GW - 80

REPORTS

YEAR(S):

1996

METRIC
Corporation ENVIRONMENTAL ENGINEERING AND SCIENCE

8429 WASHINGTON PLACE NE, SUITE A
ALBUQUERQUE, NEW MEXICO 87113
Phone: (505) 828-2801
Fax: (505) 828-2803

February 28, 1996

Mr. Larry Campbell
Transwestern Pipeline Company
6381 North Main St.
Roswell, New Mexico 88202

Dear Mr. Campbell,

As you requested, METRIC Corporation initiated and performed a subsurface soil investigation under the Cooling Fan area at the Transwestern Compressor Station No. 5 located at Thoreau, New Mexico. It was understood that a previous subsurface investigation and excavation had identified and removed material contaminated with aromatic hydrocarbons. Confirmation sampling of the excavation sidewalls indicated the presence of aromatic hydrocarbons on the south and east sidewalls. The purpose of this investigation was to determine the horizontal and vertical extent of the presence of aromatic hydrocarbons which might be found in a southeasterly direction from the existing open excavation. The following discussion and attachments document methodology and results of the investigation.

METRIC arrived on-site to perform the investigation on February 12, 1996. METRIC personnel were met on-site by Charlie Allen of Transwestern and George Friend of FEC Environmental. The weather was 50-60 degrees with moderate wind. Borings were conducted and samples taken on February 12 and 13, 1996.

The work consisted of one and one-half days of soil boring and sampling. The first borehole was located near the center of the source area to guide depth selection of future boreholes. The remaining boreholes were located away from the source towards the center of the Cooling Fan. Borehole locations are shown on the attached Figure 1. Depth of boreholes was limited by clearance under the cooling fan (approx. 10.5 feet) which necessitated the use of a hand auger. Maximum recoverable depth was limited to 20.5 feet.

The boreholes were drilled using a 3 inch diameter bucket type AMS hand auger. Recovered soil cores were logged based on soil color and texture. Sample logs for each borehole are attached as Appendix 1. Sample retrieval and examination of the recovered soil samples began at an 8 foot depth and every two foot interval thereafter. The samples were analyzed in the field for total aromatic hydrocarbons using the heated headspace method with a Century Model 128 Organic Vapor Analyzer (OVA) and AMS hydrocarbon test tube samplers. Neither the OVA or hydrocarbon test tubes were useful in detecting

aromatic hydrocarbons. Laboratory samples of soils were collected from each two foot sample using EPA approved methods, placed on ice, and transported to NET laboratory by Federal Express overnight delivery. Laboratory samples were analyzed using EPA methodology 418.1 (TPH) and 8020 (BTEX).

Drilling and sampling tools were decontaminated between holes using Liquinox® detergent and water. All decontamination water was contained in 55 gallon steel drums located on-site to await disposal by Transwestern. All boreholes were backfilled with soil cuttings.

Laboratory results were received from NET Laboratories via fax on February 19, 1996. Copies of all laboratory results are attached as Appendix 2. Results for each borehole are tabulated and presented in the attached Tables 1 and 2. Table 1 shows three hits of TPH in two boreholes. Borehole BH-2 detected aromatic hydrocarbons at 11.5 and 12.5 feet. Borehole BH-7 detected aromatic hydrocarbons at 16.5 feet. All aromatic hydrocarbons detected were less than 30 ppm. No constituents of gasoline were detected with method 8020.

I hope this report is sufficient for your needs. If you have any questions, please do not hesitate to call.

