	0.99	9/18/98	5402
Silver		1.0	mg/L	1.0	100	9/18/98	5402
Uranium		1.0	mg/L	0.98	98	9/18/98	5402
Copper		1.0	mg/L	0.99	99	9/18/98	5402
Iron		100.0	mg/L	106.0	106	9/20/98	5461
Manganese		1.0	mg/L	0.99	99	9/18/98	5402
Zinc		1.0	mg/L	1.0	100	9/18/98	5402
Aluminum		250.0	mg/L	251.0	100	9/20/98	5461
Boron		1.0	mg/L	0.99	99	9/18/98	5402
Cobalt		1.0	mg/L	1.0	100	9/18/98	5402
Molybdenum		1.0	mg/L	0.96	96	9/18/98	5402
Nickel		1.0	mg/L	0.99	99	9/18/98	5402
TRPHC		100	mg/L	103	103	9/15/98	5324
Phenol		80	mg/L	77	96	9/19/98	5410
1,4-Dichlorobenzene		80	mg/L	67	84	9/19/98	5410

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000168

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
2-nitrophenol		80	mg/L	77	96	9/19/98	5410
2,4-Dichlorophenol		80	mg/L	79	99	9/19/98	5410
Hexachlorobutadiene		80	mg/L	67	84	9/19/98	5410
4-Chloro-3-methylphenol		80	mg/L	68	85	9/19/98	5410
2,4,6-Trichlorophenol		80	mg/L	69	86	9/19/98	5410
Acenaphthene		80	mg/L	69	86	9/19/98	5410
n-Nitrosodiphenylamine		80	mg/L	80	100	9/19/98	5410
Pentachlorophenol		80	mg/L	86	108	9/19/98	5410
Fluoranthene		80	mg/L	71	88	9/19/98	5410
Di-n-octylphthalate		80	mg/L	84	105	9/19/98	5410
Benzo(a)pyrene		80	mg/L	69	86	9/19/98	5410
pH		7.0	s.u.	7.0	100	9/10/98	5271
MTBE		0.100	mg/L	0.089	89	9/14/98	5321
Benzene		0.100	mg/L	0.091	91	9/14/98	5321
Toluene		0.100	mg/L	0.089	89	9/14/98	5321
Ethylbenzene		0.100	mg/L	0.092	92	9/14/98	5321
m,p,o-xylene		0.300	mg/L	0.269	90	9/14/98	5321
Chloride		500	mg/L	499	100	9/20/98	5421
Chloride		500	mg/L	500	100	9/20/98	5422
TDS		1,000	mg/L	976	98	9/21/98	5449
Total Phenols		0.80	mg/L	0.80	100	9/20/98	5451
Fluoride		2.5	mg/L	2.47	99	9/21/98	5490
Chloride		12.5	mg/L	12.31	98	9/21/98	5490
Nitrate		5	mg/L	5.08	101	9/21/98	5490
Sulfate		12.5	mg/L	12.895	103	9/21/98	5490
Fluoride		2.5	mg/L	2.48	99	9/21/98	5491
Chloride		12.5	mg/L	12.63	101	9/21/98	5491
Nitrate		5	mg/L	5.09	102	9/21/98	5491
Sulfate		12.5	mg/L	12.88	103	9/21/98	5491

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98
Page # 22

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000168

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	136	136	100	119	119	13	9/17/98		5377
Benzene		ug/L	<1	100	121	121	100	110	110	9.5	9/17/98		5377
Trichloroethene		ug/L	<1	100	122	122	100	111	111	9.4	9/17/98		5377
Toluene		ug/L	<1	100	116	116	100	106	106	9.0	9/17/98		5377
Chlorobenzene		ug/L	<1	100	104	104	100	94	94	10	9/17/98		5377
PCB		mg/Kg	<0.1	0.40	0.43	108	0.40	0.45	113	4.5	9/18/98	5044	5401
Cyanide		mg/Kg	<0.01	0.12	0.10	83	0.12	0.09	75	10	9/15/98		5332
1,1-Dichloroethene		mg/Kg	<25	100	127	127	100	127	127	0	9/20/98		5461
Benzene		mg/Kg	<25	100	121	121	100	124	124	2.4	9/20/98		5461
Trichloroethene		mg/Kg	<25	100	124	124	100	124	124	0	9/20/98		5461
Toluene		mg/Kg	<25	100	116	116	100	119	119	2.6	9/20/98		5461
Chlorobenzene		mg/Kg	<25	100	106	106	100	106	106	0	9/20/98		5461
TRPHC		mg/Kg	<10.0	250	205	82	250	235	94	14	9/15/98	4988	5324
Phenol		mg/Kg	<0.25	10.00	5.23	52	10.00	5.66	57	9.2	9/19/98	5030	5410
2-Chlorophenol		mg/Kg	<1.25	10.00	4.89	49	10.00	5.17	52	5.9	9/19/98	5030	5410
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	6.21	62	10.00	6.51	65	4.7	9/19/98	5030	5410
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	5.12	51	10.00	5.44	54	5.7	9/19/98	5030	5410
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	5.99	60	10.00	6.11	61	1.7	9/19/98	5030	5410
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	5.11	51	10.00	5.45	55	7.5	9/19/98	5030	5410
Acenaphthene		mg/Kg	<0.25	10.00	6.46	65	10.00	7.06	71	8.8	9/19/98	5030	5410
4-Nitrophenol		mg/Kg	<1.25	10.00	3.54	35	10.00	4.3	43	20	9/19/98	5030	5410
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	5.89	59	10.00	6.52	65	9.7	9/19/98	5030	5410
Pentachlorophenol		mg/Kg	<1.25	10.00	5.61	56	10.00	6.1	61	8.5	9/19/98	5030	5410
Pyrene		mg/Kg	<0.25	10.00	6.73	67	10.00	7.13	71	5.8	9/19/98	5030	5410
MTBE		mg/Kg	<0.050	5	5.12	102	5	5.26	105	2.9	9/14/98		5321
Benzene		mg/Kg	<0.050	5	5.42	108	5	5.51	110	1.8	9/14/98		5321
Toluene		mg/Kg	<0.050	5	5.39	108	5	5.5	110	1.8	9/14/98		5321
Ethylbenzene		mg/Kg	<0.050	5	5.57	111	5	5.66	113	1.8	9/14/98		5321
m,p,o-xylene		mg/Kg	0.159	15	16.5	109	15	16.9	112	2.7	9/14/98		5321
Chloride		mg/Kg	54	4,000	4,251	105	4,000	4,262	105	0	9/20/98		5421
Chloride		mg/Kg	140	4,000	4,622	112	4,000	4,622	112	0	9/20/98		5422
Total Phenols		mg/Kg	2.8	20	22.9	101	20	23.3	103	2.0	9/20/98		5451
Arsenic		mg/Kg	<0.50	200	167	84	200	168	84	0	9/18/98	5090	5402
Barium		mg/Kg	<0.50	200	182	91	200	184	92	1.1	9/18/98	5090	5402
Cadmium		mg/Kg	<0.10	200	175	88	200	173	87	1.1	9/18/98	5090	5402
Chromium		mg/Kg	<0.50	200	182	91	200	182	91	0	9/18/98	5090	5402
Lead		mg/Kg	<0.50	200	175	88	200	173	87	1.1	9/18/98	5090	5402
Selenium		mg/Kg	<0.50	200	165	83	200	161	81	2.4	9/18/98	5090	5402
Silver		mg/Kg	<0.50	350	350	100	350	413	118	17	9/18/98	5090	5402
Uranium		mg/Kg	<2.0	200	192	96	200	190	95	1.0	9/18/98	5090	5402
Copper		mg/Kg	<1.0	200	175	88	200	176	88	0	9/18/98	5090	5402

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000168

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Manganese		mg/Kg	<1.0	200	179	90	200	178	89	1.1	9/18/98	5090	5402
Zinc		mg/Kg	<2.0	200	178	89	200	176	88	1.1	9/18/98	5090	5402
Boron		mg/Kg	<10	200	170	85	200	166	83	2.4	9/18/98	5090	5402
Cobalt		mg/Kg	<0.50	200	175	88	200	179	90	2.2	9/18/98	5090	5402
Molybdenum		mg/Kg	<1.0	200	176	88	200	173	87	1.1	9/18/98	5090	5402
Nickel		mg/Kg	<0.50	200	172	86	200	173	87	1.2	9/18/98	5090	5402
Aluminum		mg/Kg	<10	200	165	83	200	169	85	2.4	9/20/98	5090	5461
Iron		mg/Kg	<10	200	160	80	200	157	79	1.3	9/20/98	5090	5461
Fluoride		mg/Kg	5.92	5	10.84	98	5	10.91	100	2	9/21/98		5490
Chloride		mg/Kg	86.77	25	107.83	84	25	106.85	81	3.6	9/21/98		5490
Nitrate		mg/Kg	<0.2	10	11.29	113	10	11.54	115	1.8	9/21/98		5490
Sulfate		mg/Kg	27.22	25	54.06	107	25	53.18	104	2.8	9/21/98		5490
Fluoride		mg/Kg	7.21	5	12.33	102	5	12.25	101	0.99	9/21/98		5491
Chloride		mg/Kg	168.9	25	193.53	99	25	187.55	75	3.1	9/21/98		5491
Nitrate		mg/Kg	1.64	10	11.17	95	10	11.65	100	5.1	9/21/98		5491
Sulfate		mg/Kg	55.5	25	82.33	107	25	81.31	103	3.8	9/21/98		5491

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-1-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000168

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	7.8	7.7	1.30	9/10/98		5271
TDS		mg/Kg	1100	1080	1.8	9/21/98		5449

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

TraceAnalysis, Inc.
Nell Green
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0915	**P.O. Number:**	N/A
Client I.D.:	107012	**ARS Sample I.D.:**	ARS-98-3350
Date Sampled:	9/3/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1037
Type of Sample:	Solid	**Date of Report:**	9/14/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	3.34	1.39	pCi/gm	0.124	0.051	Bq/gm	EPA 901.1M	9/14/98 1117	kh
Ra-228	<0.08	N/A	pCi/gm	<0.003	N/A	Bq/gm	EPA 901.1M	9/14/98 1117	kh
Pb-210	2.09	1.76	pCi/gm	0.077	0.065	Bq/gm	EPA 901.1M	9/14/98 1117	kh
Total Activity	21.20	N/A	pCi/gm	0.784	N/A	Bq/gm	EPA 901.1M	9/14/98 1117	kh

Notes:

Quality Assurance Review

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ARS Tracking Number:	ARS-98-0915	**P.O. Number:**	N/A
Client I.D.:	107016	**ARS Sample I.D.:**	ARS-98-3351
Date Sampled:	9/3/98	**Date Received:**	9/11/98
Time Sampled:	N/A	**Time Received:**	1037
Type of Sample:	Solid	**Date of Report:**	9/14/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.88	1.72	pCi/gm	0.070	0.064	Bq/gm	EPA 901.1M	9/14/98 1045	kh
Ra-228	<0.12	N/A	pCi/gm	<0.004	N/A	Bq/gm	EPA 901.1M	9/14/98 1045	kh
Pb-210	<1.08	N/A	pCi/gm	<0.040	N/A	Bq/gm	EPA 901.1M	9/14/98 1045	kh
Total Activity	3.80	N/A	pCi/gm	0.141	N/A	Bq/gm	EPA 901.1M	9/14/98 1045	kh

Notes:

Quality Assurance Review

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1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 168

Company Name: Phillip Services Corporation
Phone #: (915) 563-0118
Address: 7904 I H 20 West Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Sam
Project #: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
107012	GSB-3 (2-3')	5	40z Jars		✓					✓			09/03/98	0825
	GSB-3 (2-3')	1	40ml VOA		✓							✓	09/03/98	0825
13	GSB-3 (38-40')	2	4oz Jars		✓					✓			09/03/98	1121
14	GSB-3 (48-50')	2	4oz Jars		✓					✓			09/03/98	1218
15	GSB-3D (48-50')	2	4oz Jars		✓					✓			09/03/98	1218
16	GSB-8 (2-3')	5	4oz Jars		✓					✓			09/03/98	1421
	GSB-8 (2-3')	1	40ml VOA		✓							✓	09/03/98	1421
17	GSB-8 (43-45')	2	4oz Jars		✓					✓			09/03/98	1659
18	GSB-8 (57-59')	2	4oz Jars		✓					✓			09/04/98	0920
19	GSB-8D (57-59')	2	4oz Jars		✓					✓			09/04/98	0920
107020/107021	Trip Blank + Field Blank	4	40ml VOA	✓				/		✓			09/04/98	1630

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	See Attached	VOC's	Chloride	Turn Around Time if different from standard	Hold
		✓												✓				
															✓			
	✓	✓														✓		
	✓	✓												✓		✓		
	✓	✓														✓		
		✓												✓				
															✓			
	✓	✓														✓		
	✓	✓														✓		
	✓	✓														✓		
														✓				

Relinquished by: Jeffrey Kindley Date: 09/08/98 Time: 2:45 PM
Received by: Helen Shelton 9/8/98 Time: 2:45 PM
Relinquished by: Helen Shelton 9/8/98 Time: 6:30 PM
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Date: Time:
Vicki Wrather 9-9-98 9:00 AM

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 28 samples + TB

LAB USE ONLY
Intact (Y) N
Headspace Y / N
Temp 2 °
Log-in Review AVS

REMARKS:
Normal Turnaround
915 384 3491

Carrier # Greyhound

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-09-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000195

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
107157	Trip Blank			9/10/98
107158	Field Blank	9/8/98	16:30	9/10/98
107159	GSB-11 2-3'	9/8/98	9:11	9/10/98
107160	GSB-11 33-35'	9/8/98	13:09	9/10/98
107161	GSB-11 48-50'	9/8/98	15:09	9/10/98
107162	GSB-11D 48-50'	9/8/98	15:09	9/10/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrections:
1) Order ID Number corrected on pages: 10 - 18.
2) Blank reporting limits corrected for Dichlorobenzene and 1-1,dichloroethylene.
3) CCVS True Concentration corrected for m,p,o-xylene.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98
Page # 2

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000195
Sample Number: 107157

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Acrylonitrile		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Benzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chlorobenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chloroform		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorobenzene		<2	ug/L	S-8260B		9/17/98	AG		5377	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloropropenes		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylbenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromodichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromomethane		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Chloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Toluene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Vinyl chloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
m,p-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
o-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylene dibromide		<1	ug/L	S-8260B		9/17/98	AG		5377	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Methylene chloride		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Surr. Dibromofluoromethane		105	%	S-8260B		9/17/98	AG		5377	72-132
Surr. Toluene-d8		99	%	S-8260B		9/17/98	AG		5377	82-124
Surr. 4-Bromofluorobenzene		102	%	S-8260B		9/17/98	AG		5377	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98
Page # 3

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000195
Sample Number: 107158

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Acrylonitrile		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Benzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Carbon tetrachloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chlorobenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,2-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Chloroform		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorobenzene		<2	ug/L	S-8260B		9/17/98	AG		5377	2
1,1-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloropropenes		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylbenzene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromodichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Bromomethane		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Chloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Dichloromethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichlorofluorometane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Tetrachloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Toluene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Trichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Vinyl chloride		<1	ug/L	S-8260B		9/17/98	AG		5377	1
m,p-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
o-xylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
1,1-dichloroethane		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Ethylene dibromide		<1	ug/L	S-8260B		9/17/98	AG		5377	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		9/17/98	AG		5377	1
Methylene chloride		<5	ug/L	S-8260B		9/17/98	AG		5377	5
Surr. Dibromofluoromethane		101	%	S-8260B		9/17/98	AG		5377	72-132
Surr. Toluene-d8		102	%	S-8260B		9/17/98	AG		5377	82-124
Surr. 4-Bromofluorobenzene		103	%	S-8260B		9/17/98	AG		5377	76-126

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98
Page # 4

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000195
Sample Number: 107159

Sample Description: GSB-11 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<455	ug/Kg	S-8260B		9/20/98	AG		5461	455
Acrylonitrile		<455	ug/Kg	S-8260B		9/20/98	AG		5461	455
Benzene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Carbon tetrachloride		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Chlorobenzene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
1,2-dichloroethane		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
1,1,2,2-tetrachloroethane		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
1,1,1-trichloroethane		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
1,1,2-trichloroethane		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
1,1,2-trichloroethylene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Chloroform		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Dichlorobenzene		<182	ug/Kg	S-8260B		9/20/98	AG		5461	182
1,1-dichloroethylene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Dichloropropenes		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Ethylbenzene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Bromodichloromethane		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Bromomethane		<455	ug/Kg	S-8260B		9/20/98	AG		5461	455
Chloromethane		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Dichlorodifluoromethane		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Dichloromethane		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Trichlorofluorometane		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Tetrachloroethylene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Toluene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Trichloroethylene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Vinyl chloride		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
m,p-xylene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
o-xylene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
1,1-dichloroethane		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Ethylene dibromide		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
cis-1,2-dichlorethylene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
trans-1,2-dichloroethylene		<91	ug/Kg	S-8260B		9/20/98	AG		5461	91
Methylene chloride		<455	ug/Kg	S-8260B		9/20/98	AG		5461	455
Dibromofluoromethane		100	%	S-8260B		9/20/98	AG		5461	72-132
Toluene-d8		99	%	S-8260B		9/20/98	AG		5461	82-124
4-Bromofluorobenzene		101	%	S-8260B		9/20/98	AG		5461	76-126
Benzidine		<2.5	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25

Date: 10-1-98
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Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000195
Sample Number: 107159

Sample Description: GSB-11 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
N-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/14/98	9/18/98	DG	5030	5410	0.25
Surr. 2-Fluorophenol		45	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	25-121
Surr. Phenol-d6		50	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	24-113
Surr. Nitroobenzene-d5		47	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	23-120
Surr. 2-Fluorobiphenyl		53	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	30-115
Surr. 2,4,6-Tribromophenol		56	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	19-122
Surr. Terphenyl-d14		87	%	S-8270C	9/14/98	9/18/98	DG	5030	5410	28-137

Date: 10-1-98
Page # 6
Order ID Number: 9809000195
Sample Number: 107159

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GSB-11 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	9/22/98	10/6/98	SH	---	---	50
Chlordane		<50	ug/Kg	S-8080	9/22/98	10/6/98	SH	---	---	50
DDT		<50	ug/Kg	S-8080	9/22/98	10/6/98	SH	---	---	50
Dieldrin		<50	ug/Kg	S-8080	9/22/98	10/6/98	SH	---	---	50
Endosulfan		<50	ug/Kg	S-8080	9/22/98	10/6/98	SH	---	---	50
Endrin		<50	ug/Kg	S-8080	9/22/98	10/6/98	SH	---	---	50
Heptachlor		<50	ug/Kg	S-8080	9/22/98	10/6/98	SH	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/15/98	9/15/98	RC	5044	5401	0.1
Arsenic		3.9	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Barium		274	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cadmium		<0.10	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.10
Chromium		3.4	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Lead		1.7	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Total Mercury		<0.10	mg/Kg	E 7471	9/17/98	9/18/98	MS	506	5399	<0.10
Selenium		<0.50	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Silver		<0.50	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Uranium		<2.0	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Copper		3.9	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Iron		2,600	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Manganese		24	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Zinc		5.5	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	2.0
Aluminum		3,900	mg/Kg	E 6010B	9/17/98	9/20/98	RR	5090	5461	10
Boron		10	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	10
Cobalt		5.9	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Molybdenum		1.8	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	1.0
Nickel		5.4	mg/Kg	E 6010B	9/17/98	9/18/98	RR	5090	5402	0.50
Cyanide		<0.010	mg/Kg	SM 4500 CN,CE		9/15/98	SA		5330	0.01
Fluoride		7.2	mg/Kg	E 300.0		9/21/98	JS		5491	0.2
Nitrate		<0.4	mg/Kg	E 300.0		9/21/98	JS		5491	0.4
Chloride		160	mg/Kg	E 300.0		9/21/98	JS		5491	2.0
Sulfate		56	mg/Kg	E 300.0		9/21/98	JS		5491	1.0
TDS		380	mg/Kg	E 160.1		9/21/98	RS		5449	---
pH		8.2	s.u.	E 150.1		9/11/98	SA		5284	---
TRPHC		12	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Total Phenols		2.8	mg/Kg	SM 5530 A,D		9/20/98	RC		5451	0.25
Total Radium		2.85	pCi/gm	E 901.1M		9/17/98	DS	---	---	---

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98
Page # 7

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000195
Sample Number: 107160

Sample Description: GSB-11 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
Benzene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
Toluene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
Ethylbenzene		0.469	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
m,p,o-xylene		2.95	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
TRPHC		1,100	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		140	mg/Kg	E 300.0		9/20/98	JS		5422	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000195
Sample Number: 107161

Sample Description: GSB-11 48-50'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
Benzene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
Toluene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
Ethylbenzene		0.694	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
m,p,o-xylene		7.41	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
TRPHC		1,990	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		7.6	mg/Kg	E 300.0		9/20/98	JS		5422	2.0

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-9-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9809000195
Sample Number: 107162

Sample Description: GSB-11

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
MTBE		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
Benzene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
Toluene		<0.050	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
Ethylbenzene		0.309	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
m,p,o-xylene		3.25	mg/Kg	S 8021B		9/14/98	CS		5321	0.05
TRPHC		704	mg/Kg	S 418.1	9/15/98	9/15/98	SR	4988	5324	10.0
Chloride		22	mg/Kg	E 300.0		9/20/98	JS		5422	2.0

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-09-99

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000195

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	9/17/98		5377
Acrylonitrile		<5	ug/L	5	9/17/98		5377
Benzene		<1	ug/L	1	9/17/98		5377
Carbon tetrachloride		<1	ug/L	1	9/17/98		5377
Chlorobenzene		<1	ug/L	1	9/17/98		5377
1,2-dichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2,2-tetrachloroethane		<1	ug/L	1	9/17/98		5377
1,1,1-trichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2-trichloroethane		<1	ug/L	1	9/17/98		5377
1,1,2-trichloroethylene		<1	ug/L	1	9/17/98		5377
Chloroform		<1	ug/L	1	9/17/98		5377
Dichlorobenzene		<2	ug/L	2	9/17/98		5377
1,1-dichloroethylene		<1	ug/L	1	9/17/98		5377
Dichloropropenes		<1	ug/L	1	9/17/98		5377
Ethylbenzene		<1	ug/L	1	9/17/98		5377
Bromodichloromethane		<1	ug/L	1	9/17/98		5377
Bromomethane		<5	ug/L	5	9/17/98		5377
Chloromethane		<1	ug/L	1	9/17/98		5377
Dichlorodifluoromethane		<1	ug/L	1	9/17/98		5377
Dichloromethane		<1	ug/L	1	9/17/98		5377
Trichlorofluoromethane		<1	ug/L	1	9/17/98		5377
Tetrachloroethylene		<1	ug/L	1	9/17/98		5377
Toluene		<1	ug/L	1	9/17/98		5377
Trichloroethylene		<1	ug/L	1	9/17/98		5377
Vinyl chloride		<1	ug/L	1	9/17/98		5377
m,p-xylene		<1	ug/L	1	9/17/98		5377
o-xylene		<1	ug/L	1	9/17/98		5377
1,1-dichloroethane		<1	ug/L	1	9/17/98		5377
Ethylene dibromide		<1	ug/L	1	9/17/98		5377
cis-1,2-dichlorethylene		<1	ug/L	1	9/17/98		5377
trans-1,2-dichloroethylene		<1	ug/L	1	9/17/98		5377
Methylene chloride		<5	ug/L	5	9/17/98		5377
Surr. Dibromofluoromethane		107	%	72-132	9/17/98		5377
Surr. Toluene-d8		112	%	82-124	9/17/98		5377
Surr. 4-Bromofluorobenzene		110	%	76-126	9/17/98		5377
Acrolein		<125	ug/Kg	125	9/20/98		5461
Acrylonitrile		<125	ug/Kg	125	9/20/98		5461
Benzene		<25	ug/Kg	25	9/20/98		5461
Carbon tetrachloride		<25	ug/Kg	25	9/20/98		5461
Chlorobenzene		<25	ug/Kg	25	9/20/98		5461
,2-dichloroethane		<25	ug/Kg	25	9/20/98		5461

Corrected

Date: 06-09-99
Page # 11
Order ID Number: 9808000195

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	9/20/98		5461
1,1,1-trichloroethane		<25	ug/Kg	25	9/20/98		5461
1,1,2-trichloroethane		<25	ug/Kg	25	9/20/98		5461
1,1,2-trichloroethylene		<25	ug/Kg	25	9/20/98		5461
Chloroform		<25	ug/Kg	25	9/20/98		5461
Dichlorobenzene		<50	ug/Kg	*50	9/20/98		5461
1,1-dichloroethylene		<25	ug/Kg	*25	9/20/98		5461
Dichloropropenes		<25	ug/Kg	25	9/20/98		5461
Ethylbenzene		<25	ug/Kg	25	9/20/98		5461
Bromodichloromethane		<25	ug/Kg	25	9/20/98		5461
Bromomethane		<125	ug/Kg	125	9/20/98		5461
Chloromethane		<25	ug/Kg	25	9/20/98		5461
Dichlorodifluoromethane		<25	ug/Kg	25	9/20/98		5461
Dichloromethane		<25	ug/Kg	25	9/20/98		5461
Trichlorofluoromethane		<25	ug/Kg	25	9/20/98		5461
Tetrachloroethylene		<25	ug/Kg	25	9/20/98		5461
Toluene		<25	ug/Kg	25	9/20/98		5461
Trichloroethylene		<25	ug/Kg	25	9/20/98		5461
Vinyl chloride		<25	ug/Kg	25	9/20/98		5461
m,p-xylene		<25	ug/Kg	25	9/20/98		5461
[illegible]-xylene		<25	ug/Kg	25	9/20/98		5461
[illegible],1-dichloroethane		<25	ug/Kg	25	9/20/98		5461
Ethylene dibromide		<25	ug/Kg	25	9/20/98		5461
cis-1,2-dichlorethylene		<25	ug/Kg	25	9/20/98		5461
trans-1,2-dichloroethylene		<25	ug/Kg	25	9/20/98		5461
Methylene chloride		<125	ug/Kg	125	9/20/98		5461
Surr. Dibromofluoromethane		101	%	72-132	9/20/98		5461
Surr. Toluene-d8		99	%	82-124	9/20/98		5461
Surr. 4-Bromofluorobenzene		102	%	76-126	9/20/98		5461
PCB		0.1	mg/Kg	0.1	9/18/98	5044	5401
Cyanide		<0.01	mg/Kg	0.01	9/15/98		5332
Total Mercury		<0.10	mg/Kg	<0.10	9/18/98	5086	5399
Arsenic		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Barium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Cadmium		<0.10	mg/Kg	0.10	9/18/98	5090	5402
Chromium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Lead		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Selenium		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Silver		<0.50	mg/Kg	0.50	9/18/98	5090	5402
Uranium		<2.0	mg/Kg	2.0	9/18/98	5090	5402
Copper		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Iron		<10	mg/Kg	10	9/20/98	5090	5461
Manganese		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Zinc		<2.0	mg/Kg	2.0	9/18/98	5090	5402
Aluminum		<10	mg/Kg	10	9/20/98	5090	5461
Boron		<10	mg/Kg	10	9/18/98	5090	5402
[illegible]Cobalt		<0.50	mg/Kg	0.50	9/18/98	5090	5402

Blank reporting limits corrected.

Corrected

Date: 06-09-99
Page # 12
Order ID Number: 9808000195

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Molybdenum		<1.0	mg/Kg	1.0	9/18/98	5090	5402
Nickel		<0.50	mg/Kg	0.50	9/18/98	5090	5402
TRPHC		<10.0	mg/Kg	10	9/15/98	4988	5324
Benzidine		<2.5	mg/kg	2.5	9/18/98	5030	5410
Hexachlorobenzene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Pentachlorobenzene		<0.25	mg/kg	0.25	9/18/98	5030	5410
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Hexachloroethane		<0.25	mg/kg	0.25	9/18/98	5030	5410
2,4-dichlorophenol		<1.25	mg/kg	1.25	9/18/98	5030	5410
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	9/18/98	5030	5410
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	9/18/98	5030	5410
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	9/18/98	5030	5410
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	9/18/98	5030	5410
bis (chloromethyl) ether		<1.25	mg/kg	1.25	9/18/98	5030	5410
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	9/18/98	5030	5410
2,4-dinitrotoluene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Diphenylhydrazine		<1.25	mg/kg	1.25	9/18/98	5030	5410
Hexachlorobutadiene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Isophorone		<1.25	mg/kg	1.25	9/18/98	5030	5410
Nitrobenzene		<0.25	mg/kg	0.25	9/18/98	5030	5410
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	9/18/98	5030	5410
2,4-dinitrophenols		<1.25	mg/kg	1.25	9/18/98	5030	5410
n-nitrosodiethylamine		<0.25	mg/kg	0.25	9/18/98	5030	5410
N-nitrosodimethylamine		<0.25	mg/kg	0.25	9/18/98	5030	5410
N-nitrosodibutylamine		<1.25	mg/kg	1.25	9/18/98	5030	5410
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	9/18/98	5030	5410
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	9/18/98	5030	5410
Pentachlorophenol		<1.25	mg/kg	1.25	9/18/98	5030	5410
Dibutyl phthalate		<0.25	mg/kg	0.25	9/18/98	5030	5410
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	9/18/98	5030	5410
Diethyl phthalate		<0.25	mg/kg	0.25	9/18/98	5030	5410
Dimethyl phthalate		<0.25	mg/kg	0.25	9/18/98	5030	5410
Anthracene		<0.25	mg/kg	0.25	9/18/98	5030	5410
3,4-benzofluoranthene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Fluoranthene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Fluorene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Phenanthrene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Pyrene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Naphthalene		<0.25	mg/kg	0.25	9/18/98	5030	5410
1-methylnaphthalene		<0.25	mg/kg	0.25	9/18/98	5030	5410
2-methylnaphthalene		<0.25	mg/kg	0.25	9/18/98	5030	5410
Benzo-a-pyrene		<0.25	mg/kg	0.25	9/18/98	5030	5410
monomethylnaphthalenes		<0.25	mg/kg	0.25	9/18/98	5030	5410
Surr. 2-Fluorophenol		61	%	25-121	9/18/98	5030	5410
Surr. Phenol-d6		64	%	24-113	9/18/98	5030	5410

Corrected

Date: 06-09-99
Page # 13
Order ID Number: 9808000195

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Surr. Nitroobenzene-d5		48	%	23-120	9/18/98	5030	5410
Surr. 2-Fluorobiphenyl		73	%	30-115	9/18/98	5030	5410
Surr. 2,4,6-Tribromophenol		56	%	19-122	9/18/98	5030	5410
Surr. Terphenyl-d14		56	%	28-137	9/18/98	5030	5410
MTBE		<0.050	mg/kg	0.05	9/14/98		5321
Benzene		<0.050	mg/kg	0.05	9/14/98		5321
Toluene		<0.050	mg/kg	0.05	9/14/98		5321
Ethylbenzene		<0.050	mg/kg	0.05	9/14/98		5321
m,p,o-xylene		<0.050	mg/kg	0.05	9/14/98		5321
Chloride		<2.0	mg/kg	2.0	9/20/98		5422
Total Phenols		<0.25	mg/kg	0.25	9/20/98		5451
Fluoride		<0.2	mg/kg	0.2	9/21/98		5491
Chloride		<1.0	mg/Kg	1.0	9/21/98		5491
Nitrate		<0.2	mg/Kg	0.2	9/21/98		5491
Sulfate		<1.0	mg/Kg	1.0	9/21/98		5491

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-09-99

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000195

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	120	120	9/14/98	5377
1,1-Dichloroethene		100	ug/L	118	118	9/14/98	5377
Chloroform		100	ug/L	116	116	9/14/98	5377
1,2-Dichloropropane		100	ug/L	114	114	9/14/98	5377
Toluene		100	ug/L	115	115	9/14/98	5377
Chlorobenzene		100	ug/L	113	113	9/14/98	5377
Ethylbenzene		100	ug/L	114	114	9/14/98	5377
Vinyl chloride		100	ug/L	117	117	9/20/98	5461
1,1-Dichloroethene		100	ug/L	119	119	9/20/98	5461
Chloroform		100	ug/L	109	109	9/20/98	5461
1,2-Dichloropropane		100	ug/L	107	107	9/20/98	5461
Toluene		100	ug/L	116	116	9/20/98	5461
Chlorobenzene		100	ug/L	112	112	9/20/98	5461
Ethylbenzene		100	ug/L	120	120	9/20/98	5461
PCB		0.400	mg/L	0.410	103	9/18/98	5401
Cyanide		0.12	mg/L	0.11	92	9/15/98	5332
Total Mercury		5.0	mg/L	4.8	96	9/18/98	5399
Arsenic		1.0	mg/L	1.0	100	9/18/98	5402
Barium		1.0	mg/L	0.99	99	9/18/98	5402
Cadmium		1.0	mg/L	1.0	100	9/18/98	5402
Chromium		1.0	mg/L	1.0	100	9/18/98	5402
Lead		1.0	mg/L	1.0	100	9/18/98	5402
Selenium		1.0	mg/L	0.99	0.99	9/18/98	5402
Silver		1.0	mg/L	1.0	100	9/18/98	5402
Uranium		1.0	mg/L	0.98	98	9/18/98	5402
Copper		1.0	mg/L	0.99	99	9/18/98	5402
Iron		100.0	mg/L	106.0	106	9/20/98	5461
Manganese		1.0	mg/L	0.99	99	9/18/98	5402
Zinc		1.0	mg/L	1.0	100	9/18/98	5402
Aluminum		250.0	mg/L	251.0	100	9/20/98	5461
Boron		1.0	mg/L	0.99	99	9/18/98	5402
Cobalt		1.0	mg/L	1.0	100	9/18/98	5402
Molybdenum		1.0	mg/L	0.96	96	9/18/98	5402
Nickel		1.0	mg/L	0.99	99	9/18/98	5402

