6701 Andreen Ave., Suite 9 TraceAnalysis, Inc.

Lubbock, T. 424-1515

(806) 794-1296

Report Date: July 5, 2001Order Number: A01050432 SEC36-255-36E

J. Anthony Ranch

Page Number: 1 of 2 SEC 36-255-36E

# **Summary Report**

Wayne Price

OCD

1220 S. Saint Francis Dr. Santa Fe, NM 87504

BEFORE EXAMINER

OIL CONSERVATION DIVISION

Report Date:

July 5, 2001

- EXHIBIT NO. 3

Order ID Number: A01050432

Project Number: Project Name: Project Location: SEC36-25536E

J. Anthon

SEC 36-28

			Date	$\mathbf{Time}$	Date
Sample	Description	Matrix	Taken	Taken	Received
170563	0105021700	Soil	5/2/01	17:00	5/4/01
170564	0105021710	Soil	5/2/01	17:00	5/4/01
170565	0105021720	Soil	5/2/01	17:00	5/4/01
170566	0105021800	Soil	5/2/01	17:00	5/4/01
170567	0105021830	Soil	5/2/01	17:00	5/4/01
170568	0105021900	Soil	5/2/01	17:00	5/4/01

This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX					TPH
.	Benzene	Toluene	Ethylbenzene	M,P,O-Xylene	Total BTEX	TRPHC
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
170563 - 0105021700	< 0.013	< 0.013	< 0.013	0.685	0.685	35700
170564 - 0105021710	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	7500
170565 - 0105021720	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	23900
170566 - 0105021800	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	<10.0
170567 - 0105021830	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	20900
170568 - 0105021900	1.06	2	< 0.1	<0.1	3.06	16500

Sample: 170563 - 0105021700

Sampic. 11000	0 - 01000 <b>2</b> 1100		7
Param	Flag	Result	Units
CL		<10	mg/Kg

Sample: 170564 - 0105021710

Param	Flag	Result	Units
CL		<10	mg/Kg

Sample: 170565 - 0105021720

Param	Flag	Result	Units
CL		<10	m mg/Kg

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Sample: 170566 - 0105021800

Param Flag

Result

SEC 36-255-36E

 $\overline{\text{CL}}$ 

<50

Units mg/Kg

Sample: 170567 - 0105021830

Param  $\overline{\text{CL}}$ 

Result <50

Units mg/Kg

Sample: 170568 - 0105021900

Param	Flag	Result	Units
Hydroxide Alkalinity	1 105	<1.0	mg/Kg as CaCo3
Carbonate Alkalinity		<1.0	mg/Kg as CaCo3
Bicarbonate Alkalinity		138	mg/Kg as CaCo3
Total Alkalinity		138	mg/Kg as CaCo3
Specific Conductance		· · · · · · · · · · · · · · · · · · ·	
		675	$\mu \mathrm{MHOS/cm}$
Total Mercury		<0.19	mg/Kg
CL		<50	mg/Kg
Fluoride		9.11	mg/Kg
Nitrate-N		<5.0	$\mathrm{mg}/\mathrm{Kg}$
Sulfate	to a	106	${ m mg/Kg}$
Dissolved Calcium		14.3	mg/Kg
Dissolved Magnesium		8.30	mg/Kg
Dissolved Potassium		9.47	mg/Kg
Dissolved Sodium		38.8	mg/Kg
Total Dissolved Solids		27900	mg/Kg
Total Arsenic		<b>&lt;</b> 5	mg/Kg
Total Barium		14.8	mg/Kg
Total Cadmium		<2	mg/Kg
Total Chromium	en e	<5	mg/Kg
Total Lead		<5	mg/Kg
Total Selenium		<b>&lt;</b> 5	${ m mg/Kg}$
Total Silver		<1	mg/Kg
рН	·	8.7	s.u.

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# Analytical and Quality Control Report

Wayne Price

Report Date:

July 5, 2001

OCD

1220 S. Saint Francis Dr. Santa Fe, NM 87504

Order ID Number: A01050432

Project Number:

SEC36-255-36E

Project Name: Project Location:

J. Anthony Ranch SEC 36-255-36E

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

-			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
170563	0105021700	Soil	5/2/01	17:00	5/4/01
170564	0105021710	Soil	5/2/01	17:00	5/4/01
170565	0105021720	Soil	5/2/01	17:00	5/4/01
170566	0105021800	Soil	5/2/01	17:00	5/4/01
170567	0105021830	Soil	5/2/01	17:00	5/4/01
170568	0105021900	Soil	5/2/01	17:00	5/4/01

These results represent only the samples received in the laboratory. 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.

This report consists of a total of 18 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director



Order Number: A01050432 J. Anthony Ranch



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# **Analytical Report**

Sample:

170563 - 0105021700

BTEX Analytical Method: S 8021B QC Batch: QC11133 Date Analyzed: Analysis: 5/11/01 JW Analyst: Preparation Method: E 5030B Prep Batch: PB09536 Date Prepared: 5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		< 0.013	mg/Kg	13	0.001
Toluene		< 0.013	mg/Kg	13	0.001
Ethylbenzene		< 0.013	mg/Kg	13	0.001
M,P,O-Xylene		0.685	mg/Kg	13	0.001
Total BTEX		0.685	mg/Kg	13	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		1.11	mg/Kg	13	0.10	85	72 - 128
4-BFB		1.02	mg/Kg	13	0.10	78	72 - 128

Sample:

170563 - 0105021700

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC11235 Date Analyzed: 5/15/01

Analyst: JS Preparation Method: N/A Prep Batch: PB09622 Date Prepared: 5/9/01

Param	Flag	Result	Units	Dilution	RDL
CL		<10	mg/Kg	1	0.50

Sample:

170563 - 0105021700

Analysis: Analytical Method: 5/8/01 TPH E 418.1 QC Batch: QC11015 Date Analyzed: Analyst: IJ Preparation Method: N/A PB09454 Date Prepared: 5/5/01 Prep Batch:

Param	Flag	Result	Units	Dilution	RDL
TRPHC		35700	mg/Kg	1	10

Sample: 170564 - 0105021710

Analysis: 5/11/01 Analytical Method: QC Batch: QC11133 Date Analyzed: BTEX S 8021B Analyst: JW Date Prepared: 5/11/01 Preparation Method: E 5030B Prep Batch: PB09536

<sup>2</sup> aram	Flag	Result	$\mathbf{Units}$	Dilution	RDL
Benzene		< 0.013	mg/Kg	13	0.001
Coluene		< 0.013	mg/Kg	13	0.001
Sthylbenzene		< 0.013	mg/Kg	13	0.001
A,P,O-Xylene		< 0.013	mg/Kg	13	0.001
otal BTEX		< 0.013	mg/Kg	13	0.001

urrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
FT		1.36	mg/Kg	13	0.10	104	72 - 128
-BFB		1.19	mg/Kg	13	0.10	91	72 - 128

Order Number: A01050432 J. Anthony Ranch

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Sample: 170564 - 0105021710

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC11235 Date Analyzed: 5/15/01