Sincerely,

METRIC Corporation

Phil Berry
Senior Environmental Scientist

attachments

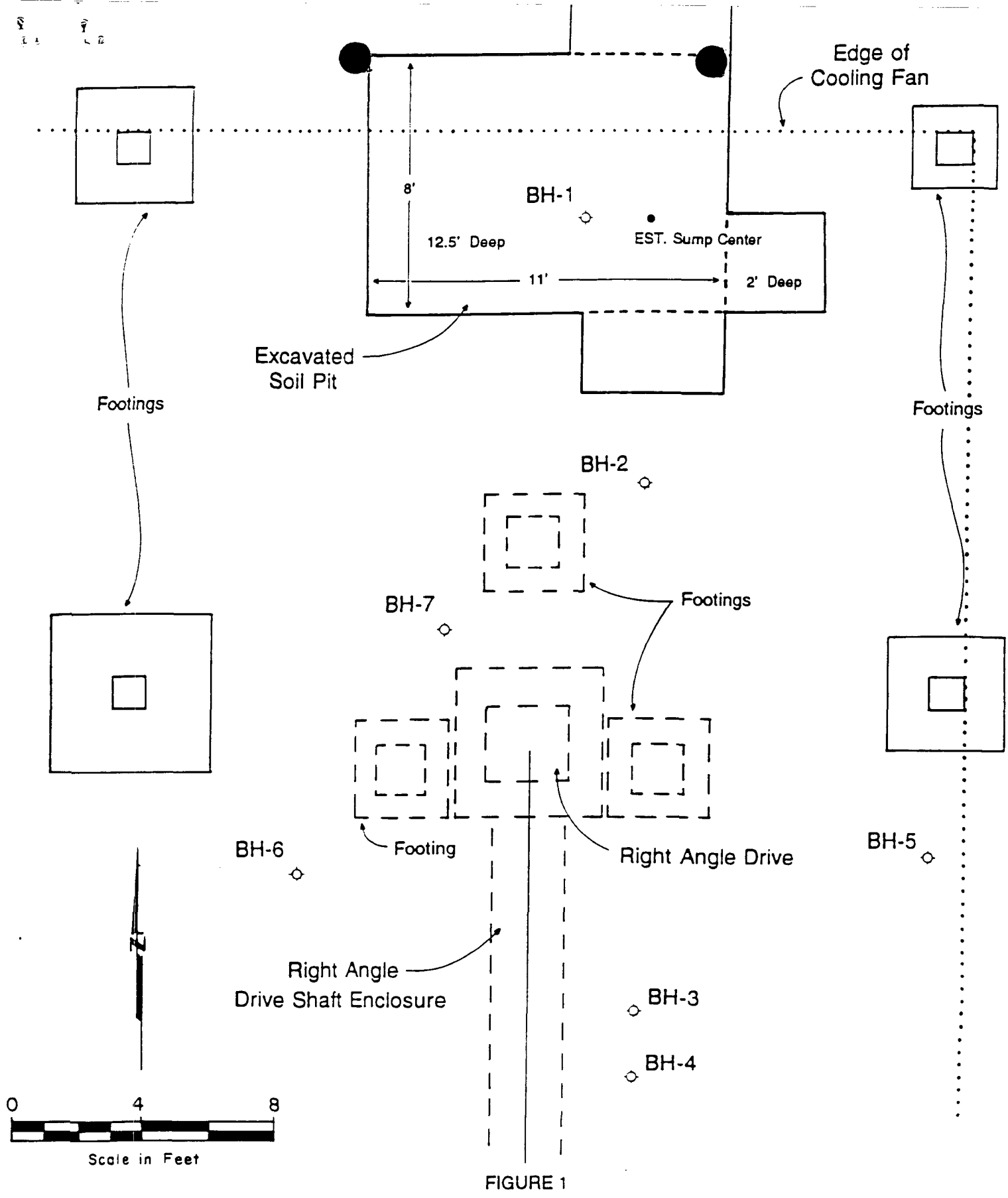

FIGURE 1

Location of Soil Borings Under Cooling Fan
Transwestern Pipeline Company
Thoreau Station #5
Thoreau, New Mexico

TABLE 1

TRANSWESTERN PIPELINE COMPANY
THOREAU STATION NO. 5

EPA METHOD 418.1 (TPH)

	BOREHOLE #					
DEPTH	BH1	BH2	BH3	BH5	BH6	BH7
8.5	-	ND	ND	ND	ND	ND
10.5	-	ND	ND	ND	ND	ND
11.5	-	14 ppm	-	-	-	-
12.5	-	10 ppm	-	ND	ND	ND
14.5	ND	ND	-	ND	ND	ND
16.5	ND	ND	-	ND	ND	27 ppm
17.5	-	-	-	-	-	ND
18.5	ND	ND	-	ND	ND	-
20.5	ND	-	-	-	-	-

ND = No Detection

- = No Sample Taken

TABLE 2

TRANSWESTERN PIPELINE COMPANY
THOREAU STATION NO. 5

EPA METHOD 8020 (BTEX)

	BOREHOLE #					
DEPTH	BH1	BH2	BH3	BH5	BH6	BH7
8.5	-	ND	ND	ND	ND	ND
10.5	-	ND	ND	ND	ND	ND
11.5	-	ND	-	-	-	-
12.5	-	ND	-	ND	ND	ND
14.5	ND	ND	-	ND	ND	ND
16.5	ND	ND	-	ND	ND	ND
17.5	-	-	-	-	-	ND
18.5	ND	ND	-	ND	ND	-
20.5	ND	-	-	-	-	-

ND = No Detection

- = No Sample Taken

Appendix 1

METRIC
Corporation

SAMPLE LOG

Borehole Number BH-1 Borehole Location See Map

Property Owner Transwestern Pipeline Company

Sample Logger Phil Berry, METRIC Corporation

Driller Phil Berry, METRIC Corporation

Drilling Medium Hand Auger

Date of Completion 2-12-96

Depth (feet)	Thickness (feet)	Stratigraphic Description
12.5 - 20.5	8.0	Reddish brown, sandy loam.

METRIC
Corporation

SAMPLE LOG

Borehole Number BH-2 Borehole Location See Map

Property Owner Transwestern Pipeline Company

Sample Logger Phil Berry, METRIC Corporation

Driller Phil Berry, METRIC Corporation

Drilling Medium Hand Auger

Date of Completion 2-12-96

Depth (feet)	Thickness (feet)	Stratigraphic Description
0.0 - 8.5	8.5	Reddish brown, sandy clay.
8.5 - 10.5	2.0	Reddish brown, sandy loam.
10.5 - 11.5	1.0	Reddish brown, sandy clay with black stringers.
11.5 - 12.5	1.0	Reddish brown to black clay.
12.5 - 18.5	6.0	Reddish brown, sandy loam.