Corrected

Date: 06-09-99
Page # 15
Order ID Number: 9808000195

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
TRPHC		100	mg/L	103	103	9/15/98	5324
Phenol		80	mg/L	81	101	9/18/98	5410
1,4-Dichlorobenzene		80	mg/L	78	98	9/18/98	5410
2-nitrophenol		80	mg/L	81	101	9/18/98	5410
2,4-Dichlorophenol		80	mg/L	87	109	9/18/98	5410
Hexachlorobutadiene		80	mg/L	80	100	9/18/98	5410
4-Chloro-3-methylphenol		80	mg/L	70	88	9/18/98	5410
2,4,6-Trichlorophenol		80	mg/L	84	105	9/18/98	5410
Acenaphthene		80	mg/L	84	105	9/18/98	5410
n-Nitrosodiphenylamine		80	mg/L	74	93	9/18/98	5410
Pentachlorophenol		80	mg/L	76	95	9/18/98	5410
Fluoranthene		80	mg/L	71	89	9/18/98	5410
Di-n-octylphthalate		80	mg/L	74	93	9/18/98	5410
Benzo(a)pyrene		80	mg/L	75	94	9/18/98	5410
pH		7	s.u.	7	100	9/11/98	5284
MTBE		0.100	mg/L	0.089	89	9/14/98	5321
Benzene		0.100	mg/L	0.091	91	9/14/98	5321
Toluene		0.100	mg/L	0.089	89	9/14/98	5321
Ethylbenzene		0.100	mg/L	0.092	92	9/14/98	5321
m,p,o-xylene		**0.300	mg/L	0.269	90	9/14/98	5321
Chloride		500	mg/L	500	100	9/20/98	5422
TDS		1,000	mg/L	976	98	9/21/98	5449
Total Phenols		0.80	mg/L	0.80	100	9/20/98	5451
Fluoride		2.5	mg/L	2.48	99	9/21/98	5491
Chloride		12.5	mg/L	12.63	101	9/21/98	5491
Nitrate		5	mg/L	5.09	102	9/21/98	5491
Sulfate		12.5	mg/L	12.88	103	9/21/98	5491

** CCVS True Concentration corrected.

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-09-99

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000195

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	136	136	100	119	119	13	9/17/98		5377
Benzene		ug/L	<1	100	121	121	100	110	110	9.5	9/17/98		5377
Trichloroethene		ug/L	<1	100	122	122	100	111	111	9.4	9/17/98		5377
Toluene		ug/L	<1	100	116	116	100	106	106	9.0	9/17/98		5377
Chlorobenzene		ug/L	<1	100	104	104	100	94	94	10.0	9/17/98		5377
PCB		mg/Kg	<0.1	0.40	0.43	108	0.40	0.45	113	4.5	9/18/98	5044	5401
Cyanide	lcs	mg/Kg	<0.01	0.12	0.10	83	0.12	0.09	75	10	9/15/98		5332
1,1-Dichloroethene		mg/Kg	<25	100	127	127	100	127	127	0	9/20/98		5461
Benzene		mg/Kg	<25	100	121	121	100	124	124	2.4	9/20/98		5461
Trichloroethene		mg/Kg	<25	100	124	124	100	124	124	0	9/20/98		5461
Toluene		mg/Kg	<25	100	116	116	100	119	119	2.6	9/20/98		5461
Chlorobenzene		mg/Kg	<25	100	106	106	100	106	106	0	9/20/98		5461
Total Mercury		mg/Kg	<0.10	2.5	2.5	100	2.5	2.5	100	0	9/18/98	5086	5399
Total Phenols		mg/Kg	2.8	20	22.9	101	20	23.3	103	2	9/20/98		5451
Arsenic		mg/Kg	<0.50	200	167	84	200	168	84	0	9/18/98	5090	5402
Barium		mg/Kg	<0.50	200	182	91	200	184	92	1.1	9/18/98	5090	5402
Cadmium		mg/Kg	<0.10	200	175	88	200	173	87	1.1	9/18/98	5090	5402
Chromium		mg/Kg	<0.50	200	182	91	200	182	91	0	9/18/98	5090	5402
Lead		mg/Kg	<0.50	200	175	88	200	173	87	1.1	9/18/98	5090	5402
Selenium		mg/Kg	<0.50	200	165	83	200	161	81	2.4	9/18/98	5090	5402
Silver		mg/Kg	<0.50	350	350	100	350	413	118	17	9/18/98	5090	5402
Uranium		mg/Kg	<2.0	200	192	96	200	190	95	1.0	9/18/98	5090	5402
Copper		mg/Kg	<1.0	200	175	88	200	176	88	0	9/18/98	5090	5402
Manganese		mg/Kg	<1.0	200	179	90	200	178	89	1.1	9/18/98	5090	5402
Zinc		mg/Kg	<2.0	200	178	89	200	176	88	1.1	9/18/98	5090	5402
TRPHC		mg/Kg	<10.0	250	205	82	250	235	94	14	9/15/98	4988	5324
Phenol		mg/Kg	<0.25	10.00	5.56	56	10.00	5.94	59	5.2	9/18/98	5030	5410
2-Chlorophenol		mg/Kg	<1.25	10.00	5.52	55	10.00	5.74	57	3.6	9/18/98	5030	5410
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	6.58	66	10.00	6.85	69	4.4	9/18/98	5030	5410
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	7.21	72	10.00	8.33	83	14	9/18/98	5030	5410
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	6.36	64	10.00	6.75	68	6.1	9/18/98	5030	5410
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	5.25	53	10.00	5.86	59	11	9/18/98	5030	5410
Acenaphthene		mg/Kg	<0.25	10.00	6.77	68	10.00	7.24	72	5.7	9/18/98	5030	5410
4-Nitrophenol		mg/Kg	<1.25	10.00	3.9	39	10.00	4.49	45	14	9/18/98	5030	5410
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	5.74	57	10.00	6.42	64	12	9/18/98	5030	5410
Pentachlorophenol		mg/Kg	<1.25	10.00	3.76	38	10.00	4.55	46	19	9/18/98	5030	5410
Pyrene		mg/Kg	<0.25	10.00	5.76	58	10.00	6.34	63	8.3	9/18/98	5030	5410
MTBE		mg/Kg	<0.050	5.00	5.12	102	5.00	5.26	105	2.9	9/14/98		5321
Benzene		mg/Kg	<0.050	5.00	5.42	108	5.00	5.51	110	1.8	9/14/98		5321
Toluene		mg/Kg	<0.050	5.00	5.39	108	5.00	5.5	110	1.8	9/14/98		5321
Ethylbenzene		mg/Kg	<0.050	5.00	5.57	111	5.00	5.66	113	1.8	9/14/98		5321

Corrected

Date: 06-09-99
Page # 17
Order ID Number: 9808000195

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
m,p,o-xylene		mg/Kg	0.159	15	16.5	109	15	16.9	112	2.7	9/14/98		5321
Chloride		mg/Kg	140	4,000	4622	112	4,000	4622	112	0	9/20/98		5422
Boron		mg/Kg	<10	200	170	85	200	166	83	2.4	9/18/98	5090	5402
Cobalt		mg/Kg	<0.50	200	175	88	200	179	90	2.2	9/18/98	5090	5402
Molybdenum		mg/Kg	<1.0	200	176	88	200	173	87	1.1	9/18/98	5090	5402
Nickel		mg/Kg	<0.50	200	172	86	200	173	87	1.2	9/18/98	5090	5402
Aluminum		mg/Kg	<10	200	165	83	200	169	85	2.4	9/20/98	5090	5461
Iron		mg/Kg	<10	200	160	80	200	157	79	1.3	9/20/98	5090	5461
Fluoride		mg/Kg	7.21	5	12.33	102	5	12.25	101	0.99	9/21/98		5491
Chloride		mg/Kg	168.9	25	193.53	99	25	187.55	75	3.1	9/21/98		5491
Nitrate		mg/Kg	1.64	10	11.17	95	10	11.65	100	5.1	9/21/98		5491
Sulfate		mg/Kg	55.5	25	82.33	107	25	81.31	103	3.8	9/21/98		5491

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-09-99

Project Number: 19349
Project Name: Shell Grimes
Project Location: Grimes Battery, Hobbs, NM

Order ID Number: 9808000195

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	7.9	7.9	0.00	9/11/98		5284
TDS		mg/Kg	1,100.0	1,080.00	1.8	9/21/98		5449

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

TraceAnalysis, Inc.
Nell Green
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424
Phone: 806-794-1296
Fax: 806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0921	**P.O. Number:**	
Client I.D.:	107159	**ARS Sample I.D.:**	ARS-98-3360
Date Sampled:	9/8/98	**Date Received:**	9/15/98
Time Sampled:	N/A	**Time Received:**	1240
Type of Sample:	Solid	**Date of Report:**	9/17/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	<0.78	N/A	pCi/gm	<0.029	N/A	Bq/gm	EPA 901.1M	9/17/98 1006	kh
Ra-228	<0.17	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	9/17/98 1006	kh
Pb-210	1.66	1.55	pCi/gm	0.061	0.057	Bq/gm	EPA 901.1M	9/17/98 1006	kh
Total Activity	2.85	N/A	pCi/gm	0.105	N/A	Bq/gm	EPA 901.1M	9/17/98 1006	kh

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeffrey Kindley
Phone #: (915) ~~915~~ 563-0118
FAX #: (915) 563-9526

Company Name & Address: Philip Services Corporation
7904 I H 20 West
Midland, Tx 79706

Project #: 19349
Project Name: Shell Grimes Tank Battery

Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME	BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240 / 8260	8270	See Attached	VOC's	Chlorides (300)
107157	Trip Blank	2	40ml VOA	✓						✓			09/08/98										✓			
158	Field Blank	2	40ml VOA	✓				✓					09/08/98	16:30									✓			
159	GSB-11 (2-3')	5	4oz Jars		✓								09/08/98	09:11		✓							✓			
	GSB-11 (2-3')	1	40ml VOA		✓							✓	09/08/98	09:11										✓		
160	GSB-11 (33-35')	2	4oz Jars		✓					✓			09/08/98	13:09	✓	✓									✓	
161	GSB-11 (48-50')	2	4oz Jars		✓					✓			09/08/98	15:09	✓	✓									✓	
162	GSB-11D (48-50')	2	4oz Jars		✓					✓			09/8/98	15:09	✓	✓									✓	

SPECIAL HANDLING: Turn around # of days; Fax ASAP; Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	09/09/98	4:10 PM	Helen Shelton	9/09/98	4:10 PM
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Helen Shelton	9/9/98	16:00 PM			
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Vicki Windham	9-10-98	9:00 am

REMARKS: Normal Turnaround

ONA

Relinquished by: Glen Rainey

11. Anhydrites - HC 159 384370 2

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 1

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
108238	TMW-3 2-3'	9/22/98	8:50	9/26/98
108239	TMW-3 3-5'	9/22/98	8:55	9/26/98
108240	TMW-3 23-25'	9/22/98	9:40	9/26/98
108241	TMW-3 63-65'	9/22/98	14:50	9/26/98
108242	Field Blank	9/22/98	16:30	9/26/98
108243	Trip Blank			9/26/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

All data meets quality control criteria with the following exceptions:
108238, 108239, 108240 and 108241 Volatiles run 3 days past hold time

Corrections:
Volatile samples 108238-41 flagged as being run past hold time.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 2

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488
Sample Number: 108238

Field Code: TMW-3 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<350	ug/Kg	S-8260B		*10/9/98	MB		5709	350
Acrylonitrile		<350	ug/Kg	S-8260B		*10/9/98	MB		5709	350
Benzene		74	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Carbon tetrachloride		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Chlorobenzene		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
1,2-dichloroethane		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
1,1,2,2-tetrachloroethane		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
1,1,1-trichloroethane		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
1,1,2-trichloroethane		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
1,1,2-trichloroethylene		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Chloroform		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Dichlorobenzene		<140	ug/Kg	S-8260B		*10/9/98	MB		5709	140
1,1-dichloroethylene		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	50
Dichloropropenes		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Ethylbenzene		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Bromodichloromethane		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Bromomethane		<350	ug/Kg	S-8260B		*10/9/98	MB		5709	350
Chloromethane		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Dichlorodifluoromethane		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Dichloromethane		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Trichlorofluorometane		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Tetrachloroethylene		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Toluene		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Trichloroethylene		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Vinyl chloride		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
m,p-xylene		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
o-xylene		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
1,1-dichloroethane		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Ethylene dibromide		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
cis-1,2-dichlorethylene		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
trans-1,2-dichloroethylene		<70	ug/Kg	S-8260B		*10/9/98	MB		5709	70
Methylene chloride		<350	ug/Kg	S-8260B		*10/9/98	MB		5709	350
Surr. Dibromofluoromethane		101	%	S-8260B		10/9/98	MB		5709	72-130
Surr. Toluene-d8		104	%	S-8260B		10/9/98	MB		5709	77-127
Surr. 4-Bromofluorobenzene		106	%	S-8260B		10/9/98	MB		5709	72-131
Benzidine		<25	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	25
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5

Corrected

Date: 05-20-99

Order ID Number: 9809000488
Sample Number: 108238

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TMW-3 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
2,4-dichlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
bis (2-chloroethyl) ether		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Isophorone		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
n-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
N-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	12.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Anthracene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Fluorene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Pyrene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
2-methylnaphthalene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	9/27/98	10/1/98	DG	5302	5662	2.5
Surr. 2-Fluorophenol		86	%	S-8270C	9/27/98	10/1/98	DG	5302	5662	25-121
Surr. Phenol-d6		66	%	S-8270C	9/27/98	10/1/98	DG	5302	5662	24-113
Surr. Nitroobenzene-d5		74	%	S-8270C	9/27/98	10/1/98	DG	5302	5662	23-120
Surr. 2-Fluorobiphenyl		84	%	S-8270C	9/27/98	10/1/98	DG	5302	5662	30-115
Surr. 2,4,6-Tribromophenol		70	%	S-8270C	9/27/98	10/1/98	DG	5302	5662	19-122
Surr. Terphenyl-d14		100	%	S-8270C	9/27/98	10/1/98	DG	5302	5662	28-137

Corrected

Date: 05-20-99
Page # 4
Order ID Number: 9809000488
Sample Number: 108238

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TMW-3 2-3'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/30/98	10/1/98	RC	5320	5662	0.1
Arsenic		3.6	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Barium		152	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Cadmium		<0.10	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.10
Chromium		3.2	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Lead		1.4	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Total Mercury		0.28	mg/Kg	S 7471	10/4/98	10/4/98	MS	5339	5680	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Silver		<0.50	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Copper		3.5	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Iron		2500	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Manganese		25	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Zinc		7.5	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Aluminum		3800	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	10.0
Boron		<10.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	10.0
Cobalt		5.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Molybdenum		1.2	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Nickel		6.4	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/30/98	SA		5651	0.01
Fluoride		3.4	mg/Kg	E 300.0		9/29/98	JS		5645	0.2
Nitrate		<0.2	mg/Kg	E 300.0		9/29/98	JS		5645	0.4
Chloride		81	mg/Kg	E 300.0		9/29/98	JS		5645	1.0
Sulfate		180	mg/Kg	E 300.0		9/29/98	JS		5645	1.0
TDS		460	mg/Kg	E 160.2		10/8/98	RS		5699	---
pH		8.2	s.u.	E 150.1		9/28/98	SA		5640	---
TRPHC		1,460	mg/Kg	S 418.1	9/28/98	9/29/98	MF		5521	10.0
Total Phenol		<0.25	mg/Kg	SM 5530 A,D		10/6/98	RC		5698	0.25
Total Radium		7.54	pCi/gm	E 901.1M		9/30/98	KH	---	---	---

* Sample was run 3 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 5

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488
Sample Number: 108239

Field Code: TMW-3 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<240	ug/Kg	S-8260B		*10/9/98	MB		5709	240
Acrylonitrile		<240	ug/Kg	S-8260B		*10/9/98	MB		5709	240
Benzene		73	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Carbon tetrachloride		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Chlorobenzene		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
1,2-dichloroethane		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
1,1,2,2-tetrachloroethane		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
1,1,1-trichloroethane		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
1,1,2-trichloroethane		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
1,1,2-trichloroethylene		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Chloroform		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Dichlorobenzene		<96	ug/Kg	S-8260B		*10/9/98	MB		5709	96
1,1-dichloroethylene		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	50
Dichloropropenes		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Ethylbenzene		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Bromodichloromethane		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Bromomethane		<240	ug/Kg	S-8260B		*10/9/98	MB		5709	240
Chloromethane		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Dichlorodifluoromethane		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Dichloromethane		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Trichlorofluorometane		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Tetrachloroethylene		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Toluene		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Trichloroethylene		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Vinyl chloride		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
m,p-xylene		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
o-xylene		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
1,1-dichloroethane		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Ethylene dibromide		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
cis-1,2-dichlorethylene		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
trans-1,2-dichloroethylene		<48	ug/Kg	S-8260B		*10/9/98	MB		5709	48
Methylene chloride		<240	ug/Kg	S-8260B		*10/9/98	MB		5709	240
Surr. Dibromofluoromethane		101	%	S-8260B		10/9/98	MB		5709	72-130
Surr. Toluene-d8		103	%	S-8260B		10/9/98	MB		5709	77-127
Surr. 4-Bromofluorobenzene		101	%	S-8260B		10/9/98	MB		5709	72-131
Benzidine		<25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5

Corrected

Date: 05-20-99
Page # 6
Order ID Number: 9809000488
Sample Number: 108239

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TMW-3 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
2,4-dichlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
bis (2-chloroethyl) ether		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Isophorone		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
n-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
N-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Anthracene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Fluorene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Pyrene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Naphthalene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
2-methylnaphthalene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Benzo-a-pyrene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Surr. 2-Fluorophenol		76	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	25-121
Surr. Phenol-d6		61	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	24-113
Surr. Nitroobenzene-d5		82	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	23-120
Surr. 2-Fluorobiphenyl		105	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	30-115
Surr. 2,4,6-Tribromophenol		66	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	19-122
Surr. Terphenyl-d14		102	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	28-137

Corrected

Date: 05-20-99
Page # 7
Order ID Number: 9809000488
Sample Number: 108239

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TMW-3 3-5'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/30/98	10/1/98	RC	5320	5662	0.1
Arsenic		2.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Barium		147	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Cadmium		<0.10	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.10
Chromium		4.2	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Lead		1.3	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Total Mercury		0.35	mg/Kg	S 7471	10/4/98	10/4/98	MS	5339	5680	0.10
Selenium		0.66	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Silver		<0.50	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Copper		1.3	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Iron		3300	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Manganese		24	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Zinc		8.4	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Aluminum		5100	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	10
Boron		12	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	10
Cobalt		5.5	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Molybdenum		1.1	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Nickel		7.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/30/98	SA		5651	0.01
Fluoride		7.4	mg/Kg	E 300.0		9/29/98	JS		5645	0.2
Nitrate		<0.2	mg/Kg	E 300.0		9/29/98	JS		5645	0.2
Chloride		41	mg/Kg	E 300.0		9/29/98	JS		5645	1.0
Sulfate		63	mg/Kg	E 300.0		9/29/98	JS		5645	1.0
TDS		470	mg/Kg	E 160.2		10/8/98	RS		5699	---
pH		8.4	s.u.	E 150.1		9/28/98	SA		5640	
TRPHC		2986.0	mg/Kg	S 418.1	9/28/98	9/29/98	MF		5521	10.0
Total Phenol		<0.25	mg/Kg	SM 5530 A,D		10/6/98	RC		5698	0.25
Total Radium		14.14	pCi/gm	E 901.1M		9/30/98	KH	---	---	---

* Sample was run 3 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99
Page # 8

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488
Sample Number: 108240

Field Code: TMW-3 23-25'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<500	ug/Kg	S-8260B		*10/9/98	MB		5709	500
Acrylonitrile		<500	ug/Kg	S-8260B		*10/9/98	MB		5709	500
Benzene		120	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Carbon tetrachloride		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Chlorobenzene		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
1,2-dichloroethane		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
1,1,2,2-tetrachloroethane		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
1,1,1-trichloroethane		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
1,1,2-trichloroethane		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
1,1,2-trichloroethylene		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Chloroform		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Dichlorobenzene		<200	ug/Kg	S-8260B		*10/9/98	MB		5709	200
1,1-dichloroethylene		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Dichloropropenes		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Ethylbenzene		3,000	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Bromodichloromethane		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Bromomethane		<500	ug/Kg	S-8260B		*10/9/98	MB		5709	500
Chloromethane		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Dichlorodifluoromethane		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Dichloromethane		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Trichlorofluorometane		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Tetrachloroethylene		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Toluene		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Trichloroethylene		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Vinyl chloride		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
m,p-xylene		11,500	ug/Kg	S-8260B		*10/9/98	MB		5709	100
o-xylene		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
1,1-dichloroethane		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Ethylene dibromide		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
cis-1,2-dichlorethylene		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
trans-1,2-dichloroethylene		<100	ug/Kg	S-8260B		*10/9/98	MB		5709	100
Methylene chloride		<500	ug/Kg	S-8260B		*10/9/98	MB		5709	500
Surr. Dibromofluoromethane		101	%	S-8260B		10/9/98	MB		5709	72-130
Surr. Toluene-d8		110	%	S-8260B		10/9/98	MB		5709	77-127
Surr. 4-Bromofluorobenzene		115	%	S-8260B		10/9/98	MB		5709	72-131
Benzidine		<25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Hexachlorobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Pentachlorobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
1,2,4,5-tetrachlorobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5

Corrected

Date: 05-20-99
Page # 9
Order ID Number: 9809000488
Sample Number: 108240

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TMW-3 23-25'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
2,4-dichlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
2,4,5-trichlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
2,4,6-trichlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
bis (2-chloroethyl) ether		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
bis (2-chloroisopropyl) ether		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
bis (chloromethyl) ether		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
3,3-dichlorobenzidine		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
2,4-dinitrotoluene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Diphenylhydrazine		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
Hexachlorobutadiene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Hexachlorocyclopentadiene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Isophorone		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
Nitrobenzene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
2,4-dinitro-o-cresol		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
2,4-dinitrophenols		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
n-nitrosodiethylamine		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
N-nitrosodimethylamine		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
N-nitrosodibutylamine		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
N-nitrosodiphenylamine		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
N-nitrosopyrrolidine		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Pentachlorophenol		<12.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	12.5
Dibutyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
di-2-ethylhexyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Diethyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Dimethyl phthalate		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Anthracene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
3,4-benzofluoranthene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Benzo(k)fluoranthene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Fluoranthene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Fluorene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Phenanthrene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Pyrene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Naphthalene		3.41	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
1-methylnaphthalene		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
2-methylnaphthalene		7.52	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Benzo-a-pyrene		8.81	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Surr. 2-Fluorophenol		42	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	25-121
Surr. Phenol-d6		40	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	24-113
Surr. Nitroobenzene-d5		52	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	23-120
Surr. 2-Fluorobiphenyl		72	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	30-115
Surr. 2,4,6-Tribromophenol		34	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	19-122
Surr. Terphenyl-d14		69	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	28-137

Corrected

Date: 05-20-99
Page # 10
Order ID Number: 9809000488
Sample Number: 108240

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TMW-3 23-25'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/30/98	10/1/98	RC	5320	5662	0.1
Arsenic		0.54	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Barium		285	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Cadmium		0.14	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.10
Chromium		2.6	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Lead		0.69	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Total Mercury		0.38	mg/Kg	S 7471	10/4/98	10/4/98	MS	5339	5680	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Silver		<0.50	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Copper		2.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Iron		1500	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Manganese		13	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Zinc		4.2	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Aluminum		1800	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	10.0
Boron		<10.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	10.0
Cobalt		3.7	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Nickel		3.9	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/30/98	SA		5651	0.01
Fluoride		2.4	mg/Kg	E 300.0		9/29/98	JS		5645	0.2
Nitrate		<0.4	mg/Kg	E 300.0		9/29/98	JS		5645	0.4
Chloride		42	mg/Kg	E 300.0		9/29/98	JS		5645	1.0
Sulfate		17	mg/Kg	E 300.0		9/29/98	JS		5645	2.0
TDS		200	mg/Kg	E 160.2		10/8/98	RS		5699	---
pH		8.6	s.u.	E 150.1		9/28/98	SA		5640	---
TRPHC		3,574	mg/Kg	S 418.1	9/28/98	9/29/98	MF		5521	10.0
Total Phenol		<0.25	mg/Kg	SM 5530 A,D		10/6/98	RC		5698	0.25
Total Radium		1.91	pCi/gm	E 901.1M		9/30/98	KH	---	---	---

* Sample run 3 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 05-20-99

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488
Sample Number: 108241

Field Code: TMW-3 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<180	ug/Kg	S-8260B		*10-9-98	MB		5709	180
Acrylonitrile		<180	ug/Kg	S-8260B		*10-9-98	MB		5709	180
Benzene		57	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Carbon tetrachloride		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Chlorobenzene		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
1,2-dichloroethane		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
1,1,2,2-tetrachloroethane		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
1,1,1-trichloroethane		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
1,1,2-trichloroethane		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
1,1,2-trichloroethylene		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Chloroform		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Dichlorobenzene		<72	ug/Kg	S-8260B		*10-9-98	MB		5709	72
1,1-dichloroethylene		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	180
Dichloropropenes		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Ethylbenzene		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Bromodichloromethane		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Bromomethane		<180	ug/Kg	S-8260B		*10-9-98	MB		5709	180
Chloromethane		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Dichlorodifluoromethane		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Dichloromethane		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Trichlorofluorometane		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Tetrachloroethylene		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Toluene		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Trichloroethylene		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Vinyl chloride		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
m,p-xylene		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
o-xylene		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
1,1-dichloroethane		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Ethylene dibromide		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
cis-1,2-dichlorethylene		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
trans-1,2-dichloroethylene		<36	ug/Kg	S-8260B		*10-9-98	MB		5709	36
Methylene chloride		<180	ug/Kg	S-8260B		*10-9-98	MB		5709	180
Surr. Dibromofluoromethane		100	%	S-8260B		10/9/98	MB		5709	72-130
Surr. Toluene-d8		104	%	S-8260B		10/9/98	MB		5709	77-127
Surr. 4-Bromofluorobenzene		104	%	S-8260B		10/9/98	MB		5709	72-131
Benzidine		<2.5	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	2.5
Hexachlorobenzene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Pentachlorobenzene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
1,2,4,5-tetrachlorobenzene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25

Date: 10-20-98
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Order ID Number: 9809000488
Sample Number: 108241

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Field Code: TMW-3 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Hexachloroethane		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
2,4-dichlorophenol		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
2,4,5-trichlorophenol		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
2,4,6-trichlorophenol		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
bis (2-chloroethyl) ether		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
bis (2-chloroisopropyl) ether		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
bis (chloromethyl) ether		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
3,3-dichlorobenzidine		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
2,4-dinitrotoluene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Diphenylhydrazine		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
Hexachlorobutadiene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Hexachlorocyclopentadiene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Isophorone		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
Nitrobenzene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
2,4-dinitro-o-cresol		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
2,4-dinitrophenols		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
n-nitrosodiethylamine		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
N-nitrosodimethylamine		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
N-nitrosodibutylamine		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
N-nitrosodiphenylamine		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
N-nitrosopyrrolidine		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Pentachlorophenol		<1.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	1.25
Dibutyl phthalate		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
di-2-ethylhexyl phthalate		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Diethyl phthalate		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Dimethyl phthalate		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Anthracene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
3,4-benzofluoranthene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Benzo(k)fluoranthene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Fluoranthene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Fluorene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Phenanthrene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Pyrene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Naphthalene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
1-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
2-methylnaphthalene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Benzo-a-pyrene		<0.25	mg/Kg	S-8270C	9/27/98	10/4/98	JG	5302	5681	0.25
Surr. 2-Fluorophenol		70	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	25-121
Surr. Phenol-d6		83	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	24-113
Surr. Nitroobenzene-d5		75	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	23-120
Surr. 2-Fluorobiphenyl		79	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	30-115
Surr. 2,4,6-Tribromophenol		74	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	19-122
Surr. Terphenyl-d14		78	%	S-8270C	9/27/98	10/4/98	JG	5302	5681	28-137

Corrected

Date: 05-20-99
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Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488
Sample Number: 108241

Field Code: TMW-3 63-65'

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Chlordane		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
DDT		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Dieldrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Endosulfan		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Endrin		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
Heptachlor		<50	ug/Kg	S-8080	10/5/98	10/16/98	KC	---	---	50
PCB's		<0.1	mg/Kg	S 8082	9/30/98	10/1/98	RC	5320	5662	0.1
Arsenic		<0.50	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Barium		10	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Cadmium		0.14	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.10
Chromium		3.3	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Lead		1.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Total Mercury		0.45	mg/Kg	S 7471	10/4/98	10/4/98	MS	5339	5680	0.10
Selenium		<0.50	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Silver		<0.50	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Uranium		<2.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Copper		1.1	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Iron		2400	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Manganese		20	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Zinc		7.4	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	2.0
Aluminum		2000	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	10
Boron		<10.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	10
Cobalt		2.5	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Molybdenum		<1.0	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	1.0
Nickel		2.4	mg/Kg	S 6010B	9/27/98	9/28/98	RR	5301	5511	0.50
Cyanide		<0.01	mg/Kg	SM 4500 CN,CE		9/30/98	SA		5651	0.01
Fluoride		1.5	mg/Kg	E 300.0		9/30/98	JS		5650	0.2
Nitrate		<0.2	mg/Kg	E 300.0		9/30/98	JS		5650	0.2
Chloride		31	mg/Kg	E 300.0		10/1/98	JS		5661	1.0
Sulfate		9.0	mg/Kg	E 300.0		10/1/98	JS		5661	1.0
TDS		170	mg/Kg	E 160.2		10/8/98	RS		5699	---
pH		9.2	s.u.	E 150.1		9/28/98	SA		5640	
TRPHC		<10.0	mg/Kg	S 418.1	9/28/98	9/29/98	MF		5521	10.0
Total Phenol		<0.25	mg/Kg	SM 5530 A,D		10/6/98	RC		5698	0.25
Total Radium		10.60	pCi/gm	E 901.1M		9/30/98	KH	---	---	---

* Sample ran 3 days past hold time

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 14

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488
Sample Number: 108242

Field Code: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/3/98	AG		5671	5
Acrylonitrile		<5	ug/L	S-8260B		10/3/98	AG		5671	5
Benzene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Chlorobenzene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Chloroform		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Dichlorobenzene		<2	ug/L	S-8260B		10/3/98	AG		5671	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Dichloropropenes		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Ethylbenzene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Bromodichloromethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Bromomethane		<5	ug/L	S-8260B		10/3/98	AG		5671	5
Chloromethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Dichloromethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Toluene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Trichloroethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Vinyl chloride		<1	ug/L	S-8260B		10/3/98	AG		5671	1
m,p-xylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
o-xylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Ethylene dibromide		<1	ug/L	S-8260B		10/3/98	AG		5671	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Methylene chloride		<5	ug/L	S-8260B		10/3/98	AG		5671	5
Surr. Dibromofluoromethane		101	%	S-8260B		10/3/98	AG		5671	72-130
Surr. Toluene-d8		99	%	S-8260B		10/3/98	AG		5671	77-127
Surr. 4-Bromofluorobenzene		97	%	S-8260B		10/3/98	AG		5671	72-131

Analytical Results Report

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 15

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488
Sample Number: 108243

Field Code: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/3/98	AG		5671	5
Acrylonitrile		<5	ug/L	S-8260B		10/3/98	AG		5671	5
Benzene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Chlorobenzene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Chloroform		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Dichlorobenzene		<2	ug/L	S-8260B		10/3/98	AG		5671	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Dichloropropenes		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Ethylbenzene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Bromodichloromethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Bromomethane		<5	ug/L	S-8260B		10/3/98	AG		5671	5
Chloromethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Dichloromethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Toluene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Trichloroethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Vinyl chloride		<1	ug/L	S-8260B		10/3/98	AG		5671	1
m,p-xylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
o-xylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Ethylene dibromide		<1	ug/L	S-8260B		10/3/98	AG		5671	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/3/98	AG		5671	1
Methylene chloride		<5	ug/L	S-8260B		10/3/98	AG		5671	5
Surr. Dibromofluoromethane		125	%	S-8260B		10/3/98	AG		5671	72-130
Surr. Toluene-d8		87	%	S-8260B		10/3/98	AG		5671	77-127
Surr. 4-Bromofluorobenzene		106	%	S-8260B		10/3/98	AG		5671	72-131

Quality Control Report
Blanks

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	10/3/98		5671
Acrylonitrile		<5	ug/L	5	10/3/98		5671
Benzene		<1	ug/L	1	10/3/98		5671
Carbon tetrachloride		<1	ug/L	1	10/3/98		5671
Chlorobenzene		<1	ug/L	1	10/3/98		5671
1,2-dichloroethane		<1	ug/L	1	10/3/98		5671
1,1,2,2-tetrachloroethane		<1	ug/L	1	10/3/98		5671
1,1,1-trichloroethane		<1	ug/L	1	10/3/98		5671
1,1,2-trichloroethane		<1	ug/L	1	10/3/98		5671
1,1,2-trichloroethylene		<1	ug/L	1	10/3/98		5671
Chloroform		<1	ug/L	1	10/3/98		5671
Dichlorobenzene		<2	ug/L	2	10/3/98		5671
1,1-dichloroethylene		<1	ug/L	1	10/3/98		5671
Dichloropropenes		<1	ug/L	1	10/3/98		5671
Ethylbenzene		<1	ug/L	1	10/3/98		5671
Bromodichloromethane		<1	ug/L	1	10/3/98		5671
Bromomethane		<5	ug/L	5	10/3/98		5671
Chloromethane		<1	ug/L	1	10/3/98		5671
Dichlorodifluoromethane		<1	ug/L	1	10/3/98		5671
Dichloromethane		<1	ug/L	1	10/3/98		5671
Trichlorofluoromethane		<1	ug/L	1	10/3/98		5671
Tetrachloroethylene		<1	ug/L	1	10/3/98		5671
Toluene		<1	ug/L	1	10/3/98		5671
Trichloroethylene		<1	ug/L	1	10/3/98		5671
Vinyl chloride		<1	ug/L	1	10/3/98		5671
m,p-xylene		<1	ug/L	1	10/3/98		5671
o-xylene		<1	ug/L	1	10/3/98		5671
1,1-dichloroethane		<1	ug/L	1	10/3/98		5671
Ethylene dibromide		<1	ug/L	1	10/3/98		5671
cis-1,2-dichlorethylene		<1	ug/L	1	10/3/98		5671
trans-1,2-dichloroethylene		<1	ug/L	1	10/3/98		5671
Methylene chloride		<5	ug/L	5	10/3/98		5671
Surr. Dibromofluoromethane		105	%	72-130	10/3/98		5671
Surr. Toluene-d8		98	%	77-127	10/3/98		5671
Surr. 4-Bromofluorobenzene		101	%	72-131	10/3/98		5671
Acrolein		<125	ug/Kg	125	10/9/98		5709
Acrylonitrile		<125	ug/Kg	125	10/9/98		5709
Benzene		<25	ug/Kg	25	10/9/98		5709
Carbon tetrachloride		<25	ug/Kg	25	10/9/98		5709
Chlorobenzene		<25	ug/Kg	25	10/9/98		5709
1,2-dichloroethane		<25	ug/Kg	25	10/9/98		5709