Analyst: JS Preparation Method: N/A Prep Batch: PB09622 Date Prepared: 5/9/01

 Param
 Flag
 Result
 Units
 Dilution
 RDL

 CL
 <10</td>
 mg/Kg
 1
 0.50

Sample: 170564 - 0105021710

Analytical Method: E 418.1 QC Batch: Analysis: TPH QC11015 Date Analyzed: 5/8/01 Preparation Method: N/A Prep Batch: PB09454 Date Prepared: 5/5/01 Analyst: JJ

ParamFlagResultUnitsDilutionRDLTRPHC7500mg/Kg110

Sample: 170565 - 0105021720

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC11133 Date Analyzed: 5/11/01 Analyst: JW Preparation Method: E 5030B Prep Batch: PB09536 Date Prepared: 5/11/01

Param Flag Result Units Dilution RDL mg/Kg Benzene < 0.013  $\overline{13}$ 0.001 Toluene < 0.013 mg/Kg 13 0.001 Ethylbenzene < 0.013 mg/Kg 13 0.001 M,P,O-Xylene < 0.013 mg/Kg 13 0.001 Total BTEX < 0.013 mg/Kg 13 0.001

Spike Percent Recovery Result Units Surrogate Flag Dilution Amount Recovery Limits TFT 1.26 mg/Kg13 0.10 96 72 - 128 4-BFB 1.08 mg/Kg 13 0.10 83 72 - 128

Sample: 170565 - 0105021720

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC11235 Date Analyzed: 5/15/01

Analyst: JS Preparation Method: N/A Prep Batch: PB09622 Date Prepared: 5/9/01

Sample: 170565 - 0105021720

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC11015 Date Analyzed: 5/8/01 Analyst: JJ Preparation Method: N/A Prep Batch: PB09454 Date Prepared: 5/5/01



Order Number: A01050432 J. Anthony Ranch

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Sample:	170566 -	0105021800
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S 8021B **BTEX** Analytical Method: QC Batch: QC11133 Date Analyzed: Analysis: 5/11/01 JW Preparation Method: Analyst: E 5030B Prep Batch: PB09536 Date Prepared: 5/11/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		< 0.013	${ m mg/Kg}$	13	0.001
Toluene		< 0.013	mg/Kg	13	0.001
Ethylbenzene		< 0.013	mg/Kg	13	0.001
M,P,O-Xylene		< 0.013	mg/Kg	13	0.001
Total BTEX		< 0.013	mg/Kg	13	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
$\overline{ ext{TFT}}$		1.3	mg/Kg	13	0.10	100	72 - 128
4-BFB		1.16	mg/Kg	13	0.10	89	72 - 128

#### Sample: 170566 - 0105021800

QC11235 Date Analyzed: 5/15/01 Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch:

Analysis: Analyst: Preparation Method: N/A Prep Batch: PB09622 Date Prepared: 5/9/01

Param	Flag	Result	Units	Dilution	·	RDL
CL		< 50	mg/Kg	5		0.50

#### Sample: 170566 - 0105021800

TPH Analytical Method: QC Batch: Analysis: E 418.1 QC11015 Date Analyzed: 5/8/01 Analyst: JJ Preparation Method: N/A Prep Batch: PB09454 Date Prepared: 5/5/01

Param	Flag	Result	Units	Dilution	RDL
TRPHC		<10.0	mg/Kg	1	10

#### Sample: 170567 - 0105021830

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC11133 Date Analyzed: 5/11/01 Analyst: JW Preparation Method: E 5030B Prep Batch: PB09536 Date Prepared: 5/11/01

Param	Flag	Result	Units	Dilution	RDL
3enzene		< 0.025	mg/Kg	25	0.001
[foluene]		< 0.025	${ m mg/Kg}$	25	0.001
Ethylbenzene		< 0.025	mg/Kg	25	0.001
1,P,O-Xylene		< 0.025	mg/Kg	25	0.001
Otal BTEX		< 0.025	mg/Kg	25	0.001

urrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
FT		2.43	mg/Kg	25	0.10	97	72 - 128
-BFB		2.55	mg/Kg	25	0.10	102	72 - 128

Order Number: A01050432 J. Anthony Ranch

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Sample: 170567 - 0105021830

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC11235 Date Analyzed: 5/15/01
Analyst: JS Preparation Method: N/A Prep Batch: PB09622 Date Prepared: 5/9/01

Sample: 170567 - 0105021830

Analysis: TPH Analytical Method: E 418.1 QC Batch: QC11015 Date Analyzed: 5/8/01

Analyst: JJ Preparation Method: N/A Prep Batch: PB09454 Date Prepared: 5/5/01

ParamFlagResultUnitsDilutionRDLTRPHC20900mg/Kg110

Sample: 170568 - 0105021900

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC11295 Date Analyzed: 5/17/01 Analyst: Preparation Method: N/A Prep Batch: PB09662 Date Prepared: RS 5/17/01

Param Flag Result Units Dilution RDL Hydroxide Alkalinity <1.0 mg/Kg as CaCo3 1 1 Carbonate Alkalinity <1.0 mg/Kg as CaCo3 1 1 Bicarbonate Alkalinity 138 mg/Kg as CaCo3 1 1 Total Alkalinity 138 mg/Kg as CaCo3 1 1

Sample: 170568 - 0105021900

Analysis: Analytical Method: BTEX S 8021B QC Batch: QC11133 Date Analyzed: 5/11/01 Analyst: JW Preparation Method: E 5030B Prep Batch: PB09536 Date Prepared: 5/11/01

Param Flag Result Units Dilution RDL Benzene 1.06 mg/Kg 100 0.001 Toluene 2 mg/Kg 100 0.001 Ethylbenzene < 0.1 mg/Kg 100 0.001 M,P,O-Xylene < 0.1 mg/Kg 100 0.001 Total BTEX 3.06 mg/Kg 100 0.001

Spike Percent Recovery Surrogate Result Flag Units Dilution Amount Recovery Limits TFT 9.63 mg/Kg 100 0.10 96 72 - 128 4-BFB 11.1 mg/Kg 100 0.10 111 72 - 128

Sample: 170568 - 0105021900

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC11189 Date Analyzed: 5/9/01 Analyst: JS Preparation Method: N/A Prep Batch: PB09552 Date Prepared: 5/9/01

Order Number: A01050432 J. Anthony Ranch Page Number: 6 of 18 SEC 36-255-36E

Sample: 170568 - 0105021900

Analysis: Hg, Total Analyst: SSC Analytical Method: Preparation Method:

S 7471A QC Batch: N/A Prep Batch: QC11082 PB09503 Date Analyzed:
Date Prepared:

5/10/01 5/10/01

Sample: 170568 - 0105021900

Analysis: Ion Ch

Analyst:

Ion Chromatography (IC) Analytical Method:

E 300.0 QC Batch:

QC11178 Date Analyzed: 5/10/01

JS Preparation Method: N/A Prep Batch: PB09567 Date Prepared: 5/9/01

Param	Flag	Result	$\mathbf{Units}$	Dilution	RDL
CL		<50	mg/Kg	5 .	0.50
Fluoride		9.11	mg/Kg	5	0.20
Nitrate-N	4	< 5.0	mg/Kg	5	0.20
Sulfate		106	mg/Kg	5	0.50

Sample: 170568 - 0105021900

Analysis: Salts Analytical Method: S 6010B QC Batch: QC12373 Date Analyzed: 6/27/01 Analyst: LB Preparation Method: E 3005 A Prep Batch: PB10481 Date Prepared: 6/27/01

Flag Result Units Dilution RDL Param Dissolved Calcium 14.3 mg/Kg 1 0.50 Dissolved Magnesium 8.30 mg/Kg 1 0.50 Dissolved Potassium 9.47 mg/Kg 1 0.50 Dissolved Sodium 1 38.8 mg/Kg 0.50

Sample: 170568 - 0105021900

Inalysis: Analytical Method: TDS E 160.1 QC Batch: QC11259 Date Analyzed: 5/16/01 \nalyst: JS Preparation Method: Prep Batch: PB09621 Date Prepared: 5/15/01 N/A

ParamFlagResultUnitsDilutionRDLPotal Dissolved Solids27900mg/Kg2010

Sample: 170568 - 0105021900

nalysis: TPH Analytical Method: E 418.1 QC Batch: QC11015 Date Analyzed: 5/8/01 nalyst: JJ Preparation Method: N/A Prep Batch: PB09454 Date Prepared: 5/5/01

 aram
 Flag
 Result
 Units
 Dilution
 RDL

 RPHC
 16500
 mg/Kg
 1
 10

ample: 170568 - 0105021900

nalysis: Analytical Method: 5/12/01 Total Metals S 6010B QC Batch: QC11123 Date Analyzed: nalyst: Date Prepared: 5/7/01 RR. Preparation Method: E 3010A Prep Batch: PB09414

Continued ...

Order Number: A01050432 J. Anthony Ranch

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Continued Sam	ple: 170568 Analy Flag	vsis: Total Metals Result	Units	Dilution	RDL
				<del> </del>	<del></del>
Param	$\mathbf{Flag}$	Result	Units	Dilution	RDL
Total Arsenic		<5	mg/Kg	1	5
Total Barium		14.8	mg/Kg	1	5
Total Cadmium	•	<2	mg/Kg	1	2
Total Chromium		<5	mg/Kg	1	5
Total Lead		<5	mg/Kg	1	5
Total Selenium		<5	mg/Kg	. 1	5
Total Silver		<1	mg/Kg	1	1

170568 - 0105021900 Sample:

Analysis: Analyst:

pH RS

Analytical Method: Preparation Method: N/A

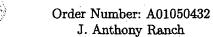
E 150.1

QC Batch: QC11251 Prep Batch: PB09627

Date Analyzed: Date Prepared:

5/9/01 5/9/01

Param	Flag	Result	Units	Dilution	RDL
pH		8.7	s.u.	1	1





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# Quality Control Report Method Blank

Method Blank

QCBatch:

QC11015

				Reporting
Param	Flag	Results	${f Units}$	Limit
TRPHC		<10.0	mg/Kg	10

Method Blank

QCBatch:

QC11082

	•			Reporting
Param	Flag	Results	Units	Limit
Total Mercury		<0.19	mg/Kg	0.19

Method Blank

QCBatch:

QC11123

·					
Param	Flag	Results	Units	Limit	
Total Arsenic		<5	mg/Kg	5	
Total Barium		<5	mg/Kg	5	
Total Cadmium		<2	mg/Kg	2	
Total Chromium		<5	mg/Kg	5	
Total Lead		<5	mg/Kg	5	
Total Selenium		<5	mg/Kg	5	
Total Silver		<1	mg/Kg	1	

Method Blank

QCBatch:

QC11133

				Reporting
Param	Flag	Results	${f Units}$	Limit
Benzene		< 0.013	mg/Kg	0.001
Toluene		< 0.013	mg/Kg	0.001
Ethylbenzene		< 0.013	${ m mg/Kg}$	0.001
M,P,O-Xylene	•	< 0.013	mg/Kg	0.001
Total BTEX		< 0.013	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
$\Gamma F T$		1.27	mg/Kg	13	0.10	97	72 - 128
⊢BFB		1.11	mg/Kg	13	0.10	85	72 - 128

Method Blank

QCBatch:

Order Number: A01050432 J. Anthony Ranch

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Param	Flag	Results	${f Units}$	Reporting Limit
$\overline{ ext{CL}}$		2.91	mg/Kg	0.50
Fluoride		<1.0	mg/Kg	0.20
Nitrate-N		<1.0	mg/Kg	0.20
Sulfate		7.89	mg/Kg	0.50

Method Blank

QCBatch:

QC11189

				Reporting
Param	Flag	Results	Units	Limit
Specific Conductance		6.77	$\mu \mathrm{MHOS/cm}$	

Method Blank

QCBatch:

QC11235

•				Reporting
Param	Flag	Results	Units	Limit
$\overline{ ext{CL}}$		2.99	mg/Kg	0.50

Method Blank

QCBatch:

QC11259

				•	Reporting
Param	Flag	Results	Units		Limit
Total Dissolved Solids		<10	mg/Kg	,	10

Method Blank

QCBatch:

QC11295

Param	Flag	Results	Units	Reporting Limit
Hydroxide Alkalinity		<1.0	mg/Kg as CaCo3	1
Carbonate Alkalinity	,	<1.0	mg/Kg as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/Kg as CaCo3	1.
Total Alkalinity		<4.0	mg/Kg as CaCo3	1

Method Blank

QCBatch:

QC12373

Param	Flag	Results	Units	Reporting Limit
Dissolved Calcium		< 0.5	mg/L	0.50
Dissolved Magnesium		< 0.5	m mg/L	0.50
Dissolved Potassium		< 0.5	m mg/L	0.50
Dissolved Sodium		<0.5	mg/L	0.50

Quality Control Report Duplicate Samples

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Duplicate

Specific Conductance

Param

QCBatch:

QC11189

	Duplicate	Sample				RPD
Flag	Result	Result	Units	Dilution	RPD	Limit
	2875	2870	uMHOS/cm	1	0	6.1

Duplicate

QCBatch:

QC11251

,		Duplicate	Sample				RPD	
Param	Flag	Result	Result	Units	Dilution	RPD	Limit	
pH		7.5	7.5	s.u.	1	0	0.85	

Duplicate

QCBatch:

QC11295

		Duplicate	Sample				RPD
Param	Flag	Result	Result	Units	Dilution	RPD	Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/Kg as CaCo3	1	0	7
Carbonate Alkalinity		<1.0	<1.0	mg/Kg as CaCo3	1	0	7
Bicarbonate Alkalinity	1	22	16	mg/Kg as CaCo3	1	31	7
Total Alkalinity		22	16	mg/Kg as CaCo3	1	31	7

# Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch:

QC11015

					Spike				•	:
	LCS	LCSD			Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
FRPHC	276	252	mg/Kg	1	250	<10.0	110	9	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch:

QC11082

					Spike					
	LCS	LCSD			Amount	Matrix			% Rec	RPD
'aram	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
Total Mercury	2.55	2.55	mg/Kg	1	2.50	<0.19	102	0	83 - 124	20

<sup>&#</sup>x27;ercent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch:

<sup>&</sup>lt;sup>1</sup>Sample RPD was above acceptable control limits

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-										•
Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Arsenic	60.60	61.20	mg/Kg	1	50	<5	121	. 0	80 - 120	20
Total Barium	110	111	mg/Kg	1	100	<5	110	0	80 - 120	20
Total Cadmium	27.3	27.40	mg/Kg	1	<b>2</b> 5	<2	109	0	80 - 120	20
Total Chromium	11	11	mg/Kg	1	10	<5	110	0	80 - 120	20
Total Lead	55.4	55.1	mg/Kg	1	50	<5	110	0	80 - 120	20
Total Selenium	48.50	48.3	mg/Kg	1	50	<5	97	0	80 - 120	20
Total Silver	$^{2}$ 4.57	4.64	mg/Kg	1	12.50	<1	36	1	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch:

QC11133

					Spike				*	
	LCS	LCSD			Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
MTBE	1.28	1.19	mg/Kg	13	0.10	< 0.013	98	7	80 - 120	20
Benzene	1.33	1.29	mg/Kg	13	0.10	< 0.013	102	3	80 - 120	20
Toluene	1.25	1.23	mg/Kg	13	0.10	< 0.013	96	1	80 - 120	20
Ethylbenzene	1.22	1.2	mg/Kg	13	0.10	< 0.013	93	1	80 - 120	20
M,P,O-Xylene	3.7	3.62	mg/Kg	13	0.30	< 0.013	94	2	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Recovery
Surrogate	Result	Result	Units	Dilution	Amount	% Rec	% Rec	Limits
$\overline{ ext{TFT}}$	1.3	1.25	mg/Kg	13	0.10	100	96	72 - 128
4-BFB	1.23	1.19	mg/Kg	13	0.10	94	91	72 - 128

Laboratory Control Spikes

QCBatch:

QC11178

					Spike					
	LCS	LCSD		,	Amount	Matrix		•	% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
Bromide	2.59	2.61	mg/Kg	1	2.50	<1.0	103	0	90 - 110	20
$\mathbf{CL}$	<sup>3</sup> 14.16	<sup>4</sup> 14.21	mg/Kg	1	12.50	2.91	113	0	90 - 110	20
Fluoride	<sup>5</sup> 2.73	<sup>6</sup> 2.73	mg/Kg	1 .	2.50	<1.0	109	0	90 - 110	20
Nitrate-N	<sup>7</sup> 2.56	8 2.55	mg/Kg	. 1	2.50	<1.0	102	0	90 - 110	20
Sulfate	<sup>9</sup> 19.71	<sup>10</sup> 20.02	mg/Kg	1	12.50	7.89	157	1	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch:

<sup>&</sup>lt;sup>2</sup>Matrix spike and LCS recoveries were low on Ag due to the Ag falling out of solutions.

 $<sup>^3</sup>$ Sample master doesn't subtract the blank from the spikes. The correct %EA = 90.

 $<sup>^4</sup>$ Sample master doesn't subtract the blank from the spikes. The correct %EA = 90.

 $<sup>^5</sup>$ Sample master doesn't subtract the blank from the spikes. The correct %EA = 109.

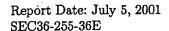
 $<sup>^6</sup>$ Sample master doesn't subtract the blank from the spikes. The correct %EA = 109.

<sup>7</sup> Sample master doesn't subtract the blank from the spikes. The correct %EA = 102.

 $<sup>^8</sup>$ Sample master doesn't subtract the blank from the spikes. The correct %EA = 102.

 $<sup>^9</sup>$ Sample master doesn't subtract the blank from the spikes. The correct %EA = 95.

 $<sup>^{10}</sup>$ Sample master doesn't subtract the blank from the spikes. The correct %EA = 97.





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					Spike				•	
*	LCS	LCSD			Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
$\overline{\mathrm{CL}}$	11 14.41	<sup>12</sup> 14.40	mg/Kg	1	12.50	2.99	115	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spikes

QCBatch:

QC12373

					Spike					
•	LCS	LCSD			Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
Dissolved Calcium	100	102	$_{ m mg/L}$	1	100	< 0.5	100	1	75 - 125	20
Dissolved Magnesium	95.9	99.3	${ m mg/L}$	1	100	< 0.5	95	3	75 - 125	20
Dissolved Potassium	97.4	99.4	mg/L	1	100	< 0.5	97	2	75 - 125	20
Dissolved Sodium	94.9	99.1	$_{ m mg/L}$	1	100	< 0.5	94	4	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

# Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch:

QC11015

					Spike					
	MS	MSD			Amount	Matrix	•		% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
TRPHC	255	271	mg/Kg	1	250	<10.0	102	6	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch:

QC11082

					Spike					
	MS	MSD			Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
Total Mercury	2.43	2.55	mg/Kg	1	2.50	< 0.19	97	4	83 - 124	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch:

QC11123

MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
57.5	58.3	mg/Kg	1	50	<5	115	1 .	75 - 125	20
211	196	mg/Kg	1	100	88.6	122	13	75 - 125	20
26.4	26.4	mg/Kg	11	25	<2	105	0	75 - 125	20
	Result 57.5 211	Result         Result           57.5         58.3           211         196	Result         Result         Units           57.5         58.3         mg/Kg           211         196         mg/Kg	Result         Result         Units         Dil.           57.5         58.3         mg/Kg         1           211         196         mg/Kg         1	MS         MSD         Amount           Result         Result         Units         Dil.         Added           57.5         58.3         mg/Kg         1         50           211         196         mg/Kg         1         100	MS         MSD         Amount         Matrix           Result         Result         Units         Dil.         Added         Result           57.5         58.3         mg/Kg         1         50         <5	MS         MSD         Amount         Matrix           Result         Result         Units         Dil.         Added         Result         % Rec           57.5         58.3         mg/Kg         1         50         <5	MS         MSD         Amount         Matrix           Result         Result         Dil.         Added         Result         % Rec         RPD           57.5         58.3         mg/Kg         1         50         <5	MS         MSD         Amount         Matrix         % Rec           Result         Result         Units         Dil.         Added         Result         % Rec         RPD         Limit           57.5         58.3         mg/Kg         1         50         <5

Continued ...

 $<sup>^{11}</sup>$ Sample master doesn't subtract the blank from the spikes. The correct %EA = 91.

 $<sup>^{12}</sup>$ Sample master doesn't subtract the blank from the spikes. The correct %EA = 91.