METRIC
Corporation

SAMPLE LOG

Borehole Number BH-3 Borehole Location See Map

Property Owner Transwestern Pipeline Company

Sample Logger Phil Berry, METRIC Corporation

Driller Phil Berry, METRIC Corporation

Drilling Medium Hand Auger

Date of Completion 2-12-96

Depth (feet)	Thickness (feet)	Stratigraphic Description
0.0 - 8.5	8.5	Reddish brown, sandy loam.
8.5 - 10.0	1.5	Reddish brown to black, sandy clay.
10.0 - 10.7	0.7	Brownish black, sandy clay loam with large gravels; strong smell.
10.7		Auger refusal.

METRIC
Corporation

SAMPLE LOG

Borehole Number BH-4 Borehole Location See Map

Property Owner Transwestern Pipeline Company

Sample Logger Phil Berry, METRIC Corporation

Driller Phil Berry, METRIC Corporation

Drilling Medium Hand Auger

Date of Completion 2-12-96

Depth (feet)	Thickness (feet)	Stratigraphic Description
0.0 - 8.5	8.5	Reddish brown, sandy loam.
8.5 - 10.0	1.5	Reddish brown to black, sandy clay.
10.0 - 10.7	0.7	Brownish black, sandy clay loam with large gravels.
10.7		Auger refusal.

METRIC
Corporation

SAMPLE LOG

Borehole Number BH-5 Borehole Location See Map

Property Owner Transwestern Pipeline Company

Sample Logger Phil Berry, METRIC Corporation

Driller Phil Berry, METRIC Corporation

Drilling Medium Hand Auger

Date of Completion 2-12-96

Depth (feet)	Thickness (feet)	Stratigraphic Description
0.0 - 8.5	8.5	Reddish brown, sandy clay loam.
8.5 - 10.5	2.0	Reddish brown, sandy loam with some gravel.
10.5 - 12.5	2.0	Reddish brown, sandy clay.
12.5 - 18.5	6.0	Reddish brown, sandy loam.

METRIC
Corporation

SAMPLE LOG

Borehole Number BH-6 Borehole Location See Map

Property Owner Transwestern Pipeline Company

Sample Logger Phil Berry, METRIC Corporation

Driller Phil Berry, METRIC Corporation

Drilling Medium Hand Auger

Date of Completion 2-13-96

Depth (feet)	Thickness (feet)	Stratigraphic Description
0.0 - 1.5	1.5	Reddish brown clay.
1.5 - 5.5	4.0	Brownish black, sandy clay.
5.5 - 8.5	3.0	Dark brown, sandy clay.
8.5 - 11.0	2.5	Brownish black, sandy loam.
11.0 - 11.8	0.8	Brownish black clay.
11.8 - 12.5	0.7	Reddish brown, sandy clay loam.
12.5 - 14.5	2.0	Reddish brown, sandy loam.
14.5 - 18.5	4.0	Dark reddish brown, sandy loam.

METRIC
Corporation

SAMPLE LOG

Borehole Number BH-7 Borehole Location See Map

Property Owner Transwestern Pipeline Company

Sample Logger Phil Berry, METRIC Corporation

Driller Phil Berry, METRIC Corporation

Drilling Medium Hand Auger

Date of Completion 2-13-96

Depth (feet)	Thickness (feet)	Stratigraphic Description
0.0 - 4.0	4.0	Backfill.
4.0 - 4.1	0.1	Plastic.
4.1 - 8.5	4.4	Reddish brown, sandy clay.
8.5 - 11.0	2.5	Reddish brown, sandy loam.
11.0 - 12.0	1.0	Reddish brown clay.
12.0 - 12.5	0.5	Reddish brown, sandy clay loam.
12.5 - 14.5	2.0	Reddish brown, sandy loam.
14.5 - 17.5	3.0	Reddish brown, sandy loam with some gravel.
17.5		Auger refusal.

Appendix 2

NATIONAL ENVIRONMENTAL TESTING, INC.

Dallas Division
1548 Valwood Parkway
Suite 118
Carrollton, TX 75006
Tel: (214) 406-8100
Fax: (214) 484-2969

ANALYTICAL AND QUALITY CONTROL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996

NET Job Number: 96.01100

Enclosed is the Analytical and Quality Control report for the following samples submitted to the Dallas Division of NET, Inc. for analysis. Reproduction of this analytical report is permitted only in its entirety.

Sample Number	Sample Description	Date Taken	Date Received
294398	BH2-8.5	02/12/1996	02/14/1996
294399	BH2-10.5	02/12/1996	02/14/1996
294400	BH2-11.5	02/12/1996	02/14/1996
294401	BH2-12.5	02/12/1996	02/14/1996
294402	BH2-14.5	02/12/1996	02/14/1996
294403	BH2-16.5	02/12/1996	02/14/1996
294404	BH2-18.5	02/12/1996	02/14/1996
294405	BH1-16.5	02/12/1996	02/14/1996
294406	BH1-18.5	02/12/1996	02/14/1996
294407	BH1-20.5	02/12/1996	02/14/1996
294408	BH1-14.5	02/12/1996	02/14/1996
294409	BH5-8.5	02/12/1996	02/14/1996
294410	BH5-10.5	02/12/1996	02/14/1996
294411	BH5-12.5	02/12/1996	02/14/1996
294412	BH5-14.5	02/12/1996	02/14/1996
294413	BH5-16.5	02/12/1996	02/14/1996
294414	BH5-18.5	02/12/1996	02/14/1996
294415	BH6-8.5	02/13/1996	02/14/1996
294416	BH6-10.5	02/13/1996	02/14/1996
294417	BH6-12.5	02/13/1996	02/14/1996
294418	BH6-14.5	02/13/1996	02/14/1996

National Environmental Testing, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Holding Times: All holding times were within method criteria.