Corrected

Date: 12-16-98

Order ID Number: 9809000488

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
1,1,2,2-tetrachloroethane		<25	ug/Kg	25	10/9/98		5709
1,1,1-trichloroethane		<25	ug/Kg	25	10/9/98		5709
1,1,2-trichloroethane		<25	ug/Kg	25	10/9/98		5709
1,1,2-trichloroethylene		<25	ug/Kg	25	10/9/98		5709
Chloroform		<25	ug/Kg	25	10/9/98		5709
Dichlorobenzene		<50	ug/Kg	**50	10/9/98		5709
1,1-dichloroethylene		<25	ug/Kg	**25	10/9/98		5709
Dichloropropenes		<25	ug/Kg	25	10/9/98		5709
Ethylbenzene		<25	ug/Kg	25	10/9/98		5709
Bromodichloromethane		<25	ug/Kg	25	10/9/98		5709
Bromomethane		<125	ug/Kg	125	10/9/98		5709
Chloromethane		<25	ug/Kg	25	10/9/98		5709
Dichlorodifluoromethane		<25	ug/Kg	25	10/9/98		5709
Dichloromethane		<25	ug/Kg	25	10/9/98		5709
Trichlorofluoromethane		<25	ug/Kg	25	10/9/98		5709
Tetrachloroethylene		<25	ug/Kg	25	10/9/98		5709
Toluene		<25	ug/Kg	25	10/9/98		5709
Trichloroethylene		<25	ug/Kg	25	10/9/98		5709
Vinyl chloride		<25	ug/Kg	25	10/9/98		5709
m,p-xylene		<25	ug/Kg	25	10/9/98		5709
o-xylene		<25	ug/Kg	25	10/9/98		5709
1,1-dichloroethane		<25	ug/Kg	25	10/9/98		5709
Ethylene dibromide		<25	ug/Kg	25	10/9/98		5709
cis-1,2-dichlorethylene		<25	ug/Kg	25	10/9/98		5709
trans-1,2-dichloroethylene		<25	ug/Kg	25	10/9/98		5709
Methylene chloride		<125	ug/Kg	125	10/9/98		5709
Surr. Dibromofluoromethane		97	%	72-130	10/9/98		5709
Surr. Toluene-d8		98	%	77-127	10/9/98		5709
Surr. 4-Bromofluorobenzene		97	%	72-131	10/9/98		5709
Benzidine		<2.5	mg/kg	2.5	10/1/98	5302	5662
Hexachlorobenzene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Pentachlorobenzene		<0.25	mg/kg	0.25	10/1/98	5302	5662
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Hexachloroethane		<0.25	mg/kg	0.25	10/1/98	5302	5662
2,4-dichlorophenol		<1.25	mg/kg	1.25	10/1/98	5302	5662
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	10/1/98	5302	5662
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	10/1/98	5302	5662
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	10/1/98	5302	5662
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	10/1/98	5302	5662
bis (chloromethyl) ether		<1.25	mg/kg	1.25	10/1/98	5302	5662
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	10/1/98	5302	5662
2,4-dinitrotoluene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Diphenylhydrazine		<1.25	mg/kg	1.25	10/1/98	5302	5662
Hexachlorobutadiene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Isophorone		<1.25	mg/kg	1.25	10/1/98	5302	5662
Nitrobenzene		<0.25	mg/kg	0.25	10/1/98	5302	5662

** Reporting limit corrected.

Date: 10-20-98
Page # 18
Order ID Number: 9809000488

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	10/1/98	5302	5662
2,4-dinitrophenols		<1.25	mg/kg	1.25	10/1/98	5302	5662
n-nitrosodiethylamine		<0.25	mg/kg	0.25	10/1/98	5302	5662
N-nitrosodimethylamine		<0.25	mg/kg	0.25	10/1/98	5302	5662
N-nitrosodibutylamine		<1.25	mg/kg	1.25	10/1/98	5302	5662
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	10/1/98	5302	5662
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	10/1/98	5302	5662
Pentachlorophenol		<1.25	mg/kg	1.25	10/1/98	5302	5662
Dibutyl phthalate		<0.25	mg/kg	0.25	10/1/98	5302	5662
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	10/1/98	5302	5662
Diethyl phthalate		<0.25	mg/kg	0.25	10/1/98	5302	5662
Dimethyl phthalate		<0.25	mg/kg	0.25	10/1/98	5302	5662
Anthracene		<0.25	mg/kg	0.25	10/1/98	5302	5662
3,4-benzofluoranthene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Fluoranthene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Fluorene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Phenanthrene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Pyrene		<0.25	mg/kg	0.25	10/1/98	5302	5662
laphthalene		<0.25	mg/kg	0.25	10/1/98	5302	5662
-methylnaphthalene		<0.25	mg/kg	0.25	10/1/98	5302	5662
2-methylnaphthalene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Benzo-a-pyrene		<0.25	mg/kg	0.25	10/1/98	5302	5662
Surr. 2-Fluorophenol		105	%	25-121	10/1/98	5302	5662
Surr. Phenol-d6		94	%	24-113	10/1/98	5302	5662
Surr. Nitroobenzene-d5		79	%	23-120	10/1/98	5302	5662
Surr. 2-Fluorobiphenyl		118	%	30-115	10/1/98	5302	5662
Surr. 2,4,6-Tribromophenol		101	%	19-122	10/1/98	5302	5662
Surr. Terphenyl-d14		108	%	28-137	10/1/98	5302	5662
Benzidine		<2.5	mg/kg	2.5	10/4/98	5302	5681
Hexachlorobenzene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Pentachlorobenzene		<0.25	mg/kg	0.25	10/4/98	5302	5681
1,2,4,5-tetrachlorobenzene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Hexachloroethane		<0.25	mg/kg	0.25	10/4/98	5302	5681
2,4-dichlorophenol		<1.25	mg/kg	1.25	10/4/98	5302	5681
2,4,5-trichlorophenol		<1.25	mg/kg	1.25	10/4/98	5302	5681
2,4,6-trichlorophenol		<1.25	mg/kg	1.25	10/4/98	5302	5681
bis (2-chloroethyl) ether		<1.25	mg/kg	1.25	10/4/98	5302	5681
bis (2-chloroisopropyl) ether		<1.25	mg/kg	1.25	10/4/98	5302	5681
bis (chloromethyl) ether		<1.25	mg/kg	1.25	10/4/98	5302	5681
3,3-dichlorobenzidine		<1.25	mg/kg	1.25	10/4/98	5302	5681
2,4-dinitrotoluene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Diphenylhydrazine		<1.25	mg/kg	1.25	10/4/98	5302	5681
Hexachlorobutadiene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Hexachlorocyclopentadiene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Isophorone		<1.25	mg/kg	1.25	10/4/98	5302	5681

Date: 10-20-98
Page # 19
Order ID Number: 9809000488

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Nitrobenzene		<0.25	mg/kg	0.25	10/4/98	5302	5681
2,4-dinitro-o-cresol		<1.25	mg/kg	1.25	10/4/98	5302	5681
2,4-dinitrophenols		<1.25	mg/kg	1.25	10/4/98	5302	5681
n-nitrosodiethylamine		<0.25	mg/kg	0.25	10/4/98	5302	5681
N-nitrosodimethylamine		<0.25	mg/kg	0.25	10/4/98	5302	5681
N-nitrosodibutylamine		<1.25	mg/kg	1.25	10/4/98	5302	5681
N-nitrosodiphenylamine		<0.25	mg/kg	0.25	10/4/98	5302	5681
N-nitrosopyrrolidine		<0.25	mg/kg	0.25	10/4/98	5302	5681
Pentachlorophenol		<1.25	mg/kg	1.25	10/4/98	5302	5681
Dibutyl phthalate		<0.25	mg/kg	0.25	10/4/98	5302	5681
di-2-ethylhexyl phthalate		<0.25	mg/kg	0.25	10/4/98	5302	5681
Diethyl phthalate		<0.25	mg/kg	0.25	10/4/98	5302	5681
Dimethyl phthalate		<0.25	mg/kg	0.25	10/4/98	5302	5681
Anthracene		<0.25	mg/kg	0.25	10/4/98	5302	5681
3,4-benzofluoranthene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Benzo(k)fluoranthene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Fluoranthene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Fluorene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Phenanthrene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Pyrene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Naphthalene		<0.25	mg/kg	0.25	10/4/98	5302	5681
1-methylnaphthalene		<0.25	mg/kg	0.25	10/4/98	5302	5681
2-methylnaphthalene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Benzo-a-pyrene		<0.25	mg/kg	0.25	10/4/98	5302	5681
Surr. 2-Fluorophenol		89	%	25-121	10/4/98	5302	5681
Surr. Phenol-d6		108	%	24-113	10/4/98	5302	5681
Surr. Nitroobenzene-d5		81	%	23-120	10/4/98	5302	5681
Surr. 2-Fluorobiphenyl		99	%	30-115	10/4/98	5302	5681
Surr. 2,4,6-Tribromophenol		92	%	19-122	10/4/98	5302	5681
Surr. Terphenyl-d14		100	%	28-137	10/4/98	5302	5681
Cyanide		<0.01	mg/Kg	0.01	9/30/98		5651
TRPHC		<10.0	mg/Kg	10.0	8/22/98	4743	5045
Arsenic		<0.50	mg/Kg	0.50	9/28/98	5301	5511
Barium		<0.50	mg/Kg	0.50	9/28/98	5301	5511
Cadmium		<0.10	mg/Kg	0.10	9/28/98	5301	5511
Chromium		<0.50	mg/Kg	0.50	9/28/98	5301	5511
Lead		<0.50	mg/Kg	0.50	9/28/98	5301	5511
Total Mercury		<0.10	mg/Kg	0.10	10/4/98	5339	5680
Selenium		<0.50	mg/Kg	0.50	9/28/98	5301	5511
Silver		<0.50	mg/Kg	0.50	9/28/98	5301	5511
Uranium		<2.0	mg/Kg	2.0	9/28/98	5301	5511
Copper		<1.0	mg/Kg	1.0	9/28/98	5301	5511
Iron		<2.0	mg/Kg	2.0	9/28/98	5301	5511
Manganese		<1.0	mg/Kg	1.0	9/28/98	5301	5511
Zinc		<2.0	mg/Kg	2.0	9/28/98	5301	5511
Aluminum		<10	mg/Kg	10	9/28/98	5301	5511

Order ID Number: 9809000488

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Boron		<10	mg/Kg	10	9/28/98	5301	5511
Cobalt		<0.50	mg/Kg	0.50	9/28/98	5301	5511
Molybdenum		<1.0	mg/Kg	1.0	9/28/98	5301	5511
Nickel		<0.50	mg/Kg	0.50	9/28/98	5301	5511
Total Phenol		<0.25	mg/Kg	0.25	10/6/98		5698
PCB		<0.1	mg/Kg	0.1	8/26/98	4796	5112
Fluoride		<0.2	mg/Kg	0.2	9/29/98		5645
Nitrate		<0.2	mg/Kg	0.2	9/29/98		5645
Chloride		<1.0	mg/Kg	1.0	9/29/98		5645
Sulfate		<1.0	mg/Kg	1.0	9/29/98		5645
Fluoride		<0.2	mg/Kg	0.2	9/30/98		5650
Nitrate		<0.2	mg/Kg	0.2	9/30/98		5650
Chloride		<1.0	mg/Kg	1.0	10/1/98		5661
Sulfate		<1.0	mg/Kg	1.0	10/1/98		5661
PCB		<0.1	mg/Kg	<0.1	10/1/98	5320	5662

Quality Control Report
Continuing Calibration Verification Standard

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	113	113	10/3/98	5671
1,1-Dichloroethene		100	ug/L	119	119	10/3/98	5671
Chloroform		100	ug/L	107	107	10/3/98	5671
1,2-Dichloropropane		100	ug/L	106	106	10/3/98	5671
Toluene		100	ug/L	107	107	10/3/98	5671
Chlorobenzene		100	ug/L	103	103	10/3/98	5671
Ethylbenzene		100	ug/L	107	107	10/3/98	5671
Vinyl chloride		100	ug/Kg	118	118	10/9/98	5709
1,1-Dichloroethene		100	ug/Kg	113	113	10/9/98	5709
Chloroform		100	ug/Kg	106	106	10/9/98	5709
1,2-Dichloropropane		100	ug/Kg	105	105	10/9/98	5709
Toluene		100	ug/Kg	107	107	10/9/98	5709
Chlorobenzene		100	ug/Kg	105	105	10/9/98	5709
Ethylbenzene		100	ug/Kg	109	109	10/9/98	5709
Phenol		80	mg/L	73	91	10/1/98	5662
1,4-Dichlorobenzene		80	mg/L	79	99	10/1/98	5662
2-nitrophenol		80	mg/L	79	99	10/1/98	5662
2,4-Dichlorophenol		80	mg/L	76	95	10/1/98	5662
Hexachlorobutadiene		80	mg/L	73	91	10/1/98	5662
4-Chloro-3-methylphenol		80	mg/L	74	93	10/1/98	5662
2,4,6-Trichlorophenol		80	mg/L	71	89	10/1/98	5662
Acenaphthene		80	mg/L	74	93	10/1/98	5662
n-Nitrosodiphenylamine		80	mg/L	80	100	10/1/98	5662
Pentachlorophenol		80	mg/L	76	95	10/1/98	5662
Fluoranthene		80	mg/L	78	98	10/1/98	5662
Di-n-octylphthalate		80	mg/L	75	94	10/1/98	5662
Benzo(a)pyrene		80	mg/L	74	93	10/1/98	5662
Phenol		80	mg/L	78	98	10/4/98	5681
1,4-Dichlorobenzene		80	mg/L	76	95	10/4/98	5681
2-nitrophenol		80	mg/L	80	100	10/4/98	5681
2,4-Dichlorophenol		80	mg/L	80	100	10/4/98	5681
Hexachlorobutadiene		80	mg/L	75	94	10/4/98	5681
4-Chloro-3-methylphenol		80	mg/L	74	93	10/4/98	5681
2,4,6-Trichlorophenol		80	mg/L	75	94	10/4/98	5681
Acenaphthene		80	mg/L	78	98	10/4/98	5681
n-Nitrosodiphenylamine		80	mg/L	70	88	10/4/98	5681
Pentachlorophenol		80	mg/L	67	84	10/4/98	5681
Fluoranthene		80	mg/L	76	95	10/4/98	5681
Di-n-octylphthalate		80	mg/L	72	90	10/4/98	5681
Benzo(a)pyrene		80	mg/L	73	91	10/4/98	5681

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
pH		7.0	s.u.	7.0	100	9/28/98	5640
Cyanide		0.12	mg/L	0.12	100	9/30/98	5651
TRPHC		100	mg/L	104	104	8/22/98	5045
TDS		1,000	mg/L	975	98	10/8/98	5699
Arsenic		1.0	mg/L	1.0	100	9/28/98	5511
Barium		1.0	mg/L	0.97	97	9/28/98	5511
Cadmium		1.0	mg/L	1.0	100	9/28/98	5511
Chromium		1.0	mg/L	1.0	100	9/28/98	5511
Lead		1.0	mg/L	1.0	100	9/28/98	5511
Total Mercury		5.0	mg/L	6.0	120	10/4/98	5680
Selenium		1.0	mg/L	1.0	100	9/28/98	5511
Silver		0.2	mg/L	1.0	100	9/28/98	5511
Uranium		1.0	mg/L	0.99	99	9/28/98	5511
Copper		1.0	mg/L	1.0	100	9/28/98	5511
Iron		50	mg/L	1.0	100	9/28/98	5511
Manganese		1.0	mg/L	1.0	100	9/28/98	5511
Zinc		1.0	mg/L	1.0	100	9/28/98	5511
Aluminum		100	mg/L	1.0	100	9/28/98	5511
Boron		1.0	mg/L	1.0	100	9/28/98	5511
Cobalt		1.0	mg/L	1.0	100	9/28/98	5511
Molybdenum		1.0	mg/L	1.0	100	9/28/98	5511
Nickel		1.0	mg/L	0.97	97	8/27/98	5120
Total Phenol		0.80	mg/L	0.77	96	10/6/98	5698
PCB		0.4	mg/L	0.47	117	10/1/98	5662
Fluoride		2.5	mg/L	2.425	96	9/29/98	5645
Nitrate		5	mg/L	4.86	92	9/29/98	5645
Chloride		12.5	mg/L	12.12	85	9/29/98	5645
Sulfate		12.5	mg/L	12.615	80	9/29/98	5645
Fluoride		2.5	mg/L	2.425	97	9/30/98	5650
Nitrate		5	mg/L	4.73	97	9/30/98	5650
Chloride		12.5	mg/L	12.115	96	10/1/98	5661
Sulfate		12.5	mg/L	12.565	99	10/1/98	5661

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 23

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	116	116	100	123	123	5.9	10/3/98		5671
Benzene		ug/L	<1	100	112	112	100	123	123	9.4	10/3/98		5671
Trichloroethene		ug/L	<1	100	114	114	100	117	117	2.6	10/3/98		5671
Toluene		ug/L	<1	100	114	114	100	122	122	6.8	10/3/98		5671
Chlorobenzene		ug/L	<1	100	108	108	100	114	114	5.4	10/3/98		5671
Cyanide		mg/Kg	<0.01	0.12	0.12	100	0.12	0.11	92	8.3	8/24/98		5087
1,1-Dichloroethene		mg/Kg	<1	100	119	119	100	120	120	0	10/9/98		5709
Benzene		mg/Kg	<1	100	117	117	100	116	116	2	10/9/98		5709
Trichloroethene		mg/Kg	<1	100	118	118	100	118	118	1	10/9/98		5709
Toluene		mg/Kg	<1	100	116	116	100	115	115	1	10/9/98		5709
Chlorobenzene		mg/Kg	<1	100	116	116	100	116	116	1	10/9/98		5709
TRPHC		mg/Kg	<10.0	250	276	110	250	235	94	16	8/22/98	4743	5045
Phenol		mg/Kg	<0.25	10.00	9.33	93	10.00	7.86	79	17	10/1/98	5302	5662
2-Chlorophenol		mg/Kg	<1.25	10.00	9.13	91	10.00	7.45	75	20	10/1/98	5302	5662
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	8.95	90	10.00	7.96	80	12	10/1/98	5302	5662
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	8.54	85	10.00	7.87	79	12	10/1/98	5302	5662
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	8.89	89	10.00	8.13	81	9.0	10/1/98	5302	5662
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	7.54	75	10.00	8.69	87	14	10/1/98	5302	5662
Acenaphthene		mg/Kg	<0.25	10.00	9.00	90	10.00	8.15	82	10	10/1/98	5302	5662
4-Nitrophenol		mg/Kg	<1.25	10.00	9.24	92	10.00	8.77	88	5.0	10/1/98	5302	5662
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	10.4	104	10.00	8.52	85	20	10/1/98	5302	5662
Pentachlorophenol		mg/Kg	<1.25	10.00	8.03	80	10.00	7.43	74	7.0	10/1/98	5302	5662
Pyrene		mg/Kg	<0.25	10.00	9.91	99	10.00	10.1	101	2.0	10/1/98	5302	5662
Phenol		mg/Kg	<0.25	10.00	5.43	54	10.00	5.33	53	1.9	9/16/98	4885	5363
2-Chlorophenol		mg/Kg	<1.25	10.00	5.11	51	10.00	5.11	51	0	9/16/98	4885	5363
1,4-Dichlorobenzene		mg/Kg	<0.25	10.00	5.91	59	10.00	5.9	59	0.0	9/16/98	4885	5363
n-Nitrosodi-n-propylamine		mg/Kg	<0.25	10.00	7.98	80	10.00	7.71	77	3.8	9/16/98	4885	5363
1,2,4-trichlorobenzene		mg/Kg	<0.25	10.00	6.11	61	10.00	6.06	61	0.0	9/16/98	4885	5363
4-Chloro-3-methylphenol		mg/Kg	<1.25	10.00	4.29	43	10.00	4.92	49	13	9/16/98	4885	5363
Acenaphthene		mg/Kg	<0.25	10.00	6.64	66	10.00	6.49	65	1.5	9/16/98	4885	5363
4-Nitrophenol		mg/Kg	<1.25	10.00	4.8	48	10.00	4.26	43	11	9/16/98	4885	5363
2,4-Dinitrotoluene		mg/Kg	<0.25	10.00	6.05	61	10.00	5.97	60	1.7	9/16/98	4885	5363
Pentachlorophenol		mg/Kg	<1.25	10.00	3.41	34	10.00	3.11	31	9.2	9/16/98	4885	5363
Pyrene		mg/Kg	<0.25	10.00	6.09	61	10.00	6.08	61	0	9/16/98	4885	5363
Arsenic		mg/Kg	3.6	200	178	87	200	178	87	0	9/28/98	5301	5511
Barium	LCS	mg/Kg	<0.50	200	183	92	200	177	89	3.3	9/28/98	5301	5511
Cadmium		mg/Kg	<0.10	200	157	79	200	157	79	0	9/28/98	5301	5511
Chromium		mg/Kg	3.2	200	166	81	200	169	83	2.4	9/28/98	5301	5511

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Lead		mg/Kg	1.4	200	152	75	200	147	74	1.3	9/28/98	5301	5511
Total Mercury		mg/Kg	0.28	2.5	2.6	93	2.5	2.7	97	4.2	9/28/98	5301	5511
Selenium		mg/Kg	<0.50	200	164	82	200	166	83	1.2	9/28/98	5301	5511
Silver		mg/Kg	<0.50	100	112	112	100	113	113	0.89	9/28/98	5301	5511
Uranium		mg/Kg	<2.0	200	154	77	200	146	73	5.3	9/28/98	5301	5511
Copper		mg/Kg	3.5	200	169	83	200	173	85	2.4	9/28/98	5301	5511
Iron		mg/Kg	<2.0	200	194	97	200	193	97	0	9/28/98	5301	5511
Manganese		mg/Kg	25	200	186	81	200	177	76	6.4	9/28/98	5301	5511
Zinc		mg/Kg	7.5	200	162	77	200	166	79	2.6	9/28/98	5301	5511
Aluminum		mg/Kg	<10.0	200	185	93	200	185	93	0	9/28/98	5301	5511
Boron		mg/Kg	<10.0	200	168	84	200	168	84	0	9/28/98	5301	5511
Cobalt		mg/Kg	5.0	200	157	76	200	150	73	4.0	9/28/98	5301	5511
Molybdenum		mg/Kg	1.2	200	153	76	200	158	78	2.6	9/28/98	5301	5511
Nickel	LCS	mg/Kg	<0.50	200	177	89	200	172	86	3.4	9/28/98	5301	5511
Total Phenol		mg/Kg	<0.25	0.80	0.80	100	0.80	0.80	100	0	10/6/98		5698
PCB		mg/Kg	<0.1	0.25	0.29	116	0.25	0.30	120	3.4	10/1/98	5320	5662
Fluoride		mg/Kg	3.4	5	8.15	95	5	8.18	96	1.0	9/29/98		5645
Nitrate		mg/Kg	1.72	10	10.94	92	10	11	93	1.1	9/29/98		5645
Chloride		mg/Kg	81	25	102.33	85	25	103.02	88	3.5	9/29/98		5645
Sulfate		mg/Kg	191.5	25	211.56	80	25	209.37	72	11	9/29/98		5645
Fluoride		mg/Kg	3.37	5	8.2	97	5	8.13	95	2.1	9/30/98		5650
Nitrate		mg/Kg	3.34	10	13.08	97	10	13.15	98	1.0	9/30/98		5650
Chloride		mg/Kg	31	25	54.95	96	25	54.35	93	3.2	10/1/98		5661
Sulfate		mg/Kg	9	25	33.64	99	25	33.91	100	1.0	10/1/98		5661
Cyanide		mg/Kg	<0.01	0.12	0.101	84	0.12	0.094	78	7.4	9/30/98		5651

Quality Control Report
Duplicate

Jeff Kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9809000488

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
Ph		s.u.	9.2	9.2	0	9/28/98		5640
TDS		mg/kg	460	436	0.89	10/8/98		5699

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Ave., Ste. 9
Lubbock, TX 79424
Phone:806-794-1296
Fax:806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0973	**P.O. Number:**	N/A
Client I.D.:	108238	**ARS Sample I.D.:**	ARS-98-3535
Date Sampled:	N/A	**Date Received:**	9/29/98
Time Sampled:	N/A	**Time Received:**	1039
Type of Sample:	Solid	**Date of Report:**	10/1/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.61	1.66	pCi/gm	0.097	0.061	Bq/gm	EPA 901.1M	9/30/98 1309	kh
Ra-228	< 0.14	N/A	pCi/gm	<0.005	N/A	Bq/gm	EPA 901.1M	9/30/98 1309	kh
Pb-210	2.85	1.99	pCi/gm	0.105	0.074	Bq/gm	EPA 901.1M	9/30/98 1309	kh
Total Activity	7.54	N/A	pCi/gm	0.279	N/A	Bq/gm	EPA 901.1M	9/30/98 1309	kh

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-0973	**P.O. Number:**	N/A
Client I.D.:	108239	**ARS Sample I.D.:**	ARS-98-3536
Date Sampled:	N/A	**Date Received:**	9/29/98
Time Sampled:	N/A	**Time Received:**	1039
Type of Sample:	Solid	**Date of Report:**	10/1/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	3.66	1.38	pCi/gm	0.135	0.051	Bq/gm	EPA 901.1M	9/30/98 1237	dc
Ra-228	< 0.15	N/A	pCi/gm	<0.006	N/A	Bq/gm	EPA 901.1M	9/30/98 1237	dc
Pb-210	2.09	2.07	pCi/gm	0.077	0.077	Bq/gm	EPA 901.1M	9/30/98 1237	dc
Total Activity	14.14	N/A	pCi/gm	0.523	N/A	Bq/gm	EPA 901.1M	9/30/98 1237	dc

Notes:

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0973	**P.O. Number:**	N/A
Client I.D.:	108240	**ARS Sample I.D.:**	ARS-98-3537
Date Sampled:	N/A	**Date Received:**	9/29/98
Time Sampled:	N/A	**Time Received:**	1039
Type of Sample:	Solid	**Date of Report:**	10/1/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.12	1.09	pCi/gm	0.041	0.040	Bq/gm	EPA 901.1M	9/30/98 1341	kh
Ra-228	< 0.09	N/A	pCi/gm	<0.003	N/A	Bq/gm	EPA 901.1M	9/30/98 1341	kh
Pb-210	< 0.89	N/A	pCi/gm	<0.033	N/A	Bq/gm	EPA 901.1M	9/30/98 1341	kh
Total Activity	1.91	N/A	pCi/gm	0.071	N/A	Bq/gm	EPA 901.1M	9/30/98 1341	kh

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-0973	**P.O. Number:**	N/A
Client I.D.:	108241	**ARS Sample I.D.:**	ARS-98-3538
Date Sampled:	N/A	**Date Received:**	9/29/98
Time Sampled:	N/A	**Time Received:**	1039
Type of Sample:	Solid	**Date of Report:**	10/1/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Result	Analysis Error ±2σ	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	< 0.92	N/A	pCi/gm	<0.034	N/A	Bq/gm	EPA 901.1M	9/30/98 1205	kh
Ra-228	0.40	0.27	pCi/gm	0.015	0.010	Bq/gm	EPA 901.1M	9/30/98 1205	kh
Pb-210	2.33	1.60	pCi/gm	0.086	0.059	Bq/gm	EPA 901.1M	9/30/98 1205	kh
Total Activity	10.60	N/A	pCi/gm	0.392	N/A	Bq/gm	EPA 901.1M	9/30/98 1205	kh

Notes:

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

108238-1

488 1 of 1

TraceAnalysis, Inc.

6701 Aberdeen Avenue Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jeffrey Kindley

Phone #: 1-915-563-0118

FAX #: 1-915-563-9526

Company Name & Address: Phillips Services Corporation, 7909 IH 20 West, Midland, Tx 79706

Project #: 19350

Project Name: Shell Tasker Road

Project Location: Hobbs, New Mexico

Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	Methanol	SAMPLING: DATE	TIME
108238	TMW-3 (2-3')	5	40z Jars		✓					✓			09/22/98	0850
	TMW-3 (2-3')	1	40ml VOA		✓							✓	09/22/98	0850
39	TMW-3 (3-5')	5	40z Jars		✓					✓			09/22/98	0855
	TMW-3 (3-5')	1	40ml VOA		✓							✓	09/22/98	0855
40	TMW-3 (23-25')	5	4 oz Jars		✓					✓			09/22/98	0940
	TMW-3 (23-25')	1	40 ml VOA		✓							✓	09/22/98	0940
41	TMW-3 (63-65')	5	4oz Jars		✓					✓			09/22/98	1450
	TMW-3 (63-65')	1	40ml VOA		✓							✓	09/22/98	1450
42	Field Blank	2	40ml VOA	✓				✓					9/22/98	1630
43	Trip Blank	2	40ml VOA	✓				✓		✓			09/22/98	1630

ANALYSIS REQUEST

BTEX, MTBE	TPH (418.1)	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	8240 / 8260	8270	See Attached (VOC's)
	✓								✓
									✓
	✓								✓
									✓
	✓								✓
									✓
	✓								✓
									✓
	✓								✓
	✓								✓

SPECIAL HANDLING

Turn around # of days
Fax ASAP
Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	09/25/98	12:20PM	Helen Shelton	9/25/98	12:20PM
Helen Shelton	9/26/98	9:10PM			
			Received at Laboratory by:	Date:	Time:
			Vicki Wyatt	9-26-98	

REMARKS

Normal Turnaround

Standard Turnaround 2 x Samples - NS

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-14-99
Page # 1

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
109052	TMW-1	10/1/98	1:25	10/3/98
109053	Trip Blank			10/3/98
109054	TMW-2	10/1/98	1:54	10/3/98
109055	Trip Blank			10/3/98
109056	TMW-3	10/1/98	2:20	10/3/98
109057	Trip Blank			10/3/98
109058	Field Blank	10/1/98	2:54	10/3/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Corrected:
1) Order ID Number corrected.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082
Sample Number: 109052

Sample Description: TMW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Acrylonitrile		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Benzene		2	ug/L	S 8260B		10/10/98	MB		5710	1
Carbon tetrachloride		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Chlorobenzene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,2-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Chloroform		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichlorobenzene		<2	ug/L	S 8260B		10/10/98	MB		5710	2
1,1-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichloropropenes		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Ethylbenzene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Bromodichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Bromomethane		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Chloromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Trichlorofluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Tetrachloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Toluene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Vinyl chloride		<1	ug/L	S 8260B		10/10/98	MB		5710	1
m,p-xylene		1	ug/L	S 8260B		10/10/98	MB		5710	1
o-xylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Ethylene dibromide		<1	ug/L	S 8260B		10/10/98	MB		5710	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Methylene chloride		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Surr. Dibromofluoromethane		100	%	S 8260B		10/10/98	MB		5710	71-132
Surr. Toluene-d8		100	%	S 8260B		10/10/98	MB		5710	82-124
Surr. 4-Bromofluorobenzene		102	%	S 8260B		10/10/98	MB		5710	76-126
Benzidine		<0.01	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.01
Pentachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001

Order ID Number: 9810000082
Sample Number: 109052

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: TMW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
2,4,5-trichlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
2,4,6-trichlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
bis (2-chloroethl) ether		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
bis (2-chloroisopropyl) ether		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
bis (chloromethyl) ether		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
3,3-dichlorobenzidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Diphenylhydrazine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Isophorone		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
2,4-dinitrophenols		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
i-nitrosodiethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
N-nitrosodimethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
N-nitrosodibutylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Pentachlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
Phenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
bis(2-ethylhexyl) phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Anthracene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Benzo(b)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Fluorene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Naphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
1-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
2-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Surr. 2-Fluorophenol		21	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	1-85
Surr. Phenol-d6		25	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	0-82
Surr. Nitroobenzene-d5		68	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	38-111
Surr. 2-Fluorobiphenyl		72	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	38-103
Surr. 2,4,6-Tribromophenol		79	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	1-127
Surr. Terphenyl-d14		68	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	38-122

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Order ID Number: 9810000082
Sample Number: 109052

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: TMW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/9/98	10/13/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Barium		0.19	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cadmium		<0.01	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.01
Chromium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Lead		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Total Mercury		0.0017	mg/L	S 6010B	10/9/98	10/11/98	MS	5365	5725	0.0002
Selenium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Silver		<0.05	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.05
Uranium		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Copper		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Iron		5	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Manganese		0.14	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Zinc		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Aluminum		7	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Boron		0.37	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.10
Cobalt		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/9/98	SA		5699	0.01
Fluoride		1.7	mg/L	E 300.0		10/7/98	JS		5698	0.5
Nitrate		0.16	mg/L	SM 4500 NO3,E		10/9/98	JS		5706	0.10
Chloride		250	mg/L	E 300.0		10/7/98	JS		5698	2.5
Sulfate		58	mg/L	E 300.0		10/7/98	JS		5698	2.5
TDS		830	mg/L	E 160.1		10/5/98	RS		5680	---
pH		7.0	s.u.	E 150.1		10/3/98	SA		5670	---
TRPHC		<0.500	mg/L	E 418.1		10/7/98	MF	5342	5700	0.500
Total Phenols		<0.01	mg/L	S 5530 A,D		10/15/98	RC		5787	0.01
Total Radium		17.07	pCi/gm	E 901.1M		10/20/98	DC	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
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Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082
Sample Number: 109053