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 $\dots Continued$ 

					Spike					
	MS	MSD			Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
Total Chromium	<sup>13</sup> 24.3	<sup>14</sup> 23	mg/Kg	1	10	11	133	10	75 - 125	20
Total Lead	74.3	78.5	mg/Kg	1	<b>5</b> 0	29.3	90	8	75 - 125	20
Total Selenium	39	40.6	mg/Kg	1	50	<5	78	4	75 - 125	20
Total Silver	<sup>15</sup> 4.67	4.67	mg/Kg	1	12.50	<1	37	0	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch:

QC11133

				•	Spike					
	MS	MSD			Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
Benzene	0.744	0.968	mg/Kg	13	0.10	< 0.013	57	177	. 80 - 120	20
Toluene	0.729	0.969	mg/Kg	13	0.10	< 0.013	56	178	80 - 120	20
Ethylbenzene	0.682	0.918	mg/Kg	13	0.10	< 0.013	52	178	80 - 120	20
M,P,O-Xylene	. 2	2.696	mg/Kg	13	0.30	< 0.013	51	178	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Recovery
Surrogate	Result	Result	Units	Dilution	Amount	% Rec	% Rec	Limits
$\overline{ ext{TFT}}$	0.976	1.254	mg/Kg	13	0.10	75	96	72 - 128
4-BFB	1.05	1.261	mg/Kg	13	0.10	80	97	72 - 128

Matrix Spikes

QCBatch:

QC11178

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
$\overline{ ext{CL}}$	1435.61	1437.97	mg/Kg	1	625	863	91	0	70 - 115	20
Fluoride	<sup>16</sup> 122.26	$^{17}$ 126.20	mg/Kg	· <b>1</b> ·	125	< 5.0	97	3	77 - 111	20
Nitrate-N	<sup>18</sup> 126.15	<sup>19</sup> 127.18	mg/Kg	1	125	< 5.0	100	0	80 - 112	20
Sulfate	<sup>20</sup> 675.59	<sup>21</sup> 682.15	mg/Kg	1	625	53.5	99	1	74 - 118	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch:

<sup>&</sup>lt;sup>13</sup>Poor spike recovery due to matrix difficulties. LCS/LCSD show analysis in control.

<sup>&</sup>lt;sup>14</sup>Poor spike recovery due to matrix difficulties. LCS/LCSD show analysis in control.

<sup>&</sup>lt;sup>15</sup>Matrix spike and LCS recoveries were low on Ag due to the Ag falling out of solutions.

<sup>&</sup>lt;sup>16</sup>I spiked the \* 50 dilution for 170574, but reported the \*5 dilution. The correct %EA = 92.

<sup>17</sup>I spiked the \* 50 dilution for 170574, but reported the \*5 dilution.

18I spiked the \* 50 dilution for 170574, but reported the \*5 dilution.

19I spiked the \* 50 dilution for 170574, but reported the \*5 dilution.

 $<sup>^{20}</sup>$ I spiked the \* 50 dilution for 170574, but reported the \*5 dilution. The correct %EA = 96.

<sup>&</sup>lt;sup>21</sup>I spiked the \* 50 dilution for 170574, but reported the \*5 dilution.

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					Spike					
	MS	MSD			Amount	Matrix			% Rec	$\mathtt{RPD}$
Param	Result	Result	Units	Dil.	$\mathbf{Added}$	Result	% Rec	RPD	Limit	Limit
$\overline{\mathrm{CL}}$	773.57	771.37	mg/Kg	1	250	520	101	0	70 - 115	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes

QCBatch:

QC12373

	MS	MSD			Spike Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
Dissolved Calcium	111	109	mg/L	1	100	14.3	96	2	75 - 125	20
Dissolved Magnesium	99.6	97.6	mg/L	\ <b>1</b>	100	8.30	91	2	75 - 125	20
Dissolved Potassium	103	100	mg/L	1	100	9.47	93	3	75 - 125	20
Dissolved Sodium	132	127	mg/L	1	100	38.8	93	. 5	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

# Quality Control Report Continuing Calibration Verification Standards

CCV (1)

QCBatch:

QC11015

			CCVs	CCVs	CCVs	Percent	•
		,	True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
TRPHC		mg/Kg	100	98.1	98	75 - 125	5/8/01

CCV (2)

QCBatch:

QC11015

			CCVs	CCVs	CCVs	Percent	
4			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
TRPHC		mg/Kg	100	. 104	104	75 - 125	5/8/01

ICV (1)

QCBatch:

QC11015

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
TRPHC		mg/Kg	100	98.6	98	75 - 125	5/8/01

CCV (1)

QCBatch:

Page Number: 15 of 18 Order Number: A01050432 Report Date: July 5, 2001 SEC 36-255-36E J. Anthony Ranch SEC36-255-36E CCVs **CCVs** Percent **CCVs** Recovery Date Found Percent True Analyzed Limits Flag Units Conc. Conc. Recovery Param 5/10/01 0.005 0.00492 98 80 - 120 mg/Kg Total Mercury ICV (1) QC11082 QCBatch: **CCVs CCVs CCVs** Percent Recovery Date Found Percent True Limits Analyzed Flag Units Conc. Conc. Recovery Param 80 - 120 5/10/01 0.005 0.00513 102 mg/Kg Total Mercury QC11123 CCV (1) QCBatch: **CCVs CCVs CCVs** Percent Date True Found Percent Recovery Analyzed Recovery Limits Conc. Conc. Flag Units Param 5/12/01 mg/L1 1.07 107 90 - 110 Total Arsenic 5/12/01 2 90 - 110 2.09 104 mg/L Total Barium 5/12/01 106 90 - 110 mg/L 0.50 0.531 Total Cadmium 90 - 110 5/12/01 0.20 0.209 104 mg/L Total Chromium 5/12/01 105 90 - 110 mg/L1 1.05 Total Lead 5/12/01 90 - 110 1.04 104 mg/L 1 Total Selenium 90 - 110 5/12/01 100 mg/L0.25 0.251 Total Silver ICV (1) QCBatch: QC11123 **CCVs CCVs CCVs** Percent Date True Found Percent Recovery Units Conc. Conc. Recovery Limits Analyzed Flag Param 90 - 110 5/12/01 1.03 103 mg/L1 Total Arsenic 5/12/01 2 100 90 - 110 mg/L2 Total Barium 5/12/01 90 - 110 0.50 0.501 100 Total Cadmium mg/L 5/12/01 0.20 0.20 100 90 - 110 Total Chromium mg/L5/12/01 90 - 110 mg/L 1 1 100 Total Lead 5/12/01 mg/L1 1 100 90 - 110 Total Selenium 5/12/01 90 - 110 mg/L0.250.24999 Total Silver CCV (1) QCBatch: QC11133

						· ·	· ·
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
MTBE		mg/Kg	0.10	0.106	106	85 - 115	5/11/01
Benzene		mg/Kg	0.10	0.103	103	85 - 115	5/11/01
Toluene		mg/Kg	0.10	0.0977	97	85 - 115	5/11/01
Ethylbenzene		mg/Kg	0.10	0.0921	92	85 - 115	5/11/01
M,P,O-Xylene		mg/Kg	0.30	0.272	90	85 - 115	5/11/01