Method Blanks: All method blanks were within quality control criteria.

Instrument calibration: All calibrations were within method quality control criteria.

Analysis Comments: No Unusual Comments

Lisa A. Sanders

Lisa A. Sanders
Project Coordinator

ANALYTICAL AND QUALITY CONTROL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996

NET Job Number: 96.01100

Enclosed is the Analytical and Quality Control report for the following samples submitted to the Dallas Division of NET, Inc. for analysis. Reproduction of this analytical report is permitted only in its entirety.

Sample Number	Sample Description	Date Taken	Date Received
294398	BH2-8.5	02/12/1996	02/14/1996
294399	BH2-10.5	02/12/1996	02/14/1996
294400	BH2-11.5	02/12/1996	02/14/1996
294401	BH2-12.5	02/12/1996	02/14/1996
294402	BH2-14.5	02/12/1996	02/14/1996
294403	BH2-16.5	02/12/1996	02/14/1996
294404	BH2-18.5	02/12/1996	02/14/1996
294405	BH1-16.5	02/12/1996	02/14/1996
294406	BH1-18.5	02/12/1996	02/14/1996
294407	BH1-20.5	02/12/1996	02/14/1996
294408	BH1-14.5	02/12/1996	02/14/1996
294409	BH5-8.5	02/12/1996	02/14/1996
294410	BH5-10.5	02/12/1996	02/14/1996
294411	BH5-12.5	02/12/1996	02/14/1996
294412	BH5-14.5	02/12/1996	02/14/1996
294413	BH5-16.5	02/12/1996	02/14/1996
294414	BH5-18.5	02/12/1996	02/14/1996
294415	BH6-8.5	02/13/1996	02/14/1996
294416	BH6-10.5	02/13/1996	02/14/1996
294417	BH6-12.5	02/13/1996	02/14/1996
294418	BH6-14.5	02/13/1996	02/14/1996

National Environmental Testing, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Holding Times: All holding times were within method criteria.

Method Blanks: All method blanks were within quality control criteria.

Instrument calibration: All calibrations were within method quality control criteria.

Analysis Comments: No Unusual Comments

Lisa A. Sanders

Lisa A. Sanders
Project Coordinator

ANALYTICAL AND QUALITY CONTROL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996

NET Job Number: 96.01100

Enclosed is the Analytical and Quality Control report for the following samples submitted to the Dallas Division of NET, Inc. for analysis. Reproduction of this analytical report is permitted only in its entirety.

Sample Number	Sample Description	Date Taken	Date Received
294419	BH6-16.5	02/13/1996	02/14/1996
294420	BH6-18.5	02/13/1996	02/14/1996
294421	BH7-8.5	02/13/1996	02/14/1996
294422	BH7-10.5	02/13/1996	02/14/1996
294423	BH7-12.5	02/13/1996	02/14/1996
294424	BH7-14.5	02/13/1996	02/14/1996
294425	BH7-16.5	02/13/1996	02/14/1996
294426	BH7-17.5	02/13/1996	02/14/1996
294427	BH3-8.5	02/12/1996	02/14/1996
294428	BH3-10.5	02/12/1996	02/14/1996

National Environmental Testing, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Holding Times: All holding times were within method criteria.

Method Blanks: All method blanks were within quality control criteria.

Instrument calibration: All calibrations were within method quality control criteria.

Analysis Comments: No Unusual Comments

Lisa A. Sanders

Lisa A. Sanders
Project Coordinator

ANALYTICAL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996
Job No.: 96.01100

Project Name:

Date Received: 02/14/1996

294398 BH2-8.5
Taken: 02/12/1996 11:40

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg
Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	45		% Rec

294399 BH2-10.5
Taken: 02/12/1996 12:00

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg
Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	44		% Rec

294400 BH2-11.5
Taken: 02/12/1996 12:10

TPH-418.1 (Nonaqueous)	14		ug/g
EPA 8020-NONAQ			
Benzene	<10		ug/kg
Ethylbenzene	<10		ug/kg
Toluene	<10		ug/kg
Xylenes, Total	<10		ug/kg
SURR: a,a,a-TFT	39		% Rec

294401 BH2-12.5
Taken: 02/12/1996 12:20

TPH-418.1 (Nonaqueous)	10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996
Job No.: 96.01100

Project Name:

Date Received: 02/14/1996

294401	BH2-12.5			
	Taken:	02/12/1996 12:20		
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		47		% Rec
294402	BH2-14.5			
	Taken:	02/12/1996 12:35		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<2		ug/kg
Ethylbenzene		<2		ug/kg
Toluene		<2		ug/kg
Xylenes, Total		<2		ug/kg
SURR: a,a,a-TFT		67		% Rec
294403	BH2-16.5			
	Taken:	02/12/1996 12:50		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		65		% Rec
294404	BH2-18.5			
	Taken:	02/12/1996 14:05		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		64		% Rec

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996
Job No.: 96.01100

Project Name:

Date Received: 02/14/1996

294405 BH1-16.5
Taken: 02/12/1996 10:15

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg
Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	61		% Rec

294406 BH1-18.5
Taken: 02/12/1996 10:40

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg
Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	63		% Rec

294407 BH1-20.5
Taken: 02/12/1996 11:15

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg
Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	57		% Rec

294408 BH1-14.5
Taken: 02/12/1996 10:00

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996
Job No.: 96.01100

Project Name:

Date Received: 02/14/1996

294408	BH1-14.5			
	Taken:	02/12/1996 10:00		
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		61		% Rec
294409	BH5-8.5			
	Taken:	02/12/1996 15:45		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		59		% Rec
294410	BH5-10.5			
	Taken:	02/12/1996 16:00		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		61		% Rec
294411	BH5-12.5			
	Taken:	02/12/1996 16:10		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		59		% Rec

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996
Job No.: 96.01100

Project Name:

Date Received: 02/14/1996

294412	BH5-14.5			
	Taken:	02/12/1996 16:30		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	ELD	ug/kg
SURR: a,a,a-TFT		58		% Rec
294413	BH5-16.5			
	Taken:	02/12/1996 16:40		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		42		% Rec
294414	BH5-18.5			
	Taken:	02/12/1996 16:50		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		51		% Rec
294415	BH6-8.5			
	Taken:	02/13/1996 09:25		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996
Job No.: 96.01100

Project Name:

Date Received: 02/14/1996

294415 BH6-8.5
Taken: 02/13/1996 09:25

Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	53		% Rec

294416 BH6-10.5
Taken: 02/13/1996 09:30

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg
Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	65		% Rec

294417 BH6-12.5
Taken: 02/13/1996 09:45

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg
Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	50		% Rec

294418 BH6-14.5
Taken: 02/13/1996 10:10

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg
Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	56		% Rec

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996
Job No.: 96.01100

Project Name:

Date Received: 02/14/1996

294419	BH6-16.5			
	Taken:	02/13/1996 10:20		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		63		% Rec
294420	BH6-18.5			
	Taken:	02/13/1996 10:30		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		32		% Rec
294421	BH7-8.5			
	Taken:	02/13/1996 11:00		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		56		% Rec
294422	BH7-10.5			
	Taken:	02/13/1996 11:10		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996
Job No.: 96.01100

Project Name:

Date Received: 02/14/1996

294422	BH7-10.5			
	Taken:	02/13/1996 11:10		
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		49		% Rec
294423	BH7-12.5			
	Taken:	02/13/1996 11:15		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		51		% Rec
294424	BH7-14.5			
	Taken:	02/13/1996 11:25		
TPH-418.1 (Nonaqueous)		<10		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		52		% Rec
294425	BH7-16.5			
	Taken:	02/13/1996 11:40		
TPH-418.1 (Nonaqueous)		27		ug/g
EPA 8020-NONAQ				
Benzene		<10	EDL	ug/kg
Ethylbenzene		<10	EDL	ug/kg
Toluene		<10	EDL	ug/kg
Xylenes, Total		<10	EDL	ug/kg
SURR: a,a,a-TFT		100		% Rec

EDL - Elevated Detection Limit due to matrix interference.

ANALYTICAL REPORT

Phil Berry
METRIC CORPORATION
8429 Washington Pl NE
Suite A
ABQ, NM 87113

02/19/1996
Job No.: 96.01100

Project Name:

Date Received: 02/14/1996

294426 BH7-17.5
Taken: 02/13/1996 11:45

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg
Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	99		% Rec

294427 BH3-8.5
Taken: 02/12/1996 14:30

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg
Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	103		% Rec

294428 BH3-10.5
Taken: 02/12/1996 14:40

TPH-418.1 (Nonaqueous)	<10		ug/g
EPA 8020-NONAQ			
Benzene	<10	EDL	ug/kg
Ethylbenzene	<10	EDL	ug/kg
Toluene	<10	EDL	ug/kg
Xylenes, Total	<10	EDL	ug/kg
SURR: a,a,a-TFT	42		% Rec

EDL - Elevated Detection Limit due to matrix interference.