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Acrylonitrile		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Benzene		2	ug/L	S-8260B		10/10/98	MB		5710	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Chlorobenzene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Chloroform		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichlorobenzene		<2	ug/L	S-8260B		10/10/98	MB		5710	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichloropropenes		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Ethylbenzene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Bromodichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Bromomethane		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Chloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Toluene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Vinyl chloride		<1	ug/L	S-8260B		10/10/98	MB		5710	1
m,p-xylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
o-xylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Ethylene dibromide		<1	ug/L	S-8260B		10/10/98	MB		5710	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Methylene chloride		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Surr. Dibromofluoromethane		102	%	S-8260B		10/10/98	MB		5710	72-130
Surr. Toluene-d8		101	%	S-8260B		10/10/98	MB		5710	77-127
Surr. 4-Bromofluorobenzene		102	%	S-8260B		10/10/98	MB		5710	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
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Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082
Sample Number: 109054

Sample Description: TMW-2

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Acrylonitrile		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Benzene		2	ug/L	S 8260B		10/10/98	MB		5710	1
Carbon tetrachloride		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Chlorobenzene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,2-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Chloroform		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichlorobenzene		<2	ug/L	S 8260B		10/10/98	MB		5710	2
1,1-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichloropropenes		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Ethylbenzene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Bromodichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Bromomethane		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Chloromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Trichlorofluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Tetrachloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Toluene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Vinyl chloride		<1	ug/L	S 8260B		10/10/98	MB		5710	1
m,p-xylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
o-xylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Ethylene dibromide		<1	ug/L	S 8260B		10/10/98	MB		5710	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Methylene chloride		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Surr. Dibromofluoromethane		103	%	S 8260B		10/10/98	MB		5710	71-132
Surr. Toluene-d8		100	%	S 8260B		10/10/98	MB		5710	82-124
Surr. 4-Bromofluorobenzene		102	%	S 8260B		10/10/98	MB		5710	76-126
Benzidine		<0.01	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.01
Pentachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082
Sample Number: 109054

Sample Description: TMW-2

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
2,4,5-trichlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
2,4,6-trichlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
bis (2-chloroethl) ether		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
bis (2-chloroisopropyl) ether		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
bis (chloromethyl) ether		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
3,3-dichlorobenzidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Diphenylhydrazine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Isophorone		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
2,4-dinitrophenols		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
i-nitrosodiethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
N-nitrosodimethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
N-nitrosodibutylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Pentachlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
Phenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
bis(2-ethylhexyl) phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Anthracene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Benzo(b)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Fluorene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Naphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
1-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
2-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Surr. 2-Fluorophenol		10	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	1-85
Surr. Phenol-d6		12	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	0-82
Surr. Nitroobenzene-d5		56	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	38-111
Surr. 2-Fluorobiphenyl		60	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	38-103
Surr. 2,4,6-Tribromophenol		63	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	1-127
Surr. Terphenyl-d14		63	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	38-122

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082
Sample Number: 109054

Sample Description: TMW-2

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/9/98	10/13/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Barium		0.26	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cadmium		<0.01	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.01
Chromium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Lead		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Total Mercury		0.0006	mg/L	S 6010B	10/9/98	10/11/98	MS	5365	5725	0.0002
Selenium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Silver		<0.05	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.05
Uranium		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Copper		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Iron		5.9	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Manganese		0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Zinc		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Aluminum		10	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Boron		0.44	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.10
Cobalt		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/9/98	SA		5699	0.01
Fluoride		1.5	mg/L	E 300.0		10/6/98	JS		5697	0.5
Nitrate		0.41	mg/L	SM 4500 NO3,E		10/9/98	JS		5706	0.10
Chloride		230	mg/L	E 300.0		10/6/98	JS		5697	2.5
Sulfate		51	mg/L	E 300.0		10/6/98	JS		5697	2.5
TDS		880	mg/L	E 160.1		10/5/98	RS		5680	---
pH		7.0	s.u.	E 150.1		10/3/98	SA		5670	---
TRPHC		<0.500	mg/L	E 418.1		10/20/98	MF	5342	5700	0.500
Total Phenols		0.1	mg/L	S 5530 A,D		10/15/98	RC		5787	0.01
Total Radium		3.93	pCi/L	E 901.1M		10/20/98	DC	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 9

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082
Sample Number: 109055

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Acrylonitrile		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Benzene		2	ug/L	S-8260B		10/10/98	MB		5710	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Chlorobenzene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Chloroform		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichlorobenzene		<2	ug/L	S-8260B		10/10/98	MB		5710	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichloropropenes		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Ethylbenzene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Bromodichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Bromomethane		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Chloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Toluene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Vinyl chloride		<1	ug/L	S-8260B		10/10/98	MB		5710	1
m,p-xylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
o-xylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Ethylene dibromide		<1	ug/L	S-8260B		10/10/98	MB		5710	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Methylene chloride		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Surr. Dibromofluoromethane		102	%	S-8260B		10/10/98	MB		5710	72-130
Surr. Toluene-d8		98	%	S-8260B		10/10/98	MB		5710	77-127
Surr. 4-Bromofluorobenzene		102	%	S-8260B		10/10/98	MB		5710	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082
Sample Number: 109056

Sample Description: TMW-3

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Acrylonitrile		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Benzene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Carbon tetrachloride		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Chlorobenzene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,2-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Chloroform		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichlorobenzene		<2	ug/L	S 8260B		10/10/98	MB		5710	2
1,1-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichloropropenes		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Ethylbenzene		1	ug/L	S 8260B		10/10/98	MB		5710	1
Bromodichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Bromomethane		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Chloromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Dichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Trichlorofluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Tetrachloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Toluene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Vinyl chloride		<1	ug/L	S 8260B		10/10/98	MB		5710	1
m,p-xylene		5	ug/L	S 8260B		10/10/98	MB		5710	1
o-xylene		2	ug/L	S 8260B		10/10/98	MB		5710	1
1,1-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Ethylene dibromide		<1	ug/L	S 8260B		10/10/98	MB		5710	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5710	1
Methylene chloride		<5	ug/L	S 8260B		10/10/98	MB		5710	5
Surr. Dibromofluoromethane		103	%	S 8260B		10/10/98	MB		5710	71-132
Surr. Toluene-d8		99	%	S 8260B		10/10/98	MB		5710	82-124
Surr. 4-Bromofluorobenzene		102	%	S 8260B		10/10/98	MB		5710	76-126
Benzidine		<0.01	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.01
Pentachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082
Sample Number: 109056

Sample Description: TMW-3

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
2,4,5-trichlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
2,4,6-trichlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
bis (2-chloroethl) ether		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
bis (2-chloroisopropyl) ether		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
bis (chloromethyl) ether		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
3,3-dichlorobenzidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Diphenylhydrazine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Isophorone		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
2,4-dinitrophenols		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
nitrosodiethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
N-nitrosodimethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
N-nitrosodibutylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Pentachlorophenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.005
Phenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
bis(2-ethylhexyl) phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Anthracene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Benzo(b)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Fluorene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Naphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
1-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
2-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5358	5708	0.001
Surr. 2-Fluorophenol		33	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	1-85
Surr. Phenol-d6		23	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	0-82
Surr. Nitroobenzene-d5		66	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	38-111
Surr. 2-Fluorobiphenyl		72	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	38-103
Surr. 2,4,6-Tribromophenol		68	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	1-127
Surr. Terphenyl-d14		60	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	38-122

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082
Sample Number: 109056

Sample Description: TMW-3

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
PCB's		<0.001	ug/Kg	S 8082	10/9/98	10/13/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Barium		0.21	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cadmium		<0.01	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.01
Chromium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Lead		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Total Mercury		0.0004	mg/L	S 6010B	10/9/98	10/11/98	MS	5365	5725	0.0002
Selenium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Silver		<0.05	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.05
Uranium		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Copper		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Iron		9.0	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Manganese		0.16	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Zinc		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Aluminum		15	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Boron		0.33	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.10
Cobalt		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/9/98	SA		5699	0.01
Fluoride		2.1	mg/L	E 300.0		10/6/98	JS		5697	0.5
Nitrate		1.03	mg/L	SM 4500 NO3,E		10/9/98	JS		5706	0.10
Chloride		150	mg/L	E 300.0		10/6/98	JS		5697	2.5
Sulfate		110	mg/L	E 300.0		10/6/98	JS		5697	2.5
TDS		930	mg/L	E 160.1		10/5/98	RS		5680	---
pH		6.9	s.u.	E 150.1		10/3/98	SA		5670	---
TRPHC		<0.500	mg/L	E 418.1		10/20/98	MF	5342	5700	0.500
Total Phenols		0.5	mg/L	S 5530 A,D		10/15/98	RC		5787	0.01
Total Radium		6.23	pCi/L	E 901.1M		10/20/98	DC	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
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Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082
Sample Number: 109057

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Acrylonitrile		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Benzene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Chlorobenzene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Chloroform		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichlorobenzene		<2	ug/L	S-8260B		10/10/98	MB		5710	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichloropropenes		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Ethylbenzene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Bromodichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Bromomethane		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Chloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Toluene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Vinyl chloride		<1	ug/L	S-8260B		10/10/98	MB		5710	1
m,p-xylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
o-xylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Ethylene dibromide		<1	ug/L	S-8260B		10/10/98	MB		5710	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Methylene chloride		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Surr. Dibromofluoromethane		103	%	S-8260B		10/10/98	MB		5710	72-130
Surr. Toluene-d8		100	%	S-8260B		10/10/98	MB		5710	77-127
Surr. 4-Bromofluorobenzene		102	%	S-8260B		10/10/98	MB		5710	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 14

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082
Sample Number: 109058

Sample Description: Field Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Acrylonitrile		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Benzene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Chlorobenzene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Chloroform		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichlorobenzene		<2	ug/L	S-8260B		10/10/98	MB		5710	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichloropropenes		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Ethylbenzene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Bromodichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Bromomethane		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Chloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Dichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Toluene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Vinyl chloride		<1	ug/L	S-8260B		10/10/98	MB		5710	1
m,p-xylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
o-xylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Ethylene dibromide		<1	ug/L	S-8260B		10/10/98	MB		5710	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5710	1
Methylene chloride		<5	ug/L	S-8260B		10/10/98	MB		5710	5
Surr. Dibromofluoromethane		105	%	S-8260B		10/10/98	MB		5710	72-130
Surr. Toluene-d8		101	%	S-8260B		10/10/98	MB		5710	77-127
Surr. 4-Bromofluorobenzene		102	%	S-8260B		10/10/98	MB		5710	72-131

Quality Control Report
Blanks

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	10/10/98		5710
Acrylonitrile		<5	ug/L	5	10/10/98		5710
Benzene		<1	ug/L	1	10/10/98		5710
Carbon tetrachloride		<1	ug/L	1	10/10/98		5710
Chlorobenzene		<1	ug/L	1	10/10/98		5710
1,2-dichloroethane		<1	ug/L	1	10/10/98		5710
1,1,2,2-tetrachloroethane		<1	ug/L	1	10/10/98		5710
1,1,1-trichloroethane		<1	ug/L	1	10/10/98		5710
1,1,2-trichloroethane		<1	ug/L	1	10/10/98		5710
1,1,2-trichloroethylene		<1	ug/L	1	10/10/98		5710
Chloroform		<1	ug/L	1	10/10/98		5710
Dichlorobenzene		<2	ug/L	2	10/10/98		5710
1,1-dichloroethylene		<1	ug/L	1	10/10/98		5710
Dichloropropenes		<1	ug/L	1	10/10/98		5710
Ethylbenzene		<1	ug/L	1	10/10/98		5710
Bromodichloromethane		<1	ug/L	1	10/10/98		5710
Bromomethane		<5	ug/L	5	10/10/98		5710
Chloromethane		<1	ug/L	1	10/10/98		5710
Dichlorodifluoromethane		<1	ug/L	1	10/10/98		5710
Dichloromethane		<1	ug/L	1	10/10/98		5710
Trichlorofluoromethane		<1	ug/L	1	10/10/98		5710
Tetrachloroethylene		<1	ug/L	1	10/10/98		5710
Toluene		<1	ug/L	1	10/10/98		5710
Trichloroethylene		<1	ug/L	1	10/10/98		5710
Vinyl chloride		<1	ug/L	1	10/10/98		5710
m,p-xylene		<1	ug/L	1	10/10/98		5710
o-xylene		<1	ug/L	1	10/10/98		5710
1,1-dichloroethane		<1	ug/L	1	10/10/98		5710
Ethylene dibromide		<1	ug/L	1	10/10/98		5710
cis-1,2-dichlorethylene		<1	ug/L	1	10/10/98		5710
trans-1,2-dichloroethylene		<1	ug/L	1	10/10/98		5710
Methylene chloride		<5	ug/L	5	10/10/98		5710
Surr. Dibromofluoromethane		97	%	71-132	10/10/98		5710
Surr. Toluene-d8		103	%	82-124	10/10/98		5710
Surr. 4-Bromofluorobenzene		99	%	76-126	10/10/98		5710

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Fluoride		<0.1	mg/L	0.1	10/6/98		5697
Nitrate		<0.1	mg/L	0.1	10/9/98		5706
Chloride		<0.5	mg/L	0.5	10/6/98		5697
Sulfate		<0.5	mg/L	0.5	10/6/98		5697
Fluoride		<0.1	mg/L	0.1	10/7/98		5698
Chloride		<0.5	mg/L	0.5	10/7/98		5698
Sulfate		<0.5	mg/L	0.5	10/7/98		5698
PCB		<0.001	mg/L	0.001	10/13/98	5366	5670
Cyanide		<0.01	mg/L	0.01	10/9/98		5699
Benzidine		<0.01	mg/L	0.01	10/9/98	5358	5708
Hexachlorobenzene		<0.001	mg/L	0.001	10/9/98	5358	5708
Pentachlorobenzene		<0.001	mg/L	0.001	10/9/98	5358	5708
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	0.001	10/9/98	5358	5708
Hexachloroethane		<0.001	mg/L	0.001	10/9/98	5358	5708
2,4-dichlorophenol		<0.005	mg/L	0.005	10/9/98	5358	5708
2,4,5-trichlorophenol		<0.005	mg/L	0.005	10/9/98	5358	5708
2,4,6-trichlorophenol		<0.005	mg/L	0.005	10/9/98	5358	5708
bis (2-chloroethl) ether		<0.005	mg/L	0.005	10/9/98	5358	5708
bis (2-chloroisopropyl) ether		<0.005	mg/L	0.005	10/9/98	5358	5708
bis (chloromethyl) ether		<0.005	mg/L	0.005	10/9/98	5358	5708
3,3-dichlorobenzidine		<0.005	mg/L	0.005	10/9/98	5358	5708
2,4-dinitrotoluene		<0.001	mg/L	0.001	10/9/98	5358	5708
Diphenylhydrazine		<0.005	mg/L	0.005	10/9/98	5358	5708
Hexachlorobutadiene		<0.001	mg/L	0.001	10/9/98	5358	5708
Hexachlorocyclopentadiene		<0.001	mg/L	0.001	10/9/98	5358	5708
Isophorone		<0.005	mg/L	0.005	10/9/98	5358	5708
Nitrobenzene		<0.001	mg/L	0.001	10/9/98	5358	5708
2,4-dinitro-o-cresol		<0.001	mg/L	0.001	10/9/98	5358	5708
2,4-dinitrophenols		<0.005	mg/L	0.005	10/9/98	5358	5708
i-nitrosodiethylamine		<0.001	mg/L	0.001	10/9/98	5358	5708
N-nitrosodimethylamine		<0.001	mg/L	0.001	10/9/98	5358	5708
N-nitrosodibutylamine		<0.005	mg/L	0.005	10/9/98	5358	5708
N-nitrosodiphenylamine		<0.001	mg/L	0.001	10/9/98	5358	5708
N-nitrosopyrrolidine		<0.001	mg/L	0.001	10/9/98	5358	5708
Pentachlorophenol		<0.005	mg/L	0.005	10/9/98	5358	5708
Phenol		<0.001	mg/L	0.001	10/9/98	5358	5708
Dibutyl phthalate		<0.001	mg/L	0.001	10/9/98	5358	5708
bis(2-ethylhexyl) phthalate		0.030	mg/L	0.001	10/9/98	5358	5708
Diethyl phthalate		<0.001	mg/L	0.001	10/9/98	5358	5708
Dimethyl phthalate		<0.001	mg/L	0.001	10/9/98	5358	5708
Anthracene		<0.001	mg/L	0.001	10/9/98	5358	5708
Benzo(b)fluoranthene		<0.001	mg/L	0.001	10/9/98	5358	5708
Benzo(k)fluoranthene		<0.001	mg/L	0.001	10/9/98	5358	5708

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9807000082*

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Fluoranthene		<0.001	mg/L	0.001	10/9/98	5358	5708
Fluorene		<0.001	mg/L	0.001	10/9/98	5358	5708
Phenanthrene		<0.001	mg/L	0.001	10/9/98	5358	5708
Pyrene		<0.001	mg/L	0.001	10/9/98	5358	5708
Naphthalene		<0.001	mg/L	0.001	10/9/98	5358	5708
1-methylnaphthalene		<0.001	mg/L	0.001	10/9/98	5358	5708
2-methylnaphthalene		<0.001	mg/L	0.001	10/9/98	5358	5708
Benzo-a-pyrene		<0.001	mg/L	0.001	10/9/98	5358	5708
Surr. 2-Fluorophenol		51	%	1-85	10/9/98	5358	5708
Surr. Phenol-d6		59	%	0-82	10/9/98	5358	5708
Surr. Nitroobenzene-d5		55	%	38-111	10/9/98	5358	5708
Surr. 2-Fluorobiphenyl		61	%	38-103	10/9/98	5358	5708
Surr. 2,4,6-Tribromophenol		80	%	1-127	10/9/98	5358	5708
Surr. Terphenyl-d14		77	%	38-122	10/9/98	5358	5708
Arsenic		<0.10	mg/L	0.10	10/15/98	5398	5785
Barium		<0.10	mg/L	0.10	10/15/98	5398	5785
Cadmium		<0.01	mg/L	0.01	10/15/98	5398	5785
Chromium		<0.05	mg/L	0.05	10/15/98	5398	5785
Lead		<0.05	mg/L	0.05	10/15/98	5398	5785
Total Mercury		<0.0002	mg/L	0.0002	10/11/98	5365	5725
Selenium		<0.05	mg/L	0.05	10/15/98	5398	5785
Silver		<0.05	mg/L	0.05	10/17/98	5398	5795
Uranium		<0.10	mg/L	0.10	10/15/98	5398	5785
Copper		<0.10	mg/L	0.10	10/15/98	5398	5785
Iron		<0.10	mg/L	0.10	10/18/98	5398	5812
Manganese		<0.10	mg/L	0.10	10/15/98	5398	5785
Zinc		<0.10	mg/L	0.10	10/15/98	5398	5785
Aluminum		<0.10	mg/L	0.10	10/18/98	5398	5812
Boron		<0.10	mg/L	0.10	10/17/98	5398	5795
Cobalt		<0.05	mg/L	0.05	10/15/98	5398	5785
Molybdenum		<0.10	mg/L	0.10	10/18/98	5398	5812
Nickel		<0.10	mg/L	0.10	10/15/98	5398	5785
Total Phenols		<0.01	mg/L	0.01	10/15/98		5787
TRPHC		<0.500	mg/L	0.500	10/7/98	5342	5700

* Order ID Number corrected.

Quality Control Report
Continuing Calibration Verification Standard

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	115	115	10/10/98	5710
1,1-Dichloroethene		100	ug/L	112	112	10/10/98	5710
Chloroform		100	ug/L	117	117	10/10/98	5710
1,2-Dichloropropane		100	ug/L	115	115	10/10/98	5710
Toluene		100	ug/L	117	117	10/10/98	5710
Chlorobenzene		100	ug/L	112	112	10/10/98	5710
Ethylbenzene		100	ug/L	119	119	10/10/98	5710
Fluoride		2.5	mg/L	2.430	97	10/6/98	5697
Nitrate		0.133	mg/L	0.117	88	10/9/98	5706
Chloride		12.5	mg/L	12.415	99	10/6/98	5697
Sulfate		12.5	mg/L	12.32	99	10/6/98	5697
Fluoride		2.5	mg/L	2.415	97	10/7/98	5698
Chloride		12.5	mg/L	12.3	98	10/7/98	5698
Sulfate		12.5	mg/L	11.95	96	10/7/98	5698
Total Mercury		0.0010	mg/L	0.0011	110	10/11/98	5725
PCB		0.40	mg/L	0.39	98	10/13/98	5670
Cyanide		0.12	mg/L	0.12	100	10/9/98	5699
Phenol		80	mg/L	83	104	10/9/98	5708
1,4-Dichlorobenzene		80	mg/L	83	104	10/9/98	5708
2-nitrophenol		80	mg/L	91	114	10/9/98	5708
2,4-Dichlorophenol		80	mg/L	89	111	10/9/98	5708
Hexachlorobutadiene		80	mg/L	84	105	10/9/98	5708
4-Chloro-3-methylphenol		80	mg/L	8	109	10/9/98	5708
2,4,6-Trichlorophenol		80	mg/L	75	94	10/9/98	5708
Acenaphthene		80	mg/L	85	106	10/9/98	5708
n-Nitrosodiphenylamine		80	mg/L	80	100	10/9/98	5708
Pentachlorophenol		80	mg/L	81	101	10/9/98	5708
Fluoranthene		80	mg/L	87	109	10/9/98	5708
Di-n-octylphthalate		80	mg/L	76	95	10/9/98	5708
Benzo(a)pyrene		80	mg/L	80	100	10/9/98	5708
TDS		1,000	mg/L	956	96	10/5/98	5680
Total Phenol		0.80	mg/L	0.79	99	10/15/98	5787
Arsenic		1.0	mg/L	1.0	100	10/15/98	5785
Barium		1.0	mg/L	0.98	98	10/15/98	5785
Cadmium		1.0	mg/L	1.0	100	10/15/98	5785
Chromium		1.0	mg/L	1.0	100	10/15/98	5785

Date: 10-20-98

Order ID Number: 9810000082

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Lead		1.0	mg/L	1.0	100	10/15/98	5785
Selenium		1.0	mg/L	1.0	100	10/15/98	5785
Silver		1.0	mg/L	0.94	94	10/17/98	5795
Uranium		1.0	mg/L	0.94	94	10/15/98	5785
Copper		1.0	mg/L	1.0	100	10/15/98	5785
Iron		1.0	mg/L	0.96	96	10/18/98	5812
Manganese		1.0	mg/L	1.0	100	10/15/98	5785
Zinc		1.0	mg/L	1.0	100	10/15/98	5785
Aluminum		1.0	mg/L	0.90	90	10/18/98	5812
Boron		1.0	mg/L	0.93	93	10/17/98	5795
Cobalt		1.0	mg/L	1.0	100	10/15/98	5785
Molybdenum		1.0	mg/L	1.0	100	10/18/98	5812
Nickel		1.0	mg/L	1.0	100	10/15/98	5785
pH		7.0	mg/L	7.0	100	10/3/98	5670
TRPHC		100	mg/L	104	104	10/7/98	5700

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 20

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	127	127	100	126	126	1	10/10/98		5710
Benzene		ug/L	<1	100	108	108	100	108	108	0	10/10/98		5710
Trichloroethene		ug/L	<1	100	114	114	100	112	112	2.0	10/10/98		5710
Toluene		ug/L	<1	100	118	118	100	118	118	0	10/10/98		5710
Chlorobenzene		ug/L	<1	100	112	112	100	113	113	0	10/10/98		5710
Fluoride		mg/L	1.7	12.5	14.03	99	12.5	14.12	99	0	10/6/98		5697
Nitrate		mg/L	<0.10	0.133	0.136	102	0.133	0.133	100	2.0	10/9/98		5706
Chloride		mg/L	46	62.5	107.51	98	62.5	108.01	100	2.0	10/6/98		5697
Sulfate		mg/L	79	62.5	138.43	95	62.5	138.35	95	0.0	10/6/98		5697
Fluoride		mg/L	5.44	12.5	17.25	94	12.5	17.49	96	2.1	10/7/98		5698
Chloride		mg/L	19.24	62.5	76.56	92	62.5	78.92	95	3.2	10/7/98		5698
Sulfate		mg/L	5.16	62.5	64.07	94	62.5	64.7	95	1.0	10/7/98		5698
Total Phenol		mg/L	<0.01	0.80	0.79	99	0.80	0.81	101	2	10/15/98		5787
PCB		mg/L	<0.001	0.005	0.0037	74	0.005	0.0038	76	2.7	10/13/98	5366	5670
Cyanide		mg/L	<0.01	0.12	0.107	89	0.12	0.112	93	4.4	10/9/98		5699
Phenol		mg/L	<0.001	0.10	0.0381	38	0.10	0.0376	38	0	10/9/98	5358	5708
2-Chlorophenol		mg/L	<0.001	0.10	0.0748	75	0.10	0.0724	72	3	10/9/98	5358	5708
1,4-Dichlorobenzene		mg/L	<0.001	0.10	0.0597	60	0.10	0.0520	52	14	10/9/98	5358	5708
n-Nitrosodi-n-propylamine		mg/L	<0.001	0.10	0.0776	78	0.10	0.0796	80	3	10/9/98	5358	5708
1,2,4-trichlorobenzene		mg/L	<0.001	0.10	0.0697	70	0.10	0.0631	63	10	10/9/98	5358	5708
4-Chloro-3-methylphenol		mg/L	<0.001	0.10	0.0863	86	0.10	0.0830	83	4	10/9/98	5358	5708
Acenaphthene		mg/L	<0.001	0.10	0.0809	81	0.10	0.0772	77	5	10/9/98	5358	5708
4-Nitrophenol		mg/L	<0.001	0.10	0.0109	11	0.10	0.0095	10	14	10/9/98	5358	5708
2,4-Dinitrotoluene		mg/L	<0.001	0.10	0.0837	84	0.10	0.0881	88	5	10/9/98	5358	5708
Pentachlorophenol		mg/L	<0.001	0.10	0.0674	67	0.10	0.0647	65	4	10/9/98	5358	5708
Pyrene		mg/L	<0.001	0.10	0.0997	100	0.10	0.0816	82	20	10/9/98	5358	5708
TRPHC		mg/L	<0.500	8.5	9.34	110	8.5	10.9	128	15	10/7/98	5342	5700
Arsenic		mg/L	<0.10	2.0	1.8	90	2.0	1.9	95	5.4	10/15/98	5398	5785
Barium		mg/L	<0.10	2.0	2.1	105	2.0	2.0	100	2.4	10/15/98	5398	5785
Cadmium		mg/L	<0.01	2.0	1.8	90	2.0	1.8	90	0	10/15/98	5398	5785
Chromium		mg/L	<0.05	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5398	5785
Lead		mg/L	<0.05	2.0	1.9	95	2.0	1.8	90	5.4	10/15/98	5398	5785
Selenium		mg/L	<0.05	2.0	1.8	90	2.0	1.8	90	0	10/15/98	5398	5785
Silver		mg/L	<0.05	0.32	0.31	97	0.32	0.33	103	6.0	10/17/98	5398	5795
Uranium		mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5398	5785

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000082

Parameter		Sample	Spike Amount	Matrix Spike	MS Percent	Duplicate Spike Amount	MSD	MSD Percent	MS/MSD	Date	Prep	Run
Copper	mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5398	5785
Iron	mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/18/98	5398	5812
Manganese	mg/L	<0.10	2.0	2.1	105	2.0	2.0	100	4.9	10/15/98	5398	5785
Zinc	mg/L	<0.10	2.0	1.9	95	2.0	1.8	90	5.4	10/15/98	5398	5785
Aluminum	mg/L	<0.10	2.0	2.0	100	2.0	2.0	100	0	10/18/98	5398	5812
Boron	mg/L	<0.10	2.0	2.2	110	2.0	2.2	110	0	10/17/98	5398	5795
Cobalt	mg/L	<0.05	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5398	5785
Molybdenum	mg/L	<0.10	2.0	2.0	100	2.0	2.0	100	0	10/18/98	5398	5812
Nickel	mg/L	<0.10	2.0	2.0	100	2.0	1.9	95	5.1	10/15/98	5398	5785
Total Mercury	mg/L	<0.0002	0.0010	0.0011	110	0.0010	0.0012	120	8.7	10/11/98	5365	5725

Quality Control Report
Duplicate

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes
Project Location: Casey House, Hobbs, NM

Order ID Number: 9810000082

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	7.0	7.0	0	10/3/98		5670
TDS		mg/L	430	425	1.2	10/5/98		5680

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-1002	**P.O. Number:**	N/A
Client I.D.:	109052	**ARS Sample I.D.:**	ARS-98-3614
Date Sampled:	10/1/98	**Date Received:**	10/6/98
Time Sampled:	N/A	**Time Received**	1121
Type of Sample:	Liquid	**Date of Report**	10/21/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	10.01	1.51	1.39	pCi/L	EPA 903	10/21/98 1514	DC
Ra-228	7.06	1.08	1.61	pCi/L	EPA 904	10/20/98 2010	DC

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-1002	**P.O. Number:**	N/A
Client I.D.:	109054	**ARS Sample I.D.:**	ARS-98-3615
Date Sampled:	10/1/98	**Date Received:**	10/6/98
Time Sampled:	N/A	**Time Received**	1121
Type of Sample:	Liquid	**Date of Report**	10/21/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.88	0.74	1.39	pCi/L	EPA 903	10/21/98 1514	DC
Ra-228	2.05	0.83	1.54	pCi/L	EPA 904	10/20/98 2010	DC

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-1002	**P.O. Number:**	N/A
Client I.D.:	109056	**ARS Sample I.D.:**	ARS-98-3616
Date Sampled:	10/1/98	**Date Received:**	10/6/98
Time Sampled:	N/A	**Time Received**	1121
Type of Sample:	Liquid	**Date of Report**	10/21/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	3.01	0.79	1.19	pCi/L	EPA 903	10/21/98 1515	DC
Ra-228	3.22	0.84	1.54	pCi/L	EPA 904	10/20/98 2010	DC

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

109052-

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 082

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West, Midland, Texas 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	H2SO4	NONE	NaOH	SAMPLING: DATE	TIME
109052	Tmw-1	1	500ml Plastic	✓					✓				10/1/98	1:25
	Tmw-1	1	Liter Plastic	✓								✓	10/01/98	"
	Tmw-1	1	Liter Plastic	✓							✓		10/01/98	"
	Tmw-1	1	Liter Glass	✓						✓			10/01/98	"
	Tmw-1	3	40ml VOA	✓				✓					10/01/98	"
	Tmw-1	2	Liter Glass	✓							✓		10/01/98	"
	Tmw-1	3	Liter Glass	✓							✓		10/01/98	"
	Tmw-1	1	Liter Glass	✓							✓		10/01/98	"
	Tmw-1	1	Liter Glass	✓							✓		10/01/98	"
	Tmw-1	1	Liter Glass	✓				✓					10/01/98	"
109053	Trip Blank	2	40ml VOA	✓							✓		10/01/98	"

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se unfiltered	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	Cyanide	Wet Chemistry	Phenols	Radium 226/228	Turn Around Time if different from standard	Hold
				✓															
														✓					
															✓				
																✓			
									✓										
										✓									
												✓							
											✓								
																	✓		
		✓																	
									•										

Relinquished by: Shawn E. Hall Date: 10/2/98 Time: 11:10
Received by: Helen Shelton Date: 10/2/98 Time: 11:10 AM
Relinquished by: Helen Shelton Date: 10/2/98 Time: 6:30PM
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Date: 10/3/98 Time: 1055

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 2 °
Log-in Review

REMARKS: Normal Turnaround.

Carrier # Greyhound 159-384-310.

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 17 samples - KS

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID #: 082

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West, Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	NaOH	SAMPLING: DATE	TIME
109054	TMW-2	1	500ml Plastic	✓					✓				10/01/98	1:54
	TMW-2	1	Liter Plastic	✓								✓	10/01/98	1851
	TMW-2	1	Liter Plastic	✓							✓		10/01/98	"
	TMW-2	1	Liter Glass	✓						✓			10/01/98	"
	TMW-2	3	40ml VOA	✓				✓					10/01/98	"
	TMW-2	2	Liter Glass	✓							✓		10/01/98	"
	TMW-2	3	Liter Glass	✓							✓		10/01/98	"
	TMW-2	1	Liter Glass	✓							✓		10/01/98	"
	TMW-2	1	Liter Glass	✓							✓		10/01/98	"
	TMW-2	1	Liter Glass	✓				✓					10/01/98	"
10993	Trip Blank	2	40ml VOA	✓							✓		10/01/98	"

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se Unfiltered	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC:MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	Cyanide	Wet Chemistry Phenols	Radium 226/228	Turn Around Time if different from standard	Hold
				✓														
													✓					
														✓				
															✓			
									✓									
										✓								
												✓						
													✓					
											✓							
		✓																
									•									

Relinquished by: Shane E. Read Date: 10/2/98 Time: 11:10
Received by: Helen Shelton Date: 10/2/98 Time: 11:10 AM
Relinquished by: Helen Shelton Date: 10/2/98 Time: 6:30 PM
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Date: 10/3/98 Time: 1015

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 2 °
Log-in Review

REMARKS: Normal Turnaround

Carrier # Greyhound 159-334-389-0

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 17 samples-AS

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 082

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West, Midland, Texas 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE/H2SO4	NONE	NaOH	SAMPLING: DATE	TIME
109056	TMW-3	1	500ml Plastic	✓					✓				10/01/98	2:20
	TMW-3	1	Liter Plastic	✓								✓	10/01/98	"
	TMW-3	1	Liter Plastic	✓							✓		10/01/98	"
	TMW-3	1	Liter Glass	✓						✓			10/01/98	"
	TMW-3	3	40ml VOA	✓				✓					10/01/98	"
	TMW-3	2	Liter Glass	✓							✓		10/01/98	"
	TMW-3	3	Liter Glass	✓							✓		10/01/98	"
	TMW-3	1	Liter Glass	✓							✓		10/01/98	"
	TMW-3	1	Liter Glass	✓							✓		10/01/98	"
	TMW-3	1	Liter Glass	✓				✓					10/01/98	"
109057	Trip Blank	2	40ml VOA	✓							✓		10/01/98	"

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se (unfiltered)	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	Cyanide	Wet Chemistry	Phenols	Radium 226/228	Turn Around Time if different from standard	Hold
				✓															
														✓					
															✓				
																✓			
									✓										
										✓									
											✓								
												✓							
																	✓		
		✓																	
									•										

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Shawn E. Hood	10/1/98	11:10	Helen Shelton	10/2/98	11:10 AM
Helen Shelton	10/2/98	6:30PM	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
				10/3/98	1015

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 4 °
Log-in Review

REMARKS: Normal Turnaround.