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CCV (2)	QCBatch:	QC11133
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	•		CCVs	CCVs	CCVs	Percent	
			$\mathbf{True}$	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
MTBE		mg/Kg	0.10	0.0985	98	85 - 115	5/11/01
Benzene		mg/Kg	0.10	0.0988	. 98	85 - 115	5/11/01
Toluene		${ m mg/Kg}$	0.10	0.0916	91	85 - 115	5/11/01
Ethylbenzene		$_{ m mg/Kg}$	0.10	0.0884	88	85 - 115	5/11/01
M,P,O-Xylene		mg/Kg	0.30	0.265	88	85 - 115	5/11/01

ICV (1)

QCBatch:

QC11133

			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
MTBE		mg/Kg	0.10	0.102	102	85 - 115	5/11/01
Benzene		mg/Kg	0.10	0.103	103	85 - 115	5/11/01
Toluene		mg/Kg	0.10	0.0985	98	85 - 115	5/11/01
Ethylbenzene		mg/Kg	0.10	0.0972	97	85 - 115	5/11/01
M,P,O-Xylene		mg/Kg	0.30	0.29	96	85 - 115	5/11/01

CCV (1)

QCBatch:

QC11178

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.61	104	90 - 110	5/10/01
CL	· ·	mg/L	12.50	11.71	93	90 - 110	5/10/01
Fluoride		mg/L	2.50	2.41	96	90 - 110	5/10/01
Nitrate-N		mg/L	2.50	2.43	97	90 - 110	5/10/01
Sulfate		mg/L	12.50	12.02	96	90 - 110	5/10/01

ICV (1)

QCBatch:

QC11178

			CCVs	CCVs	CCVs	Percent	(A)
			${f True}$	Found	Percent	Recovery	Date
Param	$\mathbf{Flag}$	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Bromide		mg/L	2.50	2.52	100	90 - 110	5/10/01
CL		${ m mg/L}$	12.50	11.82	94	90 - 110	5/10/01
Fluoride		m mg/L	2.50	2.56	102	90 - 110	5/10/01
Nitrate-N		mg/L	2.50	2.43	97	90 - 110	5/10/01
Sulfate		mg/L	12.50	12.24	97	90 - 110	5/10/01

CCV (1)

QCBatch:

Report Date: July 5, 2001

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SEC36-255-36E			J. Anthony Ranch			SEC 36-255-30		
		Flor	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Param	ductono	Flag	$\mu$ MHOS/cm	1412	1388	98	90 - 110	5/9/01
Specific Cond	luctance	,	μMIIOS/CIII	1412	1300	90	30 - 110	3/9/01
TOTT (1)		OOD-4-b.	0011100					
ICV (1)		QCBatch:	QC11189					
				CCVs	CCVs	CCVs	Percent	
				True	Found	Percent	Recovery	Date
Param		Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Specific Cond	luctance		$\mu \mathrm{MHOS/cm}$	1411	1397	99	90 - 110	5/9/01
CCV (1)		QCBatch:	QC11235			• .		
	•	QODAGA.	QC11200					
			CCVs	CCVs	C	CVs	Percent	
			True	Found	Pe	rcent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Rec	covery	Limits	Analyzed
CL		mg/L	12.50	11.96		95	90 - 110	5/15/01
					•			
ICV (1)		QCBatch:	QC11235			,		
10 (1)		QCDaten.	QC11233					•
			CCVs	CCVs	C	CVs	Percent	
			True	Found		rcent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Rec	overy	Limits	Analyzed
CL		$_{ m mg/L}$	12.50	12.47		99	90 - 110	5/15/01
CCV (1)		QCBatch:	QC11251		••			
			CCVs	CCVs	CCVs	12/	ercent	
		· .	True	Found	Percent		covery	Date
Param	Flag	Units	Conc.	Conc.	Recovery		imits	Analyzed
pH		s.u.	7	7.0	100		- +0.1 s.u.	5/9/01
						· · · · · · · · · · · · · · · · · · ·		
•						•		* #3
			• ,					125
ICV (1)		QCBatch:	QC11251					
			COL	COL	COTT			
			CCVs	CCVs	CCVs		ercent	D-4
Daram	Tile or	TInita	True	Found	Percent	Re	covery	Date

CCV (1)

Flag

Param

pН

QCBatch:

Units

s.u.

QC11295

Conc.

7.0

Recovery

100

Limits

-0.1 s.u. - +0.1 s.u.

Analyzed

5/9/01



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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/Kg as CaCo3	0	<1.0	0	90 - 110	5/17/01
Carbonate Alkalinity		mg/Kg as CaCo3	0.	236	0	90 - 110	5/17/01
Bicarbonate Alkalinity		mg/Kg as CaCo3	0	10	0	90 - 110	5/17/01
Total Alkalinity		mg/Kg as CaCo3	250	246	98	90 - 110	5/17/01

ICV (1)

QCBatch:

QC11295

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/Kg as CaCo3	0	<1.0	0	90 - 110	5/17/01
Carbonate Alkalinity		mg/Kg as CaCo3	0	228	0	90 - 110	5/17/01
Bicarbonate Alkalinity		mg/Kg as CaCo3	0	18	0	90 - 110	5/17/01
Total Alkalinity		mg/Kg as CaCo3	250	246	98	90 - 110	5/17/01

CCV (1)

QCBatch:

QC12373

			CCVs True	$ ext{CCVs}$ $ ext{Found}$	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	$\mathbf{Conc.}$	Recovery	Limits	Analyzed
Dissolved Calcium		mg/L	25	25.4	101	90 - 110	6/27/01
Dissolved Magnesium		$_{ m mg/L}$	25	24.9	99	90 - 110	6/27/01
Dissolved Potassium	•	$_{ m mg/L}$	25	24.4	97	90 - 110	6/27/01
Dissolved Sodium		mg/L	25	24.5	98	90 - 110	6/27/01

ICV (1)

QCBatch:

,			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Calcium		mg/L	25	25.2	100	95 - 105	6/27/01
Dissolved Magnesium		${ m mg/L}$	25	25.4	101	95 - 105	6/27/01
Dissolved Potassium	4	m mg/L	<b>25</b>	24.7	98	95 - 105	6/27/01
Dissolved Sodium		mg/L	25	24.8	99	95 - 105	6/27/01