QUALITY CONTROL REPORT
Continuing Calibration Verification
(CCV)

JOB NUMBER: 96.01100

PARAMETER	ANALYST	DATE ANALYZED	METHOD	CCV RESULT	CCV TRUE CONCENTRATION	% REC.	FLAG
TPH-418.1 (Nonaqueous)	bss	02/15/1996	E-418.1	96.96	97	100	NA
TPH-418.1 (Nonaqueous)	bss	02/16/1996	E-418.1	97.31	97	100	NA
EPA 8020-NONAQ			S-8020A				
Benzene	tcc	02/13/1996	S-8020A	24	20	120	NA
Ethylbenzene	tcc	02/13/1996	S-8020A	20	20	100	NA
Toluene	tcc	02/13/1996	S-8020A	21	20	105	NA
Xylenes, Total	tcc	02/13/1996	S-8020A	65	60	108	NA
EPA 8020-NONAQ			S-8020A				
Benzene	tcc	02/14/1996	S-8020A	20	20	100	NA
Ethylbenzene	tcc	02/14/1996	S-8020A	16	20	80	NA
Toluene	tcc	02/14/1996	S-8020A	17	20	85	NA
Xylenes, Total	tcc	02/14/1996	S-8020A	53	60	88	NA
EPA 8020-NONAQ			S-8020A				
Benzene	tcc	02/16/1996	S-8020A	19	20	95	NA
Ethylbenzene	tcc	02/16/1996	S-8020A	16	20	80	NA
Toluene	tcc	02/16/1996	S-8020A	16	20	80	NA
Xylenes, Total	tcc	02/16/1996	S-8020A	52	60	87	NA
EPA 8020-NONAQ			S-8020A				
Benzene	tcc	02/15/1996	S-8020A	20	20	100	NA
Ethylbenzene	tcc	02/15/1996	S-8020A	18	20	90	NA
Toluene	tcc	02/15/1996	S-8020A	19	20	95	NA
Xylenes, Total	tcc	02/15/1996	S-8020A	62	60	103	NA

Method References and Codes

The 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.

E-100 through 493: "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

E-601 through 625: "Guidelines Establishing Test Procedures for the Analysis of Pollutants", U.S. EPA, 40CFR, Part 136, rev. 1990.

S-1000 through 9999: "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd Edition, 1986.

A: "Standard Methods for the Examination of Water and Wastewater", 16th Edition, APHA, 1985.

SM: "Standard Methods for the Examination of Water and Wastewater", 18th Edition, APHA, 1992.

D: ASTM Method

M: Method has been modified

*: Other Reference

QUALITY CONTROL REPORT
Continuing Calibration Verification
(CCV)

JOB NUMBER: 96.01100

PARAMETER	ANALYST	DATE ANALYZED	METHOD	CCV RESULT	CCV TRUE CONCENTRATION	% REC.	FLAG
EPA 8020-NONAQ			S-8020A				
Benzene	tcc	02/15/1996	S-8020A	20	20	100	NA
Ethylbenzene	tcc	02/15/1996	S-8020A	18	20	90	NA
Toluene	tcc	02/15/1996	S-8020A	19	20	95	NA
Xylenes, Total	tcc	02/15/1996	S-8020A	61	60	102	NA
EPA 8020-NONAQ			S-8020A				
Benzene	tcc	02/19/1996	S-8020A	23	20	115	NA
Ethylbenzene	tcc	02/19/1996	S-8020A	22	20	110	NA
Toluene	tcc	02/19/1996	S-8020A	23	20	115	NA
Xylenes, Total	tcc	02/19/1996	S-8020A	70	60	117	NA
EPA 8020-NONAQ			S-8020A				
Benzene	tcc	02/19/1996	S-8020A	19	20	95	NA
Ethylbenzene	tcc	02/19/1996	S-8020A	19	20	95	NA
Toluene	tcc	02/19/1996	S-8020A	20	20	100	NA
Xylenes, Total	tcc	02/19/1996	S-8020A	62	60	103	NA

Method References and Codes

The 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.

E-100 through 493: "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

E-601 through 625: "Guidelines Establishing Test Procedures for the Analysis of Pollutants", U.S. EPA, 40CFR, Part 136, rev. 1990.

S-1000 through 9999: "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd Edition, 1986.

A: "Standard Methods for the Examination of Water and Wastewater", 16th Edition, APHA, 1985.

SM: "Standard Methods for the Examination of Water and Wastewater", 18th Edition, APHA, 1992.

D: ASTM Method

M: Method has been modified

*: Other Reference

QUALITY CONTROL REPORT
BLANKS

JOB NUMBER: 96.01100

PARAMETER	DATE ANALYZED	BLANK	UNITS	REPORTING LIMIT	FLAG
TPH-418.1 (Nonaqueous)	02/15/1996	<10	ug/g	10	NA
TPH-418.1 (Nonaqueous)	02/16/1996	<10	ug/g	10	NA
EPA 8020-NONAQ					
Benzene	02/13/1996	<2	ug/kg	2	NA
Ethylbenzene	02/13/1996	<2	ug/kg	2	NA
Toluene	02/13/1996	<2	ug/kg	2	NA
Xylenes, Total	02/13/1996	<2	ug/kg	2	NA
EPA 8020-NONAQ					
Benzene	02/15/1996	<2	ug/kg	2	NA
Ethylbenzene	02/15/1996	<2	ug/kg	2	NA
Toluene	02/15/1996	<2	ug/kg	2	NA
Xylenes, Total	02/15/1996	<2	ug/kg	2	NA
EPA 8020-NONAQ					
Benzene	02/19/1996	<2	ug/kg	2	NA
Ethylbenzene	02/19/1996	<2	ug/kg	2	NA
Toluene	02/19/1996	<2	ug/kg	2	NA
Xylenes, Total	02/19/1996	<2	ug/kg	2	NA

Advisory Control Limits for Blanks

Metals/Wet Chemistry/Conventionals/GC - All compounds should be less than the Reporting Limit.