Carrier # Greyhound 159-384-3906

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 17 samples-HS

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 082

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West, Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19 350
Project Name: Shell Tasker Road
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	SAMPLING: DATE	TIME
109058	Field Blank	2	40ml VOA	✓				✓				10/1/98	2:54

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	See Attached				Turn Around Time if different from standard	Hold
														✓					

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jean E. Yeh	10/2/98	11:10	Helen Shelton	10/2/98	11:10 AM
Helen Shelton	10/2/98	6:30PM			
			Received at Laboratory by:	Date:	Time:
				10/13/98	1015

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 2 °
Log-in Review

REMARKS: Normal Turnaround

Carrier # Greyhound 139-384-32

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 2 samples HS

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-24-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
109059	GMW-2	10/1/98	8:56	10/3/98
109060	Trip Blank			10/3/98
109061	GMW-4	10/1/98	10:20	10/3/98
109062	Trip Blank			10/3/98
109063	GMW-6	10/1/98	9:32	10/3/98
109064	Trip Blank			10/3/98
109065	GMW-7	10/1/98	11:50	10/3/98
109066	Trip Blank			10/3/98
109067	GMW-8	10/1/98	11:20	10/3/98
109068	Trip Blank			10/3/98
109069	GMW-9	10/1/98	2:46	10/3/98
109070	Trip Blank			10/3/98
109071	GMW-10	10/1/98	8:15	10/3/98
109072	Trip Blank			10/3/98
109073	MW-9D	10/1/98	2:46	10/3/98
109074	Trip Blank			10/3/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Data meets quality control criteria with the following exceptions:
0.030 mg/L bis(2-ethylhexyl)phthalate found in method blank

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 2

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109059

Sample Description: GMW-2

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Acrylonitrile		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Benzene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Carbon tetrachloride		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Chlorobenzene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,2-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Chloroform		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichlorobenzene		<2	ug/L	S 8260B		10/10/98	MB		5712	2
1,1-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichloropropenes		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Ethylbenzene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Bromodichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Bromomethane		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Chloromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Trichlorofluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Tetrachloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Toluene		1	ug/L	S 8260B		10/10/98	MB		5712	1
Trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Vinyl chloride		<1	ug/L	S 8260B		10/10/98	MB		5712	1
m,p-xylene		2	ug/L	S 8260B		10/10/98	MB		5712	1
o-xylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Ethylene dibromide		<1	ug/L	S 8260B		10/10/98	MB		5712	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Methylene chloride		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Surr. Dibromofluoromethane		106	%	S 8260B		10/10/98	MB		5712	71-132
Surr. Toluene-d8		100	%	S 8260B		10/10/98	MB		5712	82-124
Surr. 4-Bromofluorobenzene		103	%	S 8260B		10/10/98	MB		5712	76-126
Benzidine		<0.01	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.01
Pentachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001

Date: 10-20-98
Page # 3
Order ID Number: 9810000083
Sample Number: 109059

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-2

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,5-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,6-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroethl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (chloromethyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
3,3-dichlorobenzidine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diphenylhydrazine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Isophorone		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitrophenols		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
-nitrosodiethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodimethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodibutylamine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pentachlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Phenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
bis(2-ethylhexyl) phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Anthracene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(b)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluorene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Naphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Surr. 2-Fluorophenol		21	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-85
Surr. Phenol-d6		15	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	0-82
Surr. Nitroobenzene-d5		46	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-111
Surr. 2-Fluorobiphenyl		51	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-103
Surr. 2,4,6-Tribromophenol		43	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-127
Surr. Terphenyl-d14		47	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-122

Date: 10-20-98
Page # 4
Order ID Number: 9810000083
Sample Number: 109059

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-2

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/9/98	10/13/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Barium		0.25	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Cadmium		<0.01	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.01
Chromium		0.07	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Lead		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Total Mercury		<0.0002	mg/L	S 7471B	10/9/98	10/11/98	MS	5365	5725	0.0002
Selenium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Silver		<0.05	mg/L	S 6010B	10/12/98	10/17/98	RR	5380	5800	0.05
Uranium		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Copper		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Iron		23	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Manganese		0.28	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Zinc		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Aluminum		39	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Boron		0.21	mg/L	S 6010B	10/12/98	10/17/98	RR	5380	5800	0.10
Cobalt		0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/9/98	SA		5709	0.01
Fluoride		1.8	mg/L	E 300.0		10/6/98	JS		5695	0.5
Nitrate		2.17	mg/L	SM 4500 NO3,E		10/9/98	JS		5711	0.10
Chloride		51	mg/L	E 300.0		10/6/98	JS		5695	2.5
Sulfate		87	mg/L	E 300.0		10/6/98	JS		5695	2.5
TDS		450	mg/L	E 160.1		10/5/98	RS		5682	---
pH		7.4	s.u.	E 150.1		10/3/98	SA		5669	---
TRPHC		<0.500	mg/L	E 418.1	10/5/98	10/7/98	MF	5342	5700	0.500
Total Phenols		0.1	mg/L	S 5530 A,D		10/15/98	RC		5783	0.01
Total Radium		3.42	pCi/L	E 901.1M		10/20/98	DC	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 5

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109060

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/10/98	MB		5712	5
Acrylonitrile		<5	ug/L	S-8260B		10/10/98	MB		5712	5
Benzene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Chlorobenzene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Chloroform		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Dichlorobenzene		<2	ug/L	S-8260B		10/10/98	MB		5712	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Dichloropropenes		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Ethylbenzene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Bromodichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Bromomethane		<5	ug/L	S-8260B		10/10/98	MB		5712	5
Chloromethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Dichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Toluene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Vinyl chloride		<1	ug/L	S-8260B		10/10/98	MB		5712	1
m,p-xylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
o-xylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Ethylene dibromide		<1	ug/L	S-8260B		10/10/98	MB		5712	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Methylene chloride		<5	ug/L	S-8260B		10/10/98	MB		5712	5
Surr. Dibromofluoromethane		109	%	S-8260B		10/10/98	MB		5712	72-130
Surr. Toluene-d8		98	%	S-8260B		10/10/98	MB		5712	77-127
Surr. 4-Bromofluorobenzene		102	%	S-8260B		10/10/98	MB		5712	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109061

Sample Description: GMW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Acrylonitrile		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Benzene		2	ug/L	S 8260B		10/10/98	MB		5712	1
Carbon tetrachloride		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Chlorobenzene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,2-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Chloroform		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichlorobenzene		<2	ug/L	S 8260B		10/10/98	MB		5712	2
1,1-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichloropropenes		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Ethylbenzene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Bromodichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Bromomethane		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Chloromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Trichlorofluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Tetrachloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Toluene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Vinyl chloride		<1	ug/L	S 8260B		10/10/98	MB		5712	1
m,p-xylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
o-xylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Ethylene dibromide		<1	ug/L	S 8260B		10/10/98	MB		5712	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Methylene chloride		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Surr. Dibromofluoromethane		107	%	S 8260B		10/10/98	MB		5712	71-132
Surr. Toluene-d8		98	%	S 8260B		10/10/98	MB		5712	82-124
Surr. 4-Bromofluorobenzene		100	%	S 8260B		10/10/98	MB		5712	76-126
Benzidine		<0.01	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.01
Pentachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001

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Order ID Number: 9810000083
Sample Number: 109061

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,5-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,6-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroethl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (chloromethyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
3,3-dichlorobenzidine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diphenylhydrazine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Isophorone		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitrophenols		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
i-nitrosodiethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodimethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodibutylamine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pentachlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Phenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
bis(2-ethylhexyl) phthalate	*	0.008	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Anthracene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(b)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluorene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Naphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Surr. 2-Fluorophenol		14	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-85
Surr. Phenol-d6		20	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	0-82
Surr. Nitroobenzene-d5		46	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-111
Surr. 2-Fluorobiphenyl		50	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-103
Surr. 2,4,6-Tribromophenol		42	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-127
Surr. Terphenyl-d14		49	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-122

Date: 10-20-98
Page # 8
Order ID Number: 9810000083
Sample Number: 109061

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-4

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/9/98	10/13/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Barium		0.31	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Cadmium		<0.01	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.01
Chromium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Lead		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Total Mercury		<0.0002	mg/L	S 7471B	10/9/98	10/11/98	MS	5365	5725	0.0002
Selenium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Silver		<0.05	mg/L	S 6010B	10/12/98	10/17/98	RR	5380	5800	0.05
Uranium		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Copper		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Iron		14	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Manganese		0.17	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Zinc		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Aluminum		24	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Boron		0.16	mg/L	S 6010B	10/12/98	10/17/98	RR	5380	5800	0.10
Cobalt		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/9/98	SA		5709	0.01
Fluoride		1.8	mg/L	E 300.0		10/6/98	JS		5695	0.5
Nitrate		2.30	mg/L	SM 4500 NO3,E		10/9/98	JS		5711	0.10
Chloride		42	mg/L	E 300.0		10/6/98	JS		5695	2.5
Sulfate		72	mg/L	E 300.0		10/6/98	JS		5695	2.5
TDS		470	mg/L	E 160.1		10/5/98	RS		5682	---
pH		7.4	s.u.	E 150.1		10/3/98	SA		5669	---
TRPHC		0.533	mg/L	E 418.1	10/5/98	10/7/98	MF	5342	5700	0.500
Total Phenols		0.7	mg/L	S 5530 A,D		10/15/98	RC		5783	0.01
Total Radium		2.74	pCi/L	E 901.1M		10/20/98	DC	---	---	---

*Reportable bis(2-ethylhexyl)phthalate in method blank.

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 9

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109062

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/10/98	MB		5712	5
Acrylonitrile		<5	ug/L	S-8260B		10/10/98	MB		5712	5
Benzene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Chlorobenzene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Chloroform		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Dichlorobenzene		<2	ug/L	S-8260B		10/10/98	MB		5712	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Dichloropropenes		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Ethylbenzene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Bromodichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Bromomethane		<5	ug/L	S-8260B		10/10/98	MB		5712	5
Chloromethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Dichloromethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Toluene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Trichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Vinyl chloride		<1	ug/L	S-8260B		10/10/98	MB		5712	1
m,p-xylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
o-xylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Ethylene dibromide		<1	ug/L	S-8260B		10/10/98	MB		5712	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/10/98	MB		5712	1
Methylene chloride		<5	ug/L	S-8260B		10/10/98	MB		5712	5
Surr. Dibromofluoromethane		108	%	S-8260B		10/10/98	MB		5712	72-130
Surr. Toluene-d8		97	%	S-8260B		10/10/98	MB		5712	77-127
Surr. 4-Bromofluorobenzene		101	%	S-8260B		10/10/98	MB		5712	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 10

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109063

Sample Description: GMW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Acrylonitrile		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Benzene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Carbon tetrachloride		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Chlorobenzene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,2-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Chloroform		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichlorobenzene		<2	ug/L	S 8260B		10/10/98	MB		5712	2
1,1-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichloropropenes		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Ethylbenzene		2	ug/L	S 8260B		10/10/98	MB		5712	1
Bromodichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Bromomethane		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Chloromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Dichloromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Trichlorofluoromethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Tetrachloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Toluene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Trichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Vinyl chloride		<1	ug/L	S 8260B		10/10/98	MB		5712	1
m,p-xylene		7	ug/L	S 8260B		10/10/98	MB		5712	1
o-xylene		2	ug/L	S 8260B		10/10/98	MB		5712	1
1,1-dichloroethane		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Ethylene dibromide		<1	ug/L	S 8260B		10/10/98	MB		5712	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		10/10/98	MB		5712	1
Methylene chloride		<5	ug/L	S 8260B		10/10/98	MB		5712	5
Surr. Dibromofluoromethane		109	%	S 8260B		10/10/98	MB		5712	71-132
Surr. Toluene-d8		97	%	S 8260B		10/10/98	MB		5712	82-124
Surr. 4-Bromofluorobenzene		100	%	S 8260B		10/10/98	MB		5712	76-126
Benzidine		<0.01	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.01
Pentachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001

Date: 10-20-98
Page # 11
Order ID Number: 9810000083
Sample Number: 109063

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,5-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,6-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroethl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (chloromethyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
3,3-dichlorobenzidine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diphenylhydrazine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Isophorone		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
4-dinitrophenols		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
-nitrosodiethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodimethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodibutylamine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pentachlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Phenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
bis(2-ethylhexyl) phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Anthracene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(b)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluorene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Naphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Surr. 2-Fluorophenol		26	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-85
Surr. Phenol-d6		23	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	0-82
Surr. Nitroobenzene-d5		61	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-111
Surr. 2-Fluorobiphenyl		69	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-103
Surr. 2,4,6-Tribromophenol		58	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-127
Surr. Terphenyl-d14		63	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-122

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Order ID Number: 9810000083
Sample Number: 109063

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-6

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/9/98	10/13/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Barium		0.41	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Cadmium		<0.01	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.01
Chromium		0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Lead		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Total Mercury		0.0002	mg/L	S 7471B	10/2/98	10/13/98	RR	5375	5763	0.0002
Selenium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Silver		<0.05	mg/L	S 6010B	10/12/98	10/17/98	RR	5380	5800	0.05
Uranium		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Copper		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Iron		34	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Manganese		0.42	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Zinc		0.16	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Aluminum		51	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Boron		0.23	mg/L	S 6010B	10/12/98	10/17/98	RR	5380	5800	0.10
Cobalt		0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/9/98	SA		5709	0.01
Fluoride		1.7	mg/L	E 300.0		10/6/98	JS		5695	0.5
Nitrate		4.81	mg/L	SM 4500 NO3,E		10/9/98	JS		5711	0.10
Chloride		46	mg/L	E 300.0		10/6/98	JS		5695	2.5
Sulfate		79	mg/L	E 300.0		10/6/98	JS		5695	2.5
TDS		500	mg/L	E 160.1		10/5/98	RS		5682	---
pH		7.4	s.u.	E 150.1		10/3/98	SA		5669	---
TRPHC		<0.500	mg/L	E 418.1	10/5/98	10/7/98	MF	5342	5700	0.500
Total Phenols		0.1	mg/L	S 5530 A,D		10/15/98	RC		5783	0.01
Total Radium		2.5	pCi/L	E 901.1M		10/20/98	DC	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109064

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Acrylonitrile		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Benzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chlorobenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,2-trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chloroform		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorobenzene		<2	ug/L	S-8260B		10/13/98	MB		5764	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloropropenes		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylbenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromodichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromomethane		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Chloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Toluene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Vinyl chloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
m,p-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
o-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylene dibromide		<1	ug/L	S-8260B		10/13/98	MB		5764	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Methylene chloride		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Surr. Dibromofluoromethane		108	%	S-8260B		10/13/98	MB		5764	72-130
Surr. Toluene-d8		94	%	S-8260B		10/13/98	MB		5764	77-127
Surr. 4-Bromofluorobenzene		102	%	S-8260B		10/13/98	MB		5764	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 14

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109065

Sample Description: GMW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Acrylonitrile		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Benzene		1.2	ug/L	S 8260B		10/13/98	MB		5764	1
Carbon tetrachloride		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Chlorobenzene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,2-dichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Chloroform		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichlorobenzene		<2	ug/L	S 8260B		10/13/98	MB		5764	2
1,1-dichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichloropropenes		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Ethylbenzene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Bromodichloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Bromomethane		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Chloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Trichlorofluoromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Tetrachloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Toluene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Trichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Vinyl chloride		<1	ug/L	S 8260B		10/13/98	MB		5764	1
m,p-xylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
o-xylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1-dichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Ethylene dibromide		<1	ug/L	S 8260B		10/13/98	MB		5764	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Methylene chloride		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Surr. Dibromofluoromethane		106	%	S 8260B		10/13/98	MB		5764	71-132
Surr. Toluene-d8		95	%	S 8260B		10/13/98	MB		5764	82-124
Surr. 4-Bromofluorobenzene		103	%	S 8260B		10/13/98	MB		5764	76-126
Benzidine		<0.01	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.01
Pentachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001

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Order ID Number: 9810000083
Sample Number: 109065

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,5-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,6-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroethl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (chloromethyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
3,3-dichlorobenzidine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diphenylhydrazine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Isophorone		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitrophenols		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
n-nitrosodiethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodimethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodibutylamine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pentachlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Phenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
bis(2-ethylhexyl) phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Anthracene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(b)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluorene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Naphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Surr. 2-Fluorophenol		27	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-85
Surr. Phenol-d6		21	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	0-82
Surr. Nitroobenzene-d5		66	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-111
Surr. 2-Fluorobiphenyl		71	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-103
Surr. 2,4,6-Tribromophenol		59	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-127
Surr. Terphenyl-d14		63	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-122

Date: 10-20-98
Page # 16
Order ID Number: 9810000083
Sample Number: 109065

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-7

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/9/98	10/13/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Barium		0.14	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Cadmium		<0.01	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.01
Chromium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Lead		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Total Mercury		<0.0002	mg/L	S 7471B	10/9/98	10/11/98	MS	5365	5725	0.0002
Selenium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Silver		<0.05	mg/L	S 6010B	10/12/98	10/17/98	RR	5380	5800	0.05
Uranium		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Copper		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Iron		7.4	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Manganese		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Zinc		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Aluminum		11	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Boron		0.19	mg/L	S 6010B	10/12/98	10/17/98	RR	5380	5800	0.10
Cobalt		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/9/98	SA		5709	0.01
Fluoride		1.9	mg/L	E 300.0		10/6/98	JS		5696	0.5
Nitrate		1.97	mg/L	SM 4500 NO3,E		10/9/98	JS		5711	0.10
Chloride		41	mg/L	E 300.0		10/6/98	JS		5696	2.5
Sulfate		74	mg/L	E 300.0		10/6/98	JS		5696	2.5
TDS		430	mg/L	E 160.1		10/5/98	RS		5682	---
pH		7.4	s.u.	E 150.1		10/3/98	SA		5669	---
TRPHC		<0.500	mg/L	E 418.1	10/5/98	10/7/98	MF	5342	5700	0.500
Total Phenols		<0.01	mg/L	S 5530 A,D		10/15/98	RC		5783	0.01
Total Radium		2.27	pCi/L	E 901.1M		10/20/98	DC	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 17

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109066

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Acrylonitrile		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Benzene		1.2	ug/L	S-8260B		10/13/98	MB		5764	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chlorobenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chloroform		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorobenzene		<2	ug/L	S-8260B		10/13/98	MB		5764	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloropropenes		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylbenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromodichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromomethane		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Chloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Toluene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Vinyl chloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
m,p-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
o-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylene dibromide		<1	ug/L	S-8260B		10/13/98	MB		5764	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Methylene chloride		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Surr. Dibromofluoromethane		105	%	S-8260B		10/13/98	MB		5764	72-130
Surr. Toluene-d8		95	%	S-8260B		10/13/98	MB		5764	77-127
Surr. 4-Bromofluorobenzene		103	%	S-8260B		10/13/98	MB		5764	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109067

Sample Description: GMW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Acrylonitrile		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Benzene		2.1	ug/L	S 8260B		10/13/98	MB		5764	1
Carbon tetrachloride		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Chlorobenzene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,2-dichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Chloroform		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichlorobenzene		<2	ug/L	S 8260B		10/13/98	MB		5764	2
1,1-dichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichloropropenes		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Ethylbenzene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Bromodichloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Bromomethane		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Chloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Trichlorofluoromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Tetrachloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Toluene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Trichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Vinyl chloride		<1	ug/L	S 8260B		10/13/98	MB		5764	1
m,p-xylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
o-xylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1-dichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Ethylene dibromide		<1	ug/L	S 8260B		10/13/98	MB		5764	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Methylene chloride		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Surr. Dibromofluoromethane		109	%	S 8260B		10/13/98	MB		5764	71-132
Surr. Toluene-d8		94	%	S 8260B		10/13/98	MB		5764	82-124
Surr. 4-Bromofluorobenzene		103	%	S 8260B		10/13/98	MB		5764	76-126
Benzidine		<0.01	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.01
Pentachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001

Date: 10-20-98
Page # 19
Order ID Number: 9810000083
Sample Number: 109067

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,5-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,6-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroethl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (chloromethyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
3,3-dichlorobenzidine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diphenylhydrazine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Isophorone		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitrophenols		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
nitrosodiethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
nitrosodimethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodibutylamine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pentachlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Phenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
bis(2-ethylhexyl) phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Anthracene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(b)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluorene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Naphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Surr. 2-Fluorophenol		34	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-85
Surr. Phenol-d6		26	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	0-82
Surr. Nitroobenzene-d5		97	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-111
rr. 2-Fluorobiphenyl		100	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-103
. 2,4,6-Tribromophenol		82	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-127
Surr. Terphenyl-d14		75	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-122

Date: 10-20-98
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Order ID Number: 9810000083
Sample Number: 109067

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-8

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
PCB's		<0.01	mg/L	S-8082	10/9/98	10/21/98	RC	5366	5888	0.001
Arsenic		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Barium		0.28	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Cadmium		<0.01	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.01
Chromium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Lead		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Total Mercury		<0.0002	mg/L	S 7471B	10/9/98	10/11/98	MS	5365	5725	0.0002
Selenium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Silver		<0.05	mg/L	S 6010B	10/12/98	10/17/98	RR	5380	5800	0.05
Uranium		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Copper		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Iron		4.4	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Manganese		0.18	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Zinc		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Aluminum		6.6	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Boron		0.41	mg/L	S 6010B	10/12/98	10/17/98	RR	5380	5800	0.10
Cobalt		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5380	5782	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/9/98	SA		5710	0.01
Fluoride		2.0	mg/L	E 300.0		10/6/98	JS		5696	0.5
Nitrate		0.59	mg/L	SM 4500 NO3,E		10/9/98	JS		5711	0.10
Chloride		170	mg/L	E 300.0		10/6/98	JS		5696	2.5
Sulfate		68	mg/L	E 300.0		10/6/98	JS		5696	2.5
TDS		750	mg/L	E 160.1		10/6/98	RS		5693	---
pH		7.2	s.u.	E 150.1		10/3/98	SA		5669	---
TRPHC		<0.500	mg/L	E 418.1	10/5/98	10/7/98	MF	5342	5700	0.500
Total Phenols		<0.01	mg/L	S 5530 A,D		10/15/98	RC		5783	0.01
Total Radium		2.62	pCi/L	E 901.1M		10/20/98	DC	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
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Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109068

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Acrylonitrile		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Benzene		1.1	ug/L	S-8260B		10/13/98	MB		5764	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chlorobenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chloroform		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorobenzene		<2	ug/L	S-8260B		10/13/98	MB		5764	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloropropenes		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylbenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromodichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromomethane		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Chloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Toluene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Vinyl chloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
m,p-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
o-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylene dibromide		<1	ug/L	S-8260B		10/13/98	MB		5764	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Methylene chloride		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Surr. Dibromofluoromethane		109	%	S-8260B		10/13/98	MB		5764	72-130
Surr. Toluene-d8		95	%	S-8260B		10/13/98	MB		5764	77-127
Surr. 4-Bromofluorobenzene		102	%	S-8260B		10/13/98	MB		5764	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109069

Sample Description: GMW-9

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Acrylonitrile		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Benzene		1.8	ug/L	S 8260B		10/13/98	MB		5764	1
Carbon tetrachloride		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Chlorobenzene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,2-dichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Chloroform		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichlorobenzene		<2	ug/L	S 8260B		10/13/98	MB		5764	2
1,1-dichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichloropropenes		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Ethylbenzene		18	ug/L	S 8260B		10/13/98	MB		5764	1
Bromodichloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Bromomethane		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Chloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Trichlorofluoromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Tetrachloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Toluene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Trichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Vinyl chloride		<1	ug/L	S 8260B		10/13/98	MB		5764	1
m,p-xylene		80	ug/L	S 8260B		10/13/98	MB		5764	1
o-xylene		27	ug/L	S 8260B		10/13/98	MB		5764	1
1,1-dichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Ethylene dibromide		<1	ug/L	S 8260B		10/13/98	MB		5764	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Methylene chloride		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Surr. Dibromofluoromethane		111	%	S 8260B		10/13/98	MB		5764	71-132
Surr. Toluene-d8		96	%	S 8260B		10/13/98	MB		5764	82-124
Surr. 4-Bromofluorobenzene		103	%	S 8260B		10/13/98	MB		5764	76-126
Benzidine		<0.01	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.01
Pentachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001

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Order ID Number: 9810000083
Sample Number: 109069

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-9

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,5-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,6-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroethl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (chloromethyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
3,3-dichlorobenzidine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diphenylhydrazine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Isophorone		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitrophenols		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
nitrosodiethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodimethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodibutylamine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pentachlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Phenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
bis(2-ethylhexyl) phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Anthracene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(b)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluorene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Naphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Surr. 2-Fluorophenol		21	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-85
Surr. Phenol-d6		14	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	0-82
Surr. Nitroobenzene-d5		58	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-111
Surr. 2-Fluorobiphenyl		64	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-103
Surr. 2,4,6-Tribromophenol		63	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-127
Surr. Terphenyl-d14		71	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-122

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Page # 24
Order ID Number: 9810000083
Sample Number: 109069

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-9

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/9/98	10/13/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Barium		0.42	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Cadmium		<0.01	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.01
Chromium		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
Lead		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
Total Mercury		<0.0002	mg/L	S 7471B	10/9/98	10/11/98	MS	5365	5725	0.0002
Selenium		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
Silver		<0.05	mg/L	S 6010B	10/13/98	10/17/98	RR	5389	5800	0.05
Uranium		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Copper		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Iron		5.6	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Manganese		0.16	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Zinc		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Aluminum		10	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Boron		0.24	mg/L	S 6010B	10/13/98	10/17/98	RR	5389	5800	0.10
Cobalt		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/9/98	SA		5710	0.01
Fluoride		2.1	mg/L	E 300.0		10/6/98	JS		5696	0.5
Nitrate		2.39	mg/L	SM 4500 NO3,E		10/9/98	JS		5711	0.10
Chloride		57	mg/L	E 300.0		10/6/98	JS		5696	2.5
Sulfate		85	mg/L	E 300.0		10/6/98	JS		5696	2.5
TDS		540	mg/L	E 160.1		10/6/98	RS		5693	---
pH		7.0	s.u.	E 150.1		10/3/98	SA		5669	---
TRPHC		7.28	mg/L	E 418.1	10/5/98	10/7/98	MF	5342	5700	0.500
Total Phenols		<0.01	mg/L	S 5530 A,D		10/15/98	RC		5783	0.01
Total Radium		3.43	pCi/L	E 901.1M		10/20/98	DC	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109070

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Acrylonitrile		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Benzene		1.2	ug/L	S-8260B		10/13/98	MB		5764	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chlorobenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chloroform		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorobenzene		<2	ug/L	S-8260B		10/13/98	MB		5764	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloropropenes		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylbenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromodichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromomethane		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Chloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Toluene		1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Vinyl chloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
m,p-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
o-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylene dibromide		<1	ug/L	S-8260B		10/13/98	MB		5764	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Methylene chloride		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Surr. Dibromofluoromethane		107	%	S-8260B		10/13/98	MB		5764	72-130
Surr. Toluene-d8		94	%	S-8260B		10/13/98	MB		5764	77-127
Surr. 4-Bromofluorobenzene		105	%	S-8260B		10/13/98	MB		5764	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 26

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109071

Sample Description: GMW-10

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Acrylonitrile		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Benzene		1.6	ug/L	S 8260B		10/13/98	MB		5764	1
Carbon tetrachloride		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Chlorobenzene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,2-dichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Chloroform		<1	ug/L	S 8260B		10/13/98	MB		5764	1
[illegible]ichlorobenzene		<2	ug/L	S 8260B		10/13/98	MB		5764	2
1,1-dichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichloropropenes		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Ethylbenzene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Bromodichloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Bromomethane		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Chloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Trichlorofluoromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Tetrachloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Toluene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Trichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Vinyl chloride		<1	ug/L	S 8260B		10/13/98	MB		5764	1
m,p-xylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
o-xylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1-dichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Ethylene dibromide		<1	ug/L	S 8260B		10/13/98	MB		5764	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Methylene chloride		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Surr. Dibromofluoromethane		106	%	S 8260B		10/13/98	MB		5764	71-132
Surr. Toluene-d8		94	%	S 8260B		10/13/98	MB		5764	82-124
Surr. 4-Bromofluorobenzene		103	%	S 8260B		10/13/98	MB		5764	76-126
Benzidine		<0.01	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.01
[illegible]entachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001

Date: 10-20-98
Page # 27
Order ID Number: 9810000083
Sample Number: 109071

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-10

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,5-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,6-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroethl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (chloromethyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
3,3-dichlorobenzidine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diphenylhydrazine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Isophorone		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitrophenols		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
[illegible]trosodiethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
[illegible]-nitrosodimethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodibutylamine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pentachlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Phenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
bis(2-ethylhexyl) phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Anthracene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(b)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluorene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Naphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Surr. 2-Fluorophenol		18	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-85
Surr. Phenol-d6		14	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	0-82
[illegible]rr. Nitroobenzene-d5		58	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-111
[illegible]. 2-Fluorobiphenyl		64	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-103
Surr. 2,4,6-Tribromophenol		52	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-127
Surr. Terphenyl-d14		53	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-122

Date: 10-20-98
Page # 2 8
Order ID Number: 9810000083
Sample Number: 109071

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: GMW-10

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/9/98	10/13/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Barium		0.19	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Cadmium		<0.01	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.01
Chromium		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
Lead		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
Total Mercury		<0.0002	mg/L	S 7471B	10/9/98	10/11/98	MS	5365	5725	0.0002
Selenium		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
[illegible]ver		<0.05	mg/L	S 6010B	10/13/98	10/17/98	RR	5389	5800	0.05
[illegible]anium		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Copper		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Iron		6.6	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Manganese		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Zinc		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Aluminum		12	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Boron		0.26	mg/L	S 6010B	10/13/98	10/17/98	RR	5389	5800	0.10
Cobalt		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/9/98	SA		5710	0.01
Fluoride		1.7	mg/L	E 300.0		10/6/98	JS		5696	0.5
Nitrate		1.66	mg/L	SM 4500 NO3,E		10/9/98	JS		5711	0.10
Chloride		180	mg/L	E 300.0		10/6/98	JS		5696	2.5
Sulfate		80	mg/L	E 300.0		10/6/98	JS		5696	2.5
TDS		640	mg/L	E 160.1		10/6/98	RS		5693	---
pH		7.2	s.u.	E 150.1		10/3/98	SA		5669	---
TRPHC		<0.500	mg/L	E 418.1	10/5/98	10/7/98	MF	5342	5700	0.500
Total Phenols		<0.01	mg/L	S 5530 A,D		10/15/98	RC		5783	0.01
Total Radium		4.22	pCi/L	E 901.1M		10/20/98	DC	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109072

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Acrylonitrile		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Benzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chlorobenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chloroform		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorobenzene		<2	ug/L	S-8260B		10/13/98	MB		5764	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloropropenes		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylbenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromodichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromomethane		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Chloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Toluene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Vinyl chloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
m,p-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
o-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylene dibromide		<1	ug/L	S-8260B		10/13/98	MB		5764	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Methylene chloride		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Surr. Dibromofluoromethane		108	%	S-8260B		10/13/98	MB		5764	72-130
Surr. Toluene-d8		94	%	S-8260B		10/13/98	MB		5764	77-127
Surr. 4-Bromofluorobenzene		103	%	S-8260B		10/13/98	MB		5764	72-131

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109073

Sample Description: MW-9D

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Acrylonitrile		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Benzene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Carbon tetrachloride		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Chlorobenzene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,2-dichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2,2-tetrachloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,1-trichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2-trichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
1,1,2-trichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Chloroform		<1	ug/L	S 8260B		10/13/98	MB		5764	1
[illegible]chlorobenzene		<2	ug/L	S 8260B		10/13/98	MB		5764	2
[illegible],1-dichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichloropropenes		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Ethylbenzene		18	ug/L	S 8260B		10/13/98	MB		5764	1
Bromodichloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Bromomethane		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Chloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichlorodifluoromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Dichloromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Trichlorofluoromethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Tetrachloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Toluene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Trichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Vinyl chloride		<1	ug/L	S 8260B		10/13/98	MB		5764	1
m,p-xylene		82	ug/L	S 8260B		10/13/98	MB		5764	1
o-xylene		27	ug/L	S 8260B		10/13/98	MB		5764	1
1,1-dichloroethane		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Ethylene dibromide		<1	ug/L	S 8260B		10/13/98	MB		5764	1
cis-1,2-dichlorethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
trans-1,2-dichloroethylene		<1	ug/L	S 8260B		10/13/98	MB		5764	1
Methylene chloride		<5	ug/L	S 8260B		10/13/98	MB		5764	5
Surr. Dibromofluoromethane		111	%	S 8260B		10/13/98	MB		5764	71-132
Surr. Toluene-d8		96	%	S 8260B		10/13/98	MB		5764	82-124
Surr. 4-Bromofluorobenzene		104	%	S 8260B		10/13/98	MB		5764	76-126
Benzidine		<0.01	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.01
[illegible]ntachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
[illegible],2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001