Project #: (If different from above) Contact Person: Project Location: Address: Company Name: 6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424 Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296 nvoice to: Relihquished by Relinquished by: Submittal of samples constitutes agreement to Terms and Conditions listed or 010502 1830 010502 1900 0/0502 0/0502 1720 0105021710 0105021700 (Street, City, Zip)
1220 S SAINT FRANCIS DR (SF) HM 36-255-36E OOL CONSFRUNTION DIN FIELD CODE 1800 Date: **TraceAnalysis, Inc** PRICE 10:5AM Time: | |me: Received by: Received by: # CONTAINERS Ż Volume/Amount WATER SOIL MATRIX Fax #: 87505 AIR Sampler Signature: Phone #: SLUDGE Project Name: verse side of C.O.C. HCL 505-476-348] Date: HNO3 PRESERVATIVE H<sub>2</sub>SO METHOD 4725 Ripley Dr., Ste A El Paso, Texas 79922-1028 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443 But NaOH Time: Time: X ICE トマター NONE SAMPLING DATE TIME MTBE 8021B/602 Carrier # BTEX 8021B/602 PH 418,14 X1005 PAH 8270C Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 (Circle or Specify Method No. TCLP Metals Ag As Ba Cd Cr Pb Se Hg **ANALYSIS REQUEST** TCLP Volatiles **TCLP Semi Volatiles** REMARKS: TCLP Pesticides RCI \* DELETE GC-MS Vol. 8260B/624 GC/MS Semi. Vol. 8270C/625 PCB's 8082/608 Pesticides 8081A/608 BOD, TSS, pH XIX CHLORIDES GEN CHEN Turn Around Time if diagrant from standard

CHAIN-OF-CUSTODY AND ANALYSIS REQUES:

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## TraceAnalysis, Inc. General Terms and Conditions

#### Article 1: General

1.1 The words "we", "us", and "our" refer to TraceAnalysis. You will deliver samples to us for analysis, accompanied, or preceded by, a signed Chain of Custody/Analysis Request defining the scope and timing c work and stating either the testing criteria you require or identifying the agency to which the results will be submitted.

- 2.1 We agree to provide the professional services described in this agreement. We will provide you with written reports containing analytical results. In performing our service, we will use that degree of care and ordinarily exercised under similar circumstances by reputable members of our profession practicing in the same locality.
- 2.2 Test and observations will be conducted using test procedures and laboratory protocols as specified in accepted Chain of Custody/Analysis Request. If you direct a manner of making tests that varies from standard or recommended procedures, you agree to hold us harmless from all claims, damages, and expenses arising out of your direction.
- 2.3 We will not release information regarding our services for you or any information that we receive from you, except for information that is in the public domain and except as we are required by law.

#### Article 3: Your General Responsibilities

- 3.1 On each Chain of Custody/Analysis Request you will designate a representative who has authority to transmit instructions, receive information, and make decisions relative to our work.
- 3.2 You will respond in a reasonable time to our request for decisions, authorization for changes, additional compensation, or schedule extensions.
- 3.3 For each Chain of Custody/Analysis Request you will either provide us with the exact methods for analysis of each fraction or you will identify the regulations and agency under which or for which the analysis to be prepared. If permits, consent orders, work plans, quality assurance plans, or correspondence with regulatory agencies address laboratory requirements, you will provide us with copies of the relevant provise prior to our initiation of the analyses.

#### Article 4: Reports and Records

- 4.1 We will furnish copies of each report to you as specified in the Chain of Custody and Analysis Request. We will retain analytical data for seven years and financial data for three years relating to the services perfor following transmittal of our final report.
- 4.2 If you do not pay for our services as agreed, you agree that we may retain all reports and work not yet delivered to you. You also agree that our work will not be used by you for any purpose unless paid for.

## Article 5: Delivery and Acceptance of Samples

- 5.1 Until we accept delivery of samples by notation on chain of custody documents or otherwise in writing accept the samples, you are responsible for loss of or damage to samples. Until so accepted, we have responsibility as to samples.
- 5.2 As to any samples that are suspected of containing hazardous substances or radioactive material, such that would make special handling required, you will specify the suspected or known substances and I and type of radioactive activity. This information will be given to us in writing as a part of the Chain of Qustody/Analysis Request and will precede or accompany samples suspected of containing hazardous substan
- 5.3 Samples accepted by us remain your property while in our custody. We will retain samples for a period of 14 days following the date of submission or our report. We will extend the retention period if you so di Following the retention period we will dispose of non-hazardous samples. We may seturn highly bazardous, acutely toxic, or radioactive samples and samples containers and residues to you. You agree to accept the
- 5.4 Regardless of a prior acceptance, we may refuse acceptance or revoke acceptance of samples if we determine that the samples present a risk to health, safety, or the environment, or that we are not authorize accept them. If we revoke acceptance of any sample, you will have it removed from our facilities promptly.

### Article 6: Changes to Task Orders

- 6.1 No persons other than the designated representatives for each Chain of Custody/Analysis Request are authorized to act regarding changes to a Chain of Custody/Analysis Request. We will notify you promptly, i identify any activity that we regard as a change to the terms and conditions of a Chain of Custody/Analysis Request. Our notice will include the date, nature, circumstance, and cause of the activity regarded as a change We will specify the particular elements of project performance for which we may seek an equitable adjustment:
- 6.2 You will respond to the notice provided for in paragraph 6.1 promptly. Changes may be made to a Chain of Custody/Analysis Request through issuance of an amendment. The amendment will specify the restor the change and, as appropriate, include any modified budgets, schedules, scope of work, and other necessary provisions.
- 6.3 Until agreement is reached concerning the proposed change, we may regard the situation as a suspension directed by you.

## Article 7: Compensation

- 7.1 Our pricing for the work is predicated upon your acceptance of the conditions and allocations of risks and responsibilities described in this agreement. You agree to pay for services as stated in our proposal accepted by you or according to our then current standard pricing documents if there is no other written agreement as to price. An estimate or statement of probable cost is not a firm figure unless stated as such.
- 7.2 Unless otherwise agreed to elsewhere, you agree to pay invoices within 30 days of receipt unless, within 15 days from receipt of the invoice, you notify us in writing of a particular item that is elleged to be incorrected you agree to pay the uncontested portions of the invoices within 30 days of receipt. You agree to pay interest on unpaid balances beginning 60 days after receipt of invoice at the rate of 1.5% per month, but no exceed the maximum rate allowed by law.
- 7.3 If you direct us to invoice another, we will do so, but you agree to be ultimately responsible for our compensation until you provide us with that third party's written acceptance of all terms of our agreement and u we agree to the substitution.
- 7.4 You agree to compensate us for our services and expenses if we are required to respond to legal process related to our services for you. Compensable services include hourly charges for all personnel involve the response and attorney fees reasonably incurred in obtaining advice concerning the response, the preparation of the testifier, and appearances related to the legal process.
- 7.5 If we are delayed by, or the period of performance is materially extended because of, factors beyond our control, or if project condition or the scope or amount of work change, or if the standards or methods of tes change, we will give you timely notice of the change and we will receive an equitable adjustment of our compensation.