GC/MS Semi-Volatiles - All compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the Reporting Limit.

GC/MS Volatiles - Toluene, Methylene chloride, Acetone and Chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

QUALITY CONTROL REPORT
Laboratory Control Sample
(LCS)

JOB NUMBER: 96.01100

PARAMETER	LCS RESULT	TRUE CONC.	LCS % REC.	FLAG
TPH-418.1 (Nonaqueous)	1708	2110	81	
TPH-418.1 (Nonaqueous)	1704	2110	81	
EPA 8020-NONAQ				
Benzene	19	20	95	
Ethylbenzene	18	20	90	
Toluene	19	20	95	
Xylenes, Total	57	60	95	

Advisory Control Limits for LCS

Inorganic Parameters - The LCS recovery should be 80-120%.

QUALITY CONTROL REPORT
Matrix Spike / Matrix Spike Duplicate
(MS / MSD)

JOB NUMBER: 96.01100

PARAMETER	SAMPLE RESULT	MS RESULT	MSD RESULT	SPIKE AMOUNT	MS % REC.	MSD % REC.	MS/MSD RPD	FLAG
TPH-418.1 (Nonaqueous)	<10	101	104	125	81	83	2.9	
TPH-418.1 (Nonaqueous)	14	115	118	125	81	83	2.9	
TPH-418.1 (Nonaqueous)	<10	102	107	125	82	86	4.8	
TPH-418.1 (Nonaqueous)	<10	108	101	125	86	81	6.7	
EPA 8020-NONAQ								
Benzene	<10	41	39	100	41	39	5	EDL
Ethylbenzene	<10	45	40	100	45	40	12	EDL
Toluene	<10	48	48	100	48	48	0	EDL
Xylenes, Total	74	215	190	300	47	39	19	
EPA 8020-NONAQ								
Benzene	<2	52	63	100	52	63	19	
Ethylbenzene	<2	79	68	100	79	68	15	
Toluene	<2	70	64	100	70	64	9	
Xylenes, Total	<2	259	226	600	43	38	14	
EPA 8020-NONAQ								
Benzene	<10	103	135	100	103	135	27	EDL
Ethylbenzene	<10	81	131	100	81	131	47	EDL
Toluene	<10	90	133	100	90	133	39	EDL
Xylenes, Total	<10	266	431	300	89	144	47	EDL

EDL - Elevated Detection Limit due to matrix interference.

Advisory Control Limits for MS/MSDs

Inorganic Parameters - The spike recovery should be 75-125% if the spike amount value is greater than or equal to one fourth of the sample result value. The RPD for the MS/MSD should be less than 20.

NOTE: Matrix Spike Samples may not be samples from this job.

NET NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

COMPANY: METRIC Corporation [illegible]
ADDRESS: [illegible] Washington Pl NE Suite A, ABQ, NM 8711[illegible]
PHONE: 505-828-2801 FAX: 505-828-280[illegible]
PROJECT NAME/LOCATION: [illegible] 5
PROJECT NUMBER:
PROJECT MANAGER: Phil Berry

REPORT TO: [illegible]
INVOICE TO:
P.O. NO.
NET QUOTE NO.

SAMPLED BY: [illegible] (PRINT NAME) — SIGNATURE: Phil B[illegible]
(PRINT NAME) — SIGNATURE

To assist us in selecting the proper method
Is this work being conducted for regulatory compliance monitoring? Yes ___ No ___
Is this work being conducted for regulatory enforcement action? Yes ___ No ___
Which regulations apply: RCRA ___ UST ___ Other ___ NPDES Wastewater ___ Drinking Water ___ None ___

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	HCl	NaOH	HNO$_3$	H$_2$SO$_4$	OTHER	PCB	BTEX	TPH	COMMENTS
[illegible]	1140	BH2-8.5			X					1	X	X	X	Copy Reports to Larry
	1200	BH2-10.5			X					1	X	X	X	Campbell at T.W.S.
	[illegible]	BH2-11.5 — SX Broken [illegible] still [illegible]			X					1	X	X	X	
	[illegible]	BH2-12.5			X					1	X	X	X	PCB must be [illegible]
	[illegible]	BH2-14.5			X					1	X	X	X	as SEPERATE Report
	[illegible]	BH2-16.5			X					1	X	X	X	from BTEX & TPH!!!
	[illegible]	BH2-18.5			X					1	X	X	X	
	[illegible]	BH5-8.5			X					1	X	X	X	Transwestern Pipeline
	[illegible]	BH5-10.5			X					1	X	X	X	account
	[illegible]	BH5-12.5			X					1	X	X	X	
	[illegible]	BH5-14.5			X					1	X	X	X	
	[illegible]	BH5-16.5			X					1	X	X	X	
	[illegible]	BH5-18.5			X					1	X	X	X	

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO N/A
COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO N/A
TEMPERATURE UPON RECEIPT: 4°C
Bottles supplied by NET? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA ______
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS ______ DATE ______

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:
[illegible]	[illegible]	1245			2/14/96	10:30 AM	R. [illegible]

METHOD OF SHIPMENT: Fed Ex

REMARKS:

PT 1 ORIGINAL WHITE PT 2 NET PROJECT MANAGER YELLOW PT 3 CUSTOMER COPY PINK

NET NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

COMPANY: PETRIC Corporation

ADDRESS: 8424 Washington Pl NE Suite A, ABQ NM 87113

PHONE: 505-828-2801 FAX: 505-828-2803

PROJECT NAME/LOCATION: TW Station 5

PROJECT NUMBER:

PROJECT MANAGER: Phil Berry

REPORT TO: Phil Berry

INVOICE TO:

P.O. NO.