Date: 10-20-98
Page # 31
Order ID Number: 9810000083
Sample Number: 109073

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: MW-9D

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,5-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4,6-trichlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroethl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
bis (chloromethyl) ether		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
3,3-dichlorobenzidine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diphenylhydrazine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Isophorone		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2,4-dinitrophenols		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
[illegible]nitrosodiethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
[illegible]nitrosodimethylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosodibutylamine		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pentachlorophenol		<0.005	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.005
Phenol		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
bis(2-ethylhexyl) phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Anthracene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(b)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Fluorene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Naphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
1-methylnaphthalene		0.003	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
2-methylnaphthalene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/7/98	10/9/98	DG	5355	5713	0.001
Surr. 2-Fluorophenol		26	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-85
Surr. Phenol-d6		18	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	0-82
Surr. Nitroobenzene-d5		67	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-111
Surr. 2-Fluorobiphenyl		70	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-103
Surr. 2,4,6-Tribromophenol		63	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	1-127
Surr. Terphenyl-d14		63	%	S 8270C	10/7/98	10/9/98	DG	5355	5713	38-122

Date: 10-20-98
Page # 32
Order ID Number: 9810000083
Sample Number: 109073

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Sample Description: MW-9D

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/9/98	10/13/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Barium		0.43	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Cadmium		<0.01	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.01
Chromium		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
Lead		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
Total Mercury		<0.0002	mg/L	S 7471B	10/9/98	10/11/98	MS	5365	5725	0.0002
Selenium		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
Silver		<0.05	mg/L	S 6010B	10/13/98	10/17/98	RR	5389	5800	0.05
[illegible]anium		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
[illegible]opper		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Iron		3.2	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Manganese		0.14	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Zinc		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Aluminum		5	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Boron		0.23	mg/L	S 6010B	10/13/98	10/17/98	RR	5389	5800	0.10
Cobalt		<0.05	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5380	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/13/98	10/15/98	RR	5389	5783	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/9/98	SA		5710	0.01
Fluoride		2.3	mg/L	E 300.0		10/6/98	JS		5696	0.5
Nitrate		1.50	mg/L	SM 4500 NO3,E		10/9/98	JS		5711	0.10
Chloride		64	mg/L	E 300.0		10/6/98	JS		5696	2.5
Sulfate		87	mg/L	E 300.0		10/6/98	JS		5696	2.5
TDS		580	mg/L	E 160.1		10/6/98	RS		5693	---
pH		7.1	s.u.	E 150.1		10/3/98	SA		5669	---
TRPHC		4.76	mg/L	E 418.1	10/5/98	10/7/98	MF	5342	5700	0.500
Total Phenols		<0.01	mg/L	S 5530 A,D		10/15/98	RC		5783	0.01
Total Radium		3.73	pCi/L	E 901.1M		10/20/98	DC	---	---	---

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98
Page # 33

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083
Sample Number: 109074

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Acrylonitrile		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Benzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chlorobenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Chloroform		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorobenzene		<2	ug/L	S-8260B		10/13/98	MB		5764	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloropropenes		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylbenzene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromodichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Bromomethane		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Chloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Dichloromethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Toluene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Trichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Vinyl chloride		<1	ug/L	S-8260B		10/13/98	MB		5764	1
m,p-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
o-xylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Ethylene dibromide		<1	ug/L	S-8260B		10/13/98	MB		5764	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/13/98	MB		5764	1
Methylene chloride		<5	ug/L	S-8260B		10/13/98	MB		5764	5
Surr. Dibromofluoromethane		11	%	S-8260B		10/13/98	MB		5764	72-130
Surr. Toluene-d8		94	%	S-8260B		10/13/98	MB		5764	77-127
Surr. 4-Bromofluorobenzene		102	%	S-8260B		10/13/98	MB		5764	72-131

Quality Control Report
Blanks

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	10/10/98		5712
Acrylonitrile		<5	ug/L	5	10/10/98		5712
Benzene		<1	ug/L	1	10/10/98		5712
Carbon tetrachloride		<1	ug/L	1	10/10/98		5712
Chlorobenzene		<1	ug/L	1	10/10/98		5712
1,2-dichloroethane		<1	ug/L	1	10/10/98		5712
1,1,2,2-tetrachloroethane		<1	ug/L	1	10/10/98		5712
1,1,1-trichloroethane		<1	ug/L	1	10/10/98		5712
1,1,2-trichloroethane		<1	ug/L	1	10/10/98		5712
1,1,2-trichloroethylene		<1	ug/L	1	10/10/98		5712
Chloroform		<1	ug/L	1	10/10/98		5712
Dichlorobenzene		<2	ug/L	2	10/10/98		5712
1,1-dichloroethylene		<1	ug/L	1	10/10/98		5712
Dichloropropenes		<1	ug/L	1	10/10/98		5712
Ethylbenzene		<1	ug/L	1	10/10/98		5712
Bromodichloromethane		<1	ug/L	1	10/10/98		5712
Bromomethane		<5	ug/L	5	10/10/98		5712
Chloromethane		<1	ug/L	1	10/10/98		5712
Dichlorodifluoromethane		<1	ug/L	1	10/10/98		5712
Dichloromethane		<1	ug/L	1	10/10/98		5712
Trichlorofluoromethane		<1	ug/L	1	10/10/98		5712
Tetrachloroethylene		<1	ug/L	1	10/10/98		5712
Toluene		<1	ug/L	1	10/10/98		5712
Trichloroethylene		<1	ug/L	1	10/10/98		5712
Vinyl chloride		<1	ug/L	1	10/10/98		5712
m,p-xylene		<1	ug/L	1	10/10/98		5712
o-xylene		<1	ug/L	1	10/10/98		5712
1,1-dichloroethane		<1	ug/L	1	10/10/98		5712
Ethylene dibromide		<1	ug/L	1	10/10/98		5712
cis-1,2-dichlorethylene		<1	ug/L	1	10/10/98		5712
trans-1,2-dichloroethylene		<1	ug/L	1	10/10/98		5712
Methylene chloride		<5	ug/L	5	10/10/98		5712
Surr. Dibromofluoromethane		97	%	71-132	10/10/98		5712
Surr. Toluene-d8		103	%	82-124	10/10/98		5712
Surr. 4-Bromofluorobenzene		99	%	76-126	10/10/98		5712
Acrolein		<5	ug/L	5	10/13/98		5764
Acrylonitrile		<5	ug/L	5	10/13/98		5764
Benzene		<1	ug/L	1	10/13/98		5764

Order ID Number: 9810000083

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Carbon tetrachloride		<1	ug/L	1	10/13/98		5764
Chlorobenzene		<1	ug/L	1	10/13/98		5764
1,2-dichloroethane		<1	ug/L	1	10/13/98		5764
1,1,2,2-tetrachloroethane		<1	ug/L	1	10/13/98		5764
1,1,1-trichloroethane		<1	ug/L	1	10/13/98		5764
1,1,2-trichloroethane		<1	ug/L	1	10/13/98		5764
1,1,2-trichloroethylene		<1	ug/L	1	10/13/98		5764
Chloroform		<1	ug/L	1	10/13/98		5764
Dichlorobenzene		<2	ug/L	2	10/13/98		5764
1,1-dichloroethylene		<1	ug/L	1	10/13/98		5764
Dichloropropenes		<1	ug/L	1	10/13/98		5764
Ethylbenzene		<1	ug/L	1	10/13/98		5764
Bromodichloromethane		<1	ug/L	1	10/13/98		5764
Bromomethane		<5	ug/L	5	10/13/98		5764
Chloromethane		<1	ug/L	1	10/13/98		5764
Dichlorodifluoromethane		<1	ug/L	1	10/13/98		5764
Dichloromethane		<1	ug/L	1	10/13/98		5764
Trichlorofluoromethane		<1	ug/L	1	10/13/98		5764
Tetrachloroethylene		<1	ug/L	1	10/13/98		5764
Toluene		<1	ug/L	1	10/13/98		5764
Trichloroethylene		<1	ug/L	1	10/13/98		5764
Vinyl chloride		<1	ug/L	1	10/13/98		5764
m,p-xylene		<1	ug/L	1	10/13/98		5764
o-xylene		<1	ug/L	1	10/13/98		5764
1,1-dichloroethane		<1	ug/L	1	10/13/98		5764
Ethylene dibromide		<1	ug/L	1	10/13/98		5764
cis-1,2-dichlorethylene		<1	ug/L	1	10/13/98		5764
trans-1,2-dichloroethylene		<1	ug/L	1	10/13/98		5764
Methylene chloride		<5	ug/L	5	10/13/98		5764
Surr. Dibromofluoromethane		106	%	71-132	10/13/98		5764
Surr. Toluene-d8		96	%	82-124	10/13/98		5764
Surr. 4-Bromofluorobenzene		100	%	76-126	10/13/98		5764
Benzidine		<0.01	mg/L	0.01	10/9/98	5355	5713
Hexachlorobenzene		<0.001	mg/L	0.001	10/9/98	5355	5713
Pentachlorobenzene		<0.001	mg/L	0.001	10/9/98	5355	5713
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	0.001	10/9/98	5355	5713
Hexachloroethane		<0.001	mg/L	0.001	10/9/98	5355	5713
2,4-dichlorophenol		<0.005	mg/L	0.005	10/9/98	5355	5713
2,4,5-trichlorophenol		<0.005	mg/L	0.005	10/9/98	5355	5713
2,4,6-trichlorophenol		<0.005	mg/L	0.005	10/9/98	5355	5713
bis (2-chloroethl) ether		<0.005	mg/L	0.005	10/9/98	5355	5713
bis (2-chloroisopropyl) ether		<0.005	mg/L	0.005	10/9/98	5355	5713
bis (chloromethyl) ether		<0.005	mg/L	0.005	10/9/98	5355	5713
3,3-dichlorobenzidine		<0.005	mg/L	0.005	10/9/98	5355	5713

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM
Order ID Number: 9810000083

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
2,4-dinitrotoluene		<0.001	mg/L	0.001	10/9/98	5355	5713
Diphenylhydrazine		<0.005	mg/L	0.005	10/9/98	5355	5713
Hexachlorobutadiene		<0.001	mg/L	0.001	10/9/98	5355	5713
Hexachlorocyclopentadiene		<0.001	mg/L	0.001	10/9/98	5355	5713
Isophorone		<0.005	mg/L	0.005	10/9/98	5355	5713
Nitrobenzene		<0.001	mg/L	0.001	10/9/98	5355	5713
2,4-dinitro-o-cresol		<0.001	mg/L	0.001	10/9/98	5355	5713
2,4-dinitrophenols		<0.005	mg/L	0.005	10/9/98	5355	5713
i-nitrosodiethylamine		<0.001	mg/L	0.001	10/9/98	5355	5713
N-nitrosodimethylamine		<0.001	mg/L	0.001	10/9/98	5355	5713
N-nitrosodibutylamine		<0.005	mg/L	0.005	10/9/98	5355	5713
N-nitrosodiphenylamine		<0.001	mg/L	0.001	10/9/98	5355	5713
N-nitrosopyrrolidine		<0.001	mg/L	0.001	10/9/98	5355	5713
Pentachlorophenol		<0.005	mg/L	0.005	10/9/98	5355	5713
Phenol		<0.001	mg/L	0.001	10/9/98	5355	5713
Dibutyl phthalate		<0.001	mg/L	0.001	10/9/98	5355	5713
bis(2-ethylhexyl) phthalate		0.030	mg/L	0.001	10/9/98	5355	5713
Diethyl phthalate		<0.001	mg/L	0.001	10/9/98	5355	5713
Dimethyl phthalate		<0.001	mg/L	0.001	10/9/98	5355	5713
Anthracene		<0.001	mg/L	0.001	10/9/98	5355	5713
Benzo(b)fluoranthene		<0.001	mg/L	0.001	10/9/98	5355	5713
Benzo(k)fluoranthene		<0.001	mg/L	0.001	10/9/98	5355	5713
Surr. Terphenyl-d14		94	%	38-122	10/9/98	5355	5713
Arsenic		<0.10	mg/L	0.10	10/15/98	5380	5782
Barium		<0.10	mg/L	0.10	10/15/98	5380	5782
Cadmium		<0.01	mg/L	0.01	10/15/98	5380	5782
Chromium		<0.05	mg/L	0.05	10/15/98	5380	5782
Lead		<0.05	mg/L	0.05	10/15/98	5380	5782
Total Mercury		<0.0002	mg/L	0.0002	10/11/98	5365	5725
Selenium		<0.05	mg/L	0.05	10/15/98	5380	5782
Silver		<0.05	mg/L	0.05	10/17/98	5380	5800
Uranium		<0.10	mg/L	0.10	10/15/98	5380	5782
Copper		<0.10	mg/L	0.10	10/15/98	5380	5782
Fluoranthene		<0.001	mg/L	0.001	10/9/98	5355	5713
Fluorene		<0.001	mg/L	0.001	10/9/98	5355	5713
Phenanthrene		<0.001	mg/L	0.001	10/9/98	5355	5713
Pyrene		<0.001	mg/L	0.001	10/9/98	5355	5713
Naphthalene		<0.001	mg/L	0.001	10/9/98	5355	5713
1-methylnaphthalene		<0.001	mg/L	0.001	10/9/98	5355	5713
2-methylnaphthalene		<0.001	mg/L	0.001	10/9/98	5355	5713
Benzo-a-pyrene		<0.001	mg/L	0.001	10/9/98	5355	5713
Surr. 2-Fluorophenol		57	%	1-85	10/9/98	5355	5713
Surr. Phenol-d6		43	%	0-82	10/9/98	5355	5713
Surr. Nitroobenzene-d5		89	%	38-111	10/9/98	5355	5713

Order ID Number: 9810000083

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Surr. 2-Fluorobiphenyl		91	%	38-103	10/9/98	5355	5713
Surr. 2,4,6-Tribromophenol		84	%	1-127	10/9/98	5355	5713
Zinc		<0.10	mg/L	0.10	10/15/98	5380	5782
Boron		<0.10	mg/L	0.10	10/17/98	5380	5800
Cobalt		<0.05	mg/L	0.05	10/15/98	5380	5782
Nickel		<0.10	mg/L	0.10	10/15/98	5380	5782
Arsenic		<0.10	mg/L	0.10	10/15/98	5389	5782
Barium		<0.10	mg/L	0.10	10/15/98	5389	5782
Cadmium		<0.01	mg/L	0.01	10/15/98	5389	5782
Chromium		<0.05	mg/L	0.05	10/15/98	5389	5782
Lead		<0.05	mg/L	0.05	10/15/98	5389	5782
Total Mercury		<0.0002	mg/L	0.0002	10/13/98	5375	5763
Selenium		<0.05	mg/L	0.05	10/15/98	5389	5782
Silver		<0.05	mg/L	0.05	10/17/98	5389	5800
Uranium		<0.10	mg/L	0.10	10/15/98	5389	5782
Copper		<0.10	mg/L	0.10	10/15/98	5389	5782
Iron		<0.10	mg/L	0.10	10/18/98	5380	5812
Manganese		<0.10	mg/L	0.10	10/15/98	5389	5782
Zinc		<0.10	mg/L	0.10	10/15/98	5389	5782
Aluminum		<0.10	mg/L	0.10	10/18/98	5380	5812
Boron		<0.10	mg/L	0.10	10/17/98	5389	5800
Cobalt		<0.05	mg/L	0.05	10/15/98	5389	5782
Molybdenum		<0.10	mg/L	0.10	10/18/98	5380	5812
Nickel		<0.10	mg/L	0.10	10/15/98	5389	5782
Total Phenols		<0.01	mg/L	0.01	10/15/98		5783
TRPHC		<0.500	mg/L	0.500	10/7/98	5342	5700
Fluoride		<0.1	mg/L	0.1	10/6/98		5695
Nitrate		<0.1	mg/L	0.1	10/9/98		5711
Chloride		<0.5	mg/L	0.5	10/6/98		5695
Sulfate		<0.5	mg/L	0.5	10/6/98		5695
Fluoride		<0.1	mg/L	0.1	10/6/98		5696
Chloride		<0.5	mg/L	0.5	10/6/98		5696
Sulfate		<0.5	mg/L	0.5	10/6/98		5696
PCB		<0.001	mg/L	0.001	10/13/98	5366	5670
PCB		<0.001	mg/L	0.001	10/21/98	5366	5888
Cyanide		<0.01	mg/L	0.01	10/9/98		5709
Cyanide		<0.01	mg/L	0.01	10/9/98		5710

Quality Control Report
Continuing Calibration Verification Standard

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	115	115	10/10/98	5712
1,1-Dichloroethene		100	ug/L	112	112	10/10/98	5712
Chloroform		100	ug/L	117	117	10/10/98	5712
1,2-Dichloropropane		100	ug/L	115	115	10/10/98	5712
Toluene		100	ug/L	117	117	10/10/98	5712
Chlorobenzene		100	ug/L	112	112	10/10/98	5712
Ethylbenzene		100	ug/L	119	119	10/10/98	5712
Vinyl chloride		100	ug/L	117	117	10/13/98	5764
1,1-Dichloroethene		100	ug/L	84	84	10/13/98	5764
Chloroform		100	ug/L	91	91	10/13/98	5764
1,2-Dichloropropane		100	ug/L	94	94	10/13/98	5764
Toluene		100	ug/L	99	99	10/13/98	5764
Chlorobenzene		100	ug/L	95	95	10/13/98	5764
Ethylbenzene		100	ug/L	95	95	10/13/98	5764
Fluoride		2.5	mg/L	2.430	97	10/6/98	5695
Nitrate		0.133	mg/L	0.119	89	10/9/98	5711
Chloride		12.5	mg/L	12.415	99	10/6/98	5695
Sulfate		12.5	mg/L	12.32	99	10/6/98	5695
Fluoride		2.5	mg/L	2.425	97	10/6/98	5696
Chloride		12.5	mg/L	12.415	99	10/6/98	5696
Sulfate		12.5	mg/L	12.28	98	10/6/98	5696
PCB		0.40	mg/L	0.39	98	10/13/98	5670
PCB		0.40	mg/L	0.43	108	10/21/98	5888
Cyanide		0.12	mg/L	0.113	94	10/6/98	5709
Cyanide		0.12	mg/L	0.112	93	10/6/98	5710
Phenol		80	mg/L	83	104	10/9/98	5712
1,4-Dichlorobenzene		80	mg/L	83	104	10/9/98	5713
2-nitrophenol		80	mg/L	91	114	10/9/98	5713
2,4-Dichlorophenol		80	mg/L	89	111	10/9/98	5713
Hexachlorobutadiene		80	mg/L	84	105	10/9/98	5713
4-Chloro-3-methylphenol		80	mg/L	87	109	10/9/98	5713
2,4,6-Trichlorophenol		80	mg/L	75	94	10/9/98	5713
Acenaphthene		80	mg/L	85	106	10/9/98	5713
n-Nitrosodiphenylamine		80	mg/L	80	100	10/9/98	5713
Pentachlorophenol		80	mg/L	81	101	10/9/98	5713
Fluoranthene		80	mg/L	87	109	10/9/98	5713
Di-n-octylphthalate		80	mg/L	76	95	10/9/98	5713
Benzo(a)pyrene		80	mg/L	80	100	10/9/98	5713

Order ID Number: 9810000083

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Total Phenol		0.80	mg/L	0.79	99	10/15/98	5783
Arsenic		1.0	mg/L	1.0	100	10/15/98	5782
Barium		1.0	mg/L	0.98	98	10/15/98	5782
Cadmium		1.0	mg/L	1.0	100	10/15/98	5782
Chromium		1.0	mg/L	1.0	100	10/15/98	5782
Lead		1.0	mg/L	1.0	100	10/15/98	5782
Selenium		1.0	mg/L	1.0	100	10/15/98	5782
Silver		1.0	mg/L	0.94	94	10/17/98	5800
Uranium		1.0	mg/L	0.94	94	10/15/98	5782
Copper		1.0	mg/L	1.0	100	10/15/98	5782
Zinc		1.0	mg/L	1.0	100	10/15/98	5782
Boron		1.0	mg/L	0.93	93	10/17/98	5800
Cobalt		1.0	mg/L	1.0	100	10/15/98	5782
Nickel		1.0	mg/L	1.0	100	10/15/98	5782
Arsenic		1.0	mg/L	0.99	99	10/15/98	5783
Barium		1.0	mg/L	0.92	92	10/15/98	5783
Cadmium		1.0	mg/L	0.95	95	10/15/98	5783
Chromium		1.0	mg/L	0.95	95	10/15/98	5783
Lead		1.0	mg/L	0.98	98	10/15/98	5783
Selenium		1.0	mg/L	1.0	100	10/15/98	5783
Silver		1.0	mg/L	0.99	99	10/17/98	5800
Uranium		1.0	mg/L	0.94	94	10/15/98	5783
Copper		1.0	mg/L	0.94	94	10/15/98	5783
Iron		1.0	mg/L	0.96	96	10/18/98	5812
Manganese		1.0	mg/L	0.95	95	10/15/98	5783
Zinc		1.0	mg/L	0.97	97	10/15/98	5783
Aluminum		1.0	mg/L	0.95	95	10/18/98	5812
Boron		1.0	mg/L	0.98	98	10/17/98	5800
Cobalt		1.0	mg/L	1.0	100	10/15/98	5783
Molybdenum		1.0	mg/L	1.0	100	10/18/98	5812
Nickel		1.0	mg/L	1.0	100	10/15/98	5783
Total Mercury		0.0010	mg/L	0.0011	110	10/11/98	5725
Total Mercury		1.0	mg/L	1.0	100	10/13/98	5763
pH		7.0	mg/L	7.0	100	10/3/98	5669
TRPHC		100	mg/L	105	105	10/7/98	5700
TDS		1,000	mg/L	956	96	10/5/98	5682
TDS		1,000	mg/L	983	98	10/6/98	5693

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	127	127	100	126	126	1	10/10/98		5712
Benzene		ug/L	<1	100	108	108	100	108	108	0	10/10/98		5712
Trichloroethene		ug/L	<1	100	114	114	100	112	112	2.0	10/10/98		5712
Toluene		ug/L	<1	100	118	118	100	118	118	0	10/10/98		5712
Chlorobenzene		ug/L	<1	100	112	112	100	113	113	0	10/10/98		5712
1,1-Dichloroethene		ug/L	<1	100	84	84	100	86	86	2.4	10/13/98		5764
Benzene		ug/L	<1	100	101	101	100	101	101	0	10/13/98		5764
Trichloroethene		ug/L	<1	100	104	104	100	103	103	0.97	10/13/98		5764
Toluene		ug/L	<1	100	108	108	100	109	109	0.92	10/13/98		5764
Chlorobenzene		ug/L	<1	100	102	102	100	103	103	0.98	10/13/98		5764
Fluoride		mg/L	1.7	12.5	14.03	99	12.5	14.12	99	0	10/6/98		5695
Nitrate		mg/L	4.81	13.3	15.57	81	13.3	15.45	80	1.2	10/9/98		5711
Chloride		mg/L	46	62.5	107.51	98	62.5	108.01	99	1.0	10/6/98		5695
Sulfate		mg/L	79	62.5	138.43	95	62.5	138.35	95	0	10/6/98		5695
Fluoride		mg/L	2.3	12.5	14.37	97	12.5	14.36	96	1.0	10/6/98		5696
Chloride		mg/L	64	62.5	121.99	93	62.5	122.7	94	1.1	10/6/98		5696
Sulfate		mg/L	87	62.5	149.23	100	62.5	149.26	100	0	10/6/98		5696
PCB		mg/L	<0.001	0.005	0.0037	74	0.005	0.0038	76	2.7	10/13/98	5366	5670
PCB		mg/L	<0.001	0.005	0.0051	102	0.005	0.0054	108	5.7	10/21/98	5366	5888
Cyanide		mg/L	<0.01	0.12	0.107	89	0.12	0.112	93	4.4	10/6/98		5709
Cyanide		mg/L	<0.01	0.12	0.107	89	0.12	0.099	83	7.0	10/6/98		5710
Phenol		mg/L	<0.001	0.10	0.0381	38	0.10	0.0376	38	0	10/9/98	5355	5713
2-Chlorophenol		mg/L	<0.001	0.10	0.0748	75	0.10	0.0724	72	4.1	10/9/98	5355	5713
1,4-Dichlorobenzene		mg/L	<0.001	0.10	0.0597	60	0.10	0.0520	52	14	10/9/98	5355	5713
n-Nitrosodi-n-propylamine		mg/L	<0.001	0.10	0.0776	78	0.10	0.0796	80	2.5	10/9/98	5355	5713
1,2,4-trichlorobenzene		mg/L	<0.001	0.10	0.0697	70	0.10	0.0631	63	11	10/9/98	5355	5713
4-Chloro-3-methylphenol		mg/L	<0.001	0.10	0.0863	86	0.10	0.0830	83	3.6	10/9/98	5355	5713
Acenaphthene		mg/L	<0.001	0.10	0.0809	81	0.10	0.0772	77	5.1	10/9/98	5355	5713
4-Nitrophenol		mg/L	<0.001	0.10	0.0109	11	0.10	0.0095	10	9.5	10/9/98	5355	5713
2,4-Dinitrotoluene		mg/L	<0.001	0.10	0.0837	84	0.10	0.0881	88	4.7	10/9/98	5355	5713
Pentachlorophenol		mg/L	<0.001	0.10	0.0674	67	0.10	0.0647	65	3.0	10/9/98	5355	5713
Pyrene		mg/L	<0.001	0.10	0.0997	100	0.10	0.0816	82	20	10/9/98	5355	5713
TRPHC		mg/L	<0.500	8.5	9.34	110	8.5	10.9	128	15	10/7/98	5342	5700
Arsenic		mg/L	<0.10	2.0	1.8	90	2.0	1.9	95	5.4	10/15/98	5380	5782
Barium		mg/L	<0.10	2.0	2.1	105	2.0	2.0	100	4.9	10/15/98	5380	5782
Cadmium		mg/L	<0.01	2.0	1.8	90	2.0	1.8	90	0	10/15/98	5380	5782
Chromium		mg/L	<0.05	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5380	5782

Order ID Number: 9810000083

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
Lead		mg/L	<0.05	2.0	1.9	95	2.0	1.8	90	5.4	10/15/98	5380	5782
Selenium		mg/L	<0.05	2.0	1.8	90	2.0	1.8	90	0	10/15/98	5380	5782
Silver		mg/L	<0.05	0.32	0.31	97	0.32	0.33	103	6.0	10/17/98	5380	5800
Uranium		mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5380	5782
Copper		mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5380	5782
Zinc		mg/L	<0.10	2.0	1.9	95	2.0	1.8	90	5.4	10/15/98	5380	5782
Boron		mg/L	<0.10	2.0	2.2	110	2.0	2.2	110	0	10/12/98	5380	5800
Cobalt		mg/L	<0.05	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5380	5782
Nickel		mg/L	<0.10	2.0	2.0	100	2.0	1.9	95	5.1	10/15/98	5380	5782
Total Mercury		mg/L	<0.0002	0.0010	0.0012	120	0.0010	0.0012	120	0	10/11/98	5365	5725
Arsenic		mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5389	5783
Barium		mg/L	<0.10	2.0	2.2	110	2.0	2.2	110	0	10/15/98	5389	5783
Cadmium		mg/L	<0.01	2.0	1.8	90	2.0	1.8	90	0	10/15/98	5389	5783
Chromium		mg/L	<0.05	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5389	5783
Lead		mg/L	<0.05	2.0	1.8	90	2.0	1.9	95	5.4	10/15/98	5389	5783
Selenium		mg/L	<0.05	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5389	5783
Silver		mg/L	<0.05	0.32	0.30	94	0.32	0.31	97	3.1	10/17/98	5389	5800
Uranium		mg/L	<0.10	2.0	1.9	95	2.0	1.7	85	11	10/15/98	5389	5783
Copper		mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5389	5783
Iron		mg/L	<0.10	2.0	2.0	100	2.0	2.0	100	0	10/18/98	5380	5812
Manganese		mg/L	<0.10	2.0	2.0	100	2.0	1.9	95	5.1	10/15/98	5389	5783
Zinc		mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5389	5783
Aluminum	LCS	mg/L	<0.10	2.0	1.8	90	2.0	2.0	100	11	10/18/98	5380	5812
Boron		mg/L	<0.10	2.0	2.2	110	2.0	2.2	110	0	10/17/98	5389	5800
Cobalt		mg/L	<0.05	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5389	5783
Molybdenum		mg/L	<0.10	2.0	2.2	110	2.0	2.2	110	0	10/18/98	5380	5812
Nickel		mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5389	5783
Total Mercury	LCS	mg/L	<0.0002	0.0010	0.0012	120	0.0010	0.0012	120	0	10/13/98	5375	5763
Total Phenol		mg/L	<0.01	0.80	0.82	103	0.80	0.84	105	1.9	10/15/98		5873

Quality Control Report
Duplicate

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000083

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	7.0	7.0	0	10/3/98		5670
TDS		mg/L	430	425	1.2	10/5/98		5682
TDS		mg/L	300,000	305,000	1.7	10/6/98		5693

AMERICAN RADIATION SERVICES, INC.
1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Ste. 9
Lubbock, TX 79424
Phone:806-794-1296
Fax:806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-1002	**P.O. Number:**	N/A
Client I.D.:	109059	**ARS Sample I.D.:**	ARS-98-3617
Date Sampled:	10/1/98	**Date Received:**	10/6/98
Time Sampled:	N/A	**Time Received**	1121
Type of Sample:	Liquid	**Date of Report**	10/21/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	3.42	0.77	1.19	pCi/L	EPA 903	10/21/98 1515	DC
Ra-228	BDL	N/A	1.54	pCi/L	EPA 904	10/20/98 2010	DC

Quality Assurance Review

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ARS
AMERICAN RADIATION SERVICES, INC.

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ARS Tracking Number:	ARS-98-1002	**P.O. Number:**	N/A
Client I.D.:	109061	**ARS Sample I.D.:**	ARS-98-3618
Date Sampled:	10/1/98	**Date Received:**	10/6/98
Time Sampled:	N/A	**Time Received**	1121
Type of Sample:	Liquid	**Date of Report**	10/21/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.74	0.66	1.11	pCi/L	EPA 903	10/21/98 1515	DC
Ra-228	BDL	N/A	1.54	pCi/L	EPA 904	10/20/98 2010	DC

Quality Assurance Review

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ARS Tracking Number:	ARS-98-1002	**P.O. Number:**	N/A
Client I.D.:	109063	**ARS Sample I.D.:**	ARS-98-3619
Date Sampled:	10/1/98	**Date Received:**	10/6/98
Time Sampled:	N/A	**Time Received**	1121
Type of Sample:	Liquid	**Date of Report**	10/21/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.50	0.67	1.11	pCi/L	EPA 903	10/21/98 1515	DC
Ra-228	BDL	N/A	1.54	pCi/L	EPA 904	10/20/98 2010	DC

Quality Assurance Review

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ARS Tracking Number:	ARS-98-1002	**P.O. Number:**	N/A
Client I.D.:	109065	**ARS Sample I.D.:**	ARS-98-3620
Date Sampled:	10/1/98	**Date Received:**	10/6/98
Time Sampled:	N/A	**Time Received**	1121
Type of Sample:	Liquid	**Date of Report**	10/21/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.27	0.85	1.39	pCi/L	EPA 903	10/21/98 1514	DC
Ra-228	BDL	N/A	1.54	pCi/L	EPA 904	10/20/98 2010	DC

Quality Assurance Review

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ARS Tracking Number:	ARS-98-1002	**P.O. Number:**	N/A
Client I.D.:	109067	**ARS Sample I.D.:**	ARS-98-3621
Date Sampled:	10/1/98	**Date Received:**	10/6/98
Time Sampled:	N/A	**Time Received**	1121
Type of Sample:	Liquid	**Date of Report**	10/21/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.62	0.85	1.39	pCi/L	EPA 903	10/21/98 1514	DC
Ra-228	BDL	N/A	1.54	pCi/L	EPA 904	10/20/98 2010	DC

Quality Assurance Review

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ARS
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ARS Tracking Number:	ARS-98-1002	**P.O. Number:**	N/A
Client I.D.:	109069	**ARS Sample I.D.:**	ARS-98-3622
Date Sampled:	10/1/98	**Date Received:**	10/6/98
Time Sampled:	N/A	**Time Received**	1121
Type of Sample:	Liquid	**Date of Report**	10/21/98

Analysis Description	Analysis Result	Analysis Error ±2σ	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	1.70	0.75	1.39	pCi/L	EPA 903	10/21/98 1514	DC
Ra-228	1.73	0.72	1.54	pCi/L	EPA 904	10/20/98 2010	DC

Quality Assurance Review

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ARS Tracking Number:	ARS-98-1002	**P.O. Number:**	N/A
Client I.D.:	109071	**ARS Sample I.D.:**	ARS-98-3623
Date Sampled:	10/1/98	**Date Received:**	10/6/98
Time Sampled:	N/A	**Time Received**	1121
Type of Sample:	Liquid	**Date of Report**	10/21/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.56	0.79	1.39	pCi/L	EPA 903	10/21/98 1514	DC
Ra-228	1.66	1.03	1.54	pCi/L	EPA 904	10/20/98 2010	DC

Quality Assurance Review

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ARS Tracking Number:	ARS-98-1002	**P.O. Number:**	N/A
Client I.D.:	109073	**ARS Sample I.D.:**	ARS-98-3624
Date Sampled:	10/1/98	**Date Received:**	10/6/98
Time Sampled:	N/A	**Time Received**	1121
Type of Sample:	Liquid	**Date of Report**	10/21/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	3.73	0.99	1.39	pCi/L	EPA 903	10/21/98 1514	DC
Ra-228	BDL	N/A	1.54	pCi/L	EPA 904	10/20/98 2231	DC

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.
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Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

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109059-

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID #: 083

Company Name: Phillip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH20 West, Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	H_2SO_4	NaOH	NONE	HNO_3	SAMPLING: DATE	TIME
109059	GMW-2	1	500ml Plastic	✓								✓	10/1/98	8:36
	GMW-2	1	1 Liter Plastic	✓						✓			10/1/98	"
	GMW-2	1	1 Liter Plastic	✓							✓		10/1/98	"
	GMW-2	1	1 Liter Glass	✓					✓				10/1/98	"
	GMW-2	3	40ml VOA	✓				✓					10/1/98	"
	GMW-2	2	1 Liter Glass	✓							✓		10/1/98	"
	GMW-2	3	1 Liter Glass	✓							✓		10/1/98	"
	GMW-2	1	1 Liter Glass	✓							✓		10/1/98	"
	GMW-2	1	1 Liter Glass	✓							✓		10/1/98	"
	GMW-2	1	1 Liter Glass	✓				✓					10/1/98	"
109060	Trip Blank	2	40ml VOA	✓							✓		10/1/98	"

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se Unfiltered	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. ~~8240~~/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	Cyanide	Wet Chemistry	Phenols	Radium 226/228	Turn Around Time if different from standard	Hold
				✓					✓										
										✓				✓					
															✓				
																✓			
									✓										
										✓									
												✓							
											✓								
											✓								
		✓																	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Shawn E. Hall	10/1/98	11:10	Helen Shelton	10/2/98	11:10 AM
Helen Shelton	10/2/98	6:30PM			
			Received at Laboratory by:	10/3/98	1015

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 7 °
Log-in Review

REMARKS: Normal Turnaround.

Carrier # Greyhound 15-384-3[illegible]

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 17 samples-HS

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 083

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West Midland, Texas 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE/H2SO4	NONE	NAOH	SAMPLING: DATE	TIME
10906/	GMW-4	1	250ml Plastic	✓					✓				10/01/98	10:20
	GMW-4	1	Liter Plastic	✓								✓	10/01/98	"
	GMW-4	1	Liter Plastic	✓							✓		10/01/98	"
	GMW-4	1	Liter Glass	✓						✓			10/01/98	"
	GMW-4	3	40ml VOA	✓				✓					10/01/98	"
	GMW-4	2	Liter Glass	✓							✓		10/01/98	"
	GMW-4	3	Liter Glass	✓							✓		10/01/98	"
	GMW-4	1	Liter Glass	✓							✓		10/01/98	"
	GMW-4	1	Liter Glass	✓							✓		10/01/98	"
	GMW-4	1	Liter Glass	✓				✓					10/01/98	"
10906/2	Trip Blank	2	40ml VOA	✓							✓		10/01/98	"

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH 418.1	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se Unfiltered	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. ~~8240~~/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	Cyanide	Wet Chemistry Phenols	Radium 226/228	Turn Around Time if different from standard	Hold
				✓					✓					✓	✓	✓		
		✓																

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Shawn E. Hood	10/2/98	11:10	Helen Shelton	10/2/98	11:10 AM
Helen Shelton	10/2/98	6:30PM	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
				10/3/98	1015

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 17 samples - HS

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 2 °
Log-in Review

REMARKS:
Normal Turnaround
TPH water bottle broke

Carrier # Greyhound 159-324-585-6

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID #

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West, Midland, Texas 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE / H_2SO_4	NONE	NaOH	SAMPLING: DATE	TIME
109063	GMW-6	1	500ml Plastic	✓					✓				10/01/98	4:37
	GMW-6	1	Liter Plastic	✓								✓	10/01/98	"
	GMW-6	1	Liter Plastic	✓							✓		10/01/98	"
	GMW-6	1	Liter Glass	✓						✓			10/01/98	"
	GMW-6	3	40ml VOA	✓				✓					10/01/98	"
	GMW-6	2	1Liter Glass	✓							✓		10/01/98	"
	GMW-6	3	Liter Glass	✓							✓		10/01/98	"
	GMW-6	1	Liter Glass	✓							✓		10/01/98	"
	GMW-6	1	Liter Glass	✓							✓		10/01/98	"
	GMW-6	1	Liter Glass	✓				✓					10/01/98	"
109064	Trip Blank	2	40ml VOA	✓							✓		10/01/98	"

ANALYSIS REQUEST (Circle or Specify Method No.)	
MTBE 8020/602	
BTEX 8020/602	
TPH (418.1)	
PAH 8270	
Total Metals Ag As Ba Cd Cr Pb Hg Se unfiltered	✓
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Volatiles	
TCLP Semi Volatiles	
RCI	
GC:MS Vol. 8240/8260/624	✓
GC/MS Semi. Vol. 8270/625	✓
PCB's 8080/608	✓
Pest. 8080/608	✓
BOD, TSS, PH	
Cyanide	✓
Wet Chemistry	✓
Phenols	✓
Radium 226/ Radium 228	✓
Turn Around Time if different from standard	
Hold	

Relinquished by: Sharon E. Hood	Date: 10/2/98	Time: 11:10
Relinquished by: Helen Shelton	Date: 10/2/98	Time: 6:30 PM
Relinquished by:	Date:	Time:

Received by: Helen Shelton	Date: 10/2/98	Time: 1:10 PM
Received by:	Date:	Time:
Received at Laboratory by:	Date: 10/01/98	Time: 10:35 am

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 6 °
Log-in Review

REMARKS: Normal Turnaround

Carrier # Greyhound 159-374-385-6

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 17 samples-HS

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID #

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 I-H 20 West, Midland, Texas 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Sam
Project #: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE / H_2SO_4	NONE	NaOH	SAMPLING: DATE	TIME
109065	GMW-7	1	500ml Plastic	✓					✓				10/01/98	10:50
	GMW-7	1	Liter Plastic	✓								✓	10/01/98	"
	GMW-7	1	Liter Plastic	✓							✓		10/01/98	"
	GMW-7	1	Liter Glass	✓						✓			10/01/98	"
	GMW-7	3	40ml VOA	✓				✓					10/01/98	"
	GMW-7	2	Liter Glass	✓							✓		10/01/98	"
	GMW-7	3	Liter Glass	✓							✓		10/01/98	"
	GMW-7	1	Liter Glass	✓							✓		10/01/98	"
	GMW-7	1	Liter Glass	✓							✓		10/01/98	"
	GMW-7	1	Liter Glass	✓				✓					10/01/98	"
109066	Trip Blank	2	40ml VOA	✓							✓		10/01/98	"

ANALYSIS REQUEST	
MTBE 8020/602	
BTEX 8020/602	
TPH (418.1)	✓
PAH 8270	
Total Metals Ag As Ba Cd Cr Pb Hg Se (unfiltered)	✓
TCLP Metals Ag As Ba Cd Cr Pb Hg Se	
TCLP Volatiles	
TCLP Semi Volatiles	
RCI	
GC.MS Vol. 8240/8260/624	✓
GC/MS Semi. Vol. 8270/625	✓
PCB's 8080/608	✓
Pest. 8080/608	✓
BOD, TSS, PH	
Cyanide	✓
Wet Chemistry	✓
Phenols	✓
Radium 226/228	✓
Turn Around Time if different from standard	
Hold	

Relinquished by: Shawn E. Hall	Date: 10/2/98	Time: 11:10
Relinquished by: Helen Shelton	Date: 10/2/98	Time: 6:30 PM
Relinquished by:	Date:	Time:

Received by: Helen Shelton	Date: 10/2/98	Time: 11:10 PM
Received by:	Date:	Time:
Received at Laboratory by:	Date: 10/3/98	Time: 1015

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 2 °
Log-in Review

REMARKS:
Normal Turnaround

Carrier # Greyhound 159-384-3854

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 7 samples-1.5

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID #:

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 I H 20 West, Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	H2SO4	NONE	NaOH	SAMPLING: DATE	TIME
109067	GMW-8	1	50ml Plastic	✓					✓				10/01/98	11:20
	GMW-8	1	Liter Plastic	✓								✓	10/01/98	"
	GMW-8	1	Liter Plastic	✓							✓		10/01/98	"
	GMW-8	1	Liter Glass	✓						✓			10/01/98	"
	GMW-8	3	40ml VOA	✓				✓					10/01/98	"
	GMW-8	2	Liter Glass	✓							✓		10/01/98	"
	GMW-8	3	Liter Glass	✓							✓		10/01/98	"
	GMW-8	1	Liter Glass	✓							✓		10/01/98	"
	GMW-8	1	Liter Glass	✓							✓		10/01/98	"
	GMW-8	1	Liter Glass	✓				✓					10/01/98	"
109068	Trip Blank	2	40ml VOA	✓							✓		10/01/98	"

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se unfiltered	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	Cyanide	Wet Chemistry	Anions	Radium 226/228	Turn Around Time if different from standard	Hold
				✓															
														✓					
															✓				
																✓			
									✓										
										✓									
												✓							
													✓						
											✓								
		✓																	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Steve E. Hood	10/2/98	11:10	Helen Shelton	10/2/98	11:10 AM
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Helen Shelton	10/2/98	6:30PM			
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
				10/5/98	1015

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 17 samples - HS

LAB USE ONLY

Intact Y / N
Headspace Y / N
Temp 0 °
Log-in Review

REMARKS: Normal Turnaround

Carrier # Greyhound 159-384-3871

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID #:

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West, Midland, Tx 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 9349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	Ice / H_2SO_4	NONE	Na_2OH	SAMPLING: DATE	TIME
109089	GMW-9	1	500ml Plastic	✓					✓				10/1/98	2:46
	GMW-9	1	Liter Plastic	✓								✓	10/1/98	"
	GMW-9	1	Liter Plastic	✓							✓		10/1/98	"
	GMW-9	1	Liter Glass	✓						✓			10/1/98	"
	GMW-9	3	40ml VOA	✓				✓					10/1/98	"
	GMW-9	2	Liter Glass	✓							✓		10/1/98	"
	GMW-9	3	Liter Glass	✓							✓		10/1/98	"
	GMW-9	1	Liter Glass	✓							✓		10/1/98	"
	GMW-9	1	Liter Glass	✓							✓		10/1/98	"
	GMW-9	1	Liter Glass	✓				✓					10/1/98	"
109090	Trip Blank	2	40ml VOA	✓							✓		10/1/98	"

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se (unfiltered)	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	Cyanide	Wet Chemistry	Plants	Radium 226/228	Turn Around Time if different from standard	Hold
				✓					✓										
														✓					
															✓				
																✓			
									✓										
										✓									
												✓							
																✓			
											✓								
		✓																	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Shawn E. Heel	10/2/98	11:10	Helen Shelton	10/2/98	11:10 AM
Helen Shelton	10/2/98	6:30 PM			
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Parker	10/3/98	1015

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 17 samples HS

LAB USE ONLY

Intact Y / N
Headspace Y / N
Temp 6 °
Log-in Review

REMARKS:

Normal Turnaround

Bus 159 324 390 0

Carrier # Greyhound

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID #

Company Name: Philip Services Corporation
Phone #: (915) - 563 - 0118
Address: 7904 IH 20 West, Midland, Tx 79706
Fax #: (915) - 563 - 9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	ICE/H2SO4	NONE	NaOH	SAMPLING: DATE	TIME
109071	GMW-10	1	500ml Plastic	✓					✓				10/01/98	8:15
	GMW-10	1	Liter Plastic	✓								✓	10/01/98	"
	GMW-10	1	Liter Plastic	✓							✓		10/01/98	"
	GMW-10	1	Liter Glass	✓						✓			10/01/98	"
	GMW-10	3	40ml VOA	✓				✓					10/01/98	"
	GMW-10	2	Liter Glass	✓							✓		10/01/98	"
	GMW-10	3	Liter Glass	✓							✓		10/01/98	"
	GMW-10	1	Liter Glass	✓							✓		10/01/98	"
	GMW-10	1	Liter Glass	✓							✓		10/01/98	"
	GMW-10	1	Liter Glass	✓				✓					10/01/98	"
109072	Trip Blank	2	40ml VOA	✓							✓		10/01/98	"

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH (418.1)	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se (Unfiltered)	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	Cyanide	Wet Chemistry	Phenols	Radium 226/228	Turn Around Time if different from standard	Hold
				✓					✓	✓									
														✓					
															✓				
																✓			
										✓									
												✓							
													✓						
											✓								
		✓																	

Relinquished by: Shawn E. Noel Date: 10/2/98 Time: 11:10
Received by: Helen Shelton Date: 10/2/98 Time: 11:10 AM
Relinquished by: Helen Shelton Date: 10/2/98 Time: 6:30PM
Received by: Date: Time:
Relinquished by: Date: Time:
Received at Laboratory by: Date: Time:
10/3/98 1015

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 2 °
Log-in Review

REMARKS:
Normal Turnaround.

Carrier # Greyhound 159-334-389-0

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 17 samples - 1FS

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID #:

Company Name: Philip Services Corporation
Phone #: (915) 563-0118
Address: 7904 IH 20 West, Midland, Texas 79706
Fax #: (915) 563-9526
Contact Person: Jeffrey Kindley
Invoice to: (If different from above) Same
Project #: 19349 Shell
Project Name: Hobbs Grimes Tank Battery
Project Location: Hobbs, New Mexico
Sampler Signature: Jeffrey Kindley

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	~~ice~~ H_2SO_4	NONE	NaOH	SAMPLING: DATE	TIME
109073	MW-9D *	1	500ml Plastic	✓					✓				10/01/98	2:46
	MW-9D	1	Liter Plastic	✓								✓	10/01/98	"
	MW-9D	1	Liter Plastic	✓							✓		10/01/98	"
	MW-9D	1	Liter Glass	✓						✓			10/01/98	"
	MW-9D	3	VOA 40ml	✓				✓					10/01/98	"
	MW-9D	2	Liter Glass	✓							✓		10/01/98	"
	MW-9D	3	Liter Glass	✓							✓		10/01/98	"
	MW-9D	1	Liter Glass	✓							✓		10/01/98	"
	MW-9D	1	Liter Glass	✓							✓		10/01/98	"
	MW-9D	1	Liter Glass	✓				✓					10/01/98	"
109074	Trip Blank	2	40ml VOA	✓							✓		10/01/98	"

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8020/602	BTEX 8020/602	TPH 418.1	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH	Cyanide	Wet Chem	Benzene	Radium 226/228	Turn Around Time if different from standard	Hold
				✓															
									✓										
		✓								✓									

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Sharon E Hall	10/2/98	11:10	Helen Shelton	10/2/98	11:10 PM
Helen Shelton	10/2/98	6:30PM			
			Received at Laboratory by:	10/3/98	1015

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 2 °
Log-in Review

REMARKS:
Normal Turnaround
* metals are not Filtered

Carrier # Greyhound 159-37[illegible]

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 17 samples-HS

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date:06-07-99
Page # 1

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Date Taken	Time Taken	Date Received
109439	GMW-1	10/7/98	10:15	10/8/98
109440	GMW-3	10/7/98	9:25	10/8/98
109441	GMW-5	10/7/98	11:00	10/8/98
09599	Trip Blank			10/8/98
09600	Trip Blank			10/8/98
109601	Trip Blank			10/8/98

This Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch (es) in which your sample (s) were analyzed.

Data meets all quality control criteria with the following exceptions:
2 ug/L Benzene found in method blank
0.051 mg/L bis(2-ethylhexyl)phthalate found in method blank

Corrections:
1) Sample numbers corrected for samples 109600 and 109601.
2) Order ID Number corrected.

Dr. Blair Leftwich
Director

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-24-99

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164
Sample Number: 109439

Sample Description: GMW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<250	ug/L	S 8260B		10/16/98	MB		5790	250
Acrylonitrile		<250	ug/L	S 8260B		10/16/98	MB		5790	250
Benzene		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Carbon tetrachloride		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Chlorobenzene		<50	ug/L	S 8260B		10/16/98	MB		5790	50
1,2-dichloroethane		<50	ug/L	S 8260B		10/16/98	MB		5790	50
1,1,2,2-tetrachloroethane		<50	ug/L	S 8260B		10/16/98	MB		5790	50
1,1,1-trichloroethane		<50	ug/L	S 8260B		10/16/98	MB		5790	50
1,1,2-trichloroethane		<50	ug/L	S 8260B		10/16/98	MB		5790	50
1,1,2-trichloroethylene		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Chloroform		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Dichlorobenzene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
1,1-dichloroethylene		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Dichloropropenes		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Ethylbenzene		200	ug/L	S 8260B		10/16/98	MB		5790	50
Bromodichloromethane		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Bromomethane		<250	ug/L	S 8260B		10/16/98	MB		5790	250
Chloromethane		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Dichlorodifluoromethane		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Dichloromethane		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Trichlorofluoromethane		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Tetrachloroethylene		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Toluene		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Trichloroethylene		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Vinyl chloride		<50	ug/L	S 8260B		10/16/98	MB		5790	50
m,p-xylene		720	ug/L	S 8260B		10/16/98	MB		5790	50
o-xylene		170	ug/L	S 8260B		10/16/98	MB		5790	50
1,1-dichloroethane		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Ethylene dibromide		<50	ug/L	S 8260B		10/16/98	MB		5790	50
cis-1,2-dichlorethylene		<50	ug/L	S 8260B		10/16/98	MB		5790	50
trans-1,2-dichloroethylene		<50	ug/L	S 8260B		10/16/98	MB		5790	50
Methylene chloride		<250	ug/L	S 8260B		10/16/98	MB		5790	250
Surr. Dibromofluoromethane		100	%	S 8260B		10/16/98	MB		5790	71-132
Surr. Toluene-d8		93	%	S 8260B		10/16/98	MB		5790	82-124
Surr. 4-Bromofluorobenzene		95	%	S 8260B		10/16/98	MB		5790	76-126
Benzidine		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Pentachlorobenzene		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001

Date: 10-20-98
Page # 3
Order ID Number: 9810000164
Sample Number: 109439

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: GMW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
2,4,5-trichlorophenol		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
2,4,6-trichlorophenol		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
bis (2-chloroethl) ether		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
bis (2-chloroisopropyl) ether		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
bis (chloromethyl) ether		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
3,3-dichlorobenzidine		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Diphenylhydrazine		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Isophorone		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
2,4-dinitrophenols		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
i-nitrosodiethylamine		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
N-nitrosodimethylamine		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
N-nitrosodibutylamine		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Pentachlorophenol		<0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.005
Phenol		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
bis(2-ethylhexyl) phthalate	*	0.035	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Anthracene		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Fluorene		0.0012	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Phenanthrene		0.0020	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Pyrene		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Naphthalene		0.005	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
1-methylnaphthalene		0.0097	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
2-methylnaphthalene		0.010	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.001
Surr. 2-Fluorophenol		26	%	S 8270C	10/13/98	10/17/98	DG	5396	5799	1-85
Surr. Phenol-d6		36	%	S 8270C	10/13/98	10/17/98	DG	5396	5799	0-82
Surr. Nitroobenzene-d5		34	%	S 8270C	10/13/98	10/17/98	DG	5396	5799	38-111
Surr. 2-Fluorobiphenyl		34	%	S 8270C	10/13/98	10/17/98	DG	5396	5799	38-103
Surr. 2,4,6-Tribromophenol		32	%	S 8270C	10/13/98	10/17/98	DG	5396	5799	1-127
Surr. Terphenyl-d14		37	%	S 8270C	10/13/98	10/17/98	DG	5396	5799	38-122

*0.051 mg/L found in method blank

Date: 05-24-99
Page # 4
Order ID Number: 9810000164
Sample Number: 109439

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: GMW-1

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/24/98	10/26/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/24/98	10/26/98	RR	5398	5785	0.10
Barium		0.26	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cadmium		<0.01	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.01
Chromium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Lead		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Total Mercury		<0.001	mg/L	S 7471	10/9/98	10/11/98	MS	5365	5725	0.0010
Selenium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Silver		<0.05	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.05
Uranium		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Copper		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Iron		2.2	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Manganese		0.38	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Zinc		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Aluminum		3.1	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Boron		0.22	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.10
Cobalt		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/13/98	SA		5761	0.01
Fluoride		2.0	mg/L	E 300.0		10/12/98	JS		5705	0.5
Nitrate		<1.0	mg/L	E 300.0		10/12/98	JS		5705	1.0
Chloride		110	mg/L	E 300.0		10/12/98	JS		5705	2.5
Sulfate		100	mg/L	E 300.0		10/12/98	JS		5705	2.5
TDS		550	mg/L	E 160.1		10/11/98	RS		5728	---
pH		7.5	s.u.	E 150.1		10/8/98	SA		5707	---
TRPHC		16.9	mg/L	E 418.1	10/11/98	10/12/98	MF	5372	5750	0.500
Total Phenols		<0.01	mg/L	S 5530 A,D		10/15/98	RC		5781	0.01
Total Radium		5.27	pCi/L	E 901.1M		10/28/98	DC	---	---	---

* 0.051 mg/L bis(2-ethylhexyl)phthalate found in method blank

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-24-99

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164
Sample Number: 109440

Sample Description: GMW-3

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<500	ug/L	S 8260B		10/16/98	MB		5790	500
Acrylonitrile		<500	ug/L	S 8260B		10/16/98	MB		5790	500
Benzene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Carbon tetrachloride		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Chlorobenzene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
1,2-dichloroethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
1,1,2,2-tetrachloroethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
1,1,1-trichloroethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
1,1,2-trichloroethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
1,1,2-trichloroethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Chloroform		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Dichlorobenzene		<200	ug/L	S 8260B		10/16/98	MB		5790	200
1,1-dichloroethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Dichloropropenes		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Ethylbenzene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Bromodichloromethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Bromomethane		<500	ug/L	S 8260B		10/16/98	MB		5790	500
Chloromethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Dichlorodifluoromethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Dichloromethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Trichlorofluoromethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Tetrachloroethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Toluene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Trichloroethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Vinyl chloride		<100	ug/L	S 8260B		10/16/98	MB		5790	100
m,p-xylene		580	ug/L	S 8260B		10/16/98	MB		5790	100
o-xylene		120	ug/L	S 8260B		10/16/98	MB		5790	100
1,1-dichloroethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Ethylene dibromide		<100	ug/L	S 8260B		10/16/98	MB		5790	100
cis-1,2-dichlorethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
trans-1,2-dichloroethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Methylene chloride		<500	ug/L	S 8260B		10/16/98	MB		5790	500
Surr. Dibromofluoromethane		101	%	S 8260B		10/16/98	MB		5790	71-132
Surr. Toluene-d8		92	%	S 8260B		10/16/98	MB		5790	82-124
Surr. 4-Bromofluorobenzene		96	%	S 8260B		10/16/98	MB		5790	76-126
Benzidine		<0.01	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.01
Pentachlorobenzene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Hexachloroethane		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001

Date: 10-20-98
Page # 6
Order ID Number: 9810000164
Sample Number: 109440

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: GMW-3

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
2,4,5-trichlorophenol		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
2,4,6-trichlorophenol		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
bis (2-chloroethl) ether		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
bis (2-chloroisopropyl) ether		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
bis (chloromethyl) ether		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
3,3-dichlorobenzidine		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
2,4-dinitrotoluene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Diphenylhydrazine		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
Hexachlorobutadiene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Hexachlorocyclopentadiene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Isophorone		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
Nitrobenzene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
2,4-dinitro-o-cresol		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
2,4-dinitrophenols		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
i-nitrosodiethylamine		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
N-nitrosodimethylamine		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
N-nitrosodibutylamine		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
N-nitrosodiphenylamine		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
N-nitrosopyrrolidine		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Pentachlorophenol		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.005
Phenol		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Dibutyl phthalate		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
bis(2-ethylhexyl) phthalate	*	0.020	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Diethyl phthalate		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Dimethyl phthalate		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Anthracene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Benzo(k)fluoranthene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Fluoranthene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Fluorene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Phenanthrene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Pyrene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Naphthalene		0.023	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
1-methylnaphthalene		0.034	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
2-methylnaphthalene		0.024	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Benzo-a-pyrene		<0.001	mg/L	S 8270C	10/13/98	10/14/98	DG	5396	5781	0.001
Surr. 2-Fluorophenol		24	%	S 8270C	10/13/98	10/14/98	DG	5396	5781	1-85
Surr. Phenol-d6		19	%	S 8270C	10/13/98	10/14/98	DG	5396	5781	0-82
Surr. Nitrobenzene-d5		67	%	S 8270C	10/13/98	10/14/98	DG	5396	5781	38-114
Surr. 2-Fluorobiphenyl		74	%	S 8270C	10/13/98	10/14/98	DG	5396	5781	38-103
Surr. 2,4,6-Tribromophenol		68	%	S 8270C	10/13/98	10/14/98	DG	5396	5781	1-127
Surr. Terphenyl-d14		69	%	S 8270C	10/13/98	10/14/98	DG	5396	5781	38-122

*0.051 mg/L found in method blank

Corrected

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Date: 06-14-99

Order ID Number: 9810000164**
Sample Number: 109440

Sample Description: GMW-3

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/7/98	10/20/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/24/98	10/26/98	RC	5366	5670	0.001
Arsenic		<0.10	mg/L	S 6010B	10/24/98	10/26/98	RR	5398	5785	0.10
Barium		0.61	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cadmium		<0.01	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.01
Chromium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Lead		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Total Mercury		<0.001	mg/L	S 7471	10/9/98	10/11/98	MS	5365	5725	0.0010
Selenium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Silver		<0.05	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.05
Uranium		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Copper		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Iron		14	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Manganese		0.25	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Zinc		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Aluminum		22	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Boron		0.42	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.10
Cobalt		0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/13/98	SA		5761	0.01
Fluoride		2.3	mg/L	E 300.0		10/12/98	JS		5705	0.5
Nitrate		3.4	mg/L	E 300.0		10/12/98	JS		5705	1.0
Chloride		160	mg/L	E 300.0		10/12/98	JS		5705	2.5
Sulfate		160	mg/L	E 300.0		10/12/98	JS		5705	2.5
TDS		840	mg/L	E 160.1		10/11/98	RS		5728	---
pH		7.3	s.u.	E 150.1		10/8/98	SA		5707	---
TRPHC		27	mg/L	E 418.1		10/7/98	MF	5372	5750	0.500
Total Phenols		0.0	mg/L	S 5530 A,D		10/15/98	RC		5781	0.01
Total Radium		2.13	pCi/L	E 901.1M		10/28/98	DC	---	---	---

* 0.051 mg/L bis(2-ethylhexyl)phthalate found in method blank

** Order ID Number corrected.

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 05-24-99
Page # 8

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164
Sample Number: 109441

Sample Description: GMW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<500	ug/L	S 8260B		10/16/98	MB		5790	500
Acrylonitrile		<500	ug/L	S 8260B		10/16/98	MB		5790	500
Benzene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Carbon tetrachloride		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Chlorobenzene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
1,2-dichloroethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
1,1,2,2-tetrachloroethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
1,1,1-trichloroethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
1,1,2-trichloroethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
1,1,2-trichloroethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Chloroform		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Dichlorobenzene		<200	ug/L	S 8260B		10/16/98	MB		5790	200
1,1-dichloroethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Dichloropropenes		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Ethylbenzene		190	ug/L	S 8260B		10/16/98	MB		5790	100
Bromodichloromethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Bromomethane		<500	ug/L	S 8260B		10/16/98	MB		5790	500
Chloromethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Dichlorodifluoromethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Dichloromethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Trichlorofluoromethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Tetrachloroethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Toluene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Trichloroethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Vinyl chloride		<100	ug/L	S 8260B		10/16/98	MB		5790	100
m,p-xylene		1,220	ug/L	S 8260B		10/16/98	MB		5790	100
o-xylene		275	ug/L	S 8260B		10/16/98	MB		5790	100
1,1-dichloroethane		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Ethylene dibromide		<100	ug/L	S 8260B		10/16/98	MB		5790	100
cis-1,2-dichlorethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
trans-1,2-dichloroethylene		<100	ug/L	S 8260B		10/16/98	MB		5790	100
Methylene chloride		<500	ug/L	S 8260B		10/16/98	MB		5790	500
Surr. Dibromofluoromethane		104	%	S 8260B		10/16/98	MB		5790	71-132
Surr. Toluene-d8		92	%	S 8260B		10/16/98	MB		5790	82-124
Surr. 4-Bromofluorobenzene		98	%	S 8260B		10/16/98	MB		5790	76-126
Benzidine		<0.1	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.1
Pentachlorobenzene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
1,2,4,5-tetrachlorobenzene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Hexachloroethane		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01

Date: 10-20-98
Page # 9
Order ID Number: 9810000164
Sample Number: 109441

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: GMW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
2,4-dichlorophenol		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
2,4,5-trichlorophenol		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
2,4,6-trichlorophenol		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
bis (2-chloroethl) ether		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
bis (2-chloroisopropyl) ether		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
bis (chloromethyl) ether		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
3,3-dichlorobenzidine		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
2,4-dinitrotoluene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Diphenylhydrazine		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
Hexachlorobutadiene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Hexachlorocyclopentadiene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Isophorone		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
Nitrobenzene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
2,4-dinitro-o-cresol		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
2,4-dinitrophenols		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
i-nitrosodiethylamine		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
N-nitrosodimethylamine		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
N-nitrosodibutylamine		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
N-nitrosodiphenylamine		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
N-nitrosopyrrolidine		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Pentachlorophenol		<0.05	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.05
Phenol		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Dibutyl phthalate		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
bis(2-ethylhexyl) phthalate	*	0.054	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Diethyl phthalate		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Dimethyl phthalate		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Anthracene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Benzo(k)fluoranthene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Fluoranthene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Fluorene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Phenanthrene		0.024	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Pyrene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Naphthalene		0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
1-methylnaphthalene		0.15	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
2-methylnaphthalene		0.16	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Benzo-a-pyrene		<0.01	mg/L	S 8270C	10/13/98	10/17/98	DG	5396	5799	0.01
Surr. 2-Fluorophenol		22	%	S 8270C	10/13/98	10/17/98	DG	5396	5799	1-85
Surr. Phenol d6		19	%	S 8270C	10/13/98	10/17/98	DG	5396	5799	0-82
Surr. Nitroobenzene-d5		80	%	S 8270C	10/13/98	10/17/98	DG	5396	5799	38-111
Surr. 2-Fluorobiphenyl		68	%	S 8270C	10/13/98	10/17/98	DG	5396	5799	38-103
Surr. 2,4,6-Tribromophenol		50	%	S 8270C	10/13/98	10/17/98	DG	5396	5799	1-127
Surr. Terphenyl-d14		70	%	S 8270C	10/7/98	10/9/98	DG	5358	5708	38-122

*0.051 mg/L found in method blank

Order ID Number: 9810000164
Sample Number: 109441

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Sample Description: GMW-5

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Aldrin		<1.0	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	1.0
Chlordane		<2.5	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	2.5
DDT		<1.0	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	1.0
Dieldrin		<0.5	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	0.5
Endosulfan		<0.5	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	0.5
Endrin		<1.0	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	1.0
Heptachlor		<0.5	ug/L	S-8080	10/24/98	10/26/98	KC	---	---	0.5
PCB's		<0.001	mg/L	S-8082	10/9/98	10/21/98	RC	5366	5888	0.001
Arsenic		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Barium		0.25	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cadmium		<0.01	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.01
Chromium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Lead		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Total Mercury		<0.001	mg/L	S 7471	10/9/98	10/11/98	MS	5365	5725	0.0010
Selenium		<0.05	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Silver		<0.05	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.05
Uranium		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Copper		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Iron		4.6	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Manganese		0.19	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Zinc		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Aluminum		5.6	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Boron		0.37	mg/L	S 6010B	10/12/98	10/17/98	RR	5398	5795	0.10
Cobalt		0.07	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.05
Molybdenum		<0.10	mg/L	S 6010B	10/12/98	10/18/98	RR	5398	5812	0.10
Nickel		<0.10	mg/L	S 6010B	10/12/98	10/15/98	RR	5398	5785	0.10
Cyanide		<0.01	mg/L	SM 4500 C,E		10/13/98	SA		5761	0.01
Fluoride		2.0	mg/L	E 300.0		10/12/98	JS		5705	0.5
Nitrate		3.6	mg/L	E 300.0		10/12/98	JS		5705	1.0
Chloride		150	mg/L	E 300.0		10/12/98	JS		5705	2.5
Sulfate		160	mg/L	E 300.0		10/12/98	JS		5705	2.5
TDS		790	mg/L	E 160.1		10/11/98	RS		5728	---
pH		7.1	s.u.	E 150.1		10/8/98	JS		5707	---
TRPHC		5	pCi/L	E 418.1		10/28/98	DC	5372	5750	0.500
Total Phenols		<0.01	mg/L	S 5530 A,D		10/15/98	RC		5781	0.01
Total Radium		4.51	pCi/L	E 901.1M		10/28/98	DC	---	---	---

* 0.051 mg/L bis(2-ethylhexyl)phthalate found in method blank

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164
Sample Number: 109599

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Acrylonitrile		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Benzene	**	1.8	ug/L	S-8260B		10/12/98	MB		5751	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Chlorobenzene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Chloroform		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichlorobenzene		<2	ug/L	S-8260B		10/12/98	MB		5751	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichloropropenes		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Ethylbenzene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Bromodichloromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Bromomethane		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Chloromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichloromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Toluene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Trichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Vinyl chloride		<1	ug/L	S-8260B		10/12/98	MB		5751	1
m,p-xylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
o-xylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Ethylene dibromide		<1	ug/L	S-8260B		10/12/98	MB		5751	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Methylene chloride		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Surr. Dibromofluoromethane		108	%	S-8260B		10/12/98	MB		5751	72-130
Surr. Toluene-d8		94	%	S-8260B		10/12/98	MB		5751	77-127
Surr. 4-Bromofluorobenzene		103	%	S-8260B		10/12/98	MB		5751	72-131

** 2 ug/L found in method blank

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-07-99
Page # 12

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164
Sample Number: ***109600

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Acrylonitrile		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Benzene	**	1.4	ug/L	S-8260B		10/12/98	MB		5751	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Chlorobenzene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Chloroform		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichlorobenzene		<2	ug/L	S-8260B		10/12/98	MB		5751	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichloropropenes		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Ethylbenzene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Bromodichloromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Bromomethane		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Chloromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichloromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Toluene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Trichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Vinyl chloride		<1	ug/L	S-8260B		10/12/98	MB		5751	1
m,p-xylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
o-xylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Ethylene dibromide		<1	ug/L	S-8260B		10/12/98	MB		5751	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Methylene chloride		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Surr. Dibromofluoromethane		113	%	S-8260B		10/12/98	MB		5751	72-130
Surr. Toluene-d8		94	%	S-8260B		10/12/98	MB		5751	77-127
Surr. 4-Bromofluorobenzene		101	%	S-8260B		10/12/98	MB		5751	72-131

** 2 ug/L found in method blank.
*** Sample number corrected.

Analytical Results Report

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Corrected

Date: 06-07-99
Page # 13

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164
Sample Number: ***109601

Sample Description: Trip Blank

Parameter	Flag	Result	Units	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	Run Batch #	Reporting Limit
Acrolein		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Acrylonitrile		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Benzene	**	1.9	ug/L	S-8260B		10/12/98	MB		5751	1
Carbon tetrachloride		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Chlorobenzene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,2-dichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,2,2-tetrachloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,1-trichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,2-trichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1,2-trichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Chloroform		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichlorobenzene		<2	ug/L	S-8260B		10/12/98	MB		5751	2
1,1-dichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichloropropenes		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Ethylbenzene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Bromodichloromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Bromomethane		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Chloromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichlorodifluoromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Dichloromethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Trichlorofluorometane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Tetrachloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Toluene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Trichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Vinyl chloride		<1	ug/L	S-8260B		10/12/98	MB		5751	1
m,p-xylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
o-xylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
1,1-dichloroethane		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Ethylene dibromide		<1	ug/L	S-8260B		10/12/98	MB		5751	1
cis-1,2-dichlorethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
trans-1,2-dichloroethylene		<1	ug/L	S-8260B		10/12/98	MB		5751	1
Methylene chloride		<5	ug/L	S-8260B		10/12/98	MB		5751	5
Surr. Dibromofluoromethane		104	%	S-8260B		10/12/98	MB		5751	72-130
Surr. Toluene-d8		97	%	S-8260B		10/12/98	MB		5751	77-127
Surr. 4-Bromofluorobenzene		102	%	S-8260B		10/12/98	MB		5751	72-131

** 2 ug/L found in method blank.
*** Sample number corrected.

Quality Control Report
Blanks

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Acrolein		<5	ug/L	5	10/12/98		5790
Acrylonitrile		<5	ug/L	5	10/12/98		5790
Benzene		2	ug/L	1	10/12/98		5790
Carbon tetrachloride		<1	ug/L	1	10/12/98		5790
Chlorobenzene		<1	ug/L	1	10/12/98		5790
1,2-dichloroethane		<1	ug/L	1	10/12/98		5790
1,1,2,2-tetrachloroethane		<1	ug/L	1	10/12/98		5790
1,1,1-trichloroethane		<1	ug/L	1	10/12/98		5790
1,1,2-trichloroethane		<1	ug/L	1	10/12/98		5790
1,1,2-trichloroethylene		<1	ug/L	1	10/12/98		5790
Chloroform		<1	ug/L	1	10/12/98		5790
Dichlorobenzene		<2	ug/L	2	10/12/98		5790
1,1-dichloroethylene		<1	ug/L	1	10/12/98		5790
Dichloropropenes		<1	ug/L	1	10/12/98		5790
Ethylbenzene		<1	ug/L	1	10/12/98		5790
Bromodichloromethane		<1	ug/L	1	10/12/98		5790
Bromomethane		<5	ug/L	5	10/12/98		5790
Chloromethane		<1	ug/L	1	10/12/98		5790
Dichlorodifluoromethane		<1	ug/L	1	10/12/98		5790
Dichloromethane		<1	ug/L	1	10/12/98		5790
Trichlorofluoromethane		<1	ug/L	1	10/12/98		5790
Tetrachloroethylene		<1	ug/L	1	10/12/98		5790
Toluene		<1	ug/L	1	10/12/98		5790
Trichloroethylene		<1	ug/L	1	10/12/98		5790
Vinyl chloride		<1	ug/L	1	10/12/98		5790
m,p-xylene		<1	ug/L	1	10/12/98		5790
o-xylene		<1	ug/L	1	10/12/98		5790
1,1-dichloroethane		<1	ug/L	1	10/12/98		5790
Ethylene dibromide		<1	ug/L	1	10/12/98		5790
cis-1,2-dichlorethylene		<1	ug/L	1	10/12/98		5790
trans-1,2-dichloroethylene		<1	ug/L	1	10/12/98		5790
Methylene chloride		<5	ug/L	5	10/12/98		5790
Surr. Dibromofluoromethane		93	%	71-132	10/12/98		5790
Surr. Toluene-d8		95	%	82-124	10/12/98		5790
Surr. 4-Bromofluorobenzene		94	%	76-126	10/12/98		5790

Project Number: 19349
Order ID Number: 9810000164
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Fluoride		<0.1	mg/L	0.1	10/12/98		5705
Nitrate		<0.2	mg/L	0.2	10/12/98		5705
Chloride		<0.5	mg/L	0.5	10/12/98		5705
Sulfate		<0.5	mg/L	0.5	10/12/98		5705
PCB		<0.001	mg/L	0.001	10/13/98	5366	5888
Cyanide		<0.01	mg/L	0.01	10/13/98		5761
Benzidine		<0.01	mg/L	0.01	10/14/98	5396	5781
Hexachlorobenzene		<0.001	mg/L	0.001	10/14/98	5396	5781
Pentachlorobenzene		<0.001	mg/L	0.001	10/14/98	5396	5781
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	0.001	10/14/98	5396	5781
Hexachloroethane		<0.001	mg/L	0.001	10/14/98	5396	5781
2,4-dichlorophenol		<0.005	mg/L	0.005	10/14/98	5396	5781
2,4,5-trichlorophenol		<0.005	mg/L	0.005	10/14/98	5396	5781
2,4,6-trichlorophenol		<0.005	mg/L	0.005	10/14/98	5396	5781
bis (2-chloroethl) ether		<0.005	mg/L	0.005	10/14/98	5396	5781
bis (2-chloroisopropyl) ether		<0.005	mg/L	0.005	10/14/98	5396	5781
bis (chloromethyl) ether		<0.005	mg/L	0.005	10/14/98	5396	5781
3,3-dichlorobenzidine		<0.005	mg/L	0.005	10/14/98	5396	5781
2,4-dinitrotoluene		<0.001	mg/L	0.001	10/14/98	5396	5781
Diphenylhydrazine		<0.005	mg/L	0.005	10/14/98	5396	5781
Hexachlorobutadiene		<0.001	mg/L	0.001	10/14/98	5396	5781
Hexachlorocyclopentadiene		<0.001	mg/L	0.001	10/14/98	5396	5781
Isophorone		<0.005	mg/L	0.005	10/14/98	5396	5781
Nitrobenzene		<0.001	mg/L	0.001	10/14/98	5396	5781
2,4-dinitro-o-cresol		<0.001	mg/L	0.001	10/14/98	5396	5781
2,4-dinitrophenols		<0.005	mg/L	0.005	10/14/98	5396	5781
i-nitrosodiethylamine		<0.001	mg/L	0.001	10/14/98	5396	5781
N-nitrosodimethylamine		<0.001	mg/L	0.001	10/14/98	5396	5781
N-nitrosodibutylamine		<0.005	mg/L	0.005	10/14/98	5396	5781
N-nitrosodiphenylamine		<0.001	mg/L	0.001	10/14/98	5396	5781
N-nitrosopyrrolidine		<0.001	mg/L	0.001	10/14/98	5396	5781
Pentachlorophenol		<0.005	mg/L	0.005	10/14/98	5396	5781
Phenol		<0.001	mg/L	0.001	10/14/98	5396	5781
Dibutyl phthalate		<0.001	mg/L	0.001	10/14/98	5396	5781
bis(2-ethylhexyl) phthalate		0.051	mg/L	0.001	10/14/98	5396	5781
Diethyl phthalate		<0.001	mg/L	0.001	10/14/98	5396	5781
Dimethyl phthalate		<0.001	mg/L	0.001	10/14/98	5396	5781
Anthracene		<0.001	mg/L	0.001	10/14/98	5396	5781
Benzo(b)fluoranthene		<0.001	mg/L	0.001	10/14/98	5396	5781
Benzo(k)fluoranthene		<0.001	mg/L	0.001	10/14/98	5396	5781
Fluoranthene		<0.001	mg/L	0.001	10/14/98	5396	5781
Fluorene		<0.001	mg/L	0.001	10/14/98	5396	5781
Phenanthrene		<0.001	mg/L	0.001	10/14/98	5396	5781
Pyrene		<0.001	mg/L	0.001	10/14/98	5396	5781

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Order ID Number: 9810000164

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Naphthalene		<0.001	mg/L	0.001	10/14/98	5396	5781
1-methylnaphthalene		<0.001	mg/L	0.001	10/14/98	5396	5781
2-methylnaphthalene		<0.001	mg/L	0.001	10/14/98	5396	5781
Benzo-a-pyrene		<0.001	mg/L	0.001	10/14/98	5396	5781
Surr. 2-Fluorophenol		25	%	1-85	10/14/98	5396	5781
Surr. Phenol-d6		13	%	0-82	10/14/98	5396	5781
Surr. Nitroobenzene-d5		78	%	38-111	10/14/98	5396	5781
Surr. 2-Fluorobiphenyl		79	%	38-103	10/14/98	5396	5781
Surr. 2,4,6-Tribromophenol		71	%	1-127	10/14/98	5396	5781
Surr. Terphenyl-d14		72	%	38-122	10/14/98	5396	5781
Benzidine		<0.01	mg/L	0.01	10/17/98	5396	5799
Hexachlorobenzene		<0.001	mg/L	0.001	10/17/98	5396	5799
Pentachlorobenzene		<0.001	mg/L	0.001	10/17/98	5396	5799
1,2,4,5-tetrachlorobenzene		<0.001	mg/L	0.001	10/17/98	5396	5799
Hexachloroethane		<0.001	mg/L	0.001	10/17/98	5396	5799
2,4-dichlorophenol		<0.005	mg/L	0.005	10/17/98	5396	5799
2,4,5-trichlorophenol		<0.005	mg/L	0.005	10/17/98	5396	5799
2,4,6-trichlorophenol		<0.005	mg/L	0.005	10/17/98	5396	5799
bis (2-chloroethl) ether		<0.005	mg/L	0.005	10/17/98	5396	5799
bis (2-chloroisopropyl) ether		<0.005	mg/L	0.005	10/17/98	5396	5799
bis (chloromethyl) ether		<0.005	mg/L	0.005	10/17/98	5396	5799
3,3-dichlorobenzidine		<0.005	mg/L	0.005	10/17/98	5396	5799
2,4-dinitrotoluene		<0.001	mg/L	0.001	10/17/98	5396	5799
Diphenylhydrazine		<0.005	mg/L	0.005	10/17/98	5396	5799
Hexachlorobutadiene		<0.001	mg/L	0.001	10/17/98	5396	5799
Hexachlorocyclopentadiene		<0.001	mg/L	0.001	10/17/98	5396	5799
Isophorone		<0.005	mg/L	0.005	10/17/98	5396	5799
Nitrobenzene		<0.001	mg/L	0.001	10/17/98	5396	5799
2,4-dinitro-o-cresol		<0.001	mg/L	0.001	10/17/98	5396	5799
2,4-dinitrophenols		<0.005	mg/L	0.005	10/17/98	5396	5799
i-nitrosodiethylamine		<0.001	mg/L	0.001	10/17/98	5396	5799
N-nitrosodimethylamine		<0.001	mg/L	0.001	10/17/98	5396	5799
N-nitrosodibutylamine		<0.005	mg/L	0.005	10/17/98	5396	5799
N-nitrosodiphenylamine		<0.001	mg/L	0.001	10/17/98	5396	5799
N-nitrosopyrrolidine		<0.001	mg/L	0.001	10/17/98	5396	5799
Pentachlorophenol		<0.005	mg/L	0.005	10/17/98	5396	5799
Phenol		<0.001	mg/L	0.001	10/17/98	5396	5799
Dibutyl phthalate		<0.001	mg/L	0.001	10/17/98	5396	5799
bis(2-ethylhexyl) phthalate		0.051	mg/L	0.001	10/17/98	5396	5799
Diethyl phthalate		<0.001	mg/L	0.001	10/17/98	5396	5799
Dimethyl phthalate		<0.001	mg/L	0.001	10/17/98	5396	5799
Anthracene		<0.001	mg/L	0.001	10/17/98	5396	5799
Benzo(b)fluoranthene		<0.001	mg/L	0.001	10/17/98	5396	5799
Benzo(k)fluoranthene		<0.001	mg/L	0.001	10/17/98	5396	5799

Order ID Number: 9810000164

Project Number: 19350
Project Name: Shell Tasker Road
Project Location: Hobbs, NM

Parameter	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	Run Batch #
Fluoranthene		<0.001	mg/L	0.001	10/17/98	5396	5799
Fluorene		<0.001	mg/L	0.001	10/17/98	5396	5799
Phenanthrene		<0.001	mg/L	0.001	10/17/98	5396	5799
Pyrene		<0.001	mg/L	0.001	10/17/98	5396	5799
Naphthalene		<0.001	mg/L	0.001	10/17/98	5396	5799
1-methylnaphthalene		<0.001	mg/L	0.001	10/17/98	5396	5799
2-methylnaphthalene		<0.001	mg/L	0.001	10/17/98	5396	5799
Benzo-a-pyrene		<0.001	mg/L	0.001	10/17/98	5396	5799
Surr. 2-Fluorophenol		25	%	1-85	10/17/98	5396	5799
Surr. Phenol-d6		13	%	0-82	10/17/98	5396	5799
Surr. Nitroobenzene-d5		78	%	38-111	10/17/98	5396	5799
Surr. 2-Fluorobiphenyl		79	%	38-103	10/17/98	5396	5799
Surr. 2,4,6-Tribromophenol		71	%	1-127	10/17/98	5396	5799
Surr. Terphenyl-d14		72	%	38-122	10/17/98	5396	5799
Arsenic		<0.10	mg/L	0.10	10/15/98	5398	5785
Barium		<0.10	mg/L	0.10	10/15/98	5398	5785
Cadmium		<0.01	mg/L	0.01	10/15/98	5398	5785
Chromium		<0.05	mg/L	0.05	10/15/98	5398	5785
Lead		<0.05	mg/L	0.05	10/15/98	5398	5785
Total Mercury		<0.001	mg/L	0.0010	10/11/98	5367	5726
Selenium		<0.05	mg/L	0.05	10/15/98	5398	5785
Silver		<0.05	mg/L	0.05	10/17/98	5398	5795
Uranium		<0.10	mg/L	0.10	10/15/98	5398	5785
Copper		<0.10	mg/L	0.10	10/15/98	5398	5785
Iron		<0.10	mg/L	0.10	10/18/98	5398	5812
Manganese		<0.10	mg/L	0.10	10/15/98	5398	5785
Zinc		<0.10	mg/L	0.10	10/15/98	5398	5785
Aluminum		<0.10	mg/L	0.10	10/18/98	5398	5812
Boron		<0.10	mg/L	0.10	10/17/98	5398	5795
Cobalt		<0.05	mg/L	0.05	10/15/98	5398	5785
Molybdenum		<0.10	mg/L	0.10	10/18/98	5398	5812
Nickel		<0.10	mg/L	0.10	10/15/98	5398	5785
Total Phenols		<0.01	mg/L	0.01	10/15/98		5781
TRPHC		<0.500	mg/L	0.5	10/12/98	5372	5750
PCB		<0.001	mg/L	<0.001	10/13/98	5366	5670
PCB		<0.001	mg/L	<0.001	10/21/98	5366	5888

Quality Control Report
Continuing Calibration Verification Standard

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Vinyl chloride		100	ug/L	108	108	10/16/98	5790
1,1-Dichloroethene		100	ug/L	100	100	10/16/98	5790
Chloroform		100	ug/L	80	80	10/16/98	5790
1,2-Dichloropropane		100	ug/L	85	85	10/16/98	5790
Toluene		100	ug/L	89	89	10/16/98	5790
Chlorobenzene		100	ug/L	90	90	10/16/98	5790
Ethylbenzene		100	ug/L	89	89	10/16/98	5790
Fluoride		2.5	mg/L	2.575	103	10/12/98	5705
Nitrate		5	mg/L	4.73	95	10/12/98	5705
Chloride		12.5	mg/L	12.265	98	10/12/98	5705
Sulfate		12.5	mg/L	11.68	93	10/12/98	5705
Total Mercury		5.0	mg/L	5.2	102	10/11/98	5726
PCB		0.40	mg/L	0.39	98	10/13/98	5888
Cyanide		0.12	mg/L	0.12	100	10/13/98	5761
Phenol		80	mg/L	90	113	10/14/98	5781
1,4-Dichlorobenzene		80	mg/L	86	108	10/14/98	5781
2-nitrophenol		80	mg/L	93	116	10/14/98	5781
2,4-Dichlorophenol		80	mg/L	78	98	10/14/98	5781
Hexachlorobutadiene		80	mg/L	88	110	10/14/98	5781
4-Chloro-3-methylphenol		80	mg/L	96	120	10/14/98	5781
2,4,6-Trichlorophenol		80	mg/L	77	96	10/14/98	5781
Acenaphthene		80	mg/L	85	106	10/14/98	5781
n-Nitrosodiphenylamine		80	mg/L	75	94	10/14/98	5781
Pentachlorophenol		80	mg/L	71	89	10/14/98	5781
Fluoranthene		80	mg/L	83	104	10/14/98	5781
Di-n-octylphthalate		80	mg/L	73	91	10/14/98	5781
Benzo(a)pyrene		80	mg/L	78	99	10/14/98	5781
Phenol		80	mg/L	65	81	10/17/98	5799
1,4-Dichlorobenzene		80	mg/L	72	90	10/17/98	5799
2-nitrophenol		80	mg/L	74	93	10/17/98	5799
2,4-Dichlorophenol		80	mg/L	76	95	10/17/98	5799
Hexachlorobutadiene		80	mg/L	72	90	10/17/98	5799
4-Chloro-3-methylphenol		80	mg/L	76	95	10/17/98	5799
2,4,6-Trichlorophenol		80	mg/L	74	93	10/17/98	5799
Acenaphthene		80	mg/L	71	89	10/17/98	5799
n-Nitrosodiphenylamine		80	mg/L	73	91	10/17/98	5799

Order ID Number: 9810000164

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Parameter	Flag	CCVS TRUE Concentration	Units	CCVS Found Concentration	CCVS Percent Recovery	Date Analyzed	Run Batch #
Pentachlorophenol		80	mg/L	86	108	10/17/98	5799
Fluoranthene		80	mg/L	78	98	10/17/98	5799
Di-n-octylphthalate		80	mg/L	93	116	10/17/98	5799
Benzo(a)pyrene		80	mg/L	74	93	10/17/98	5799
TDS		1,000	mg/L	1,026	103	10/7/02	5728
Total Phenol		0.80	mg/L	0.79	99	10/15/98	5781
Arsenic		1.0	mg/L	1.0	100	10/15/98	5785
Barium		1.0	mg/L	0.98	98	10/15/98	5785
Cadmium		1.0	mg/L	1.0	100	10/15/98	5785
Chromium		1.0	mg/L	1.0	100	10/15/98	5785
Lead		1.0	mg/L	1.0	100	10/15/98	5785
Selenium		1.0	mg/L	1.0	100	10/15/98	5785
Silver		1.0	mg/L	0.94	94	10/17/98	5795
Uranium		1.0	mg/L	0.94	94	10/15/98	5785
Copper		1.0	mg/L	1.0	100	10/15/98	5785
Iron		1.0	mg/L	0.96	96	10/18/98	5812
Manganese		1.0	mg/L	1.0	100	10/15/98	5785
Zinc		1.0	mg/L	1.0	100	10/15/98	5785
Aluminum		1.0	mg/L	0.90	90	10/18/98	5812
Boron		1.0	mg/L	0.93	93	10/17/98	5795
Cobalt		1.0	mg/L	1.0	100	10/15/98	5785
Molybdenum		1.0	mg/L	1.0	100	10/18/98	5812
Nickel		1.0	mg/L	1.0	100	10/15/98	5785
pH		7.0	mg/L	7.0	100	10/8/98	5707
TRPHC		100	mg/L	105	105	10/12/98	5750
PCB		0.40	mg/L	0.39	98	10/13/98	5670
PCB		0.40	mg/L	0.43	108	1/21/98	5888

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164

Parameter	Flag	Units	Sample Result	Spike Amount Added	Matrix Spike Result	MS Percent Recovery	Duplicate Spike Amount Added	MSD Result	MSD Percent Recovery	MS/MSD RPD	Date Analyzed	Prep Batch #	Run Batch #
1,1-Dichloroethene		ug/L	<1	100	115	115	100	118	118	2.6	10/16/98		5790
Benzene		ug/L	<1	100	101	101	100	102	102	0.99	10/16/98		5790
Trichloroethene		ug/L	<1	100	104	104	100	106	106	1.9	10/16/98		5790
Toluene		ug/L	<1	100	108	108	100	110	110	0.9	10/16/98		5790
Chlorobenzene		ug/L	<1	100	107	107	100	105	105	1.9	10/16/98		5790
Fluoride		mg/L	2.0	12.5	14.71	102	12.5	14.97	104	1.9	10/12/98		5705
Nitrate		mg/L	3.6	25.0	26.58	92	25.0	26.51	92	0.0	10/12/98		5705
Chloride		mg/L	150	62.5	202.48	84	62.5	205.3	88	4.7	10/12/98		5705
Sulfate		mg/L	160	62.5	214.35	87	62.5	214.35	87	0	10/12/98		5705
Total Phenol		mg/L	<0.01	0.80	0.79	99	0.80	0.81	101	2	10/15/98		5781
PCB		mg/L	<0.001	0.005	0.004	75	0.005	0.004	75	3	10/13/98	5366	5888
Cyanide		mg/L	<0.01	0.12	0.107	89	0.12	0.112	93	4.4	10/9/98		5699
Phenol		mg/L	<0.001	0.10	0.0169	17	0.10	0.0168	17	0	10/14/98	5396	5781
2-Chlorophenol		mg/L	<0.001	0.10	0.0623	62	0.10	0.0584	58	6.7	10/14/98	5396	5781
1,4-Dichlorobenzene		mg/L	<0.001	0.10	0.0501	50	0.10	0.0457	46	8.3	10/14/98	5396	5781
n-Nitrosodi-n-propylamine		mg/L	<0.001	0.10	0.0702	70	0.10	0.0718	72	2.8	10/14/98	5396	5781
1,2,4-trichlorobenzene		mg/L	<0.001	0.10	0.054	54	0.10	0.0515	52	3.8	10/14/98	5396	5781
4-Chloro-3-methylphenol		mg/L	<0.001	0.10	0.0692	69	0.10	0.0720	72	4.3	10/14/98	5396	5781
Acenaphthene		mg/L	<0.001	0.10	0.0683	68	0.10	0.0712	71	4.3	10/14/98	5396	5781
4-Nitrophenol		mg/L	<0.001	0.10	0.0246	25	0.10	0.0249	25	0	10/14/98	5396	5781
2,4-Dinitrotoluene		mg/L	<0.001	0.10	0.0738	74	0.10	0.0807	81	9.0	10/14/98	5396	5781
Pentachlorophenol		mg/L	<0.001	0.10	0.0701	70	0.10	0.0747	75	6.9	10/14/98	5396	5781
Pyrene		mg/L	<0.001	0.10	0.0699	70	0.10	0.0794	79	12	10/14/98	5396	5781
Phenol		mg/L	<0.001	0.10	0.0169	17	0.10	0.0168	17	0	10/17/98	5396	5799
2-Chlorophenol		mg/L	<0.001	0.10	0.0623	62	0.10	0.0584	58	6.7	10/17/98	5396	5799
1,4-Dichlorobenzene		mg/L	<0.001	0.10	0.0501	50	0.10	0.0457	46	8.3	10/17/98	5396	5799
n-Nitrosodi-n-propylamine		mg/L	<0.001	0.10	0.0702	70	0.10	0.0718	72	2.8	10/17/98	5396	5799
1,2,4-trichlorobenzene		mg/L	<0.001	0.10	0.054	54	0.10	0.0515	52	3.8	10/17/98	5396	5799
4-Chloro-3-methylphenol		mg/L	<0.001	0.10	0.0692	69	0.10	0.0720	72	4.3	10/17/98	5396	5799
Acenaphthene		mg/L	<0.001	0.10	0.0683	68	0.10	0.0712	71	4.3	10/17/98	5396	5799
4-Nitrophenol		mg/L	<0.001	0.10	0.0246	25	0.10	0.0249	25	0	10/17/98	5396	5799
2,4-Dinitrotoluene		mg/L	<0.001	0.10	0.0738	74	0.10	0.0807	81	9.0	10/17/98	5396	5799
Pentachlorophenol		mg/L	<0.001	0.10	0.0701	70	0.10	0.0747	75	6.9	10/17/98	5396	5799
Pyrene		mg/L	<0.001	0.10	0.0699	70	0.10	0.0794	79	12	10/17/98	5396	5799
TRPHC		mg/L	<0.500	6.5	9.85	116	8.5	10.4	122	5.0	10/12/98	5372	5750
Arsenic		mg/L	<0.10	2.0	1.8	90	2.0	1.9	95	5.4	10/15/98	5398	5785
Barium		mg/L	<0.10	2.0	2.1	105	2.0	2.0	100	2.4	10/15/98	5398	5785
Cadmium		mg/L	<0.01	2.0	1.8	90	2.0	1.8	90	0	10/15/98	5398	5785
Chromium		mg/L	<0.05	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5398	5785
Lead		mg/L	<0.05	2.0	1.9	95	2.0	1.8	90	5.4	10/15/98	5398	5785

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164

Parameter		Sample	Spike Amount	Matrix Spike	MS Percent	Duplicate Spike Amount	MSD	MSD Percent	MS/MSD	Date	Prep	Run
Selenium	mg/L	<0.05	2.0	1.8	90	2.0	1.8	90	0	10/15/98	5398	5785
Silver	mg/L	<0.05	0.32	0.31	97	0.32	0.33	103	6.0	10/17/98	5398	5795
Uranium	mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5398	5785
Copper	mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5398	5785
Iron	mg/L	<0.10	2.0	1.9	95	2.0	1.9	95	0	10/18/98	5398	5812
Manganese	mg/L	<0.10	2.0	2.1	105	2.0	2.0	100	4.9	10/15/98	5398	5785
Zinc	mg/L	<0.10	2.0	1.9	95	2.0	1.8	90	5.4	10/15/98	5398	5785
Aluminum	mg/L	<0.10	2.0	2.0	100	2.0	2.0	100	0	10/18/98	5398	5812
Boron	mg/L	<0.10	2.0	2.2	110	2.0	2.2	110	0	10/17/98	5398	5795
Cobalt	mg/L	<0.05	2.0	1.9	95	2.0	1.9	95	0	10/15/98	5398	5785
Molybdenum	mg/L	<0.10	2.0	2.0	100	2.0	2.0	100	0	10/18/98	5398	5812
Nickel	mg/L	<0.10	2.0	2.0	100	2.0	1.9	95	5.1	10/15/98	5398	5785
Total Mercury	mg/L	<0.001	0.0050	0.0050	100	0.0050	0.0051	102	2	10/11/98	5367	5726
Cyanide	mg/L	<0.01	0.12	0.104	87	0.12	0.103	86	1.2	10/13/98		5761
PCB	mg/L	<0.001	0.005	0.0037	74	0.005	0.0038	76	2.7	10/13/98	5366	5670
PCB	mg/L	<0.001	0.005	0.0051	102	0.005	0.0054	108	5.7	10/21/98	5366	5670

Quality Control Report
Duplicate

Jeff kindley / Sharon Hall
Philip Services Corp.
7904 IH 20 West
Midland, TX 79706

Date: 10-20-98

Project Number: 19349
Project Name: Shell Grimes Tank Battery
Project Location: Hobbs, NM

Order ID Number: 9810000164

Parameter	Flag	Units	Sample Result	Dup Sample Result	RPD	Date Analyzed	Prep Batch #	Run Batch #
pH		s.u.	8.8	8.8	0	10/8/98		5707
TDS		mg/L	790	818	3.5	10/11/98		5728

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

American Radiation Services, Inc.

Laboratory Analysis Report

Prepared For:

Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue, Ste. 9
Lubbock, TX 79424
Phone:806-794-1296
Fax:806-794-1298

Quality Assurance Review

Danny L. Coleman
Laboratory Manager

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-1077	**P.O. Number:**	N/A
Client I.D.:	109439	**ARS Sample I.D.:**	ARS-98-3918
Date Sampled:	N/A	**Date Received:**	10/23/98
Time Sampled:	N/A	**Time Received**	1019
Type of Sample:	Liquid	**Date of Report**	10/28/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	3.32	0.47	0.93	pCi/L	EPA 903	10/28/98 1356	DC
Ra-228	1.95	1.77	1.43	pCi/L	EPA 904	10/27/98 1201	DC

Quality Assurance Review

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ARS
AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-1077	**P.O. Number:**	N/A
Client I.D.:	109440	**ARS Sample I.D.:**	ARS-98-3919
Date Sampled:	N/A	**Date Received:**	10/23/98
Time Sampled:	N/A	**Time Received**	1019
Type of Sample:	Liquid	**Date of Report**	10/28/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.13	0.47	0.93	pCi/L	EPA 903	10/28/98 1356	DC
Ra-228	BDL	N/A	1.43	pCi/L	EPA 904	10/27/98 1201	DC

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

ARS Tracking Number:	ARS-98-1077	**P.O. Number:**	N/A
Client I.D.:	109441	**ARS Sample I.D.:**	ARS-98-3920
Date Sampled:	N/A	**Date Received:**	10/23/98
Time Sampled:	N/A	**Time Received**	1019
Type of Sample:	Liquid	**Date of Report**	10/28/98

Analysis Description	Analysis Result	Analysis Error $\pm 2\sigma$	Detection Limit	Analysis Units	Analysis Test Method	Analysis Date & Time	Analysis Technician
Ra-226	2.47	0.45	0.93	pCi/L	EPA 903	10/28/98 1356	DC
Ra-228	2.04	1.42	1.54	pCi/L	EPA 904	10/27/98 1948	DC

Quality Assurance Review

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AMERICAN RADIATION SERVICES, INC.

1726 Wooddale Court • Baton Rouge, Louisiana 70806
1 (800) 401-4277 • Fax (504) 927-6822

Notes:

Comments:

1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B
5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only)
7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only)
8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGE).

Method References:

1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurement of Radioactivity in Drinking Water, August 1980.
2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992
3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995)
4.0) EPA 600/4/79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
5.0) HASL 300

Definitions:

1.0)	BDL	Analyte not detected because the value was below the detection limit.
2.0)	ND	Not detected above the detection limit.
3.0)	Detection Limit	The minimum amount of the analyte that ARS can detect utilizing the specific analysis.
4.0)	B	Method Blank
5.0)	D	Method Duplicate
6.0)	MS	Matrix Spike
7.0)	S	Spike
8.0)	RS	Reference Spike
9.0)	*SC	Subcontracted out to another qualified laboratory
10.0)	NR	Not Referenced

Notes: American Radiation Services, Inc assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

9439-41

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID # 164

Company Name: Philip Services Corporation
Phone #: (915) 563-0118

Address: 7904 IH 20 West
Midland, Tx 79706
Fax #: (915) 563-9526

Contact Person: Jeffrey Kindley

Invoice to: (If different from above) Same

Project #: 19349

Project Name: Shell Grimes Tank Battery

Project Location: Hobbs, New Mexico

Sampler Signature: Jeffrey Kindley

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL	HNO3	H2SO4	NONE	NAOH	SAMPLING: DATE	TIME
109439	GMW-1	1	500ml	✓					✓				10/07/98	10:15
	GMW-1	1	Liter	✓								✓	10/07/98	11
	GMW-1	1	Liter	✓							✓		10/07/98	11
	GMW-1	1	Liter	✓						✓			10/07/98	11
	GMW-1	3	40ml VOA	✓				✓					10/07/98	11
	GMW-1	3	Liter	✓							✓		10/07/98	11
	GMW-1	2	Liter	✓							✓		10/07/98	11
	GMW-1	1	Liter	✓							✓		10/07/98	11
	GMW-1	1	Liter	✓							✓		10/07/98	11
	GMW-1	1	Liter	✓				✓					10/07/98	11
109599	GMW-1 Trip Blank	2	40ml VOA	✓							✓		10/07/98	11

ANALYSIS REQUEST	Turn Around Time if different from standard	Hold
MTBE 8020/602		
BTEX 8020/602		
TPH (418.1)		
PAH 8270		
Total Metals Ag As Ba Cd Cr Pb Hg Se ~~Ni~~		
TCLP Metals Ag As Ba Cd Cr Pb Hg Se		
TCLP Volatiles		
TCLP Semi Volatiles		
RCI		
GC/MS Vol. ~~8240~~/8260/~~624~~		
GC/MS Semi. Vol. 8270/625		
PCB's 8080/608		
Pest. 8080/608		
BOD, TSS, PH		
Cyanides		
Wet Chemistry		
Phenols		
Radium 226/228		

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jeffrey Kindley	10/07/98	5:00PM	Helen Shelton	10/7/98	5:00 PM
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Helen Shelton	10/7/98	6:30 PM			
Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
			Vicki Wrather	10-8-98	9:30 AM

LAB USE ONLY
Intact Y N
Headspace Y / N
Temp 2 °
Log-in Review MM

REMARKS: Normal Turnaround

159 384 382 3

Carrier #

Signal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 17 Months - HC