# Article 8: Risk Allocation, Disputes, and Damages

- 8.1 Neither we nor you will be liable to the other for special, incidental, consequential or punitive losses or damages, including but not limited to those arising from delay, loss of use, loss of profits or revenue, or the capital.
- 8.2 We will not be liable to you for damages unless suit is commenced within two years of injury or loss or within two years of the date of the completion of our services, whichever is earlier. In no event will we be lie to you unless you have notified us of the discovery of the negligent act, error, omission or breach within 30 days of the date of its discovery and unless you have given us an opportunity to investigate and to recomme ways of mitigating your damages.
- 8.3 In the event you fail to pay us within 90 days following the invoice date, we may consider the default a total breach of our agreement and we may, at our option, terminate all of our duties without liability to you
- 8.4 If it is claimed by a third party that we did not complete an acceptable analysis, at your request will seek further review and acceptance of the completed work by the third party and use your best efforts to obtain that acceptance. We will assist you as directed.
- 8.5 You and we agree that disputes will be submitted to "Alternative Dispute Resolution" (ADR) as a condition precedent to litigation and other remedies provided by law. Each of us agrees to exercise good faith effic to resolve disputes through mediation unless we both agree upon another ADR procedure. All disputes will be governed by the law of the place where our services are rendered, or if our services are rendered in more than one state, you and we agree that the law of the place that services were first rendered will govern.
- 8.6 If either of us makes a claim against the other as to issues out of the performance of this agreement, the prevailing party will be entitled to recover its reasonable expenses of litigation, including reasonable attorned fees. If we bring lawsuit against you to collect our invoiced fees and expenses, you agree to pay our reasonable collection expenses including attorney fees.

## Article 9: Indemnities

9.1 We will indemnify and hold you harmless from and against demands, damages, and expenses caused by our negligent acts and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom we are legally responsible. You will indemnify and hold us harmless from and against demands, damages, and expenses caused by your negligent act and omissions and breach contract and by the negligent acts and omissions and breach of contract of persons for whom you are legally responsible. These indemnities are subject to specific limitations provided for in this agreement.

## Article 10: Miscellaneous Provisions

- 10.1 This agreement constitutes the entire agreement between you and us, and it supersedes all prior agreements. Any term, condition, prior course of dealing, course of performance, usage of trade, understanding purchase order conditions, or other agreement purporting to modify, vary, supplement, or explain any provision of this agreement is of no effect until placed in writing and signed by both parties subsequent to the do of this agreement. In no event will the printed terms or conditions stated in a purchase or work order, other than an agreed upon Chain of Custody/Analysis Request, be considered a part of this agreement, even if the printed terms or conditions stated in a purchase or work order, other than an agreed upon Chain of Custody/Analysis Request, be considered a part of this agreement, even if the printed terms or conditions stated in a purchase or work order. document is signed by both of us.
- 10.2 Neither party will assign this agreement without the express written approval of the other, but we may subcontract laboratory procedures with your approval as we deem necessary to meet our obligations to yo 10.3 If any of the provisions of this agreement are held to be invalid or unenforceable in any respect, the remaining terms will be in full effect and the agreement will be construed as if the invalid or unenforceable matter
- were never included in it. No waiver of any default will be waiver of any future default. 10.4 Neither you or we will have any liability for nonperformance caused in whole or in part by causes beyond our reasonable control. Such causes include but are not limited to Acts of God, civil unrest and war, lab
- unrest and strikes, equipment failures, matrix interference, acts of authorities, and failures of subcontractors that could not be reasonably anticipated. 10.5 You may stop our work by giving a written suspension or termination directive, but once work has been suspended, we need not resume work until we agree to change in scope, schedule, and compensation. Up suspension or termination, we will use reasonable care to preserve samples provided that you agree to compensate us for any additional effort, but we will have no responsibility for meeting holding time limitations af the effective time of a suspension or termination directive. We will be compensated for service rendered and expenses incurred prior to termination that cannot reasonably be avoided.

PIOH Turn Around Time if different from Standard CHAIN-OF-CUSTODY AND ANALYSIS REQUEST 808\A1808 sebicitee9 (Circle or Specify Method No.) **ANALYSIS REQUEST** GC/MS Semi. Vol. 8270C/625 3C-MS NOI: 8260B/624 PCI TCLP Pesticides TCLP Semi Volatiles TCLP Metals Ag As Ba Cd Cr Pb Se Hg Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 TPH 418 14TX 1005 BTEX 8021B/602 MTBE 80218/602 SAMPLING **HIME** 4725 Ripley Dr., Ste A El Paso, Texas 79922-1028 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443 **∮**∃TA₫ 505-476-3487 AUTHONY NONE PRESERVATIVE METHOD SANTA Fe CE X ИаОН <sup>†</sup>OS<sup>z</sup>H Sampler Signature: Project Name: VaHSO, Date: Date: TraceAnalysis, Inc. **EONH** HCF Phone #: Fax #: 87505 MATRIX STUDGE AIA TIOS × ISEOS SAINOT FRANCIS DR (SF) HM **HETAW** Received by: Received by ONL CONSTRUMTION DIV **JunomA\emuloV** = \_ `= # CONTAINERS 10:15/M Time: Time: Time: 255-36F FIELD CODE 5/3/61 0081 1830 0105021700 011 6502 17P 21AYNE Date: Date: 6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424 Tel (806) 794-1296 Fax (806) 794-1296 1 (800) 378-1296 Gubinittal of namalan acadition 010502 010502 36-200010 telinquished by: if different from above) company Name: ontact Person: Relinquished by: roject Location Relinquished by nvoice to: vddress: roject #:

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## 10: Miscellaneous Provisions

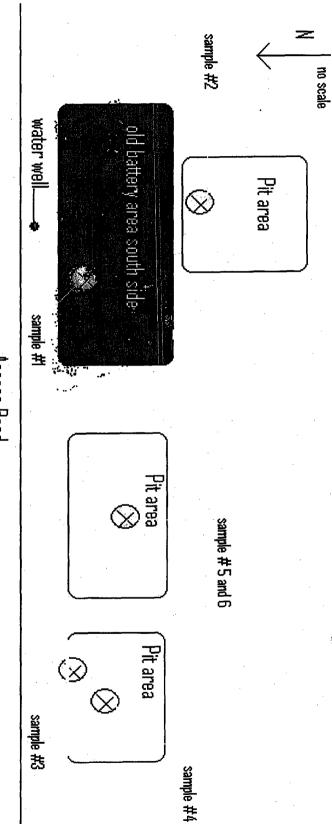
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# Access Road



Jay Anthony Ranch- Humble State #3 Tank Battery Site Unit A-Sec 36-Ts25s-R36e

© COC attached - Project name: J Anthony Ranch | Project Location: sec 36-25s-36e

Sample #1 (0105021700) collected from 0-12" deep; located Sample #2 (0105021710) collected from 0-12" deep; located

Sample #3 (0)05021720) surface sample:

Sample #4 (0105021800) collected from 4 feet deep; lou

i) located 45 feet SW of water well.
 i) located 255 feet SSE of water well.

located 345 feet west and 51 feet south of water well.

located 363 feet west and 99 feet south of water well.

Sample #5 (0105021830) collected from 3-4 feet deep; Sample #6 (0105021900) collected from 6-8 feet deep; located 237 feet west and 120 feet south of water