NET QUOTE NO.

SAMPLED BY: [illegible] (PRINT NAME) — SIGNATURE: Phil B

(PRINT NAME) — SIGNATURE

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	HCl	NaOH	HNO_3	H_2SO_4	OTHER	PCB				BTEX	TPH					COMMENTS
[illegible]	[illegible]	KHI-11.5			X					1	X				X	X					Copy Results to Larry Campbell at TWS
	[illegible]	KHI-18.5			X					1	X				X	X					
	[illegible]	KHI [illegible]			X					1	X				X	X					PCB may be [illegible]
																					[illegible]
																					[illegible] BTEX & TPH
																					Transwestern [illegible] account

To assist us in selecting the proper method

Is this work being conducted for regulatory compliance monitoring? Yes ___ No ___

Is this work being conducted for regulatory enforcement action? Yes ___ No ___

Which regulations apply: RCRA ___ NPDES Wastewater ___ UST ___ Drinking Water ___ Other ___ None ___

CONDITION OF SAMPLE: BOTTLES INTACT? (YES) / NO — FIELD FILTERED? YES / NO – NA

COC SEALS PRESENT AND INTACT? YES / (NO) — VOLATILES FREE OF HEADSPACE? YES / NO N/A

TEMPERATURE UPON RECEIPT: 4°C — Bottles supplied by NET? YES / (NO)

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA ___ I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS ___ DATE ___

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:
[illegible]	[illegible]	[illegible]			2/14/96	10:00 AM	[illegible]

METHOD OF SHIPMENT: [illegible]

REMARKS:

PT 1 ORIGINAL WHITE PT 2 NET PROJECT MANAGER YELLOW PT 3 CUSTOMER COPY PINK

NET NATIONAL ENVIRONMENTAL TESTING, INC.®

CHAIN OF CUSTODY RECORD

COMPANY: METRIC Corporation

ADDRESS: 8429 Washington Pl NE Suite A ABQ NM 87113

PHONE: 505-828-2801 • FAX: 505-828-2803

PROJECT NAME/LOCATION: Two State 5

PROJECT NUMBER:

PROJECT MANAGER: Phil Berry

REPORT TO: Phil Berry

INVOICE TO:

P.O. NO.

NET QUOTE NO.

SAMPLED BY: Phil Berry (PRINT NAME) — [signature] SIGNATURE

(PRINT NAME) — SIGNATURE

To assist us in selecting the proper method

Is this work being conducted for regulatory compliance monitoring? Yes ____ No ____

Is this work being conducted for regulatory enforcement action? Yes ____ No ____

Which regulations apply: RCRA ____ UST ____ Other ____ NPDES Wastewater ____ Drinking Water ____ None ____

DATE	TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	HCl	NaOH	HNO_3	H_2SO_4	OTHER	PCB	BTEX	TPH	COMMENTS
2/12	925	BH6-8.5			X					1	X	X	X	Copy Reports to Larry
"	950	BH6-10.5			X					1	X	X	X	Campbell at T.W.
"	945	BH6-12.5			X					1	X	X	X	
"	1010	BH6-14.5			X					1	X	X	X	PCB must be treated
"	1020	BH6-16.5			X					1	X	X	X	as SEPERATE Report
"	1030	BH6-18.5			X					1	X	X	X	from BTEX & TPH
"	1100	BH7-8.5			X					1	X	X	X	
	1110	BH7-10.5			X					1	X	X	X	Transwestern Pipeline
"	1115	BH7-12.5			X					1	X	X	X	account
"	1125	BH7-14.5			X					1	X	X	X	
"	1140	BH7-16.5			X					1	X	X	X	
"	1145	BH7-17.5			X					1	X	X	X	
2/12	1430	BH3-8.5			X					1	X	X	X	
	1440	BH3-10.5			X					1	X	X	X	
"	[illegible]	BH1-14.5			X					1	X	X	X	

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO (YES circled) — FIELD FILTERED? ~~YES / NO~~ N/A

COC SEALS PRESENT AND INTACT? YES / NO (NO circled) — VOLATILES FREE OF HEADSPACE? ~~YES / NO~~ NM

TEMPERATURE UPON RECEIPT: 4°C — Bottles supplied by NET? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA ____ — I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS ____ DATE ____

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED FOR NET BY:
Phil Berry	2/13	1245			2/14/96	10:00 AM	B. DeWitt

METHOD OF SHIPMENT: Fed EX

REMARKS: