1R - 334

GENERAL CORRESPONDENCE

YEAR(S):

12/2002 > 3/4/02

Olson, William

From: Johnson, Larry
Sent: Friday, December 27, 2002 3:24 PM
To: Olson, William
Cc: Bayliss, Randy
Subject: Duke 4" Eldridge Project

Willie,
Attached are the photos of the 4" line leak found by stressed vegetation. This line is due east of the well / battery one mile north of the road into Frank Eldridge home.

PIX 85- East entrance road 1 mile north of Eldridge home entrance off of Monument Hwy @ MM 19
Pix 89 form well pad looking east to 4" excavation
Pix 92, 93 - 4" line
Pix 02, 03 - 20" line 1/2 mi south of 4" leak
Pix 03 - North well drilled on 20" investigation

Hope you can figure out what is happening - call if you want.
Happy New Year! Larry


DCP02985.JPG


DCP02989.JPG


DCP02992.JPG


DCP02993.JPG


DCP03002.JPG


DCP03003.JPG


12. 26. 2002


12. 26. 2002


12. 26. 2002


12. 26. 2002


12. 26. 2002


12. 26. 2002

12-10-02

Kim Anderson ConocoPhillips
e-environment 390 4821

Martin Woods - Burn Pits
Wtg Spill 396-2904

Photo Folder "O"
Early December 2002

Eldrich - Duke - Eades drilling 12-13-02
sampled split spoon (calpid 99)

		time
5'-7'	pid = 452 ppm	0938
10'-12'	526	10:01
15-17'	577	10:10
20-22 discoloration	534	10.20
~~25-26~~		
23-25	355	10:38
25-27	252	10:45
Final Cal PID	90.3	

Field Codes = 021212 ---- ← times

3 ↑

12-17-02 CT SBC for Gerald Mathis

Tobyandrews@SBCGlobal.net
sent photos

CT 12-18-02 ~1630
Gwen Jordan 393-9857
will submit written complaint
w/video - dead veg. - Trees
sick husband - by J.C.

---

met:
AVRA: Tom Jones 392-8950 cell 390-8477
Williams Lease landowner
VMJ Inc. (Cowboy Thes son)
inj well

JC CT Dina Romero cell-318 3556
12-18-02 13:50 She will 3-3024
send fax with complaints
water concerns. ASAP!

DC 12-19-02 Larry Parker CRI 393-1079
Wanted Mortgage + Approval Transfers
stn. in Roswell.
C-138 submitted on 12-3-02

TraceAnalysis, Inc. 6701 Aberdeen Ave., Suite 9 Lubbock, TX 79424-1515 (806) 794-1296

Summary Report

Paul Sheeley
OCD Hobbs Office
1625 N. French Drive
Hobbs, NM 88240

Report Date: December 19, 2002

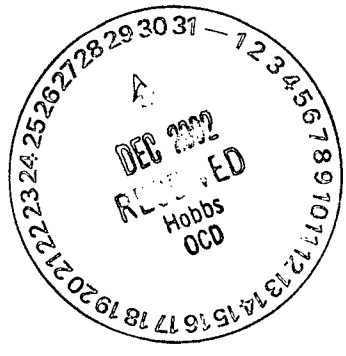
Order ID Number: A02121617

Project Number: 021212
Project Name: N/A
Project Location: Eldrich Ranch

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
216070	0212121001	Soil	12/12/02	10:01	12/14/02
216071	0212121020	Soil	12/12/02	10:20	12/14/02

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX				
Sample - Field Code	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)
216070 - 0212121001	5.69	41.6	9.27	32.1	88.7
216071 - 0212121020	<0.500	2.75	0.858	3.19	6.80



This is only a summary. Please, refer to the complete report package for quality control data.

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Paul Sheeley
OCD Hobbs Office
1625 N. French Drive
Hobbs, NM 88240

Report Date: December 19, 2002

Order ID Number: A02121617

Project Number: 021212
Project Name: N/A
Project Location: Eldrich Ranch

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

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
216070	0212121001	Soil	12/12/02	10:01	12/14/02
216071	0212121020	Soil	12/12/02	10:20	12/14/02

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. Note: the RDL is equal to MQL for all organic analytes including TPH.
The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

Note: Samples will be disposed of 30 days from the report date unless the lab is contacted before the 30 days has past.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 216070 - 0212121001

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC25663	Date Analyzed:	12/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB23789	Date Prepared:	12/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		5.69	mg/Kg	200	0.001
Toluene		41.6	mg/Kg	200	0.001
Ethylbenzene		9.27	mg/Kg	200	0.001
M,P,O-Xylene		32.1	mg/Kg	200	0.001
Total BTEX		88.7	mg/Kg	200	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.925	mg/Kg	200	1	92	70 - 130
4-BFB	[1]	1.58	mg/Kg	200	1	158	70 - 130

Sample: 216071 - 0212121020

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC25663	Date Analyzed:	12/17/02
Analyst:	CG	Preparation Method:	S 5035	Prep Batch:	PB23789	Date Prepared:	12/17/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.500	mg/Kg	500	0.001
Toluene		2.75	mg/Kg	500	0.001
Ethylbenzene		0.858	mg/Kg	500	0.001
M,P,O-Xylene		3.19	mg/Kg	500	0.001
Total BTEX		6.80	mg/Kg	500	0.001
Test Comments	[2]	*	mg/Kg	1	

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.726	mg/Kg	500	1	73	70 - 130
4-BFB	[3]	0.512	mg/Kg	500	1	51	70 - 130

[1] High surrogate recovery due to peak interference.
[2] Sample run at lowest dilution possible due to turbidity. Sample has a Benzene concentration of less than 0.136 which is the MDL.
[3] Surrogate within acceptable limits according to GC-3 soil control chart.

Quality Control Report
Method Blank

Method Blank

QCBatch: QC25663

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.010	mg/Kg	0.001
Toluene		<0.010	mg/Kg	0.001
Ethylbenzene		<0.010	mg/Kg	0.001
M,P,O-Xylene		<0.010	mg/Kg	0.001
Total BTEX		<0.010	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.928	mg/Kg	10	1	93	70 - 130
4-BFB		0.855	mg/Kg	10	1	85	70 - 130

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC25663

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	1	1.04	mg/Kg	10	1	<0.010	100	3	70 - 130	20
Benzene	0.951	0.968	mg/Kg	10	1	<0.010	95	1	70 - 130	20
Toluene	0.949	0.970	mg/Kg	10	1	<0.010	94	2	70 - 130	20
Ethylbenzene	0.927	0.952	mg/Kg	10	1	<0.010	92	2	70 - 130	20
M,P,O-Xylene	2.77	2.84	mg/Kg	10	3	<0.010	92	2	70 - 130	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.883	0.896	mg/Kg	10	1	88	89	70 - 130
4-BFB	0.874	0.887	mg/Kg	10	1	87	88	70 - 130

Quality Control Report
Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC25663

Continued ...

... Continued

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Benzene	[4] 0.837	1.02	mg/Kg	10	1	0.901	-6	665	70 - 130	20
Toluene	0.854	1.03	mg/Kg	10	1	0.909	-5	528	70 - 130	20
Ethylbenzene	0.829	0.991	mg/Kg	10	1	0.891	-6	861	70 - 130	20
M,P,O-Xylene	2.48	2.96	mg/Kg	10	3	2.66	-6	830	70 - 130	20

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

Surrogate	MS Result	MSD Result	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.826	0.975	mg/Kg	10	1	83	97	70 - 130
4-BFB	0.939	1.02	mg/Kg	10	1	94	102	70 - 130

Quality Control Report
Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC25663

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.106	106	85 - 115	12/17/02
Benzene		mg/L	0.10	0.0997	100	85 - 115	12/17/02
Toluene		mg/L	0.10	0.0998	100	85 - 115	12/17/02
Ethylbenzene		mg/L	0.10	0.0962	96	85 - 115	12/17/02
M,P,O-Xylene		mg/L	0.30	0.289	96	85 - 115	12/17/02

CCV (2)

QCBatch: QC25663

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.111	111	85 - 115	12/17/02
Benzene		mg/L	0.10	0.102	102	85 - 115	12/17/02
Toluene		mg/L	0.10	0.103	103	85 - 115	12/17/02
Ethylbenzene		mg/L	0.10	0.099	99	85 - 115	12/17/02
M,P,O-Xylene		mg/L	0.30	0.295	98	85 - 115	12/17/02

ICV (1)

QCBatch: QC25663

[4]Sample for MS/MSD was spiked due to prep error. Use LCS/LCSD.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.110	110	85 - 115	12/17/02
Benzene		mg/L	0.10	0.0993	99	85 - 115	12/17/02
Toluene		mg/L	0.10	0.099	99	85 - 115	12/17/02
Ethylbenzene		mg/L	0.10	0.0961	96	85 - 115	12/17/02
M,P,O-Xylene		mg/L	0.30	0.286	95	85 - 115	12/17/02

6701 Aberdeen Avenue, Ste. 9
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1 (800) 378-1296

TraceAnalysis, Inc.

155 McCutcheon,Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0212161 7

Company Name: New Mexico OCD
Phone #: (505) 393-6161
Address: (Street, City, Zip) 1625 N French Dr Hobbs NM 88240
Fax #: 393-0720
Contact Person: Paul Sheeley
Invoice to: (If different from above) 1220 St Francis Dr, Santa Fe NM 87505
Project #: 021212
Project Name:
Project Location: Eldrich Ranch
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
216070	021212 1001	1	40/2		X							X		12/12	1001
71	021212 1020	11	11		X							X		11	1020

ANALYSIS REQUEST
(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
	X															
	X															

	Relinquished by:	Date:	Time:	Received by:	Date:	Time:
		12/12/02	14:00			
	Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	Relinquished by:	Date:	Time:	Received at Laboratory by:	Date:	Time:
					12/4/02	11:30

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

ORIGINAL COPY

LAB USE ONLY

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

REMARKS:
BTEX

☐ Check If Special Reporting Limits Are Needed

Carrier # Bus 902 928 4781

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 of our work and stating either the testing criteria you require or identifying the agency to which the results will be submitted.

Article 2: Our General Responsibilities

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 skill 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 our 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 are 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 provisions 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 performed 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 no 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 level and type of radioactive activity. This information will be given to us in writing as a part of the Chain of Custody/Analysis Request and will precede or accompany samples suspected of containing hazardous substances.

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 of our report. We will extend the retention period if you so direct. Following the retention period we will dispose of non-hazardous samples. We may return highly hazardous, acutely toxic, or radioactive samples and samples containers and residues to you. You agree to accept them.

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 authorized to 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 if we 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 reason for 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 and 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 alleged to be incorrect. 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 not to 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 until 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 involved in 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 testing 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 cost of 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 liable 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 recommend 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 or to others.

8.4 If it is claimed by a third party that we did not complete an acceptable analysis, at your request we 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 efforts 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 attorney's 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 of 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 date 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 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 you.

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 matters 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, labor 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. Upon 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 after 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.

TraceAnalysis, Inc. 6701 Aberdeen Ave., Suite 9 Lubbock, TX 79424-1515 (806) 794-1296

Summary Report

Paul Sheeley
OCD Hobbs Office
1625 N. French Drive
Hobbs, NM 88240

Report Date: December 19, 2002

Order ID Number: A02121617

Project Number: 021212
Project Name: N/A
Project Location: Eldrich Ranch

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
216070	0212121001	Soil	12/12/02	10:01	12/14/02
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TraceAnalysis, Inc.

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El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0212161?

Company Name: New Mexico OCD
Phone #: (505) 393-6161
Address: (Street, City, Zip) 1625 N French Dr Hobbs NM 88240
Fax #: 393-0720
Contact Person: Paul Sheeley
Invoice to: (If different from above) 1220 St Francis Dr, Santa Fe NM 87505
Project #: 021212
Project Name:
Project Location: Eldrich Ranch
Sampler Signature: [signature]

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Turn Around Time if different from standard	Hold
216070	0212121001	1	40 oz		X							X		12/12	1001		X															
71	0212121020	"	"		X							X		"	1020		X															

RECEIVED
JAN 03 2003
Environmental Bureau
Oil Conservation Division

Relinquished by: [signature] Date: 12/12/02 Time: 14:00
Received by: Date: Time:

Relinquished by: Date: Time:
Received by: Date: Time:

Relinquished by: Date: Time:
Received at Laboratory by: [signature] Date: 12/4/02 Time: 11:30

LAB USE ONLY
Intact Y / N
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REMARKS: BTEX

☐ Check If Special Reporting Limits Are Needed

Carrier # Bus 902 928 478 1

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

ORIGINAL COPY

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

December 4, 2002

CERTIFIED MAIL
RETURN RECEIPT NO. 7001-1940-0004-7923-0582

Mr. Stephen Weathers
Duke Energy Field Services, Inc.
370 17th St., Suite 900
Denver, Colorado 80202

RE: CASE #1R334
ELDRIDGE RANCH
MONUMENT, NEW MEXICO

Dear Mr. Weathers:

The New Mexico Oil Conservation Division (OCD) has reviewed Duke Energy Field Services, Inc. (Duke) December 2, 2002 email titled "DEEP WELL COMPLETION AT ELDRIDGE PROPERTY" and accompanying "MONITORING WELL CONSTRUCTION DIAGRAM (DMW-01)". These documents contain Duke's proposed construction and completion work plan for a deep monitor well for investigating the extent of petroleum contamination of an irrigation well and a domestic water well at the Eldridge Ranch located in Section 21, Township 19 South, Range 37 East, Lea County, New Mexico.

The above referenced work plan is approved with the following conditions. Please be advised that OCD approval does not relieve Duke of responsibility should the investigation actions fail to adequately define the extent of contamination related to Duke's operations, or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve Duke of responsibility for compliance with any other federal, state or local laws

If you have any questions, please call me at (505) 476-3491.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

cc: Chris Williams, OCD Hobbs District Office
Frank Eldridge
Gene Samberson, Heidel, Samberson, Newell, Cox & McMahon
Robert G. McCorkle, Rodey, Dickason, Sloan, Akin & Robb

Olson, William

From: Mike Stewart [mstewart@remediacon.com]
Sent: Monday, December 02, 2002 11:02 AM
To: WOLSON@state.nm.us
Cc: Steve Weathers; John Fergerson
Subject: Deep well completion at Eldridge property

1202 Deep Well.PDF

Mr. Olson,

Attached is a schematic of how we plan to compete the deep well at the Eldridge Ranch study area. The well will probably be installed near well MW-4.

We will drill the pilot bore, place the grout inside the casing and then push it down the casing, through the bottom and up the sides until it circulates to the surface. The plug at the bottom of the casing then then be drilled out after the grout cures and installation can proceed. I have found this method provides a better seal between the surface casing and the edge of the boring than standard tremie-grouting techniques.

We plan on setting and cementing the surface casing on Friday December 13 so that it can sit for 2 1/2 days before we drill the plug out and and complete the well.

We will also install the well on the south edge of the former irrigated area. We will then develop and sample the two new wells along with the existing Eldrige well that we did not sample in October.

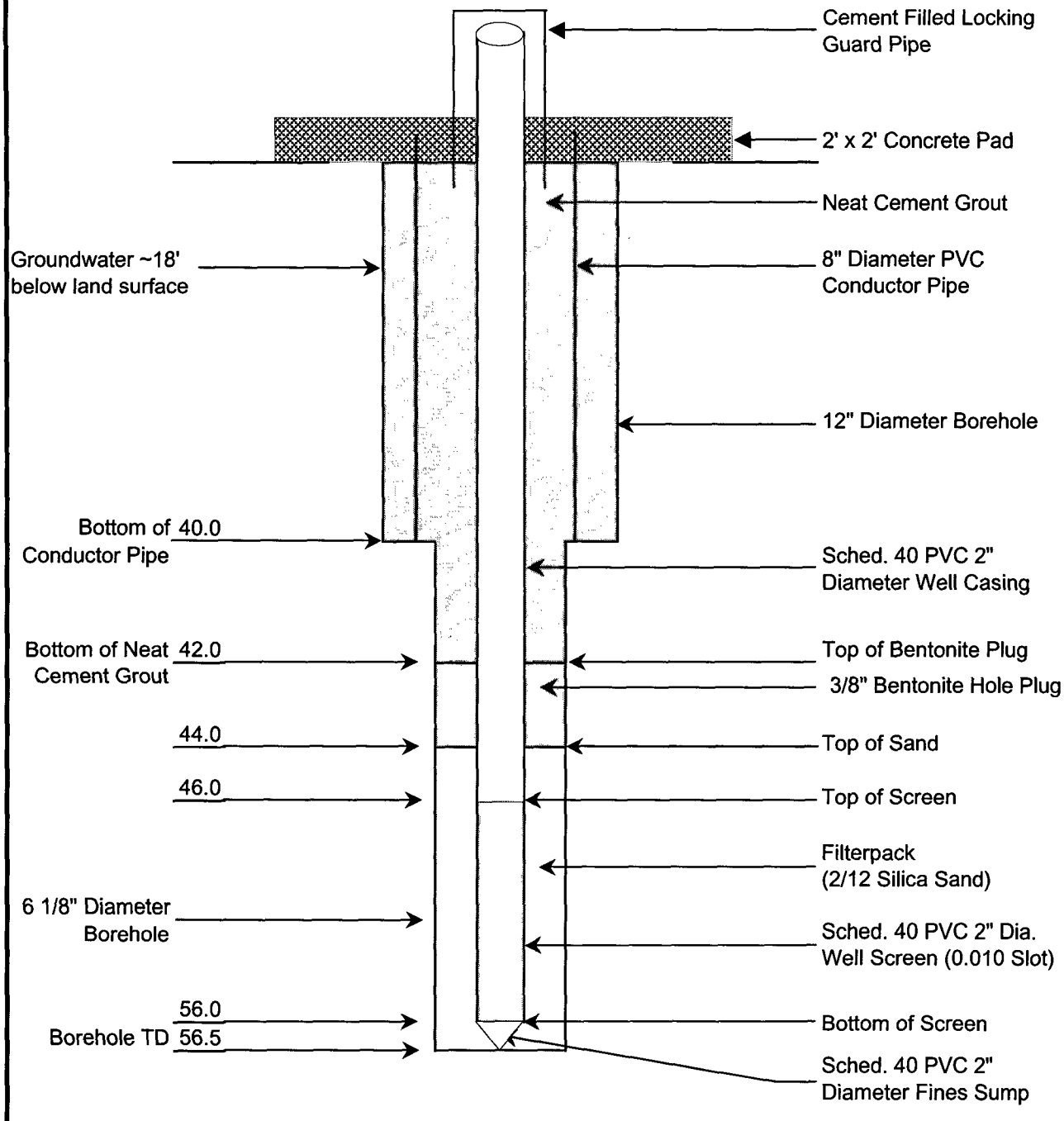
We will delay the deployment of the passive vapor collectors until we complete the trenching program and analyze the data.

Do not hesitate to contact me if you have any questions on this submittal.

=====
Michael Stewart
303-638-0001 (mobile)
303-674-4370 office
720-528-8132 (note new fax #)

MONITORING WELL CONSTRUCTION DIAGRAM (DMW-01)

Not to Scale



TRIDENT ENVIRONMENTAL	SITE: Duke Energy Field Services-Eldridge Ranch			**DMW-01 Monitoring Well Construction Diagram**
	DATE: 11/29/02	REV. NO.: 1		
	AUTHOR: JMF	DRAWN BY: JMF		
	CK'D BY: MPC	FILE: Well Construction		

Olson, William

From: Olson, William
Sent: Tuesday, November 26, 2002 3:39 PM
To: Stephen Weathers (E-mail)
Cc: Robert McCorkle (E-mail); Johnson, Larry
Subject: Eldridge Ranch Work Plans Approval

Mr. Weathers:

Attached is a copy of the OCD approval of the recent characterization report and the pipeline trenching work plan. The original copy of the approval is in the regular mail.

If you have any questions, please contact me.

Sincerely,

Wild Olson

William C. Olson
Hydrologist
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
(505) 476-3491

INV4apr.DOC

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

November 26, 2002

CERTIFIED MAIL
RETURN RECEIPT NO. 7001-1940-0004-7923-0575

Mr. Stephen Weathers
Duke Energy Field Services, Inc.
370 17th St., Suite 900
Denver, Colorado 80202

RE: CASE #1R334
ELDRIDGE RANCH
MONUMENT, NEW MEXICO

Dear Mr. Weathers:

The New Mexico Oil Conservation Division (OCD) has reviewed the following Duke Energy Field Services, Inc. (Duke) documents:

- November 5, 2002 "CHARACTERIZATION REPORT FOR THE ELDRIDGE RANCH STUDY AREA LEA COUNTY, NEW MEXICO (CASE#1R334)"

- November 22, 2002 email titled "ELDRIDGE WORKPLAN FOR TRENCHING" and accompanying November 22, 2002 "ADDENDUM TO CHARACTERIZATION REPORT FOR THE ELDRIDGE RANCH STUDY AREA: WORKPLAN TO COMPLETE ADDITIONAL CHARACTERIZATION ACTIVITIES ADJACENT TO THE DEFS PIPELINE AT THE ELDRIDGE RANCH, LEA COUNTY, NEW MEXICO".

These documents contain the results of Duke's recent investigations of the source and extent of petroleum contamination of an irrigation well and a domestic water well at the Eldridge Ranch located in Section 21, Township 19 South, Range 37 East, Lea County, New Mexico. The documents also contain recommendations for additional ground water investigations and a work plan for excavating Duke's pipeline to identify any potential leak sites.

The OCD defers comment on the conclusions in the characterization report regarding sources of contamination until addition investigation work is completed at the site. The above referenced recommendations and work plans are approved with the following conditions:

1. Duke shall install an additional monitor well at the site of the former subsurface pipeline drip tank. During the drilling soil samples shall be obtained on 5-foot depth intervals and

analyzed for concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) and total petroleum hydrocarbons (TPH).

2. Duke shall install an additional monitor well south of monitor well MW-1 to determine the southern limits of ground water contamination in this area.

3. All monitor wells installed across the top of the water table shall be constructed and developed consistent with the work plans previously approved by the OCD.

4. Prior to installation, Duke shall submit a work plan for the deep monitor well which includes construction details for preventing the creation of vertical conduits for contaminant migration during drilling.

5. Soil samples shall be obtained, for analysis of TPH, from all pipeline excavation areas which have elevated PID measurements in soil or show evidence of visual staining.

6. All soil and water quality samples shall be obtained and analyzed consistent with the work plans previously approved by the OCD .

7. All wastes generated during the investigation shall be disposed of at an OCD approved facility.

8. Duke shall submit the results of the investigations to the OCD by January 26, 2003. The report shall be submitted to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office and shall include:

    a. A description of the investigation activities which occurred including conclusions and recommendations.

    b. A site map showing the locations of all pipeline drip stations in the area and any other potential sources of contamination.

    c. A water table map showing the location of pipelines, monitor wells, private water wells and any other pertinent site features as well as the direction and magnitude of the hydraulic gradient created using the water table elevation from each monitor well.

    d. A site map showing the excavated area along the pipeline, the locations of all sampling points and any areas with visual evidence of leaks or spills.

    e. Isopleth maps for contaminants of concern observed during the investigations.

    f. Summary tables of all soil and ground water quality sampling results and copies of all laboratory analytical data sheets and associated QA/QC data.

    g. All available historical aerial photographs of the site

h. Information of the operational history of oilfield-related activities at the site.

i. The disposition of all wastes generated

j. Any other relevant information generated during implementation of the recommendations and work plans.

9. Duke shall notify the OCD at least 48 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and split samples.

Please be advised that OCD approval does not relieve Duke of responsibility should the investigation actions fail to adequately define the extent of contamination related to Duke's operations, or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve Duke of responsibility for compliance with any other federal, state or local laws

If you have any questions, please call me at (505) 476-3491.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

cc: Chris Williams, OCD Hobbs District Office
Frank Eldridge
Gene Samberson, Heidel, Samberson, Newell, Cox & McMahon
Robert G. McCorkle, Rodey, Dickason, Sloan, Akin & Robb

Olson, William

From: Stephen W. Weathers [swweathers@duke-energy.com]
Sent: Friday, November 22, 2002 12:23 PM
To: WOLSON@state.nm.us
Subject: Eldridge Workplan for Trenching

Addendum, trenching.doc

Mr. Olson

Attached you will find a workplan to complete additional characterization activities adjacent to the DEFS Pipeline within the Eldridge Study Area. This workplan is considered an addendum to the Characterization Report submitted on November 4, 2002.

DEFS anticipates field activities to begin on December 2, 2002. At this time, I have not gained access to the property north of the Eldridge, but anticipate access by December 2, 2002.

Any questions, please give me a call at 303-619-3042

Steve Weathers

(See attached file: Addendum, trenching.doc)

Remediacon Incorporated
Geological and Engineering Services
remediacon@yahoo.com

PO Box 302, Evergreen, Colorado 80437
Telephone: 303.674.4370
Facsimile: 617.507.6178

November 22, 2002

Mr. Stephen Weathers
Duke Energy Field Services, LP
370 17th Street, Suite 900
Denver, CO 80202

Re: Addendum to Characterization Report for the Eldridge Ranch Study Area: Workplan to Complete Additional Characterization Activities Adjacent to the DEFS Pipeline at the Eldridge Ranch, Lea County New Mexico

Dear Mr. Weathers:

Duke Energy Field Services proposes to excavate a trench west of and adjacent to some or all of its pipeline that traverses the Eldridge Ranch study area. The resulting information would be use to quantify the relationship between any pipeline leaks and the hydrocarbons that are present in the shallow groundwater.

The pipeline lies approximately 4 feet below ground surface (bgs). The trench would be excavated to a depth approximately 5 feet bgs. The excavation will then be examined and logged by a qualified geologist or engineer. The trench will be backfilled almost immediately upon completion of logging because cattle are on the property.

Information that will be compiled during the excavation process includes:

- The subsurface materials present in the trench;
- The distribution of hydrocarbon materials at any location where they are present;
- Photoionization detector (PID) measurements of all affected materials;
- Pictures and or video of the affected area; and
- Laboratory measurements of selected samples with the number of samples and the analytical suite based upon the conditions encountered.

The work is scheduled to begin on Monday December 2, 2002 and will last approximately 5 days. A brief report will be prepared and submitted to the OCD upon receipt and validation of the laboratory analytical results. Some or all of the additional work proposed in the Remediacon November 4, 2002 letter may also be completed.

Do not hesitate to contact me if you have any questions or comments on this work plan.

Respectfully Submitted,

Michael H. Stewart

Michael H. Stewart, P.E.

Remediacon Incorporated
Geological and Engineering Services
remediacon@yahoo.com

PO Box 302, Evergreen, Colorado 80437
Telephone: 303.674.4370
Facsimile: 617.507.6178

Principal Engineer

Duke Energy. Field Services
A New Kind of Energy™

Duke Energy Field Services
P.O. Box 5493
Denver, Colorado 80217
370 17th Street, Suite 900
Denver, Colorado 80202
303/595-3331

November 5, 2002

Mr. Bill Olson
New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RE: Characterization Report for the Eldridge Ranch Study Area Lea County, New Mexico (Case # 1R334).

Dear Mr. Olson:

Duke Energy Field Services, LP (DEFS) is pleased to submit for your review, one copy of the Characterization Report for the Eldridge Ranch Study Area Lea County, New Mexico (Case # 1R334).

If you have any questions regarding this report, please call me at 303-605-1718.

Sincerely

Duke Energy Field Services, LP

Stephen Weathers
Environmental Specialist

enclosure

cc: Environmental Files

Olson, William

From: Olson, William
Sent: Tuesday, November 05, 2002 9:22 AM
To: Robert McCorkle (E-mail)
Cc: Stephen Weathers (E-mail)
Subject: FW: Eldridge Characterization Report


1002 eld figs.pdf

1002 eld report.pdf

Mr. McCorkle,

As you requested in your 11/4/02 email attached is a copy of the recent Duke Energy report on the Eldridge Ranch. If you have any questions, please contact me.

Sincerely,

William C. Olson
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
(505) 476-3491
==========

-----Original Message-----
From: Stephen W. Weathers [mailto:swweathers@duke-energy.com]
Sent: Monday, November 04, 2002 4:43 PM
To: WOLSON@state.nm.us
Subject: Eldridge Characterization Report

Mr. Olson

Attached is an electronic copy of the Eldridge Characterization Report. The attachment includes the report and associated tables and figures. The appendices will be included in the hard copy that will be sent via Fed Ex.

Let me know if you have any questions.

Regards

Stephen Weathers
Sr. Environmental Specialist

(See attached file: 1002 eld figs.pdf)(See attached file: 1002 eld report.pdf)

Olson, William

From: Robert McCorkle [rgmccork@rodey.com]
Sent: Monday, November 04, 2002 3:35 PM
To: Olson, William
Subject: RE: Recent Eldridge Ranch Work Plan & OCD Approval Letter

I believe Duke Energy's plan is due today will you please be sure I get it tks Bob McCorkle

-----Original Message-----
From: Olson, William [mailto:WOLSON@state.nm.us]
Sent: Monday, September 23, 2002 11:10 AM
To: Robert McCorkle
Subject: Recent Eldridge Ranch Work Plan & OCD Approval Letter

Bob,

Attached is a copy of the Duke Energy's September 6, 2002 Eldridge Ranch Work Plan and the OCD's conditional approval of the plan.

If you have any questions, please contact me.

Sincerely,

William C. Olson
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
(505) 476-3491

==========

-----Original Message-----
From: Stephen W. Weathers [mailto:swweathers@duke-energy.com]
Sent: Thursday, September 05, 2002 12:33 PM
To: WOLSON@state.nm.us
Subject:

September 6, 2002

Mr. Bill Olsen VIA: EMAIL
New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RE: Workplan to Complete Additional Characterizaton On and North of the Eldridge Ranch.

Dear Mr. Olsen:

Duke Energy Field Services, LP (DEFS) is pleased to submit for your review, one copy of the Workplan to Complete Additional Characterization Activities On and North of the Eldridge Ranch, Lea County New Mexico for Duke Energy Field Services, LP.

I will forward to you a hard copy of the workplan. If you have any questions regarding this workplan, please call me at 303-605-1718.

Sincerely

Olson, William

From: Paul Rosenfeld [prosenfeld@losangeles.komex.com]
Sent: Friday, November 01, 2002 11:25 AM
To: Olson, William
Cc: Johnson, Larry
Subject: Has the Duke Energy Report Arrived (Case#1R334)

Dear Bill:
I am helping Frank Eldridge out. According to a September 17th letter from Bill Olson to Stephen Weathers of Duke Energy Filed Services, Duke Energy is supposed to submit results of an investigation by November 4, 2002. Has this report been submitted to the OCD? If so may I attain a copy? Best wishes and thanks for any assistance. Respectfully,

Paul Rosenfeld, Ph.D.
Komex H20 Science Inc
11040 Santa Monica Blvd Suite 300
Los Angeles CA 90025
Tel: (310) 914-5901 ext 205
Fax: (310) 914-5959
Cell: (310) 948-1114
Home: (310) 392-2712

-----Original Message-----
From: Olson, William [mailto:WOLSON@state.nm.us]
Sent: Tuesday, September 03, 2002 1:48 PM
To: Paul Rosenfeld
Cc: Johnson, Larry
Subject: FW: Eldridge GW Summary Report

Paul:

Attached is a copy of the recent Duke Energy report on the Eldridge Ranch.
If you have any questions, please contact me.

Sincerely,

William C. Olson
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
(505) 476-3491

==========

Olson, William

From: Olson, William
Sent: Monday, September 23, 2002 11:10 AM
To: Robert McCork (E-mail)
Subject: Recent Eldridge Ranch Work Plan & OCD Approval Letter


9-5-02wrkpln.pdf


INV3apr.DOC

Bob,

Attached is a copy of the Duke Energy's September 6, 2002 Eldridge Ranch Work Plan and the OCD's conditional approval of the plan.

If you have any questions, please contact me.

Sincerely,

William C. Olson
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
(505) 476-3491

==========

-----Original Message-----
From: Stephen W. Weathers [mailto:swweathers@duke-energy.com]
Sent: Thursday, September 05, 2002 12:33 PM
To: WOLSON@state.nm.us
Subject:

September 6, 2002

Mr. Bill Olsen VIA: EMAIL
New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RE: Workplan to Complete Additional Characterizaton On and North of the Eldridge Ranch.

Dear Mr. Olsen:

Duke Energy Field Services, LP (DEFS) is pleased to submit for your review, one copy of the Workplan to Complete Additional Characterization Activities On and North of the Eldridge Ranch, Lea County New Mexico for Duke Energy Field Services, LP

I will forward to you a hard copy of the workplan. If you have any questions regarding this workplan, please call me at 303-605-1718.

Sincerely

Duke Energy Field Services, LP

Stephen Weathers
Environmental Specialist

RODEY, DICKASON, SLOAN, AKIN & ROBB, P. A.
COUNSELORS AND ATTORNEYS AT LAW
ALBUQUERQUE PLAZA
201 THIRD STREET NW, SUITE 2200
ALBUQUERQUE, NEW MEXICO 87102

P.O. BOX 1888
ALBUQUERQUE, NEW MEXICO 87103
WEB-SITE: WWW.RODEY.COM
E-MAIL: RGMCCORK@RODEY.COM

TELEPHONE (505) 765-5900
FACSIMILE (505) 768-7395

September 23, 2002

Mr. William C. Olson
Hydrologist
Environmental Bureau
New Mexico Energy, Minerals
and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Ground Water Contamination
Eldridge Ranch
Monument, New Mexico
Case # 1R334

Mr. Olson:

I am writing to confirm that my law firm represents Mr. and Mrs. Frank Eldridge in regard to the contamination of water at their property in Lea County, New Mexico.

Thank you for discussing this situation with me. I understand you will place me on your circulation list and will also e-mail me the latest Duke Energy Field Services' proposal. Again, my e-mail address is rgmccork@rodey.com.

Thank you again for your cooperation. I will look forward to hearing from you.

Very truly yours,

RODEY, DICKASON, SLOAN, AKIN & ROBB, P.A.

By
Robert G. McCorkle

RGM/jrm
cc: Mr. and Mrs. Frank Eldridge

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
BETTY RIVERA
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

September 17, 2002

CERTIFIED MAIL
RETURN RECEIPT NO. 7001-1940-0004-7923-0520

Mr. Stephen Weathers
Duke Energy Field Services, Inc.
370 17th St., Suite 900
Denver, Colorado 80202

RE: CASE #1R334
ELDRIDGE RANCH
MONUMENT, NEW MEXICO

Dear Mr. Weathers:

The New Mexico Oil Conservation Division (OCD) has reviewed Duke Energy Field Services, Inc.'s (Duke) September 6, 2002 "WORKPLAN TO COMPLETE ADDITIONAL CHARACTERIZATION ON AND NORTH OF THE ELDRIDGE RANCH" and August 30, 2002 "DATA AND INTERPRETATIONS FROM GROUNDWATER SAMPLING EPISODE NEAR AND ON THE ELDRIDGE RANCH". These documents contain the results of Duke's recent ground water quality sampling and a work plan for characterization of the source and extent of petroleum contamination of an irrigation well and a domestic water well at the Eldridge Ranch located in Section 21, Township 19 South, Range 37 East, Lea County, New Mexico.

The above referenced work plan is approved with the following conditions:

1. Duke shall wait at least 24 hours after well development before purging and obtaining ground water samples from the monitor wells.

2. In addition to the water quality sampling proposed Duke shall also analyze ground water from the monitor wells for concentrations of iron, manganese and dissolved oxygen.

3. All soil and water quality samples shall obtained and analyzed be using EPA approved methods and quality assurance/quality control (QA/QC).

4. All wastes generated during the investigation shall be disposed of at an OCD approved facility.

5. Duke shall submit the results of the investigations to the OCD by November 4, 2002. The report shall be submitted to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office and shall include:

   a. A description of the investigation activities which occurred including conclusions and recommendations.

   b. A water table map showing the location of pipelines, monitor wells, private water wells and any other pertinent site features as well as the direction and magnitude of the hydraulic gradient created using the water table elevation from each monitor well.

   c. Isopleth maps for contaminants of concern observed during the investigations.

   d. Summary tables of all soil and ground water quality sampling results and copies of all laboratory analytical data sheets and associated QA/QC data.

   e. The disposition of all wastes generated.

   f. A map showing the locations of all pipeline drip stations in the area and any other potential sources of contamination.

6. Duke shall notify the OCD at least 48 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and split samples.

Please be advised that OCD approval does not relieve Duke of responsibility should the investigation actions fail to adequately define the extent of contamination related to Duke's operations, or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve Duke of responsibility for compliance with any other federal, state or local laws

If you have any questions, please call me at (505) 476-3491.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

cc: Chris Williams, OCD Hobbs District Office
Frank Eldridge
Gene Samberson, Heidel, Samberson, Newell, Cox & McMahon

Duke Energy Field Services
A New Kind of Energy™

Duke Energy Field Services
P.O. Box 5493
Denver, Colorado 80217
370 17th Street, Suite 900
Denver, Colorado 80202
303/595-3331

RECEIVED
SEP 0 9 2002
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Email Received 9/5/02 on

September 6, 2002

Mr. Bill Olsen
New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RE: Workplan to Complete Additional Characterization On and North of the Eldridge Ranch.

Dear Mr. Olsen:

Duke Energy Field Services, LP (DEFS) is pleased to submit for your review, one copy of the **Workplan to Complete Additional Characterization Activities On and North of the Eldridge Ranch, Lea County New Mexico for Duke Energy Field Services, LP**

I will forward to you a hard copy of the workplan. If you have any questions regarding this workplan, please call me at 303-605-1718.

Sincerely

Duke Energy Field Services, LP

Stephen Weathers
Environmental Specialist

Enclosure

cc: Environmental Files

Olson, William

From: Olson, William
Sent: Tuesday, September 03, 2002 2:48 PM
To: Paul Rosenfeld (E-mail)
Cc: Johnson, Larry
Subject: FW: Eldridge GW Summary Report

802 letter.pdf 802 Tables and figures.pdf

Paul:

Attached is a copy of the recent Duke Energy report on the Eldridge Ranch. If you have any questions, please contact me.

Sincerely,

William C. Olson
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
(505) 476-3491

==========

-----Original Message-----
From: Stephen W. Weathers [mailto:swweathers@duke-energy.com]
Sent: Friday, August 30, 2002 3:14 PM
To: WOLSON@state.nm.us
Cc: Mike Stewart <stewartmike
Subject: Eldridge GW Summary Report

August 30, 2002

Mr. Bill Olsen VIA: EMAIL
New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RE: Data and Interpretations from Groundwater Sampling Episode near and on the Eldridge Ranch.

Dear Mr. Olsen:

Duke Energy Field Services, LP (DEFS) is pleased to submit for your review, one copy of the Data and Interpretations From Groundwater Sampling Episode Completed North of the Eldridge Ranch, Lea County New Mexico.

I will forward to you a hard copy of the report. If you have any questions regarding this report, please call me at 303-605-1718.

Sincerely

Duke Energy Field Services, LP

Stephen Weathers
Environmental Specialist

Enclosure

cc: Environmental Files

(See attached file: 802 letter.pdf)(See attached file: 802 Tables and figures.pdf)

Olson, William

From: Paul Rosenfeld [prosenfeld@losangeles.komex.com]
Sent: Tuesday, September 03, 2002 2:43 PM
To: wolson@state.nm.us
Subject: RE: Eldridge Range

Bill:
Please forward Elridge Ranch Duke Energy response to request for investigation.
Please forward phone numbers of individuals with damages that may benefit from litigation.
Thanks for your assistance. Best wishes. Respectfully,

Paul Rosenfeld, Ph.D.
Komex H20 Science Inc
11040 Santa Monica Blvd Suite 300
Los Angeles CA 90025
Tel: (310) 914-5901 ext 205
Fax: (310) 914-5959
Cell: (714) 981-3282
Home: (310) 392-2712

-----Original Message-----
From: Paul Rosenfeld
Sent: Monday, July 15, 2002 1:59 PM
To: 'wolson@state.nm.us'
Subject: Eldridge Range

Bill:
Please forward Elridge Ranch Duke Energy response to request for investigation.
Please forward phone numbers of individuals with damages that may benefit from litigation.
Thanks for your assistance. Best wishes. Respectfully,

Paul Rosenfeld, Ph.D.
Komex H20 Science Inc
11040 Santa Monica Blvd Suite 300
Los Angeles CA 90025
Tel: (310) 914-5901 ext 205
Fax: (310) 914-5959
Cell: (714) 981-3282
Home: (310) 392-2712

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It is addressed. It may contain information that is privileged, confidential, and exempt from disclosure under applicable laws. If the reader of this message is not the intended recipient, employee, or agent responsible for delivering this transmittal to the intended recipient, you are hereby notified that any disclosure, dissemination, distribution, or copying of this electronic document, or the taking of any action in reliance of this information, is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and by replying to info@losangeles.komex.com. Thank you.

Duke Energy Field Services
A New Kind of Energy™

Duke Energy Field Services
P.O. Box 5493
Denver, Colorado 80217
370 17th Street, Suite 900
Denver, Colorado 80202
303/595-3331

August 30, 2002

Mr. Bill Olsen
New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RE: Data and Interpretations from Groundwater Sampling Episode near and on the Eldridge Ranch.

Dear Mr. Olsen:

Duke Energy Field Services, LP (DEFS) is pleased to submit for your review, one copy of the **Data and Interpretations From Groundwater Sampling Episode Completed North of the Eldridge Ranch, Lea County New Mexico.**

I will forward to you a hard copy of the report. If you have any questions regarding this report, please call me at 303-605-1718.

Sincerely

Duke Energy Field Services, LP

Stephen Weathers
Environmental Specialist

Enclosure

cc: Environmental Files

Olson, William

From: Stephen W. Weathers [swweathers@duke-energy.com]
Sent: Friday, August 30, 2002 3:14 PM
To: WOLSON@state.nm.us
Cc: Mike Stewart <stewartmike
Subject: Eldridge GW Summary Report

802 letter.pdf 802 Tables and figures.pdf

August 30, 2002

Mr. Bill Olsen VIA: EMAIL
New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RE: Data and Interpretations from Groundwater Sampling Episode near and on the Eldridge Ranch.

Dear Mr. Olsen:

Duke Energy Field Services, LP (DEFS) is pleased to submit for your review, one copy of the Data and Interpretations From Groundwater Sampling Episode Completed North of the Eldridge Ranch, Lea County New Mexico.

I will forward to you a hard copy of the report. If you have any questions regarding this report, please call me at 303-605-1718.

Sincerely

Duke Energy Field Services, LP

Stephen Weathers
Environmental Specialist

Enclosure

cc: Environmental Files

(See attached file: 802 letter.pdf)(See attached file: 802 Tables and figures.pdf)

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August 30, 2002

Mr. Stephen Weathers
Duke Energy Field Services, LP
370 17th Street, Suite 900
Denver, CO 80202

Re: Data and Interpretations From Groundwater Sampling Episode Completed North of the Eldridge Ranch, Lea County New Mexico for Duke Energy Field Services, LP

References: Monitoring Well Installation and Ground Water Sampling, Eldridge Ranch, Lea County New Mexico. Report to the Oil Conservation Division Report prepared by AMEC Earth and Environmental, Inc dated October 1, 2001.

Phase II Monitoring Well Installation and Ground Water Sampling, Eldridge Ranch, Lea County New Mexico. Report to the Oil Conservation Division Report prepared by AMEC Earth and Environmental, Inc dated May 6, 2002.

Dear Mr. Weathers:

Duke Energy Field Services, LP (DEFS) retained Remediacon to complete additional groundwater characterization activities on or north of the Eldridge Ranch in Lea County, New Mexico. This letter provides the results of that effort. A brief background section is presented first. A description of the field program completed and the resulting data is presented next. The final section discusses the objectives for the program.

BACKGROUND INFORMATION

The purpose of this investigation was to confirm the site conditions reported by AMEC Earth and Environmental, Inc (AMEC) in their two above-referenced reports.

The program objectives included:

1. Collecting depth-to-water data from all of the existing wells to establish the groundwater flow pattern;

2. Collecting a second round of chemical data to verify the hydrocarbon distribution pattern previously reported by AMEC;

3. Evaluating the distribution of semi-volatile compounds and inorganic constituents; and

4. Identify any data gaps that must filled to identify the probable sources and fully characterize the site in order to prepare an appropriate remediation program.

AMEC completed field programs in August 2001 and March 2002. Program descriptions, partial data compilations and the laboratory analytical results are in their two referenced reports.

The two AMEC programs included the installation of 14 monitoring wells, groundwater gauging and well development and sampling. The construction information for the 14 wells is summarized in Table 1. Well locations are shown on Figure 1. The well locations are also approximately located on a November 1997 public domain US Geological Survey aerial photograph in Figure 2 to provide spatial data on the relationship between the well locations, visible oil and gas components, Monument Draw and the Eldridge Property.

FIELD PROGRAM DESCRIPTION

The groundwater sampling activities were completed by Trident Environmental of Midland Texas. On July 17th, 2002, all of the monitoring wells were gauged and no measurable light non-aqueous phase liquids (LNAPL) were observed in any of the wells. Groundwater samples were recovered on July 17th and 18th, 2002. Prior to sampling, each monitoring well was purged using a disposable bailer to insure that a representative sample was being collected. Stabilization parameters were measured from discrete samples at 2-gallon purge volume intervals. Conductivity, pH, salinity, and temperature readings were measured using a Horiba Model U-10 meter and dissolved oxygen (DO) was measured using a Hanna Model 9143 meter. Results from the measurements taken are provided in Table 1. It should be noted that after purging approximately 2.5 gallons of water from MW-11 a small volume of LNAPL was identified. Purging was then terminated and the well was allowed to recover overnight. Measurements conducted on the following morning indicated that 0.12 feet of LNAPL had accumulated in the well, therefore groundwater samples were not recovered from MW-11.

Groundwater samples from the remaining monitoring wells were collected using disposable bailers attached to heavy monofilament line. Water was then transferred to the following laboratory-provided containers:

Laboratory Container	Preservative	Quantity	Analysis	Method
40-milliliter glass VOA vials (zero headspace)	Hydrochloric Acid	2	Benzene, Toluene, Ethylbenzene, p/m-Xylenes, and o-Xylenes	EPA 8021B
1-liter glass jar (amber)	None	1	Polynuclear Aromatic Hydrocarbons	EPA 8270C
1-liter plastic container	None	1	Major Ions and Total Dissolved Solids	Various
500-milliliter plastic container	Nitric Acid	1	RCRA Metals (8)	Various

Groundwater samples for RCRA Metal analysis were first recovered in 1-liter plastic transfer vessels. Air pressure was utilized to transfer the water through a disposable 0.45-micron filter into the 500-ml containers. The glass containers were sealed with Teflon-lined lids, and all of the samples were chilled to approximately 4°C with ice until delivery to the Environmental Lab of Texas, in Odessa using standard chain-of-custody protocols.

The following quality control samples were also collected during this effort:

- A field duplicate from well MW-6;
- A trip blank;
- A field blank; and
- A rinsate sample

Following the completion of the purge and sampling activities, approximately 88 gallons of purge water was transported via a trailer-mounted plastic tank to the Monument Booster Station for disposal in the facility waste water system operated by Duke Energy Field Services.

FIELD PROGRAM RESULTS

This section summarizes the program results. Copies of the analytical results will be provided under separate cover to minimize the size of this document. In addition, the AMEC data are included because they are limited to a single set of results.

Groundwater Elevations and Flowpaths

The gauging results and the subsequent groundwater elevation data are included in Table 3. The AMEC gauging and water table elevation data are also included. The July 2002 water-table contours are depicted on Figure 3. The water-table contours were generated by the Surfer® program using the kriging option. The AMEC data was not contoured because it was measured during two separate episodes that were separated by approximately 7 months.

The water table contours shown on of Figure 3 indicate a generally southeasterly groundwater flow direction in the northern study area that changes to a southerly groundwater flow direction near the northern boundary of the Eldridge property. This relationship agrees with the setting shown on Figure 2 where the wells in the northern study area (excepting MW-14) are situated west of Monument Draw while the wells in the southern study area approach the Draw. Two irregularities are present in Figure 2; a groundwater high at MW-6/MW-7 and a low at MW-3. These two features cannot be explained by differences in either lithologic intervals or in the well completions. Their effects are also probably more localized than the contours shown on Figure 3 imply.

Organic Constituent Distribution

The organic constituent results from the two AMEC and the July 2002 sampling episode are summarized in Table 4. The New Mexico Water Quality Control Ground Water Standards are also included at the bottom of the table. The sample results that exceeded those standards are highlighted by bolding.

Examination of Table 4 indicates the following:

- Wells MW-2, MW-3, MW-7 and MW-9 did not contain detectable concentrations of hydrocarbon constituents.

- Benzene was present at higher concentrations than ethylbenzene, toluene and total xylenes.

- Benzene exceeded the New Mexico Water Quality Control Ground Water Standards in all wells except MW-2, MW-3, MW-7 and MW-9.

- Toluene was present at high concentrations (approaching benzene in MW-4 and MW-13). It was also present at high concentrations in MW-11 in the March 2002 sampling episode but free product was present during the July 2002 sampling episode. Toluene also exceeded the New Mexico Water Quality Control Ground Water Standards in these three wells.

- Ethylbenzene and xylenes were measured at lower concentrations than benzene and toluene.

Figure 4 shows the isopleths for the July 2002 benzene results. The isopleths were generated by the Surfer® program using the kriging option. The results indicate that multiple sources are probably present for the following reasons:

1. The high benzene concentrations at wells MW-4 and MW-13 are both surrounded by wells with lower measured concentrations.

2. Well MW-12 is located upgradient from MW-13 but it had lower benzene concentrations. Well MW-12 also appears to be located adjacent to an existing oil or gas operation.

3. Figure 5 is a trilinear plot of relative percentages of benzene, toluene and xylenes for the seven monitoring wells sampled in July 2002 that contained the BTEX (benzene, toluene, ethylbenzene and xylene) constituents. The closer a point plots to an apex the higher the relative percentage of that constituent. The samples from wells MW-4, MW-12 and MW-13 all plot in differing areas of the plot. Well MW-4 had a higher relative percentage of toluene than any of the other wells regardless of concentration yet it is downgradient from the majority of the wells. Well MW-12 contained almost exclusively benzene. Well MW-13, 250 feet away from and slightly upgradient of well MW-12, possesses a completely different percentage of the three hydrocarbon constituents. The chemical compositions at the "source" wells should be more similar if they come from the same origin.

None of the samples contained detectable concentrations of polynuclear aromatic hydrocarbons that are measured using EPA method 8270. The laboratory sheets will be included in the analytical package.

Inorganic Ion Constituent Distribution

The results for the inorganic ions from all three sampling events are summarized in Table 5. Fluoride was the only constituent that exceeded the New Mexico Water Quality Control Ground Water Standards. Fluoride was present in all of the wells at the same approximate concentration. This uniformity of concentrations suggests that the fluoride is present at natural concentrations.

Figure 6 is a Piper Trilinear diagram of the principal cation and anion results from the July 2002 sampling episode. This diagram does not illustrate chemical concentrations. Instead, it is used to categorize various samples based upon the percentages of the principal cations and anions. The Piper Trilinear Diagrams shows the percentage reacting values from cations in the lower left triangle and the anions in the lower right triangle. The results for both are combined in the upper diamond.

Figure 6 was primarily included to illustrate the relationship between MW-12 and the rest of the wells. MW-12 contains a higher percentage of the cation sodium and the anion chloride than the other samples. These two ions are the major components of produced water. Examination of the total dissolved solids concentrations in Table 5 shows that the concentration in MW-12 is approximately 850 mg/l, and this concentration is slightly higher than the samples from the remaining wells. As discussed above, well MW-12 also appears to be located adjacent to an existing oil or gas operation.

Well MW-7 also has a different distribution of principal ions, particularly anions; however, it had no detectable hydrocarbon constituents. It has an elevated concentration of sulfates (Table 5) but that value is still well below the New Mexico Water Quality Control Ground Water Standard.

Distribution of Other Inorganic Constituents

The remaining inorganic constituents from the AMEC and the July 2002 sampling episode are summarized in Table 6. The July 2002 samples were intentionally filtered to assess the AMEC sampling results. Residual sediment particles in turbid groundwater samples are dissolved by the hydrochloric acid in the metals laboratory containers. This process results in elevated concentrations of metals relative to the actual dissolved concentrations. The simplest and most effective way to assess these effects is to use a 0.45 micron filter to separate the dissolved constituents from the sediment particles prior to acidification.

Examination of Table 6 indicates that dissolution of sediment particles occurred during the AMEC sampling episode. The metals arsenic, cadmium, cobalt, copper, mercury, molybdenum, selenium and silver are present at trace concentrations in the rocks and soils and they were not detected in either the filtered (dissolved) or the unfiltered (total) samples. The more common metals aluminum, chromium, iron, lead and manganese are generally present at higher concentrations in the rocks and soils so dissolving the sediment particles increases the concentrations of them that are measured in the waters. The relationship between the elevated unfiltered (total) samples collected by AMEC relative to the filtered (dissolved) samples collected in July 2002 is demonstrated in Table 5.

Barium was the only constituent in this group that did not adhere to this trend. The samples from wells MW-6, MW-7 and MW-9 appear to be significantly elevated in the unfiltered (total) verses the filtered (dissolved) samples. The samples from wells MW-8, MW-13 and MW-14 show a opposite trend, with the concentrations in the filtered (dissolved) samples approximately twice the concentrations in the unfiltered (total) samples. In addition, many of the filtered (dissolved) and unfiltered (total) samples exceeded the New Mexico Water Quality Control Ground Water Standard for barium.

The distribution of barium is shown on Figure 7. The concentrations in wells MW-8, MW-10, MW-12, MW-13 and MW-14, the wells in the northern part of the study area, had higher barium concentrations than the unaffected wells or the wells in the southern study area. There is not sufficient data to conclude upon the reason for the barium distribution.

QUALITY CONTROL

The quality control samples included a field duplicate from well MW-6 that was analyzed for the BTEX constituents, trip blank, a field blank and a rinsate sample. The trip blank, field blank and rinsate samples did not contain any detectable BTEX constituents. The MW-6 duplicate results are reported below:

	Benzene	Ethylbenzene	Toluene	Xylenes
MW-6	0.237	0.009	0.046	0.025
MW-6 dup	0.253	0.009	0.047	0.026

The relative percentage difference (RPD) values for the above constituents are 6.5, 0.0, 2.2, and 3.9 percent respectively. These values are well within the generally accepted range of RPD values.

DISCUSSION

The objectives stated in the introduction of this report have been fulfilled. A discussion of each objective follows.

Groundwater Flow

The July 2002 data indicates that the groundwater flow patterns are consistent with the well locations relative to Monument Draw. Groundwater flow in a southeasterly direction toward Monument Draw in the northern study area where the wells are located west of the drainage. It is likely that the groundwater flow paths deflect toward the south once they reach the draw.

Groundwater flow is more southerly in the south where the wells approach the draw. The groundwater in this area will probably flow beneath the Draw as it traverses the Eldridge property.

Hydrocarbon Distribution

The hydrocarbon constituents are distributed in two areas that are physically separated as demonstrated by the benzene distribution shown in Figure 3. Neither area has been fully characterized. Additional characterization activities that must be completed include:

1. Define the stability and extent of each plume. The consistency of the AMEC data with the July 2002 sampling results indicates that the plumes in both areas are in equilibrium; however, more characterization must be completed in the down gradient direction to verify plume stability.

2. Evaluate whether the constituents are migrating along the groundwater flow path or along preferential pathways related to the pipeline corridors.

3. Evaluate the effectiveness of natural biodegradation.

Semi-Volatile And Inorganic Constituent Distribution

The July sampling episode established that no polynuclear aromatic hydrocarbons are present in the groundwater at the Eldridge site at detectable concentrations. No further sampling for these constituents is necessary.

The inorganic ion data indicates that the slightly elevated sodium and chloride values from the MW-12 sample are evidence of an historic release either at the site adjacent to the monitoring well or upgradient from it. The unfiltered (total, AMEC) verses filtered (dissolved, July 2002) metals data indicates that dissolution of sediment particles contributed much of the metals found in the AMEC samples. The barium distribution also appears to be non-natural although many of the more elevated concentrations in the AMEC also appear to originate from the dissolution of sediment particles.

The metals from the filtered (dissolved) samples that exceeded the New Mexico Water Quality Control Ground Water Standards include barium in numerous wells and manganese in well MW-12. The manganese 0.212 manganese concentration in well MW-12 exceeded the 0.2 standard by only 0.012 mg/l. Well MW-12 was also the well with the slightly elevated sodium and chloride values.

There is no reason to continue analyzing for the suite of metals contained in this report. Samples from new wells should be tested for dissolved (filtered) barium at least during the initial sampling episode. In addition, any sample from a domestic well should sampled at least once for the seven "RCRA" metals arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver.

Sources

The data collected to date indicates that three different sources are releasing hydrocarbons into the groundwater. These sources include:

- The area immediately surrounding well MW-4. This release is probably the primary source of the hydrocarbons migrating onto the Eldridge property. It is separated from wells MW-12 and MW-13 by the non-detects or significantly lower readings from wells MW-6, MW-7 and MW-9. MW-4 also has a different benzene, toluene, xylenes chemical signature that either MW-12 or MW-13 (Figure 5). MW-4 is located between the pipeline right of way and Monument Draw (Figure 2). Well MW-3, located downgradient and between MW-4 and the pipeline, contained benzene at 0.002 mg/l in the July sampling episode. This well should be more affected if the pipeline is releasing the hydrocarbons in the vicinity of MW-4. There is no evidence of an existing or historic oil or gas facility that could be responsible for the release.

- The area around or upgradient from well MW-12. The sample from MW-12 had differing organic (Figure 5) and inorganic (Figure 6) chemical signatures than the other two high-benzene samples from wells MW-4 and MW-13. Well MW-12 is located off of and upgradient from the pipeline right-of-ways and adjacent to an existing oil or gas operation.

- The area surrounding MW-13. The data collected to date indicates that a release from the two north-south trending piplines produced the effects in this area. Moreover the distribution of benzene from MW-13 to MW-10 and then to MW-8 indicates that the groundwater may be flowing preferentially along the pipeline right of way. The key issue related to this release is its fate below well MW-8. The hydrocarbons do not appear to continue to flow along the pipeline below MW-8 given the low benzene concentrations in wells MW-6 and MW-7. It could be linked to MW-4 via some natural preferential flow path (buried stream channel); however, it has a different benzene, toluene, xylenes chemical signature than well MW-4 (Figure 5). It may also begin to flow to the southeast along the natural groundwater flow path until it encounters Monument Draw.

Additional Site Characterization Activities

The additional site characterization activities that must be completed before a remedial action plan can be formulated include:

1. Define the plume boundaries upgradient from wells MW-14, MW-12, MW-11 and MW-8 to the north and west.

2. Identify the sources of hydrocarbons that are in wells MW-4, MW-12 and MW-14 and delineate the plume or plumes associated with them.

3. Establish background fluoride and barium concentrations and their natural variations.

4. Installing additional wells between MW-4 and MW-9 to fully link the northern and southern study areas and to better characterize bioremediation processes between the source areas and Monument Draw.

5. Define the extent of the hydrocarbon effects to the south and east on the Eldridge Property.

Remediacon recommended to DEFS that formulation of the final work plan be postponed to attempt to identify potential sources through evaluation of historical aerial photographs. This evaluation will be completed over the next two weeks. A work plan will be prepared no later than September 16, 2002.

Thank you for the opportunity to complete this work. Do not hesitate to contact me if you have any questions or comments.

Respectfully Submitted,
REMEDIACOM INCORPORATED

Michael H. Stewart

Michael H. Stewart, P.E.
Principal Engineer

MHS/tbm

attachments

TABLES

Table 1 – Well Construction Information

Well	Elevation Top of Casing	Casing Stickup	Ground Elevation	Total Well Depth	Screen Interval	Sand Interval	Top of Pellets
MW-1	3618.22	2.50	3615.72	28.0	11.8-26.8	9.8-27	7.8
MW-2	3621.33	2.50	3618.83	28.0	11.7-26.7	8.7-27	6.7
MW-3	3619.07	2.50	3616.57	30.0	13.4-28.4	10.4-29	8.4
MW-4	3621.31	2.50	3618.81	30.0	13.2-28.2	10.2-29	11.2
MW-5	3618.08	2.50	3615.58	27.0	10.2-25.2	7.2-26	5.2
MW-6	3624.99	2.50	3622.49	30.0	13.5-28.5	10.5-29.0	8.5
MW-7	3630.62	2.50	3628.12	35.0	18.6-33.6	15.6-34	13.6
MW-8	3625.92	2.42	3623.50	30.0	15.0-30.0	12-30	10.0
MW-9	3622.12	3.42	3618.70	27.0	11.4-26.4	8.4-27	6.4
MW-10	3627.27	2.92	3624.35	31.0	15.2-30.2	12-31	10.0
MW-11	3627.56	2.42	3625.14	30.4	15.3-30.3	12-30.4	10.0
MW-12	3631.14	2.50	3628.64	34.0	18-33	15-34	13.0
MW-13	3632.9	3.42	3629.48	36.0	18.11-33.11	16-36	14.0
MW-14	3630.36	2.50	3627.86	32.0	16.11-31.11	14-32	12.0

Note: All units are feet

Table 2 – Field Parameter Summary

Well	Average Purge Rate	Temperature (°C)	Conductivity (*m*S/cm)	pH (unitless)	DO (mg/L)
MW-1	0.40 gal/min	18.9	0.759	7.22	2.56
MW-2	0.50 gal/min	19.4	0.603	7.26	7.88
MW-3	0.38 gal/min	19.6	0.724	7.29	7.18
MW-4	0.47 gal/min	19.7	0.908	7.22	3.13
MW-5	0.50 gal/min	18.5	0.888	7.47	2.60
MW-6	0.47 gal/min	19.3	0.930	7.37	3.29
MW-7	0.11 gal/min	20.6	1.07	6.90	6.24
MW-8	0.43 gal/min	19.7	0.971	6.29	4.95
MW-9	0.29 gal/min	19.1	0.714	4.96	3.29
MW-10	0.30 gal/min	19.7	0.926	5.82	2.61
MW-11*	0.21 gal/min	19.8	1.10	6.17	4.52
MW-12	0.47 gal/min	19.3	1.50	6.61	2.34
MW-13	0.29 gal/min	20.7	0.886	6.23	4.81
MW-14	0.18 gal/min	19.3	0.865	6.12	5.69

* Purging operation was terminated when free product was observed

Table 3 – Depths to Groundwater and Water Table Elevations

Well	AMEC Depth To Water[1]	AMEC Groundwater Elevations[1]	July 2002 Depth To Water	July 2002 Groundwater Elevations
MW-1	19.2	3599.02	19.54	3598.68
MW-2	22.3	3599.03	22.68	3598.65
MW-3	20.0	3599.07	22.56	3596.51
MW-4	21.5	3599.81	21.97	3599.34
MW-5	17.6	3600.48	17.99	3600.09
MW-6	21.0	3603.99	21.57	3603.42
MW-7	26.6	3604.02	27.16	3603.46
MW-8	20.7	3605.22	23.42	3602.50
MW-9	16.0	3606.12	19.64	3602.48
MW-10	20.6	3606.67	23.31	3603.96
MW-11	21.4	3606.16	23.92	3603.64
MW-12	23.7	3607.44	26.27	3604.87
MW-13	24.1	3608.80	27.89	3605.01
MW-14	21.7	3608.66	24.32	3606.04

Notes: 1) AMEC groundwater data collected in August 2001 for wells MW-1 through MW-7 and March 2002 for wells MW-8 through MW-14

Table 4 – Summary of Organic Results

Well	Date	Benzene	Ethyl benzene	Toluene	Xylenes	Gasoline Range Organics	Diesel Range Organics
MW-1	8/10/2001	**0.943**	0.052	0.120	0.06	4.36	<5
MW-1	7/18/2002	**0.279**	<0.001	0.002	<0.001	-	-
MW-2	8/10/2001	<.005	<.005	<.005	<.005	<0.5	<5
MW-2	7/18/2002	<0.001	<0.001	<0.001	<0.001	-	-
MW-3	8/10/2001	<.005	<.005	<.005	<.005	<0.5	<5
MW-3	7/18/2002	0.002	<0.001	<0.001	<0.001	-	-
MW-4	8/10/2001	**10.0**	0.190	**6.96**	**0.632**	31.9	<5
MW-4	7/18/2002	**10.4**	0.189	**5.52**	0.536	-	-
MW-5	8/10/2001	**0.217**	0.024	0.185	0.129	1.67	<5
MW-5	7/18/2002	**0.160**	0.020	0.004	0.010	-	-
MW-5 dup	8/10/2001	**0.182**	0.020	0.159	0.109	1.23	<5
MW-6	8/10/2001	**0.600**	0.024	0.502	0.100	<0.5	<5
MW-6	7/18/2002	**0.237**	0.009	0.046	0.025	-	-
MW-6 dup	7/18/2002	**0.253**	0.009	0.047	0.026	-	-
MW-7	8/10/2001	<.005	<.005	<.005	<.005	<0.5	<5
MW-7	7/18/2002	<0.001	<0.001	<0.001	<0.001	-	-
MW-8	3/3/2002	**8.60**	<.100	0.482	0.197	22.2	<5
MW-8	7/18/2002	**8.37**	0.074	0.176	0.035	-	-
MW-9	3/3/2002	<.005	<.005	<.005	<.005	<0.5	<5
MW-9	7/17/2002	<0.001	<0.001	<0.001	<0.001	-	-
MW-10	3/3/2002	**10.6**	<.100	<.100	<.100	19.7	<5
MW-10	7/18/2002	**14.0**	<0.020	0.144	<0.020	-	-
MW-11	3/3/2002	**27.8**	<.200	**2.49**	0.376	68.3	<5
MW-11	7/17/2002	**FPH**	FPH	FPH	FPH	-	-
MW-12	3/3/2002	**9.08**	<.100	0.281	<.100	22.2	<5
MW-12	7/17/2002	**6.95**	0.043	0.190	0.025	-	-
MW-13	3/3/2002	**19.8**	0.205	**5.95**	0.432	58	<5
MW-13	7/18/2002	**19.8**	0.206	**4.34**	0.453	-	-
MW-14	3/3/2002	**1.04**	<.005	0.0059	0.0085	1.05	<5
MW-14	7/18/2002	**1.21**	<0.010	<0.010	<0.010	-	-
Field Blank	7/17/2002	0.001	<0.001	<0.001	<0.001	-	-
Rinsate	7/17/2002	<0.001	<0.001	<0.001	<0.001	-	-
Trip Blank		<0.001	<0.001	<0.001	<0.001	-	-
NMWQ CCGWS		0.01	0.75	0.75	0.62		

NMWQCCGWS: New Mexico Water Quality Control Commission Standards (bolded where exceeded)

Table 5 – Summary of Inorganic Results for Ions (all units mg/l,)

Well	Date		Calcium	Magnesium	Potassium	Sodium	Bicarbonate Alkalinity	Sulfate	Chloride	pH	Fluoride	Nitrate	Total Dissolved Solids
MW-1	8/10/2001	Unfiltered	84.7	16.7	6.65	36.6	234	19.6	59.8	7.4	**2.17**	<1	496
MW-1	7/18/2002	Filtered	78.5	12.6	3.38	41.1	256	32.2	65.0		-	-	485
MW-2	8/10/2001	Unfiltered	87.5	13.2	6.5	34.9	188	70.9	47	7.5	**2.09**	3.08	578
MW-2	7/18/2002	Filtered	70.0	8.29	3.78	33.9	192	52.8	33.7		-	-	360
MW-3	8/10/2001	Unfiltered	70.6	10.9	5.79	25.3	172	57.0	29	7.6	**2.33**	2.73	432
MW-3	7/18/2002	Filtered	82.8	13.0	4.12	45.4	208	67.9	56.1		-	-	437
MW-4	8/10/2001	Unfiltered	76.5	15.8	6.28	35.2	230	57.2	72	7.4	**2.02**	<-1	548
MW-4	7/18/2002	Filtered	105	17.8	4.75	51.7	336	17.7	65.0		-	-	545
MW-5	8/10/2001	Unfiltered	96.0	17.4	8	36.9	232	37.0	62.6	7.4	**1.88**	<1	521
MW-5	7/18/2002	Filtered	98.7	18.3	3.46	46.4	318	31.4	80.0		-	-	558
MW-5 dup	8/10/2001	Unfiltered	89.4	17.7	8.16	36.3	240	35.1	62.6	7.4	**3.29**	1.04	642
MW-6	8/10/2001	Unfiltered	93.6	16.2	7.85	35.9	220	72.0	70	7.6	**3.46**	2.11	573
MW-6	7/18/2002	Filtered	102	17.1	5.06	51.5	284	62.3	79.8		-	-	641
MW-7	8/10/2001	Unfiltered	113	22.5	8.93	56.5	650	189	120	7.7	**4.18**	1.99	740
MW-7	7/18/2002	Filtered	109	27.1	6.23	66.3	250	198	97.5		-	-	663
MW-8	3/3/2002	Unfiltered	129	23.1	<5	48.5	322	11.9	69.4	7.4	**1.93**	<1	607
MW-8	7/18/2002	Filtered	106	24.4	3.79	48.7	382	<0.50	79.8		-	-	600
MW-9	3/3/2002	Unfiltered	78.5	14.1	5.66	47.1	222	45.3	34.8	7.5	**1.93**	1.31	484
MW-9	7/18/2002	Filtered	71.0	12.8	5.05	49.1	254	62.6	40.8		-	-	362
MW-10	3/3/2002	Unfiltered	89.9	20.3	5.29	52.1	278	19.0	56	7.3	**2.22**	<1	581
MW-10	7/18/2002	Filtered	104	19.0	4.66	51.4	368	24.0	70.9		-	-	565
MW-11	3/3/2002	Unfiltered	142	22.9	5.48	50.1	316	12.2	87.3	7.3	**1.92**	<1	639
MW-11	7/18/2002	Filtered	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-12	3/3/2002	Unfiltered	99.0	35.1	6.88	125	276	32.8	234	7.4	**2.52**	<1	850
MW-12	7/18/2002	Filtered	96.0	37.3	5.30	128	361	36.2	246		-	-	857
MW-13	3/3/2002	Unfiltered	103	21.8	7.28	49.9	308	11.0	72.4	7.4	**2.39**	<1	547
MW-13	7/18/2002	Filtered	92.7	22.7	6.18	46.4	327	<0.50	79.8		-	-	529
MW-14	3/3/2002	Unfiltered	94.6	20.4	5.62	45.4	322	10.8	41	7.5	**1.73**	<1	521
MW-14	7/18/2002	Filtered	101	23.4	4.36	45.7	372	<0.50	53.2		-	-	506
New Mexico Water Quality Control Commission Standards (bolded where exceeded)								600	250		1.6	10	1000

Table 6 – Summary of Other Inorganic Constituents (all units mg/l)

Well	Date		Al	As	Ba	Bo	Cd	Co	Cu	Cr	Fe
MW-1	8/10/2001	Unfiltered	8.13	<.05	0.738	0.155	<.025	<.025	<.0125	0.02	6.11
MW-1	7/18/2002	Filtered	<0.015	<0.008	0.996	0.158	<0.001	<0.002	<0.002	<0.002	1.92
MW-2	8/10/2001	Unfiltered	**17.8**	<.05	**1.39**	0.171	<.025	<.025	<.0125	**0.07**	**12.8**
MW-2	7/18/2002	Filtered	0.056	<0.008	0.466	0.107	<0.001	<0.002	<0.002	<0.002	0.067
MW-3	8/10/2001	Unfiltered	**50.7**	<.05	0.555	0.233	<.025	<.025	0.017	**0.137**	**29.4**
MW-3	7/18/2002	Filtered	<0.015	<0.008	0.621	0.144	<0.001	<0.002	<0.002	<0.002	<0.002
MW-4	8/10/2001	Unfiltered	**50.6**	<.05	**2.87**	0.263	<.025	<.025	0.021	**0.268**	**30.9**
MW-4	7/18/2002	Filtered	0.025	0.050	**1.71**	0.169	<0.001	<0.002	<0.002	<0.002	0.198
MW-5	8/10/2001	Unfiltered	**52.3**	<.05	**1.32**	0.265	<.025	<.025	0.019	**0.09**	**34.1**
MW-5	7/18/2002	Filtered	0.091	0.010	**1.41**	0.126	<0.001	<0.002	<0.002	<0.002	0.087
MW-5 dup	8/10/2001	Unfiltered	**40.7**	<.05	**1.27**	0.277	<.025	<.025	<.0125	**0.078**	**31.7**
MW-6	8/10/2001	Unfiltered	**99.1**	<.05	**18.8**	0.505	<.025	0.039	0.058	**0.605**	**69**
MW-6	7/18/2002	Filtered	<0.015	0.008	0.799	0.182	<0.001	<0.002	0.002	<0.002	0.070
MW-7	8/10/2001	Unfiltered	**72.7**	0.070	**3.64**	0.49	<.025	0.029	0.069	**0.267**	**56.2**
MW-7	7/18/2002	Filtered	<0.015	<0.008	0.512	0.204	<0.001	<0.002	<0.002	<0.002	0.072
MW-8	3/3/2002	Unfiltered	3.39	<0.05	**2.03**	0.13	<.005	<.025	<.0125	0.0145	**3.21**
MW-8	7/18/2002	Filtered	<0.015	0.037	**5.53**	0.173	<0.001	<0.002	<0.002	<0.002	0.20
MW-9	3/3/2002	Unfiltered	**94.6**	<.05	**2.84**	0.259	<.005	<.025	0.0352	**0.191**	**66.1**
MW-9	7/18/2002	Filtered	0.08	<0.008	0.230	0.157	<0.001	<0.002	<0.002	<0.002	0.047
MW-10	3/3/2002	Unfiltered	**60**	<.05	**3.34**	0.194	<.005	<.025	0.0273	**0.316**	**47.6**
MW-10	7/18/2002	Filtered	0.04	0.026	**1.16**	0.163	<0.001	<0.002	<0.002	<0.002	0.166
MW-11	3/3/2002	Unfiltered	4.66	<.05	**2.94**	0.139	0.00898	<.025	<.0125	0.0324	**3.42**
MW-11	7/18/2002	Filtered	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-12	3/3/2002	Unfiltered	**59.5**	0.0658	**9.41**	0.264	<.005	<.025	0.0307	**0.196**	**39.8**
MW-12	7/18/2002	Filtered	<0.015	0.020	**3.02**	0.208	<0.001	<0.002	0.002	<0.002	0.215
MW-13	3/3/2002	Unfiltered	**7.28**	<.05	**4.61**	0.12	<.005	<.025	<.0125	0.0118	**5.01**
MW-13	7/18/2002	Filtered	<0.015	<0.008	**7.09**	0.139	<0.001	0.007	<0.002	<0.002	0.110
MW-14	3/3/2002	Unfiltered	**20.3**	<.05	**1.66**	0.145	<.005	<.025	<.0125	0.034	**13.9**
MW-14	7/18/2002	Filtered	<0.015	0.012	**2.11**	0.133	<0.001	<0.002	<0.002	<0.002	0.608
New Mexico Water Quality Control Commission Standards (bolded where exceeded)			5	0.1	1	0.75	0.01	0.05	1	0.05	1

Table 6 – Summary of Other Inorganic Constituents (all units mg/l) continued

Well	Date		Pb	Mn	Hg	Mo	Ni	Se	Si	Ag	Sr	Zn
MW-1	8/10/2001	Unfiltered	<.01	**0.28**		<.05	<.025	<.05		<.0125		<.025
MW-1	7/18/2002	Filtered	<0.011	0.072	<0.002	<0.002	<0.006	<0.004		<0.002	0.962	0.023
MW-2	8/10/2001	Unfiltered	0.017	0.169		<.05	<.025	<.05		<.0125		<.025
MW-2	7/18/2002	Filtered	<0.011	<0.001	<0.002	0.003	<0.006	<0.004		<0.002	0.887	0.148
MW-3	8/10/2001	Unfiltered	0.016	**0.334**		<.05	<.025	<.05		<.0125		0.06
MW-3	7/18/2002	Filtered	<0.011	<0.001	<0.002	0.004	<0.006	<0.004		<0.002	0.88	0.156
MW-4	8/10/2001	Unfiltered	0.022	**0.588**		<.05	<.025	<.05		<.0125		<.025
MW-4	7/18/2002	Filtered	<0.011	0.119	<0.002	<0.002	<0.006	<0.004		<0.002	1.12	0.031
MW-5	8/10/2001	Unfiltered	0.023	**0.646**		<.05	<.025	<.05		<.0125		0.08
MW-5	7/18/2002	Filtered	<0.011	0.148	<0.002	<0.002	<0.006	<0.004		<0.002	1.22	0.034
MW-5 dup	8/10/2001	Unfiltered	0.026	**0.621**		<.05	<.025	<.05		<.0125		0.069
MW-6	8/10/2001	Unfiltered	0.04	**1.03**		<.05	<.025	<.05		<.0125		0.14
MW-6	7/18/2002	Filtered	<0.011	0.063	<0.002	0.002	<0.006	<0.004		<0.002	1.14	0.129
MW-7	8/10/2001	Unfiltered	0.041	**0.843**		<.05	<.025	<.05		<.0125		0.119
MW-7	7/18/2002	Filtered	<0.011	0.028	<0.002	0.007	<0.006	<0.004		<0.002	1.2	0.141
MW-8	3/3/2002	Unfiltered	0.0105	0.128	<0.0002	<.05	<.025	<.05	38.6	<.0125		0.0439
MW-8	7/18/2002	Filtered	<0.011	0.098	<0.002	<0.002	<0.006	<0.004		<0.002	1.46	0.05
MW-9	3/3/2002	Unfiltered	0.0212	**1.29**	<0.0002	<.05	0.0632	<.05	10.5	<.0125		0.14
MW-9	7/18/2002	Filtered	<0.011	0.040	<0.002	<0.002	<0.006	<.004		<0.002	0.886	0.15
MW-10	3/3/2002	Unfiltered	0.0197	**0.376**	<0.0002	<.05	0.0339	<.05	7.16	<.0125		0.0884
MW-10	7/18/2002	Filtered	<0.011	0.081	<0.002	<0.002	<0.006	<0.004		<0.002	1.16	0.035
MW-11	3/3/2002	Unfiltered	<.01	**0.204**	<0.0002	<.05	<.025	<.05	25.8	<.0125		<.025
MW-11	7/18/2002	Filtered	NA	NA	NA	NA	NA	NA		NA	NA	NA
MW-12	3/3/2002	Unfiltered	0.0232	**0.554**	<0.0002	<.05	0.0253	<.05	7.3	<.0125		0.0749
MW-12	7/18/2002	Filtered	<0.011	**0.212**	0.004	<0.002	<0.006	<0.004		<0.002	1.58	0.027
MW-13	3/3/2002	Unfiltered	<0.01	0.0948	<0.0002	<.05	<.025	<.05	36.4	<.0125		0.0437
MW-13	7/18/2002	Filtered	<0.011	0.016	<0.002	<0.002	<0.006	0.005		<0.002	1.66	0.01
MW-14	3/3/2002	Unfiltered	0.0112	**0.353**	<0.0002	<.05	<.025	<.05	40	<.0125		0.0465
MW-14	7/18/2002	Filtered	<0.011	0.139	<0.002	<0.002	<0.006	<0.004		<0.002	1.21	0.12
New Mexico Water Quality Control Commission Standards (bolded where exceeded)			0.05	0.2	0.002	1	0.2	0.05		0.05		10

FIGURES

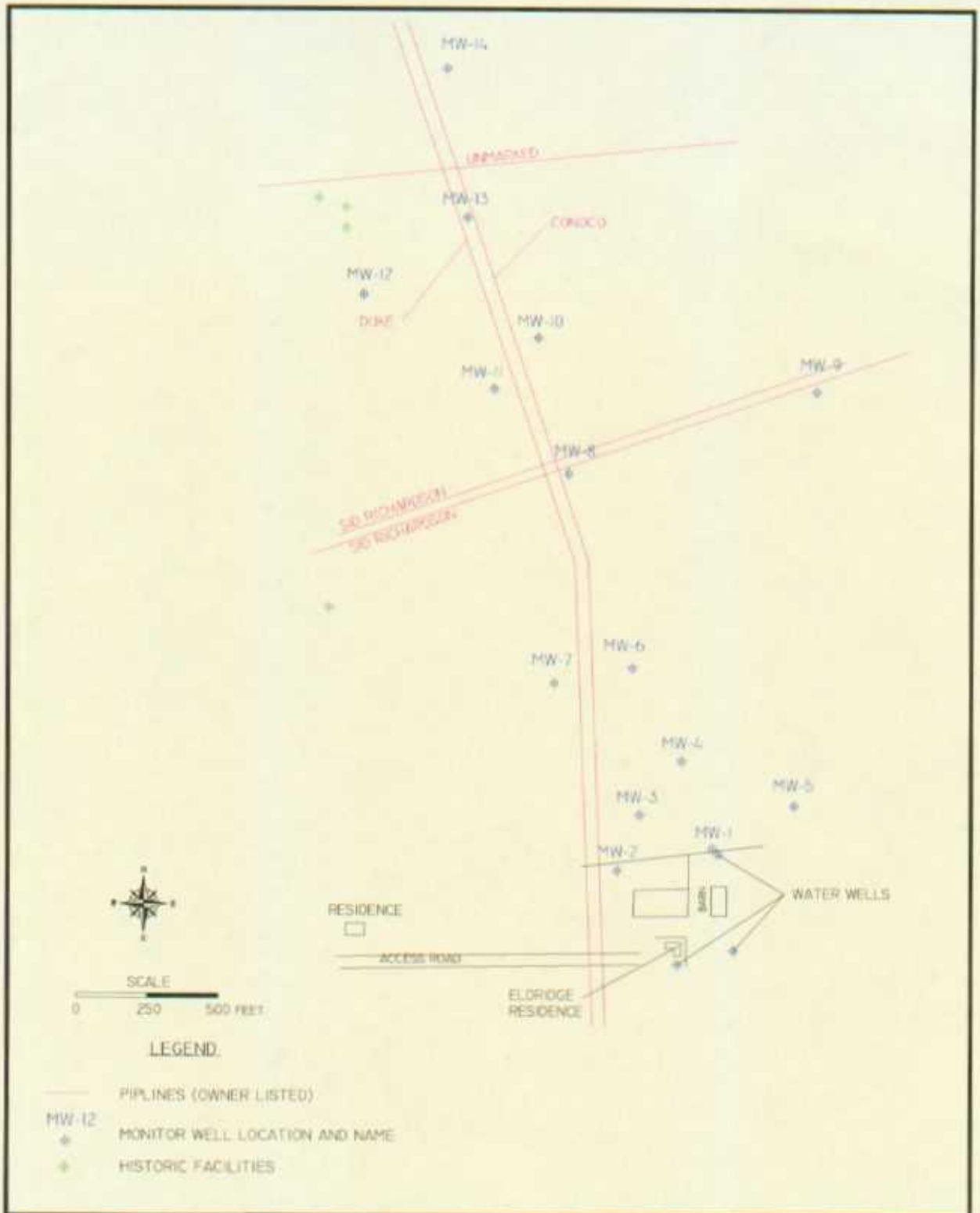


Figure 1 – Well Locations
Eldridge Ranch Characterization

Duke Energy Field Services

DRAWN BY:	MHS
REVISED:	
DATE:	AUG 02

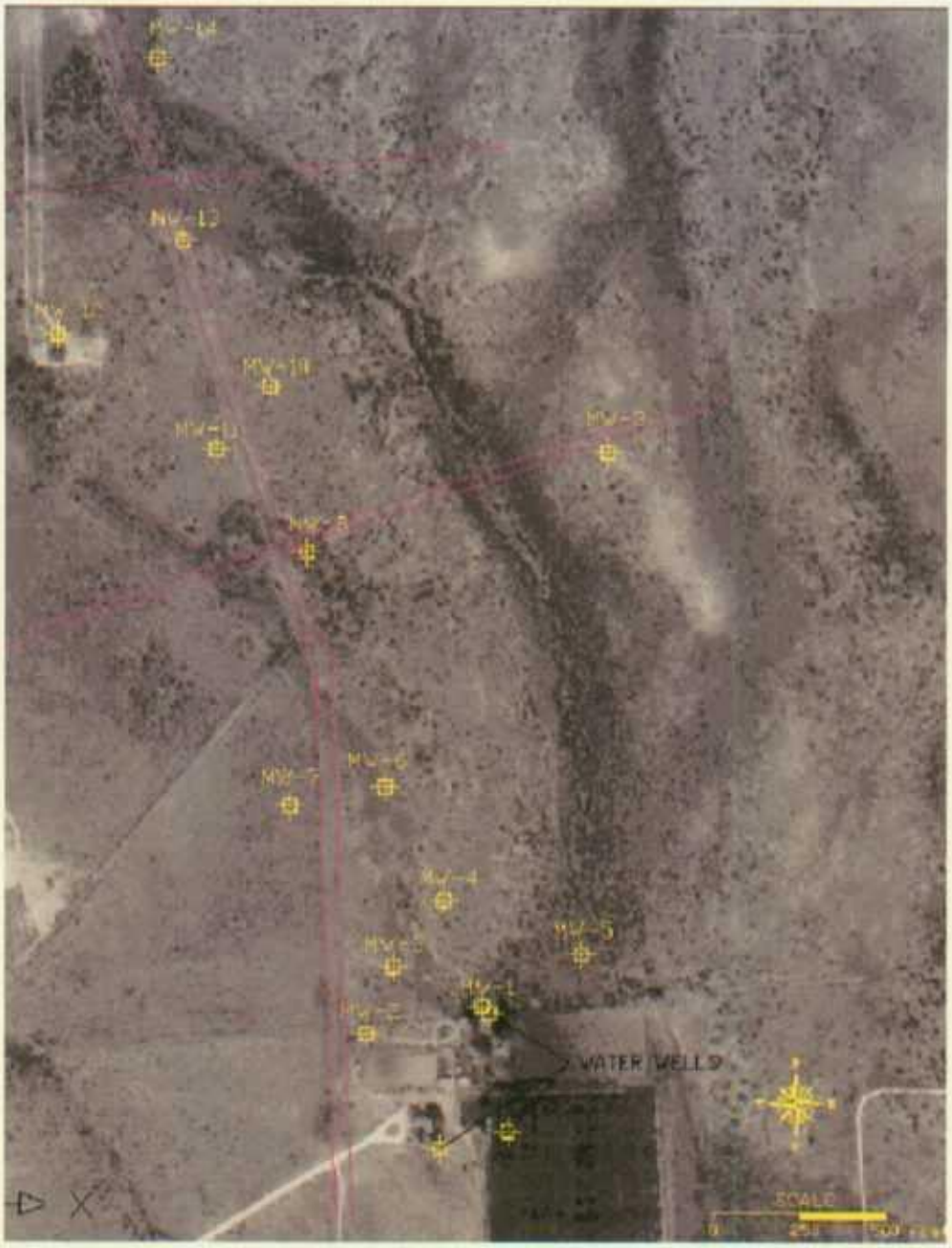


Figure 2 – Site Setting
Eldridge Ranch Characterization

Duke Energy Field Services

DRAWN BY: MHS
REVISED:
DATE: AUG 02

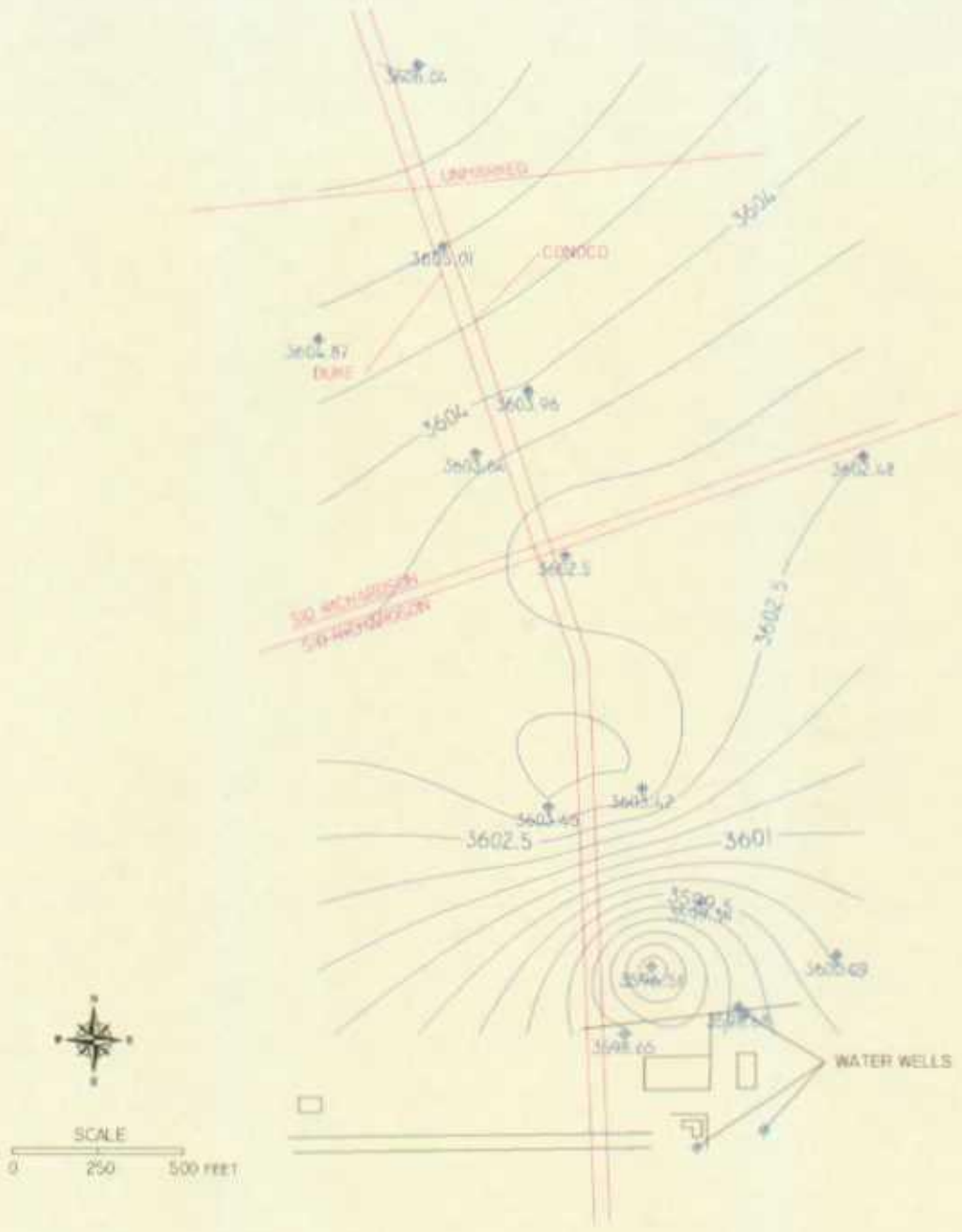


Figure 3 – July 2002 Water Table Elevations
Eldridge Ranch Characterization

Duke Energy Field Services

DRAWN BY: MHS
REVISED:
DATE: AUG 02

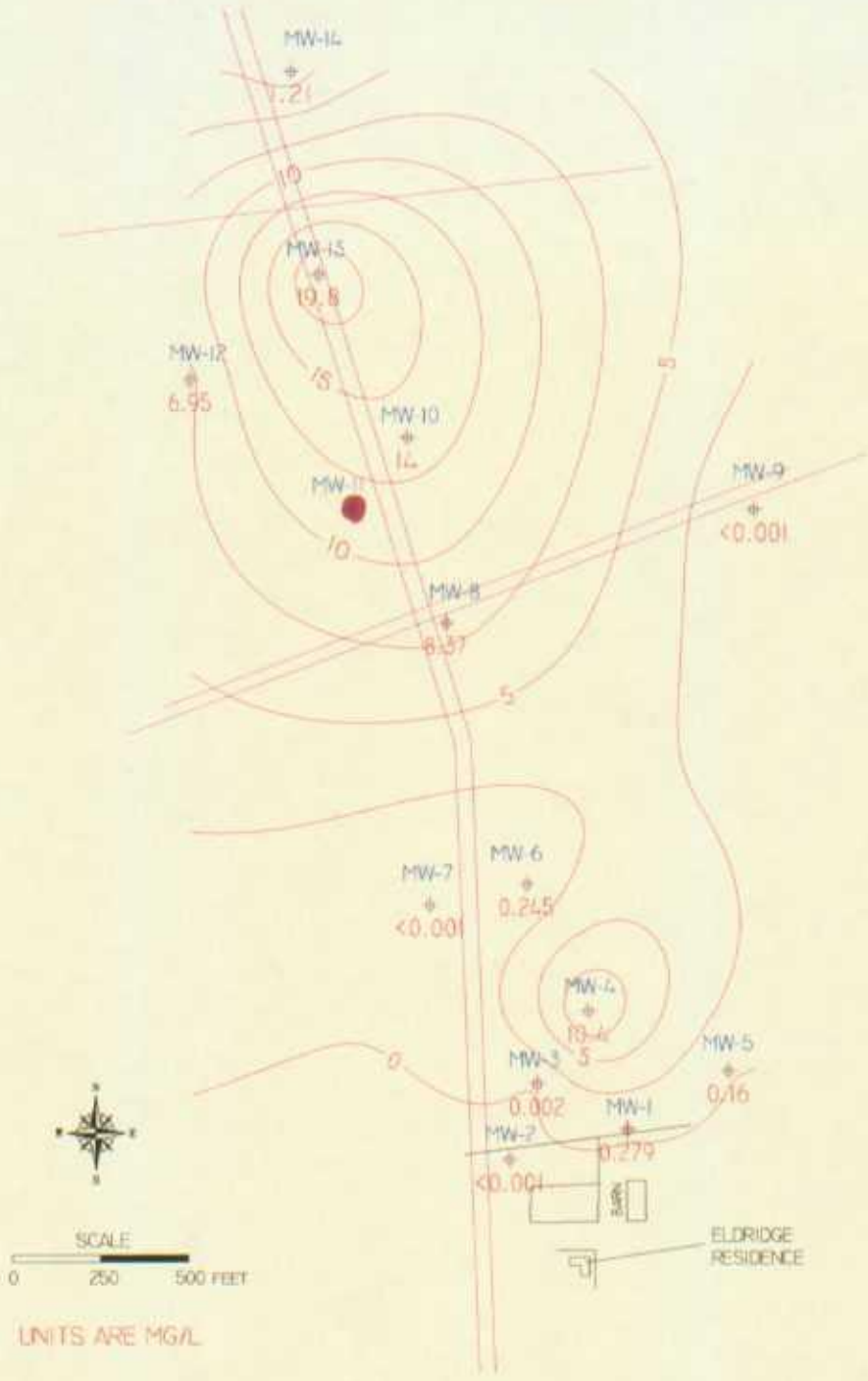


Figure 4 – July 2002 Benzene Isopleth
Eldridge Ranch Characterization

Duke Energy Field Services

DRAWN BY: MHS	
REVISED:	
DATE: AUG 02	

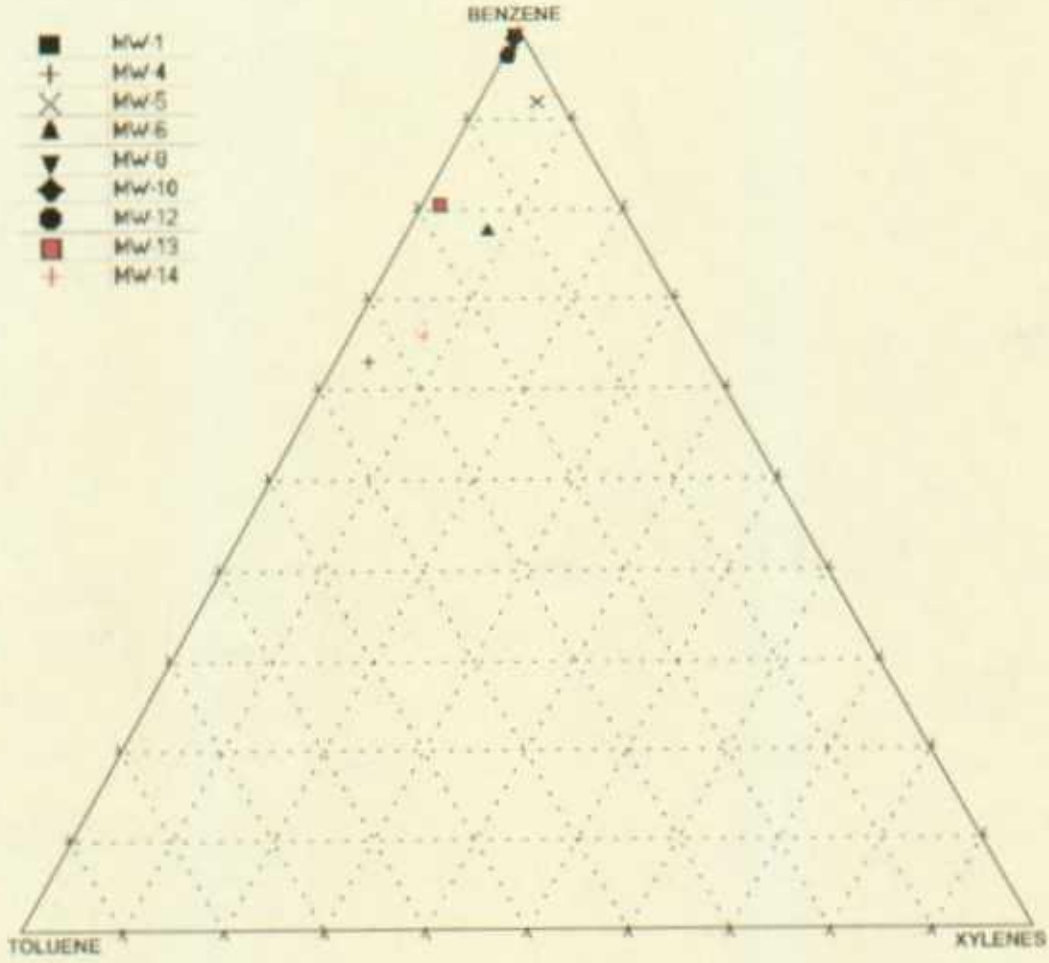


Figure 5 – Trilinear Diagram for Hydrocarbons
Eldridge Ranch Characterization

Duke Energy Field Services

DRAWN BY: MHS
REVISED:
DATE: AUG 02

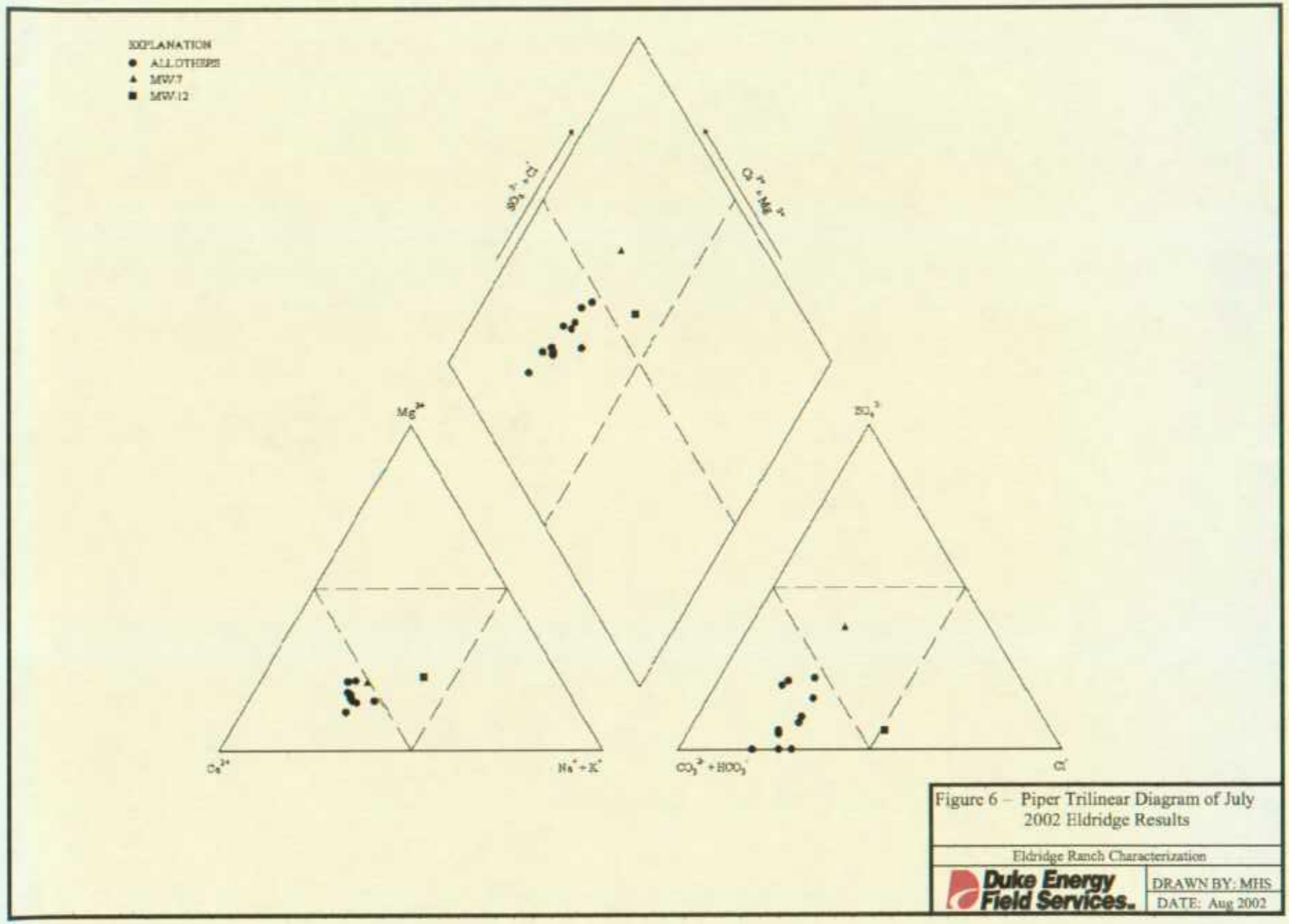


Figure 6 – Piper Trilinear Diagram of July 2002 Eldridge Results

Eldridge Ranch Characterization

Duke Energy Field Services.

DRAWN BY: MHS

DATE: Aug 2002

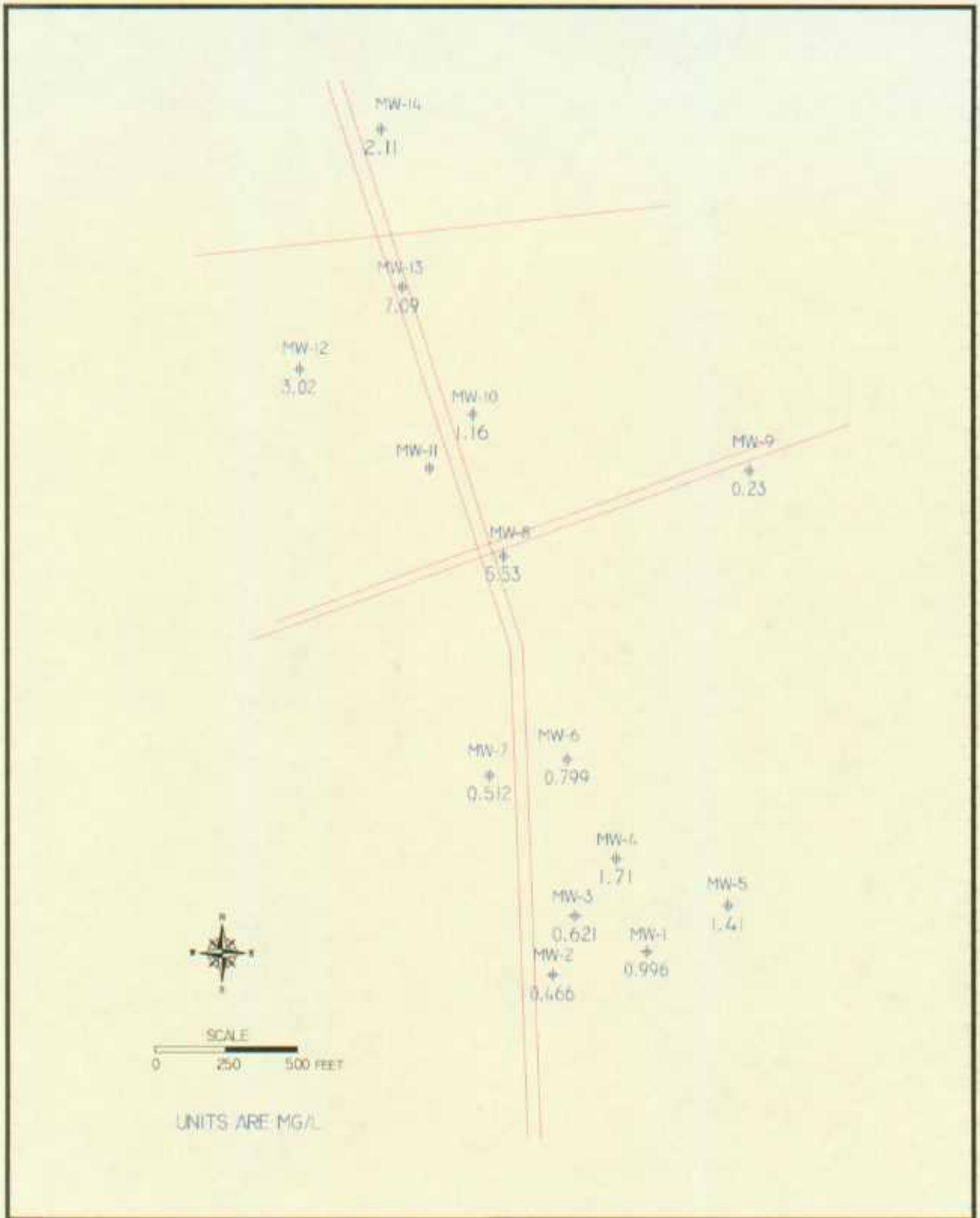


Figure 7 – July 2002 Barium Distribution
Eldridge Ranch Characterization

Duke Energy Field Services.

DRAWN BY: MHS
REVISED:
DATE: AUG 02

Olson, William

From: Olson, William
Sent: Monday, July 15, 2002 4:37 PM
To: Debbie Brinkerhoff - NMED (E-mail)
Subject: Eldridge Ranch Contamination

Debbie,

Roger Anderson asked me to respond to your inquiry on the status of the Eldridge Ranch Contamination site. The OCD conducted 2 Phases of ground water investigations over the last year using the state reclamation fund. Fourteen monitor wells were installed during these investigations. The results of the investigations show that the highest levels of ground water contamination are centered on Duke Energy's pipeline almost 1/2 a mile north of the Eldridge Ranch. The OCD has required that Duke determine the source of the contamination. Attached are recent correspondences on this issue. The OCD will copy you on all future correspondence.

Please contact me if you have any questions.

Sincerely,

Wild Olson

William C. Olson
Hydrologist
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
(505) 476-3491


INV1req.DOC


DUKE 702 workplan text.doc


INV2apr.DOC

Olson, William

From: Olson, William
Sent: Monday, July 15, 2002 3:27 PM
To: Paul Rosenfeld (E-mail)
Cc: Williams, Chris; Stephen Weathers (E-mail)
Subject: Eldridge Ranch Groundwater Work plan


702 workplan text.doc


INV2apr.DOC

Paul,

As you requested, attached is a copy of Duke Energy's recent work plan and the OCD's approval of the plan. A hard copy of the OCD's approval was sent to Frank Eldridge. Please contact me if you have any questions.

Sincerely,

William C. Olson
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
(505) 476-3491

==========

-----Original Message-----
From: Stephen W. Weathers [mailto:swweathers@duke-energy.com]
Sent: Wednesday, July 10, 2002 8:46 PM
To: WOLSON@state.nm.us
Cc: Mike Stewart <stewartmike
Subject: Eldridge Groundwater Sampling Workplan

Mr. Olson

Attached is a brief workplan summarizing field activities associated with one round of groundwater sampling of all wells associated with the Eldridge Project. Upon your approval we will implement the sampling event. I will make all notifications to the landowners to gain access to the two properties. Are the wells locked? If they are locked, whom shall I contact to get a key? If they are not locked, Duke will provide locks for the wells and submit a copy of the key to the district office in Hobbs.

Please call me if you have any questions pertaining to this project. I can be reach on my cell at 303-619-3042.

Thanks

Steve Weathers

(See attached file: 702 workplan text.doc)

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

July 11, 2002

CERTIFIED MAIL
RETURN RECEIPT NO. 7001-1940-0004-7923-0469

Mr. Stephen Weathers
Duke Energy Field Services, Inc.
370 17th St., Suite 900
Denver, Colorado 80202

RE: CASE #1R334
ELDRIDGE RANCH
MONUMENT, NEW MEXICO

Dear Mr. Weathers:

The New Mexico Oil Conservation Division (OCD) has reviewed Duke Energy Field Services, Inc.'s (Duke) July 10, 2002 email titled "ELDRIDGE GROUNDWATER SAMPLING WORKPLAN" and accompanying July 10, 2002 "WORKPLAN TO COLLECT DATA AT THE ELDRIDGE RANCH SITE, LEA COUNTY, NEW MEXICO". These documents contain Duke's work plan for collecting additional ground water information in order to prepare a work plan to complete the characterization of the source of petroleum contamination of an irrigation well and a domestic water well at the Eldridge Ranch located in Section 21, Township 19 South, Range 37 East, Lea County, New Mexico.

The above referenced work plan is approved with the following conditions:

1. Ground water from all monitor wells and the Eldridge Ranch water wells shall be purged, sampled and analyzed for concentrations of benzene, toluene, ethylbenzene, xylene, polycyclic aromatic hydrocarbons (PAH), , total dissolved solids (TDS), major cations and anions, and New Mexico Water Quality Control Commission (WQCC) metals using EPA approved methods and quality assurance/quality control (QA/QC).

2. All wastes generated during the investigation shall be disposed of at an OCD approved facility.

3. Duke shall submit the results of the investigations to the OCD by August 30, 2002. The report shall be submitted to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office and shall include:

   a. A description of the investigation activities which occurred including conclusions and recommendations.

   b. A water table map showing the location of known releases, pipelines, monitor wells, private water wells and any other pertinent site features as well as the direction and magnitude of the hydraulic gradient created using the water table elevation from each monitor well.

   c. Isopleth maps for contaminants of concern observed during the investigations.

   d. Summary tables of all ground water quality sampling results and copies of all laboratory analytical data sheets and associated QA/QC data.

   e. The disposition of all wastes generated.

   f. A work plan for determining the source of the contamination.

4. Duke shall notify the OCD at least 48 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and split samples.

Please be advised that OCD approval does not relieve Duke of responsibility should the investigation actions fail to adequately define the extent of contamination related to Duke's operations, or if contamination exists which is outside the scope of the work plan. In addition, OCD approval does not relieve Duke of responsibility for compliance with any other federal, state or local laws

If you have any questions, please call me at (505) 476-3491.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

cc: Chris Williams, OCD Hobbs District Office
Frank Eldridge
Gene Samberson, Heidel, Samberson, Newell, Cox & McMahon

Olson, William

From: Olson, William
Sent: Thursday, July 11, 2002 11:08 AM
To: 'Stephen W. Weathers'
Subject: RE: Eldridge Groundwater Sampling Work plan

INV2apr.DOC

Stephen,

Attached is a copy of the OCD approval of Duke's July 10, 2002 work plan. The original is in the mail. The monitor wells are locked. Please contact Larry Johnson at the OCD Hobbs District Office for the key.

If you have any questions, please contact me.

Sincerely,

William C. Olson
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
(505) 476-3491

==========

-----Original Message-----
From: Stephen W. Weathers [mailto:swweathers@duke-energy.com]
Sent: Wednesday, July 10, 2002 8:46 PM
To: WOLSON@state.nm.us
Cc: Mike Stewart <stewartmike
Subject: Eldridge Groundwater Sampling Workplan

Mr. Olson

Attached is a brief workplan summarizing field activities associated with one round of groundwater sampling of all wells associated with the Eldridge Project. Upon your approval we will implement the sampling event. I will make all notifications to the landowners to gain access to the two properties. Are the wells locked? If they are locked, whom shall I contact to get a key? If they are not locked, Duke will provide locks for the wells and submit a copy of the key to the district office in Hobbs.

Please call me if you have any questions pertaining to this project. I can be reach on my cell at 303-619-3042.

Thanks

Steve Weathers

(See attached file: 702 workplan text.doc)

Olson, William

From: Stephen W. Weathers [swweathers@duke-energy.com]
Sent: Wednesday, July 10, 2002 8:46 PM
To: WOLSON@state.nm.us
Cc: Mike Stewart <stewartmike
Subject: Eldridge Groundwater Sampling Workplan

702 workplan text.doc

Mr. Olson

Attached is a brief workplan summarizing field activities associated with one round of groundwater sampling of all wells associated with the Eldridge Project. Upon your approval we will implement the sampling event. I will make all notifications to the landowners to gain access to the two properties. Are the wells locked? If they are locked, whom shall I contact to get a key? If they are not locked, Duke will provide locks for the wells and submit a copy of the key to the district office in Hobbs.

Please call me if you have any questions pertaining to this project. I can be reach on my cell at 303-619-3042.

Thanks

Steve Weathers

(See attached file: 702 workplan text.doc)

Remediacon Incorporated
Geological and Engineering Services
remediacon@yahoo.com

PO Box 302, Evergreen, Colorado 80439
Telephone: 303.674.4370
Facsimile: 617.507.6178

July 10, 2002

Mr. Stephen Weathers
Duke Energy Field Services, LP
370 17th Street, Suite 900
Denver, CO 80202

Re: Workplan to Collect Data at the Eldridge Ranch Site, Lea County, New Mexico

Dear Stephen:

Duke Energy Field Services, LP (Duke) retained Remediacon to review and analyze the existing information, identify data deficiencies and then prepare a workplan to address the deficiencies for the Eldridge Ranch Site in Lea County New Mexico. Remediacon has reviewed the Phase II report and is in the process of obtaining the Phase I report. In the meantime, Remediacon proposes to inventory and sample the existing 14 monitoring wells. The activities to be completed include:

1. Inspect each well for damage;

2. Verify the reported stickup and total depth values (a copy of the reported data is included as Table 1);

3. Measure the depth-to-product (if present) and depth-to-water in each well;

4. Remove a minimum of three casing volumes of water from each well using a new disposable polypropylene bailer in each well;

5. Sample the wells after the field parameters of temperature, dissolved oxygen, pH and conductivity have stabilized; and

6. Analyze the samples for benzene, toluene, ethylbenzene, xylenes (BTEX), gasoline range organics (GRO), diesel range organics (DRO), chlorides, dissolved aluminum, dissolved barium, dissolved chrome, dissolved iron and dissolved manganese. Other inorganic parameters maybe added based upon further review of the data.

A minimum of three wells will also be slug tested to evaluate the range of hydraulic conductivities in the wells. the wells will be selected based upon examination of the lithologic logs, historic field sampling records, and geographic distribution.

The resulting information will be combined with the existing data to identify data deficiencies. A workplan will then be developed to complete characterization activities prior to preparing a corrective action plan.

The work will be completed the week of July 15, 2002. Preliminary results should be available by mid August. The workplan will be prepared by end of August.

Do not hesitate to contact me if you have any questions or comments on this letter.

Sincerely
REMEDIACON INCORPORATED

Michael H. Stewart

Michael H. Stewart, PE, CPG
Principal Engineer

MHS/tbm

Table 1 – Summary of Reported Well Construction Information
(all units in feet)

Well	Top of Casing	Stickup	Total Depth	Screen Interval	Sand Interval	Top of Pellets
MW-1	3618.22	2.50	28.0	11.8-26.8	9.8-27	7.8
MW-2	3621.33	2.50	28.0	11.7-26.7	8.7-27	6.7
MW-3	3619.07	2.50	30.0	13.4-28.4	10.4-29	8.4
MW-4	3621.31	2.50	30.0	13.2-28.2	10.2-29	11.2
MW-5	3618.08	2.50	27.0	10.2-25.2	7.2-26	5.2
MW-6	3624.99	2.50	30.0	13.5-28.5	10.5-29.0	8.5
MW-7	3630.62	2.50	35.0	18.6-33.6	15.6-34	13.6
MW-8	3625.92	2.42	30.0	15.0-30.0	12-30	10.0
MW-9	3622.12	3.42	27.0	11.4-26.4	8.4-27	6.4
MW-10	3627.27	2.92	31.0	15.2-30.2	12-31	10.0
MW-11	3627.56	2.42	30.4	15.3-30.3	12-30.4	10.0
MW-12	3631.14	2.50	34.0	18-33	15-34	13.0
MW-13	3632.9	3.42	36.0	18.11-33.11	16-36	14.0
MW-14	3630.36	2.50	32.0	16.11-31.11	14-32	12.0

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

June 14, 2002

CERTIFIED MAIL
RETURN RECEIPT NO. 7001-1940-0004-3929-7297

Mr. Stephen Weathers
Duke Energy Field Services, Inc.
370 17th St., Suite 900
Denver, Colorado 80202

RE: GROUND WATER CONTAMINATION
ELDRIDGE RANCH
MONUMENT, NEW MEXICO
CASE #1R334

Dear Mr. Weathers:

The New Mexico Oil Conservation Division (OCD) has been conducting investigations into the source of petroleum contamination of an irrigation well and a domestic water well at the Eldridge Ranch located in Section 21, Township 19 South, Range 37 East, Lea County, New Mexico.

The recent investigations contained in AMEC Earth & Environmental, Inc.'s May 6, 2002 report titled "PHASE II MONITORING WELL INSTALLATION AND GROUND WATER SAMPLING, ELDRIDGE RANCH PROJECT, LEA COUNTY, NEW MEXICO" show that high levels of benzene, toluene, ethylbenzene and xylene (BTEX) contaminated ground water are centered on a pipeline right-of-way containing a Duke Energy (Duke) gas pipeline and a Conoco gas pipeline. The results of the OCD's investigations are on file at the OCD Santa Fe Office and OCD Hobbs District Office.

According to Conoco representatives, the Conoco gas pipeline is a dry natural gas line supplying fuel gas to the Monument Booster Station and therefore is not a potential source of BTEX contamination. The Duke pipeline is currently marked as a natural gas pipeline. When the OCD initially inspected the site on September 28, 2000 the pipeline markers listed the pipeline as a GPM natural gas liquids line.

Because the high BTEX contamination of the ground water is characteristic of natural gas liquids and because the highest concentration of ground water contaminants are centered on Duke's former natural gas liquids pipeline, the OCD requires that Duke submit a plan to investigate the source of the contamination. The plan shall be submitted to the OCD Santa Fe Office by July 14, 2002 with a copy provided to the OCD Hobbs District Office.

If you have any questions, please call me at (505) 476-3491.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

cc: Chris Williams, OCD Hobbs District Office
Frank Eldridge
Gene Samberson, Heidel, Samberson, Newell, Cox & McMahon

6/18/02

amec

INVOICE 518496

AMEC Earth & Environmental, Inc.
P.O. Box 24445
Seattle, Washington 98124-0445

MAY-31-2002
Page Number 1

State of New Mexico
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

ATTENTION: Ms. Mary Anaya

Professional Services Through MAY-17-2002

Project 2-517-000002 Eldridge Ranch

Client Project Manager: Bill Olson
PO # SPD 00-805-09-17658
Doc. # 02-199-004769

LABOR		851.00
OTHER EXPENSES		23,759.15
	CURRENT BILLING	24,610.15
	NMGRT @ 5.8125 %	1,430.46
	AMOUNT DUE THIS INVOICE	26,040.61

TOTAL CONTRACT	24,621.90
PRIOR BILLINGS	.00
CURRENT INVOICE	24,610.15
TOTAL REMAINING	11.75

Project Manager: Wilcox, Robert E.

amec

AMEC Earth & Environmental, Inc.
P.O. Box 24445
Seattle, Washington 98124-0445

INVOICE 518496

MAY-31-2002
Page Number 2

ABOR

		HOURS	RATE	AMOUNT
Staff Scientist				
Wilcox, Robert E.	05/03/02	10.00		
	***	10.00	57.00	570.00
Schulz, Michael G	05/03/02	2.00		
	***	2.00	57.00	114.00
Draftsperson				
Trujillo, Robert J.	04/26/02	2.00		
	***	2.00	40.00	80.00
Project Administration				
Gallo, Rosanne	05/03/02	3.00		
	***	3.00	29.00	87.00
		17.00		851.00

XPENSES

		QTY		RATE	AMOUNT
Credit Memo					
Credit Memo					
Prior Period		3,905.65	Dollar(s)		
Billing Adjustment					
AB517H	05/17/02				
CM 518460 Put back in to WIP					
Prior Period		2,140.00	Dollar(s)		
Billing Adjustment					
AB517J	05/17/02				
CM 518425 Put back in to WIP					
Prior Period		6,694.60	Dollar(s)		
Billing Adjustment					
AB517F	05/17/02				
CM 518448 Put back in to WIP					
	***	12,740.25		1.0000	12,740.25

Subcontractor

amec

INVOICE

518496

AMEC Earth & Environmental, Inc.
P.O. Box 24445
Seattle, Washington 98124-0445

MAY-31-2002
Page Number 3

	QTY	RATE	AMOUNT
Subcontractor Geomechanics Sw Inc 607274 04/02/02 ***			11,018.90
			23,759.15
** Total Project 2-517-000002			24,610.15

Terms: Net thirty (30) days. After thirty (30) days from invoice date a late charge of one and one-half percent (1½%) per month, or the maximum rate allowed by law may be charged.

Direct all billing inquiries to your AMEC Earth & Environmental, Inc. Project Manager.
Please visit our website at
http://www.amecee.com

Federal Tax # 91-1641772

Olson, William

From: bob wilcox [bob.wilcox@amec.com]
Sent: Tuesday, June 11, 2002 8:50 AM
To: wolson@state.nm.us
Subject: Eldridge invoice backup

Hello Bill,

I figured that when you received the updated invoice while I was on vacation, you may not have received all the backup invoices. I will fax them over to you later today. When you receive them, send me a confirmation e-mail that that is what you were looking for,

Thank you,

Bob

amec

Fax

To Bill Olson
Company OCD
Fax
Charge no 505 476-3462
File no
Fax operator

From Bob Wilcox
Direct Tel 915/686-1978
Fax 915/618-0137 or 915/683-8911
Pages 5 **(inc. this page)**
Date 6/12/02
cc

Subject Invoice backup

AMEC Earth & Environmental, Inc.
301 N. Colorado Street, Suite 350
Midland, Texas 79701
Tel + 915/686-1978
Fax + 915/618-0137
www.amec.com

Geomechanics Southwest, Inc.

PMB 410
2618 N. Campbell Ave.
Tucson, AZ 85719

INVOICE #: 607274
Invoice Date: 02-Apr-02
DUE DATE: 02-May-02
GSI Job #: 042-02A

AMEC
8519 Jefferson NE
Albuquerque, NM 87113
ATTN: Accounts Payable

INVOICE FOR DRILLING SERVICES

Project Name: Eldridge Ranch
Project Location: Monument, New Mexico
Job / P.O. #: 88-0487118
Date Work Performed: 2/25/02 to 3/2/02

Quantity	Description	Unit Rate	Total
	See attached Line Item Summary		
	Drill Rig and Support Vehicle Mobilization/Demobilization		$1,610.00
	Drilling and Monitor Well Installation		$8,449.20
	Line Items not covered in price agreement		$959.70

AMOUNT DUE $11,018.90

A 1.5% monthly service charge will be added to any past due amount over 30 days.

Remove bottom portion and return with remittance.

Invoice Date	02-Apr-02	AMOUNT DUE:	$11,018.90
DUE DATE:	02-May-02		
Invoice #:	607274		

Cost Table - Geomechanics Southwest
New Mexico Oil Conservation Division
Phase II Monitoring Well Installation
Eldridge Ranch, Monument, New Mexico

Drilling Rig Mobilization/Demobilization		
4 hours Drilling Rig Preparation @ $100/hour		$ 400.00
2 man days per diem @ $60/day		$ 120.00
Pickup Truck 6 days @ $50/day		$ 300.00
Pickup Truck 1000 miles @ $0.25/mile		$ 250.00
Drilling Rig 720 miles @ $0.75/mile		$ 540.00
	Subtotal	**$ 1,610.00**
Drilling and Monitor Well Installation		
Drilling Contractor Per Price Agreement:		
Hollow stem auger drilling and well completion		$ 4,420.00
Drilling 221 feet @ $20.00/foot		$ 168.00
10' sections - 2 inch 0.010 PVC screen, 7 @ $24.00/10 ft		$ 217.00
10' sections - Blank 2 inch PVC riser, 14 @ $15.50/10 ft		$ 600.60
Sand pack, 91 @ $6.60/50lb		$ 72.60
Bentonite chips, 11 @ $6.60/50lb		$ 441.00
Cement, 73.5 sacks @ $6.00/each		$ 600.00
10 man days per diem @ $60/day (Drill Crew)		$ 450.00
5 days steam cleaner @ $90/day		$ 700.00
7 hours Installation of well cover @ $100/hour		$ 700.00
7 hours Well Development @ $100/hour		$ 130.00
2 drums @ $115/drum		
	Subtotal	**$8,449.20**
Drilling Contractor Line Items not covered in Price Agreement		
5' sections - 2 inch 0.010 PVC screen, 7 @ $30.00/5 ft		$ 210.00
3' Stickup Manhole Well Cover, 7 @ $75.00/ea		$ 525.00
Locking jay plug - 7 @ $16.00/ea		$ 112.00
End caps flush threaded - 7 @ $8.00/ea		$ 56.00
Well cap locks - 7 @ $8.10/ea		$ 56.70
	Subtotal	**$ 959.70**
	Drilling Total	**$ 11,018.90**

Geomechanics Southwest, Inc.
PMB 410
2618 N. Campbell Ave.
Tucson, AZ 85719

Invoice#: 607274A
Invoice Date: 02-Apr-02
GSI Job# 042-02A

Received from Vendor:
Halliburton Energy Services/Barold
P.O. Box 1675
Houston, Texas

Well Supplies

5' sections - 2 inch 0.010 PVC screen, 7 @ $30.00/5 ft		$ 210.00
3' Stickup Manhole Well Cover, 7 @ $75.00/ea		$ 525.00
Locking jay plug - 7 @ $16.00/ea		$ 112.00
End caps flush threaded - 7 @ $8.00/ea		$ 56.00
Well cap locks - 7 @ $8.10/ea		$ 56.70
	Subtotal	$ 959.70

TNM&O 082

1313 13th Street
Lubbock, TX 79401

Destination Station City & State: Lubbock, TX — Zip: 79427

To (Recipient's Name): TRACE ANALYSIS

Exact Street Address Cannot deliver to P.O. Box or Zip Code: 6701 ABERDEEN AVE

City: Lubbock, TX — Zip: 79427

From (Shipper's Name): AMEC (MARK)

Exact Street Address: 8519 Jefferson NE Ave

City: Albuq NM — Zip: 87113

Waybill Number — Do not write in this area: 902 806 655 3

No.: 3 — Day/Year: 4 02 9 25

Service Required: NBO / Same Day / Overnight / 800 — Payment: Bill Rec Direct Account / Cash / Bill 3rd Party / Bill Crdt Card

No. of Pieces: 1 — Actual Weight Lbs: 45

Description: FedEx

Prepaid	Charges	Collect
1850	Express	
	Repac	
	Value	
	Collect / C.O.D. Fee	
1850	Sub Total	
	Pickup	
	Delivery	
	Tax	
	C.O.D. Amount	
1850	TOTAL	

SHIPPER'S RECEIPT - 1

amec

AMEC Earth & Environmental, Inc.
P.O. Box 24445
Seattle, Washington 98124-0445

OIL CONSERVATION DIV.
02 APR 25 PM 1:45

INVOICE

518460

APR-19-2002
Page Number 1

State of New Mexico
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

ATTENTION: Ms. Mary Anaya

Professional Services Through APR-12-2002

Project 2-517-000002 Eldridge Ranch

Client Project Manager: Bill Olson
PO # SPD 00-805-09-17658
Doc. # 02-199-004769

LABOR		2,790.00
OTHER EXPENSES		1,115.65
	CURRENT BILLING	3,905.65
	NMGRT @ 5.8125 %	227.02
	AMOUNT DUE THIS INVOICE	4,132.67

TOTAL CONTRACT	24,621.90
PRIOR BILLINGS	8,834.60
CURRENT INVOICE	3,905.65
TOTAL REMAINING	11,881.65

Project Manager: Wilcox, Robert E.

LABOR:

	DATE	HOURS	RATE	AMOUNT
Senior Scientist: Project Management				
Wilcox, Robert E	03-30-02 / 04-05-02	1.00		
		1.00	$75.00	$75.00
Staff Scientist: Report Preparation				
Ehrlich, Mark A.	03-16-02 / 03-22-02	1.00		
Ehrlich, Mark A.	03-23-02 / 03-29-02	18.00		
Ehrlich, Mark A.	03-30-02 / 04-05-02	16.00		
		35.00	$57.00	$1,995.00
Draftsperson:				
Trujillo, Robert J.	03-23-02 / 03-29-02	10.00		
Trujillo, Robert J.	03-30-02 / 04-05-02	4.00		
Trujillo, Robert J.	04-06-02 / 04-12-02	4.00		
		18.00	$40.00	$720.00
TOTAL LABOR				**$2,790.00**

EXPENSES:

	DATE	QTY	RATE	AMOUNT
Basin Survey	03/15/02	1.0	$1,115.65	
TOTAL EXPENSES				**$1,115.65**

Total Charges: **$3,905.65**

Basin surveyS
P. O. Box 1786
Hobbs, NM 88241

RECEIVED MAR 18 2002

Invoice

DATE	INVOICE NO.
3/15/2002	2363

BILL TO	CLIENT INFO
AMEC Earth & Enviromental 8519 Jefferson NE Albuquerque, NM 87113	

ITEM	DESCRIPTION	QTY	RATE	AMOUNT
	Survey monitor wells in Sec. 21, T-19-S, R-37-E, Lea Co., NM			
Crew	Field Survey	8	80.00	640.00T
Mileage	Travel for crew	40	0.50	20.00T
Drafting	Draftsman	4	50.00	200.00T
GPS	GPS	4	50.00	200.00T
	NM sales tax		5.25%	55.65

APPROVED BY: Bob Wahly DATE: 4/5/02

PROJECT NO: 2-517-000002 TASK:

DEPT NO. 6517 ACCT. NO: 5720-00

AMOUNT: $ 1115 65

We appreciate your business!! Thank you.

Total $1,115.65

amec

INVOICE 518448

APR-01-2002
Page Number 1

AMEC Earth & Environmental, Inc.
P.O. Box 24445
Seattle, Washington 98124-0445

State of New Mexico
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

ATTENTION: Ms. Mary Anaya

Professional Services Through MAR-15-2002

Project 2-517-000002 Eldridge Ranch

Client Project Manager: Bill Olson
PO # SPD 00-805-09-17658
Doc. # 02-199-004769

LABOR		5,733.00
OTHER EXPENSES		961.60
	CURRENT BILLING	6,694.60
	NMGRT @ 5.8125 %	389.12
	AMOUNT DUE THIS INVOICE	7,083.72

TOTAL CONTRACT	24,621.90
PRIOR BILLINGS	2,140.00
CURRENT INVOICE	6,694.60
TOTAL REMAINING	15,787.30

Project Manager: Wilcox, Robert E.

LABOR:

	DATE	HOURS	RATE	AMOUNT
Senior Scientist: Project Management				
Wilcox, Robert E	2-25-02 / 3-01-02	2.00		
	3-4-02 / 3-4-02	1.00		
	2-18-02 / 2-22-02	2.00		
		5.00	$75.00	$375.00
Staff Scientist: Demobilization				
Strzelczyk, Bogdan M	1-14-02 / 1-18-02	1.50		
		1.50	$57.00	$85.50
Staff Scientist: Drilling/Groundwater Sampling/Mob/Demob				
Strzelczyk, Bogdan M	2-18-02 / 2-22-02	3.00		
	2-24-02 / 3-01-02	9.00		
	2-24-02 / 3-01-02	39.00		
	3-2-02 / 3-8-02	30.50		
	3-2-02 / 3-8-02	11.00		
		92.50	$57.00	$5,272.50
TOTAL LABOR				**$5,733.00**

EXPENSES:

	DATE	QTY	RATE	AMOUNT
Per Diem Strzelczyk	2-24-02/3-1-02 3-2-02/3-8-02	7.0 day(s)	$60.00	$420.00
Interface Probe	2-24-02/3-1-02 3-2-02/3-8-02	4.0 day(s)	$5.00	$20.00
Vehicle Strzelczyk	2-24-02/3-1-02	6.0 day(s)	$50.00	$300.00
Water Quality Meter	2-24-02/3-1-02	4.0 day(s)	$5.00	$20.00
PID	2-24-02/3-1-02	4.0 day(s)	$5.00	$20.00
TOTAL EXPENSES				**$780.00**

Supplies/Equipment:	(Shipping)		
Ship Lab Supplies	03/04/2002		$20.35
TOTAL SUPPLIES			**$20.35**

Mileage:

B. Strzelczyk	02/22/2002	22.0 Mile(s)	0.25	$ 5.50

3. Strzelczyk	02/25/2002	293.0 Mile(s)	0.25	$ 73.25
3. Strzelczyk	02/26/2002	54.0 Mile(s)	0.25	$ 13.50
3. Strzelczyk	02/27/2002	82.0 Mile(s)	0.25	$ 20.50
3. Strzelczyk	02/28/2002	35.0 Mile(s)	0.25	$ 8.75
3. Strzelczyk	03/01/2002	40.0 Mile(s)	0.25	$ 10.00
3. Strzelczyk	03/02/2002	61.0 Mile(s)	0.25	$ 15.25
3. Strzelczyk	03/03/2002	33.0 Mile(s)	0.25	$ 8.25
3. Strzelczyk	03/04/2002	25.0 Mile(s)	0.25	$ 6.25
	TOTAL MILEAGE			**$ 161.25**

Total Charges: **$6,694.60**

amec

INVOICE 518425

AMEC Earth & Environmental, Inc.
P.O. Box 24445
Seattle, Washington 98124-0445

MAR-01-2002
Page Number 1

02 APR -1 AM 1:35
OIL CONSERVATION DIV

State of New Mexico
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

ATTENTION: Ms. Mary Anaya

Professional Services Through FEB-15-2002

Project 2-517-000002 Eldridge Ranch

Client Project Manager: Bill Olson
PO # SPD 00-805-09-17658
Doc. # 02-199-004769

LABOR	2,020.00
OTHER EXPENSES	120.00
CURRENT BILLING	2,140.00
NMGRT @ 5.8125 %	124.39
AMOUNT DUE THIS INVOICE	2,264.39

TOTAL CONTRACT	24,621.90
PRIOR BILLINGS	.00
CURRENT INVOICE	2,140.00
TOTAL REMAINING	22,481.90

02 APR -1 AM 1:35
OIL CONSERVATION DIV

Project Manager: Wilcox, Robert E.

amec

INVOICE

AMEC Earth & Environmental, Inc.
P.O. Box 24445
Seattle, Washington 98124-0445

LABOR:

	DATE	HOURS	RATE	AMOUNT
Senior SCIENTIST: Project Management				
Wilcox, Robert E	01-07-02 / 01-11-02	10.00		
		10.00	$75.00	$750.00
STAFF SCIENTIST: Mobilization/Demobilization/Travel				
Strzelczyk, Bogdan M	01-07-02 / 01-11-02	2.00		
	01-21-02 / 01-25-02	8.50		
	01-28-02 / 02-01-02	10.00		
		20.50	$57.00	$1,168.50
WORD PROCESSOR: Project Administration/Reporting				
Trujillo, Robert J	01-21-02 / 01-25-02	3.50	$29.00	$101.50
TOTAL LABOR				$2,020.00

EXPENSES:

	DATE	QTY	RATE	AMOUNT
Mileage: Albuquerque-Hobbs Hobs-Jobsite				
B. Strzelczyk	02/01/2002	480 Mile(s)	0.25	$ 120.00
Total Charges:				$2,140.00

Terms: Net thirty (30) days. After thirty (30) days from invoice date a late charge of one and one-half percent (1½%) per month, or the maximum rate allowed by law may be charged.

Direct all billing inquiries to your AMEC Earth & Environmental, Inc. Project Manager. Please visit our website at http://www.amecee.com

Federal Tax # 91-1641772

Olson, William

From: Olson, William
Sent: Friday, April 26, 2002 11:30 AM
To: Bob Wilcox - AMEC (E-mail)
Cc: Ross, Stephen; Anaya, Mary; Anderson, Roger
Subject: Eldridge Ranch Invoices

Bob,

The New Mexico Oil Conservation Division (OCD) is in receipt of 3 AMEC invoices for the Eldridge Ranch dated March 1, 2002, April 1, 2002 and April 19, 2002. According to the New Mexico General Services Department Pricing Agreement (#00-805-09-17658) governing this project "Payment for services performed will be initiated upon final acceptance and inspection of work." The invoices submitted to date mix billings for multiple activities, some of which have not been accepted and inspected such as submission of the final investigation report documenting the site activities.

There also appears to be some errors on the invoices. The invoices all list a total contract amount which is less than the total amount approved in the December 21, 2001 purchase document. In addition, the invoices list a dollar "amount due this invoice" that differs from the "current invoice" dollar amount listed at the bottom of the invoice.

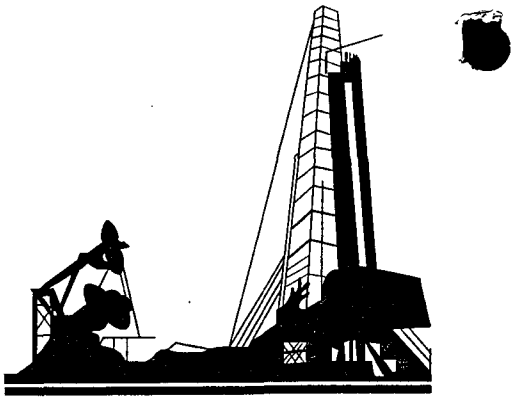
Therefore, the OCD cannot authorize payment of these invoices at this time. The OCD will either authorize payment of a total project invoice based on inspection and acceptance of the final investigation report, or authorize partial payment based upon inspection and acceptance of detailed completion reports of specific work elements categorized in AMEC's December 19, 2001 scope of work. The above-discussed discrepancies in the billing amounts also need to be corrected.

If you have any questions, please contact me.

Sincerely,

Wild Olson

William C. Olson
Hydrologist
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505
(505) 476-3491



TRANSMITTAL COVER SHEET

OIL CONSERVATION DIVISION
1220 S. ST. FRANCIS DRIVE
SANTA FE, NM 87505
(505) 476-3440
(505)476-3462 (Fax)

PLEASE DELIVER THIS FAX:

TO: Bob Wilcox - Amec

FROM: Bill Olson

DATE: 4/26/02

PAGES: 9 with cover

SUBJECT: Eldridge Ranch Invoices

IF YOU HAVE TROUBLE RECEIVING THIS FAX, PLEASE CALL THE OFFICE NUMBER ABOVE.

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☑ Telephone ☐ Personal	Time approx 0900	Date 3/19/02

Originating Party	Other Parties
Bill Olson - OCD Envir. Bureau	Bob Wilcox - AMEC

Subject

Eldridge Ranch

Discussion

Need description of services provided

Conclusions or Agreements

He will get this information

Distribution

Signed Bill Olson

AMEC Earth & Environmental, Inc.
P.O. Box 24445
Seattle, Washington 98124-0445

OIL CONSERVATION DIV.

02 MAR -8 PM 3:17

INVOICE

518425

MAR-01-2002
Page Number 1

State of New Mexico
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

ATTENTION: Ms. Mary Anaya

Professional Services Through FEB-15-2002

Project 2-517-000002 Eldridge Ranch

Client Project Manager: Bill Olson
PO # SPD 00-805-09-17658
Doc. # 02-199-004769

LABOR		2,020.00
OTHER EXPENSES		120.00
	CURRENT BILLING	2,140.00
	NMGRT @ 5.8125 %	124.39
	AMOUNT DUE THIS INVOICE	2,264.39

TOTAL CONTRACT	24,621.90
PRIOR BILLINGS	.00
CURRENT INVOICE	2,140.00
TOTAL REMAINING	22,481.90

Project Manager: Wilcox, Robert E.

amec

INVOICE

518425

AMEC Earth & Environmental, Inc.
P.O. Box 24445
Seattle, Washington 98124-0445

MAR-01-2002

LABOR

		HOURS	RATE	AMOUNT
Senior Scientist				
Wilcox, Robert E.	01/11/02	10.00		
	***	10.00	75.00	750.00
Staff Scientist				
Strzelczyk, Bogdan M	01/11/02	2.00		
Strzelczyk, Bogdan M	01/25/02	4.00		
Strzelczyk, Bogdan M	01/25/02	4.50		
Strzelczyk, Bogdan M	02/01/02	10.00		
	***	20.50	57.00	1,168.50
Clerical				
Trujillo, Robert J.	01/25/02	3.50		
	***	3.50	29.00	101.50
		34.00		2,020.00

EXPENSES

		QTY		RATE	AMOUNT
Unit Charges					
Unit Pricing					
Mileage		480.00	Mile(s)		
*0228E	02/01/01				
B. Strzelczyk					
	***	480.00		.2500	120.00
					120.00

** Total Project 2-517-000002 2,140.00

TRANSMITTAL COVER SHEET

OIL CONSERVATION DIVISION
1220 S. ST. FRANCIS DRIVE
SANTA FE, NM 87505
(505) 476-3440
(505)476-3462 (Fax)

PLEASE DELIVER THIS FAX:

TO: Larry Johnson

FROM: Bill Olson

DATE: 2/27/02

PAGES: 2

SUBJECT: Eldridge Ranch monitor well locations

IF YOU HAVE TROUBLE RECEIVING THIS FAX, PLEASE CALL THE OFFICE NUMBER ABOVE.

Olson, William

From: Olson, William
Sent: Tuesday, February 05, 2002 3:17 PM
To: Bob Wilcox - AMEC (E-mail)
Cc: Johnson, Larry; Sheeley, Paul
Subject: Eldridge Ranch Lab Analyses

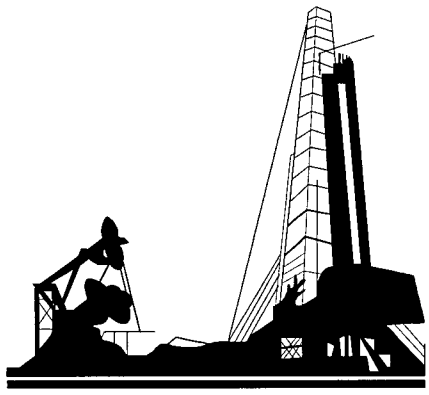
Bob,

Today the OCD received a billing from Trace Analysis for the water samples from the 1st phase of the Eldridge Ranch investigation last summer. I understand that AMEC has the original copies of the laboratory analyses. The OCD needs the original copies of the analyses before we can pay Trace Analysis. Could you please make a copy of the original documents for AMEC's files and send the original lab sheets to me. Thank you very much. If you have any questions please call me.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

William Olson
(E-mail).vcf



TRANSMITTAL COVER SHEET

OIL CONSERVATION DIVISION
1220 S. ST. FRANCIS DRIVE
SANTA FE, NM 87505
(505) 476-3440
(505)476-3462 (Fax)

PLEASE DELIVER THIS FAX:

TO: Larry Johnson

FROM: Bill Olson

DATE: 1/22/02

PAGES: 2

SUBJECT: Eldridge Ranch Monitor Wells

IF YOU HAVE TROUBLE RECEIVING THIS FAX, PLEASE CALL THE OFFICE NUMBER ABOVE.

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Carol Leach
Acting Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

January 16, 2002

Mr. Bob Wilcox
AMEC Earth and Environmental, Inc.
8519 Jefferson, NE
Albuquerque, New Mexico 87113

RE: GROUND WATER INVESTIGATION
ELDRIDGE RANCH

Dear Mr. Wilcox:

The New Mexico Oil Conservation Division (OCD) has reviewed AMEC Earth and Environmental, Inc.'s (AMEC) December 19, 2001 correspondence titled "SCOPE OF WORK, PHASE II MONITORING WELL INSTALLATION AND SAMPLING, ELDRIDGE RANCH, LEA COUNTY, NEW MEXICO. This document contains AMEC's scope of work and cost estimate for additional ground water investigation and monitoring services at the Eldridge Ranch near Monument, New Mexico pursuant to the State of New Mexico, General Services Department Contract #00-805-09-17658.

The investigation services as outlined in the above-referenced document are approved. Enclosed you will find a copy of a purchase document showing that $26,053.04 has been encumbered for the investigation and monitoring required. As discussed with you in our phone conversations, all sample analyses will be covered separately under the OCD State contract with Trace Analysis, Inc.

If you have any questions, please contact me at (505) 476-3491.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc w/o enclosure: Chris Williams, OCD Hobbs District Office
Roger Anderson, Environmental Bureau Chief
Frank Eldridge

VENDOR CODE: 911641772

VENDOR NAME AND ORDER ADDRESS:
AMEC EARTH & ENVIRONMENTAL INC
8519 JEFFERSON NE
ALBUQUERQUE, NM 87113 AM0168

STATE OF NEW MEXICO PURCHASE DOCUMENT

BUDGET FY	DATE	PAGE
02	12/21/2001	1 OF 4

AGENCY CODE	DOCUMENT NUMBER
521	02-199-004769

TERMS	DELIVERY DATE	FOB
	/ /	

SHIP TO:
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
SANTA FE, NM 87505

BILL TO:
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
SANTA FE, NM 87505

AGENCY CONTACT: Mary Anaya
PHONE NUMBER: (505) 476-3445

☐ PURCHASE REQUISITION
(Bids must be requested for items over $1500.00)

RECOMMENDED SOURCE & SPECIAL REMARKS:

☐ ESTABLISH ☐ RENEWAL NO. _____

LN	FUND	AGCY	ORG/PROG	APPR UNIT	DIVISION	OBJECT	AMOUNT	FOR AGENCY USE
01	199	521	P586	300	0700	3522	26053.04	3522 0750 26053.04
TOTAL							26053.04	

MAXIMUM OF SIX ACCOUNTING LINES PER PURCHASE ORDER

☒ CONTRACT, PRICE AGREEMENT, PURCHASE ORDER OTHER THAN PROFESSIONAL SERVICE CONTRACTS:
(Approved vendors must be used for items under contract)

C/PA/PO#: SPD 00-805-09-17658 EXPIRES: 08/31/2002

☐ DIRECT PURCHASE ORDER
(only valid for purchases $1500.00 and under)

☐ EXEMPT FROM THE NM PROCUREMENT CODE
Pursuant to Section _____ NMSA, 1978

☐ EXCLUDED FROM PROCUREMENT THROUGH STATE PURCHASING
Pursuant to Section _____ NMSA, 1978

☐ FOR ENCUMBERING PURPOSES ONLY
Reason: _____

AGENCY APPROVAL - I certify that the proposed purchase represented by this document is authorized by and is made in accordance with all State (and if applicable Federal) legislation, rules and regulations. I further certify that adequate unencumbered cash and budget expenditure authority exists for this proposed purchase and all other outstanding purchase commitments and accounts payable.
AGENCY AUTHORIZED SIGNATURE | TITLE | DATE

APPROVAL 1	DATE	APPROVAL 2	DATE

COMM LN	QUANTITY	UNIT	COMMODITY CODE	ACCT LN	ARTICLE AND DESCRIPTION	UNIT COST	TOTAL COST
					Encumber funds for Eldridge Ranch Investigation		
					Mobilization/Demobilization		
01	8	Hrs			0003 Senior Scientist	75.0000	600.00
02	16	Hrs			0004 Staff Scientist	57.0000	912.00
03	4	Hrs			0055 Drill rig prep-standby time	100.0000	400.00

RECEIVED
DEC 21 2001
FINANCIAL CONTROL

RECEIV
DEC 27 2001
FINAN...
DIVISION

TOTAL 26053.04

SPD - 101A (05/96) COPY 4 DISTRIBUTION: AGENCY COPY 3

STATE OF NEW MEXICO
PURCHASE DOCUMENT
CONTINUATION SHEET

PAGE	DATE
2 OF 4	12/21/2001
AGENCY CODE 521	DOCUMENT NUMBER 02-199-004769

COMM LN	QUANTITY	UNIT	COMMODITY CODE	ACCT LN	ARTICLE AND DESCRIPTION	UNIT COST	TOTAL COST
04	720	Mile			0047 Drill Rig	0.7500	540.00
05	2000	Mile			0042 Mileage (pickup)	0.2500	500.00
06	3	Ngts			0043 Per Diem (3 men)	60.0000	180.00
07	12	Days			0053 Pick-up trucks (2)	50.0000	600.00
					Drilling and Monitor Well Installation		
08	40	Hrs			0004 Staff Scientist	57.0000	2280.00
09	13	Ngts			0043 Per Diem (scientist, drill crew)	60.0000	780.00
10	280	Ft			0048 Hollow Stem Auger Drilling	20.0000	5600.00
11	7	Ft			0033 10 ft. 2" Screen PVC	24.0000	168.00
12	14	Ft			0031 10 ft. 2" Blank PVC Casing	15.5000	217.00
13	1	Sack			0035 Filter Sand Pack, 100 lb	330.0000	330.00
14	7	Sack			0037 Bentonite Chips, 50 lb	6.6000	46.20
15	5	Days			0054 Steam Cleaner	90.0000	450.00
16	7	Hrs			0055 Well Cover Installations Standby	100.0000	700.00
17	4	Days			0021 PID	5.0000	20.00
18	7	Each			5 FT. 2" Screen pvc (cost)	30.0000	210.00

PD202 - A2 (05/96) COPY 4 DISTRIBUTION: AGENCY COPY 3

TOTAL 26053.04

STATE OF NEW MEXICO
PURCHASE DOCUMENT
CONTINUATION SHEET

PAGE	DATE
3 OF 4	12/21/2001
AGENCY CODE 521	DOCUMENT NUMBER 02-199-004769

COMM LN	QUANTITY	UNIT	COMMODITY CODE	ACCT LN	ARTICLE AND DESCRIPTION	UNIT COST	TOTAL COST
19	7	Each			5 ft. 2" Blank PVC (cost)	9.0000	63.00
20	7	Each			3 ft. Stickup Well Cover (cost)	75.0000	525.00
21					Sacks Cement 73.5 @ $6.00 each		441.00
22	7	Each			Locking Jay Plug (cost)	16.0000	112.00
23	7	Each			Threaded End Caps	8.0000	56.00
24	7	Each			Well Cap Locks (cost)	8.1000	56.70
					Monitor Well Development and Ground Water Sampling		
25	20	Hrs			0004 Staff Scientist	57.0000	1140.00
26	7	Hrs			0055 Drill Rig Standby	100.0000	700.00
27	4	Each			0020 Interface Probe	5.0000	20.00
28	2	Days			0013 pH/temp/cond meter	5.0000	10.00
29	2	Ngts			0043 Per Diem	60.0000	120.00
30	23	Hrs			0046 Monitor Well Surveying Site Surveying	57.0000	1311.00
31	10	Brls			0044 Offsite Waste Disposal Disposal of Contaminated Fluids	115.0000	1150.00
32	40	Hrs			HASP/Project Management Reports 0002 Staff Scientist	75.0000	3000.00

PD202 - A2 (05/96) COPY 4 DISTRIBUTION: AGENCY COPY 3

TOTAL 26053.04

STATE OF NEW MEXICO
PURCHASE DOCUMENT
CONTINUATION SHEET

PAGE	DATE
4 OF 4	12/21/2001
AGENCY CODE 521	DOCUMENT NUMBER 02-199-004769

COMM LN	QUANTITY	UNIT	COMMODITY CODE	ACCT LN	ARTICLE AND DESCRIPTION	UNIT COST	TOTAL COST
33	10	Hrs			0004 Staff Scientist	57.0000	570.00
34	6	Hrs			0011 Clerical	29.0000	174.00
35	16	Hrs			0007 Draftsperson	40.0000	640.00
36					Tax (5.8125% NMGRT)		143.04

TOTAL	26057.04

PD202 - A2 (05/96) COPY 4 DISTRIBUTION: AGENCY COPY 3

Analyses received 2/19/02 separately

Sample date 8/10/01

mw 2/21/02

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Bill To: OCD
1220 S. Saint Francis Dr.
Santa Fe, NM 87505

Attn: Bill Olson

RECEIVED
FEB 05 2002
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Invoice # 49032

Invoice Date: Jan 15, 2002

Order ID: A01081410

Project #: 1517000035

Project Name: Eldrich Ranch

Project Location: Monument,NM

Invoice previously billed to AMEC
Sept. 5, 2001

Test	Quantity	Matrix	Description	Price	SubTotal
Cu, Total	8	Water	177064 - 177071	$10.00	$80.00
Al, Total	8	Water	177064 - 177071	$10.00	$80.00
As, Total	8	Water	177064 - 177071	$10.00	$80.00
B, Total	8	Water	177064 - 177071	$10.00	$80.00
Ba, Total	8	Water	177064 - 177071	$10.00	$80.00
BTEX	8	Water	177064 - 177071	$45.00	$360.00
General Cations/Anions/Chemistry	8	Water	177064 - 177071	$120.00	$960.00
Cd, Total	8	Water	177064 - 177071	$10.00	$80.00
Ag, Total	8	Water	177064 - 177071	$10.00	$80.00
Cr, Total	8	Water	177064 - 177071	$10.00	$80.00
Zn, Total	8	Water	177064 - 177071	$10.00	$80.00
Fe, Total	8	Water	177064 - 177071	$10.00	$80.00
Mn, Total	8	Water	177064 - 177071	$10.00	$80.00
Mo, Total	8	Water	177064 - 177071	$10.00	$80.00
Ni, Total	8	Water	177064 - 177071	$10.00	$80.00
Pb, Total	8	Water	177064 - 177071	$10.00	$80.00
Se, Total	8	Water	177064 - 177071	$10.00	$80.00
TPH DRO	8	Water	177064 - 177071	$40.00	$320.00
TPH GRO	8	Water	177064 - 177071	$40.00	$320.00
Co, Total	8	Water	177064 - 177071	$10.00	$80.00

Payment Terms: Net 30 Days

Total $3,240.00

Director, Dr. Blair Leftwich

Summary Report

Bill Wilcox
AMEC
8519 Jefferson NE
Albuquerqe, NM 87113

Report Date: August 31, 2001

Order ID Number: A01081410

Project Number: 1517000035
Project Name: Eldrich Farms
Project Location: Monument-Rt. 8

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
177064	MW-1	Water	8/10/01	13:50	8/14/01
177065	MW-2	Water	8/10/01	18:20	8/14/01
177066	MW-3	Water	8/10/01	19:55	8/14/01
177067	MW-4	Water	8/10/01	9:05	8/14/01
177068	MW-5	Water	8/10/01	12:05	8/14/01
177069	MW-5 (Duplicate)	Water	8/10/01	12:05	8/14/01
177070	MW-6	Water	8/10/01	10:35	8/14/01
177071	MW-7	Water	8/10/01	12:30	8/14/01

This report consists of a total of 7 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX					TPH DRO	TPH GRO
Sample - Field Code	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)	DRO (ppm)	GRO (ppm)
177064 - MW-1	0.943	0.12	0.052	0.06	1.18	<5	4.36
177065 - MW-2	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.5
177066 - MW-3	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.5
177067 - MW-4	10	6.96	0.19	0.632	17.8	<5	31.9
177068 - MW-5	0.217	0.185	0.024	0.129	0.555	<5	1.67
177069 - MW-5 (Duplicate)	0.182	0.159	0.02	0.109	0.47	<5	1.23
177070 - MW-6	0.6	0.502	0.024	0.1	1.23	<5	9.69
177071 - MW-7	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.5

Sample: 177064 - MW-1

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		234	mg/L as CaCo3
Total Alkalinity		234	mg/L as CaCo3
Specific Conductance		684	μMHOS/cm
CL		59.8	mg/L
Fluoride		2.17	mg/L
Nitrate-N	[1]	<1.0	mg/L
Sulfate		19.6	mg/L

Continued on next page ...

[1] Sample out of hold time for NO3.

Sample 177064 continued ...

Param	Flag	Result	Units
Dissolved Calcium		84.7	mg/L
Dissolved Magnesium		16.7	mg/L
Dissolved Potassium		6.65	mg/L
Dissolved Sodium		36.6	mg/L
Total Dissolved Solids		496	mg/L
Total Aluminum		8.13	mg/L
Total Arsenic		<0.05	mg/L
Total Barium		0.738	mg/L
Total Boron		0.155	mg/L
Total Cadmium		<0.025	mg/L
Total Chromium		0.02	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		<0.0125	mg/L
Total Iron		6.11	mg/L
Total Lead		<0.01	mg/L
Total Manganese		0.28	mg/L
Total Molybdenum		<0.05	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.05	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		<0.025	mg/L
pH	[2]	7.4	s.u.

Sample: 177065 - MW-2

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		188	mg/L as CaCo3
Total Alkalinity		188	mg/L as CaCo3
Specific Conductance		679	μMHOS/cm
CL		47.0	mg/L
Fluoride		2.09	mg/L
Nitrate-N	[3]	3.08	mg/L
Sulfate		70.9	mg/L
Dissolved Calcium		87.5	mg/L
Dissolved Magnesium		13.2	mg/L
Dissolved Potassium		6.5	mg/L
Dissolved Sodium		34.9	mg/L
Total Dissolved Solids		578	mg/L
Total Aluminum		17.8	mg/L
Total Arsenic		<0.05	mg/L
Total Barium		1.39	mg/L
Total Boron		0.171	mg/L
Total Cadmium		<0.025	mg/L
Total Chromium		0.07	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		<0.0125	mg/L
Total Iron		12.8	mg/L
Total Lead		0.017	mg/L

Continued on next page ...

[2]out of holding time
[3]Sample out of hold time for NO3.

Sample 177065 continued ...

Param	Flag	Result	Units
Total Manganese		0.169	mg/L
Total Molybdenum		<0.05	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.05	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		<0.025	mg/L
pH	[4]	7.5	s.u.

Sample: 177066 - MW-3

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		172	mg/L as CaCo3
Total Alkalinity		172	mg/L as CaCo3
Specific Conductance		570	μMHOS/cm
CL		29.0	mg/L
Fluoride		2.33	mg/L
Nitrate-N	[5]	2.73	mg/L
Sulfate		57.0	mg/L
Dissolved Calcium		70.6	mg/L
Dissolved Magnesium		10.9	mg/L
Dissolved Potassium		5.79	mg/L
Dissolved Sodium		25.3	mg/L
Total Dissolved Solids		432	mg/L
Total Aluminum		50.7	mg/L
Total Arsenic		<0.05	mg/L
Total Barium		0.556	mg/L
Total Boron		0.233	mg/L
Total Cadmium		<0.025	mg/L
Total Chromium		0.137	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		0.017	mg/L
Total Iron		29.4	mg/L
Total Lead		0.016	mg/L
Total Manganese		0.334	mg/L
Total Molybdenum		<0.05	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.05	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		0.06	mg/L
pH	[6]	7.6	s.u.

Sample: 177067 - MW-4

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3

Continued on next page ...

[4]out of holding time
[5]Sample out of hold time for NO3.
[6]out of holding time

Sample 177067 continued ...

Param	Flag	Result	Units
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		230	mg/L as CaCo3
Total Alkalinity		230	mg/L as CaCo3
Specific Conductance		803	μMHOS/cm
CL		72.0	mg/L
Fluoride		2.02	mg/L
Nitrate-N	[7]	<1.0	mg/L
Sulfate		57.2	mg/L
Dissolved Calcium		76.5	mg/L
Dissolved Magnesium		15.8	mg/L
Dissolved Potassium		6.28	mg/L
Dissolved Sodium		35.2	mg/L
Total Dissolved Solids		548	mg/L
Total Aluminum		50.6	mg/L
Total Arsenic		<0.05	mg/L
Total Barium		2.87	mg/L
Total Boron		0.263	mg/L
Total Cadmium		<0.025	mg/L
Total Chromium		0.268	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		0.021	mg/L
Total Iron		30.9	mg/L
Total Lead		0.022	mg/L
Total Manganese		0.588	mg/L
Total Molybdenum		<0.05	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.05	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		<0.05	mg/L
pH	[8]	7.4	s.u.

Sample: 177068 - MW-5

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		232	mg/L as CaCo3
Total Alkalinity		232	mg/L as CaCo3
Specific Conductance		729	μMHOS/cm
CL		62.6	mg/L
Fluoride		1.88	mg/L
Nitrate-N	[9]	<1.0	mg/L
Sulfate		37.0	mg/L
Dissolved Calcium		96	mg/L
Dissolved Magnesium		17.4	mg/L
Dissolved Potassium		8	mg/L
Dissolved Sodium		36.9	mg/L
Total Dissolved Solids		521	mg/L
Total Aluminum		52.3	mg/L

Continued on next page ...

[7]Sample out of hold time for NO3.
[8]out of holding time
[9]Sample out of hold time for NO3.

Sample 177068 continued ...

Param	Flag	Result	Units
Total Arsenic		<0.05	mg/L
Total Barium		1.32	mg/L
Total Boron		0.265	mg/L
Total Cadmium		<0.025	mg/L
Total Chromium		0.09	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		0.019	mg/L
Total Iron		34.1	mg/L
Total Lead		0.023	mg/L
Total Manganese		0.646	mg/L
Total Molybdenum		<0.05	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.05	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		0.08	mg/L
pH	[10]	7.4	s.u.

Sample: 177069 - MW-5 (Duplicate)

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		240	mg/L as CaCo3
Total Alkalinity		240	mg/L as CaCo3
Specific Conductance		745	μMHOS/cm
CL		62.6	mg/L
Fluoride		3.29	mg/L
Nitrate-N	[11]	1.04	mg/L
Sulfate		35.1	mg/L
Dissolved Calcium		89.4	mg/L
Dissolved Magnesium		17.7	mg/L
Dissolved Potassium		8.16	mg/L
Dissolved Sodium		36.3	mg/L
Total Dissolved Solids		642	mg/L
Total Aluminum		40.7	mg/L
Total Arsenic		<0.05	mg/L
Total Barium		1.27	mg/L
Total Boron		0.277	mg/L
Total Cadmium		<0.025	mg/L
Total Chromium		0.078	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		0.016	mg/L
Total Iron		31.7	mg/L
Total Lead		0.026	mg/L
Total Manganese		0.621	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.05	mg/L
Total Silver		<0.0125	mg/L

Continued on next page ...

[10] out of holding time
[11] Sample out of hold time for NO3.

Sample 177069 continued ...

Param	Flag	Result	Units
Total Zinc		0.069	mg/L
pH	[12]	7.4	s.u.

Sample: 177070 - MW-6

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		220	mg/L as CaCo3
Total Alkalinity		220	mg/L as CaCo3
Specific Conductance		792	µMHOS/cm
CL		70.0	mg/L
Fluoride		3.46	mg/L
Nitrate-N	[13]	2.11	mg/L
Sulfate		72.0	mg/L
Dissolved Calcium		93.6	mg/L
Dissolved Magnesium		16.2	mg/L
Dissolved Potassium		7.85	mg/L
Dissolved Sodium		35.9	mg/L
Total Dissolved Solids		573	mg/L
Total Aluminum		99.1	mg/L
Total Arsenic		<0.05	mg/L
Total Barium		18.8	mg/L
Total Boron		0.505	mg/L
Total Cadmium		<0.025	mg/L
Total Chromium		0.605	mg/L
Total Cobalt		0.039	mg/L
Total Copper		0.058	mg/L
Total Iron		69	mg/L
Total Lead		0.04	mg/L
Total Manganese		1.03	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.05	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		0.14	mg/L
pH	[14]	7.6	s.u.

Sample: 177071 - MW-7

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		650	mg/L as CaCo3
Total Alkalinity		650	mg/L as CaCo3
Specific Conductance		1070	µMHOS/cm
CL		120	mg/L

Continued on next page ...

[12]out of holding time
[13]Sample out of hold time for NO3.
[14]out of holding time

Sample 177071 continued ...

Param	Flag	Result	Units
Fluoride		4.18	mg/L
Nitrate-N	[15]	1.99	mg/L
Sulfate		189	mg/L
Dissolved Calcium		113	mg/L
Dissolved Magnesium		22.5	mg/L
Dissolved Potassium		8.93	mg/L
Dissolved Sodium		56.5	mg/L
Total Dissolved Solids		740	mg/L
Total Aluminum		72.7	mg/L
Total Arsenic		0.07	mg/L
Total Barium		3.64	mg/L
Total Boron		0.490	mg/L
Total Cadmium		<0.025	mg/L
Total Chromium		0.267	mg/L
Total Cobalt		0.029	mg/L
Total Copper		0.069	mg/L
Total Iron		56.2	mg/L
Total Lead		0.041	mg/L
Total Manganese		0.843	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.05	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		0.119	mg/L
pH	[16]	7.7	s.u.

[15]Sample out of hold time for NO3.
[16]out of holding time

TRACEANALYSIS, INC.

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Analytical and Quality Control Report

Bill Wilcox
AMEC
8519 Jefferson NE
Albuquerqe, NM 87113

Report Date: August 31, 2001

Order ID Number: A01081410

Project Number: 1517000035
Project Name: Eldrich Farms
Project Location: Monument-Rt. 8

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

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
177064	MW-1	Water	8/10/01	13:50	8/14/01
177065	MW-2	Water	8/10/01	18:20	8/14/01
177066	MW-3	Water	8/10/01	19:55	8/14/01
177067	MW-4	Water	8/10/01	9:05	8/14/01
177068	MW-5	Water	8/10/01	12:05	8/14/01
177069	MW-5 (Duplicate)	Water	8/10/01	12:05	8/14/01
177070	MW-6	Water	8/10/01	10:35	8/14/01
177071	MW-7	Water	8/10/01	12:30	8/14/01

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 32 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

Analytical Report

Sample: 177064 - MW-1

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC13443	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11461	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		234	mg/L as CaCo3	1	1
Total Alkalinity		234	mg/L as CaCo3	1	1

Sample: 177064 - MW-1

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC13479	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	E 5030B	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.943	mg/L	5	0.001
Toluene		0.12	mg/L	5	0.001
Ethylbenzene		0.052	mg/L	5	0.001
M,P,O-Xylene		0.06	mg/L	5	0.001
Total BTEX		1.18	mg/L	5	0.001

Sample: 177064 - MW-1

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC13407	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11435	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		684	μMHOS/cm	1	

Sample: 177064 - MW-1

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC13341	Date Analyzed:	8/14/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11380	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
CL		59.8	mg/L	5	0.50
Fluoride		2.17	mg/L	5	0.20
Nitrate-N	[1]	<1.0	mg/L	5	0.20
Sulfate		19.6	mg/L	5	0.50

Sample: 177064 - MW-1

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC13561	Date Analyzed:	8/23/01
Analyst:	LDB	Preparation Method:	E 3005 A	Prep Batch:	PB11433	Date Prepared:	8/16/01

[1] Sample out of hold time for NO3.

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		84.7	mg/L	1	0.50
Dissolved Magnesium		16.7	mg/L	1	0.50
Dissolved Potassium		6.65	mg/L	1	0.50
Dissolved Sodium		36.6	mg/L	1	0.50

Sample: 177064 - MW-1

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC13415	Date Analyzed:	8/17/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11441	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		496	mg/L	1	10

Sample: 177064 - MW-1

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC13498	Date Analyzed:	8/19/01
Analyst:	JJ	Preparation Method:	3510C - Mod.	Prep Batch:	PB11511	Date Prepared:	8/17/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<5	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		22.3	mg/L	0.10	25	892	70 - 130

Sample: 177064 - MW-1

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC13480	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
GRO		4.36	mg/L	5	0.10

Sample: 177064 - MW-1

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC13465	Date Analyzed:	8/20/01
Analyst:	RR	Preparation Method:	E 3010A	Prep Batch:	PB11427	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		8.13	mg/L	10	0.10
Total Arsenic		<0.05	mg/L	1	0.05
Total Barium		0.738	mg/L	1	0.10
Total Boron		0.155	mg/L	1	0.01
Total Cadmium		<0.025	mg/L	1	0.02
Total Chromium		0.02	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		<0.0125	mg/L	1	0.01
Total Iron		6.11	mg/L	10	0.05
Total Lead		<0.01	mg/L	1	0.01
Total Manganese		0.28	mg/L	1	0.02

Continued ...

... *Continued* Sample: 177064 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Molybdenum		<0.05	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.05	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		<0.025	mg/L	1	0.02

Sample: 177064 - MW-1

Analysis: pH Analytical Method: E 150.1 QC Batch: QC13327 Date Analyzed: 8/14/01
Analyst: RS Preparation Method: N/A Prep Batch: PB11372 Date Prepared: 8/14/01

Param	Flag	Result	Units	Dilution	RDL
pH	[2]	7.4	s.u.	1	1

Sample: 177065 - MW-2

Analysis: Alkalinity Analytical Method: E 310.1 QC Batch: QC13443 Date Analyzed: 8/16/01
Analyst: JS Preparation Method: N/A Prep Batch: PB11461 Date Prepared: 8/16/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		188	mg/L as CaCo3	1	1
Total Alkalinity		188	mg/L as CaCo3	1	1

Sample: 177065 - MW-2

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC13479 Date Analyzed: 8/20/01
Analyst: CG Preparation Method: E 5030B Prep Batch: PB11493 Date Prepared: 8/20/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		<0.005	mg/L	5	0.001
Total BTEX		<0.005	mg/L	5	0.001

Sample: 177065 - MW-2

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC13407 Date Analyzed: 8/16/01
Analyst: JS Preparation Method: N/A Prep Batch: PB11435 Date Prepared: 8/16/01

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		679	μMHOS/cm	1	

Sample: 177065 - MW-2

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC13341 Date Analyzed: 8/14/01
Analyst: JS Preparation Method: N/A Prep Batch: PB11380 Date Prepared: 8/14/01

[2] out of holding time

Param	Flag	Result	Units	Dilution	RDL
CL		47.0	mg/L	5	0.50
Fluoride		2.09	mg/L	5	0.20
Nitrate-N	[3]	3.08	mg/L	5	0.20
Sulfate		70.9	mg/L	5	0.50

Sample: 177065 - MW-2

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC13561	Date Analyzed:	8/23/01
Analyst:	LDB	Preparation Method:	E 3005 A	Prep Batch:	PB11433	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		87.5	mg/L	1	0.50
Dissolved Magnesium		13.2	mg/L	1	0.50
Dissolved Potassium		6.5	mg/L	1	0.50
Dissolved Sodium		34.9	mg/L	1	0.50

Sample: 177065 - MW-2

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC13415	Date Analyzed:	8/17/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11441	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		578	mg/L	1	10

Sample: 177065 - MW-2

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC13498	Date Analyzed:	8/19/01
Analyst:	JJ	Preparation Method:	3510C - Mod.	Prep Batch:	PB11511	Date Prepared:	8/17/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<5	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		21	mg/L	0.10	25	840	70 - 130

Sample: 177065 - MW-2

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC13480	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<0.5	mg/L	5	0.10

Sample: 177065 - MW-2

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC13465	Date Analyzed:	8/20/01
Analyst:	RR	Preparation Method:	E 3010A	Prep Batch:	PB11427	Date Prepared:	8/16/01

[3]Sample out of hold time for NO3.

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		17.8	mg/L	10	0.10
Total Arsenic		<0.05	mg/L	1	0.05
Total Barium		1.39	mg/L	1	0.10
Total Boron		0.171	mg/L	1	0.01
Total Cadmium		<0.025	mg/L	1	0.02
Total Chromium		0.07	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		<0.0125	mg/L	1	0.01
Total Iron		12.8	mg/L	10	0.05
Total Lead		0.017	mg/L	1	0.01
Total Manganese		0.169	mg/L	1	0.02
Total Molybdenum		<0.05	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.05	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		<0.025	mg/L	1	0.02

Sample: 177065 - MW-2

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC13327	Date Analyzed:	8/14/01
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB11372	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
pH	[4]	7.5	s.u.	1	1

Sample: 177066 - MW-3

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC13443	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11461	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		172	mg/L as CaCo3	1	1
Total Alkalinity		172	mg/L as CaCo3	1	1

Sample: 177066 - MW-3

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC13479	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	E 5030B	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		<0.005	mg/L	5	0.001
Total BTEX		<0.005	mg/L	5	0.001

[4] out of holding time

Sample: 177066 - MW-3

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC13407 Date Analyzed: 8/16/01
Analyst: JS Preparation Method: N/A Prep Batch: PB11435 Date Prepared: 8/16/01

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		570	µMHOS/cm	1	

Sample: 177066 - MW-3

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC13341 Date Analyzed: 8/14/01
Analyst: JS Preparation Method: N/A Prep Batch: PB11380 Date Prepared: 8/14/01

Param	Flag	Result	Units	Dilution	RDL
CL		29.0	mg/L	5	0.50
Fluoride		2.33	mg/L	5	0.20
Nitrate-N	[5]	2.73	mg/L	5	0.20
Sulfate		57.0	mg/L	5	0.50

Sample: 177066 - MW-3

Analysis: Salts Analytical Method: E 200.7 QC Batch: QC13561 Date Analyzed: 8/23/01
Analyst: LDB Preparation Method: E 3005 A Prep Batch: PB11433 Date Prepared: 8/16/01

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		70.6	mg/L	1	0.50
Dissolved Magnesium		10.9	mg/L	1	0.50
Dissolved Potassium		5.79	mg/L	1	0.50
Dissolved Sodium		25.3	mg/L	1	0.50

Sample: 177066 - MW-3

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC13415 Date Analyzed: 8/17/01
Analyst: JS Preparation Method: N/A Prep Batch: PB11441 Date Prepared: 8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		432	mg/L	1	10

Sample: 177066 - MW-3

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC13498 Date Analyzed: 8/19/01
Analyst: JJ Preparation Method: 3510C - Mod. Prep Batch: PB11511 Date Prepared: 8/17/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<5	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		21.7	mg/L	0.10	25	868	70 - 130

[5]Sample out of hold time for NO3.

Sample: 177066 - MW-3

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC13480	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<0.5	mg/L	5	0.10

Sample: 177066 - MW-3

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC13465	Date Analyzed:	8/20/01
Analyst:	RR	Preparation Method:	E 3010A	Prep Batch:	PB11427	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		50.7	mg/L	100	0.10
Total Arsenic		<0.05	mg/L	1	0.05
Total Barium		0.556	mg/L	1	0.10
Total Boron		0.233	mg/L	1	0.01
Total Cadmium		<0.025	mg/L	1	0.02
Total Chromium		0.137	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		0.017	mg/L	1	0.01
Total Iron		29.4	mg/L	100	0.05
Total Lead		0.016	mg/L	1	0.01
Total Manganese		0.334	mg/L	1	0.02
Total Molybdenum		<0.05	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.05	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		0.06	mg/L	1	0.02

Sample: 177066 - MW-3

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC13327	Date Analyzed:	8/14/01
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB11372	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
pH	[6]	7.6	s.u.	1	1

Sample: 177067 - MW-4

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC13443	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11461	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		230	mg/L as CaCo3	1	1
Total Alkalinity		230	mg/L as CaCo3	1	1

[6] out of holding time

Sample: 177067 - MW-4

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC13479	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	E 5030B	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		10	mg/L	50	0.001
Toluene		6.96	mg/L	50	0.001
Ethylbenzene		0.19	mg/L	50	0.001
M,P,O-Xylene		0.632	mg/L	50	0.001
Total BTEX		17.8	mg/L	50	0.001

Sample: 177067 - MW-4

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC13407	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11435	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		803	μMHOS/cm	1	

Sample: 177067 - MW-4

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC13341	Date Analyzed:	8/14/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11380	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
CL		72.0	mg/L	5	0.50
Fluoride		2.02	mg/L	5	0.20
Nitrate-N	[7]	<1.0	mg/L	5	0.20
Sulfate		57.2	mg/L	5	0.50

Sample: 177067 - MW-4

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC13561	Date Analyzed:	8/23/01
Analyst:	LDB	Preparation Method:	E 3005 A	Prep Batch:	PB11433	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		76.5	mg/L	1	0.50
Dissolved Magnesium		15.8	mg/L	1	0.50
Dissolved Potassium		6.28	mg/L	1	0.50
Dissolved Sodium		35.2	mg/L	1	0.50

Sample: 177067 - MW-4

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC13415	Date Analyzed:	8/17/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11441	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		548	mg/L	1	10

[7]Sample out of hold time for NO3.

Sample: 177067 - MW-4

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC13498	Date Analyzed:	8/19/01
Analyst:	JJ	Preparation Method:	3510C - Mod.	Prep Batch:	PB11511	Date Prepared:	8/17/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<5	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		30.5	mg/L	0.10	25	1220	70 - 130

Sample: 177067 - MW-4

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC13480	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
GRO		31.9	mg/L	50	0.10

Sample: 177067 - MW-4

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC13465	Date Analyzed:	8/20/01
Analyst:	RR	Preparation Method:	E 3010A	Prep Batch:	PB11427	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		50.6	mg/L	100	0.10
Total Arsenic		<0.05	mg/L	1	0.05
Total Barium		2.87	mg/L	1	0.10
Total Boron		0.263	mg/L	1	0.01
Total Cadmium		<0.025	mg/L	1	0.02
Total Chromium		0.268	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		0.021	mg/L	1	0.01
Total Iron		30.9	mg/L	100	0.05
Total Lead		0.022	mg/L	1	0.01
Total Manganese		0.588	mg/L	1	0.02
Total Molybdenum		<0.05	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.05	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		<0.05	mg/L	1	0.02

Sample: 177067 - MW-4

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC13327	Date Analyzed:	8/14/01
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB11372	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
pH	[8]	7.4	s.u.	1	1

[8] out of holding time

Sample: 177068 - MW-5

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC13443	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11461	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		232	mg/L as CaCo3	1	1
Total Alkalinity		232	mg/L as CaCo3	1	1

Sample: 177068 - MW-5

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC13479	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	E 5030B	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.217	mg/L	5	0.001
Toluene		0.185	mg/L	5	0.001
Ethylbenzene		0.024	mg/L	5	0.001
M,P,O-Xylene		0.129	mg/L	5	0.001
Total BTEX		0.555	mg/L	5	0.001

Sample: 177068 - MW-5

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC13407	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11435	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		729	μMHOS/cm	1	

Sample: 177068 - MW-5

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC13341	Date Analyzed:	8/14/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11380	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
CL		62.6	mg/L	5	0.50
Fluoride		1.88	mg/L	5	0.20
Nitrate-N	[9]	<1.0	mg/L	5	0.20
Sulfate		37.0	mg/L	5	0.50

Sample: 177068 - MW-5

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC13561	Date Analyzed:	8/23/01
Analyst:	LDB	Preparation Method:	E 3005 A	Prep Batch:	PB11433	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		96	mg/L	1	0.50
Dissolved Magnesium		17.4	mg/L	1	0.50
Dissolved Potassium		8	mg/L	1	0.50
Dissolved Sodium		36.9	mg/L	1	0.50

[9]Sample out of hold time for NO3.

Sample: 177068 - MW-5

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC13415	Date Analyzed:	8/17/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11441	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		521	mg/L	1	10

Sample: 177068 - MW-5

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC13498	Date Analyzed:	8/19/01
Analyst:	JJ	Preparation Method:	3510C - Mod.	Prep Batch:	PB11511	Date Prepared:	8/17/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<5	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		22.9	mg/L	0.10	25	916	70 - 130

Sample: 177068 - MW-5

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC13480	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
GRO		1.67	mg/L	5	0.10

Sample: 177068 - MW-5

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC13465	Date Analyzed:	8/20/01
Analyst:	RR	Preparation Method:	E 3010A	Prep Batch:	PB11427	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		52.3	mg/L	100	0.10
Total Arsenic		<0.05	mg/L	1	0.05
Total Barium		1.32	mg/L	1	0.10
Total Boron		0.265	mg/L	1	0.01
Total Cadmium		<0.025	mg/L	1	0.02
Total Chromium		0.09	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		0.019	mg/L	1	0.01
Total Iron		34.1	mg/L	100	0.05
Total Lead		0.023	mg/L	1	0.01
Total Manganese		0.646	mg/L	1	0.02
Total Molybdenum		<0.05	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.05	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		0.08	mg/L	1	0.02

Sample: 177068 - MW-5

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC13327	Date Analyzed:	8/14/01
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB11372	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
pH	[10]	7.4	s.u.	1	1

Sample: 177069 - MW-5 (Duplicate)

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC13443	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11461	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		240	mg/L as CaCo3	1	1
Total Alkalinity		240	mg/L as CaCo3	1	1

Sample: 177069 - MW-5 (Duplicate)

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC13479	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	E 5030B	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.182	mg/L	5	0.001
Toluene		0.159	mg/L	5	0.001
Ethylbenzene		0.02	mg/L	5	0.001
M,P,O-Xylene		0.109	mg/L	5	0.001
Total BTEX		0.47	mg/L	5	0.001

Sample: 177069 - MW-5 (Duplicate)

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC13407	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11435	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		745	μMHOS/cm	1	

Sample: 177069 - MW-5 (Duplicate)

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC13341	Date Analyzed:	8/14/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11380	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
CL		62.6	mg/L	5	0.50
Fluoride		3.29	mg/L	5	0.20
Nitrate-N	[11]	1.04	mg/L	5	0.20
Sulfate		35.1	mg/L	5	0.50

[10] out of holding time
[11] Sample out of hold time for NO3.

Sample: 177069 - MW-5 (Duplicate)

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC13561	Date Analyzed:	8/23/01
Analyst:	LDB	Preparation Method:	E 3005 A	Prep Batch:	PB11433	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		89.4	mg/L	1	0.50
Dissolved Magnesium		17.7	mg/L	1	0.50
Dissolved Potassium		8.16	mg/L	1	0.50
Dissolved Sodium		36.3	mg/L	1	0.50

Sample: 177069 - MW-5 (Duplicate)

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC13415	Date Analyzed:	8/17/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11441	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		642	mg/L	1	10

Sample: 177069 - MW-5 (Duplicate)

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC13498	Date Analyzed:	8/19/01
Analyst:	JJ	Preparation Method:	3510C - Mod.	Prep Batch:	PB11511	Date Prepared:	8/17/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<5	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		23.9	mg/L	0.10	25	956	70 - 130

Sample: 177069 - MW-5 (Duplicate)

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC13480	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
GRO		1.23	mg/L	5	0.10

Sample: 177069 - MW-5 (Duplicate)

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC13466	Date Analyzed:	8/20/01
Analyst:	RR	Preparation Method:	E 3010A	Prep Batch:	PB11428	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		40.7	mg/L	100	0.10
Total Arsenic		<0.05	mg/L	1	0.05
Total Barium		1.27	mg/L	10	0.10
Total Boron		0.277	mg/L	10	0.01
Total Cadmium		<0.025	mg/L	1	0.02
Total Chromium		0.078	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02

Continued ...

... *Continued* Sample: 177069 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Copper		0.016	mg/L	1	0.01
Total Iron		31.7	mg/L	100	0.05
Total Lead		0.026	mg/L	1	0.01
Total Manganese		0.621	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.05	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		0.069	mg/L	1	0.02

Sample: 177069 - MW-5 (Duplicate)

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC13327	Date Analyzed:	8/14/01
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB11372	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
pH	[12]	7.4	s.u.	1	1

Sample: 177070 - MW-6

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC13443	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11461	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		220	mg/L as CaCo3	1	1
Total Alkalinity		220	mg/L as CaCo3	1	1

Sample: 177070 - MW-6

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC13479	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	E 5030B	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		0.6	mg/L	5	0.001
Toluene		0.502	mg/L	5	0.001
Ethylbenzene		0.024	mg/L	5	0.001
M,P,O-Xylene		0.1	mg/L	5	0.001
Total BTEX		1.23	mg/L	5	0.001

Sample: 177070 - MW-6

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC13407	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11435	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		792	μMHOS/cm	1	

[12] out of holding time

Sample: 177070 - MW-6

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC13341 Date Analyzed: 8/14/01
Analyst: JS Preparation Method: N/A Prep Batch: PB11380 Date Prepared: 8/14/01

Param	Flag	Result	Units	Dilution	RDL
CL		70.0	mg/L	5	0.50
Fluoride		3.46	mg/L	5	0.20
Nitrate-N	[13]	2.11	mg/L	5	0.20
Sulfate		72.0	mg/L	5	0.50

Sample: 177070 - MW-6

Analysis: Salts Analytical Method: E 200.7 QC Batch: QC13561 Date Analyzed: 8/23/01
Analyst: LDB Preparation Method: E 3005 A Prep Batch: PB11433 Date Prepared: 8/16/01

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		93.6	mg/L	1	0.50
Dissolved Magnesium		16.2	mg/L	1	0.50
Dissolved Potassium		7.85	mg/L	1	0.50
Dissolved Sodium		35.9	mg/L	1	0.50

Sample: 177070 - MW-6

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC13415 Date Analyzed: 8/17/01
Analyst: JS Preparation Method: N/A Prep Batch: PB11441 Date Prepared: 8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		573	mg/L	1	10

Sample: 177070 - MW-6

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC13498 Date Analyzed: 8/19/01
Analyst: JJ Preparation Method: 3510C - Mod. Prep Batch: PB11511 Date Prepared: 8/17/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<5	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		22.3	mg/L	0.10	25	892	70 - 130

Sample: 177070 - MW-6

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC13480 Date Analyzed: 8/20/01
Analyst: CG Preparation Method: 5030 Prep Batch: PB11493 Date Prepared: 8/20/01

Param	Flag	Result	Units	Dilution	RDL
GRO		9.69	mg/L	5	0.10

[13]Sample out of hold time for NO3.

Sample: 177070 - MW-6

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC13466	Date Analyzed:	8/20/01
Analyst:	RR	Preparation Method:	E 3010A	Prep Batch:	PB11428	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		99.1	mg/L	100	0.10
Total Arsenic		<0.05	mg/L	1	0.05
Total Barium		18.8	mg/L	10	0.10
Total Boron		0.505	mg/L	10	0.01
Total Cadmium		<0.025	mg/L	1	0.02
Total Chromium		0.605	mg/L	1	0.01
Total Cobalt		0.039	mg/L	1	0.02
Total Copper		0.058	mg/L	1	0.01
Total Iron		69	mg/L	100	0.05
Total Lead		0.04	mg/L	1	0.01
Total Manganese		1.03	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.05	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		0.14	mg/L	1	0.02

Sample: 177070 - MW-6

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC13327	Date Analyzed:	8/14/01
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB11372	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
pH	[14]	7.6	s.u.	1	1

Sample: 177071 - MW-7

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC13443	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11461	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		650	mg/L as CaCo3	1	1
Total Alkalinity		650	mg/L as CaCo3	1	1

Sample: 177071 - MW-7

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC13479	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	E 5030B	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		<0.005	mg/L	5	0.001
Total BTEX		<0.005	mg/L	5	0.001

[14] out of holding time

Sample: 177071 - MW-7

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC13407	Date Analyzed:	8/16/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11435	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		1070	μMHOS/cm	1	

Sample: 177071 - MW-7

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC13342	Date Analyzed:	8/14/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11380	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
CL		120	mg/L	5	0.50
Fluoride		4.18	mg/L	5	0.20
Nitrate-N	[15]	1.99	mg/L	5	0.20
Sulfate		189	mg/L	5	0.50

Sample: 177071 - MW-7

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC13561	Date Analyzed:	8/23/01
Analyst:	LDB	Preparation Method:	E 3005 A	Prep Batch:	PB11433	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		113	mg/L	1	0.50
Dissolved Magnesium		22.5	mg/L	1	0.50
Dissolved Potassium		8.93	mg/L	1	0.50
Dissolved Sodium		56.5	mg/L	1	0.50

Sample: 177071 - MW-7

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC13415	Date Analyzed:	8/17/01
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB11441	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		740	mg/L	1	10

Sample: 177071 - MW-7

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC13498	Date Analyzed:	8/19/01
Analyst:	JJ	Preparation Method:	3510C - Mod.	Prep Batch:	PB11511	Date Prepared:	8/17/01

Param	Flag	Result	Units	Dilution	RDL
DRO		<5	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		23.5	mg/L	0.10	25	940	70 - 130

[15]Sample out of hold time for NO3.

Sample: 177071 - MW-7

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC13480	Date Analyzed:	8/20/01
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB11493	Date Prepared:	8/20/01

Param	Flag	Result	Units	Dilution	RDL
GRO		<0.5	mg/L	5	0.10

Sample: 177071 - MW-7

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC13466	Date Analyzed:	8/20/01
Analyst:	RR	Preparation Method:	E 3010A	Prep Batch:	PB11428	Date Prepared:	8/16/01

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		72.7	mg/L	100	0.10
Total Arsenic		0.07	mg/L	1	0.05
Total Barium		3.64	mg/L	1	0.10
Total Boron		0.490	mg/L	10	0.01
Total Cadmium		<0.025	mg/L	1	0.02
Total Chromium		0.267	mg/L	1	0.01
Total Cobalt		0.029	mg/L	1	0.02
Total Copper		0.069	mg/L	1	0.01
Total Iron		56.2	mg/L	100	0.05
Total Lead		0.041	mg/L	1	0.01
Total Manganese		0.843	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.05	mg/L	1	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		0.119	mg/L	1	0.02

Sample: 177071 - MW-7

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC13327	Date Analyzed:	8/14/01
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB11372	Date Prepared:	8/14/01

Param	Flag	Result	Units	Dilution	RDL
pH	[16]	7.7	s.u.	1	1

[16] out of holding time

Quality Control Report
Method Blank

Method Blank

QCBatch: QC13341

Param	Flag	Results	Units	Reporting Limit
CL		<2.0	mg/L	0.50
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<2.0	mg/L	0.50

Method Blank

QCBatch: QC13342

Param	Flag	Results	Units	Reporting Limit
CL		<2.0	mg/L	0.50
Fluoride		<0.2	mg/L	0.20
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<2.0	mg/L	0.50

Method Blank

QCBatch: QC13407

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		10.6	μMHOS/cm	

Method Blank

QCBatch: QC13415

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/L	10

Method Blank

QCBatch: QC13443

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

Method Blank

QCBatch: QC13465

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.10	mg/L	0.10
Total Arsenic		<0.05	mg/L	0.05
Total Barium		<0.10	mg/L	0.10
Total Boron		<0.01	mg/L	0.01
Total Cadmium		<0.025	mg/L	0.02
Total Chromium		<0.01	mg/L	0.01
Total Cobalt		<0.025	mg/L	0.02
Total Copper		<0.0125	mg/L	0.01
Total Iron		<0.05	mg/L	0.05
Total Lead		<0.01	mg/L	0.01
Total Manganese		<0.025	mg/L	0.02
Total Molybdenum		<0.050	mg/L	0.05
Total Nickel		<0.025	mg/L	0.02
Total Selenium		<0.05	mg/L	0.05
Total Silver		<0.0125	mg/L	0.01
Total Zinc		<0.025	mg/L	0.02

Method Blank

QCBatch: QC13466

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.1	mg/L	0.10
Total Arsenic		<0.05	mg/L	0.05
Total Barium		<0.1	mg/L	0.10
Total Boron		<0.01	mg/L	0.01
Total Cadmium		<0.025	mg/L	0.02
Total Chromium		<0.01	mg/L	0.01
Total Cobalt		<0.025	mg/L	0.02
Total Copper		<0.0125	mg/L	0.01
Total Iron		<0.05	mg/L	0.05
Total Lead		<0.01	mg/L	0.01
Total Manganese		<0.025	mg/L	0.02
Total Molybdenum		<0.050	mg/L	0.05
Total Nickel		<0.025	mg/L	0.02
Total Selenium		<0.05	mg/L	0.05
Total Silver		<0.0125	mg/L	0.01
Total Zinc		<0.025	mg/L	0.02

Method Blank

QCBatch: QC13479

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.001	mg/L	0.001
Toluene		<0.001	mg/L	0.001
Ethylbenzene		<0.001	mg/L	0.001
M,P,O-Xylene		<0.001	mg/L	0.001
Total BTEX		<0.001	mg/L	0.001

Method Blank

QCBatch: QC13480

Param	Flag	Results	Units	Reporting Limit
GRO		<0.1	mg/L	0.10

Method Blank QCBatch: QC13498

Param	Flag	Results	Units	Reporting Limit
DRO		<5	mg/L	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Octane		21.7	mg/L	0.10	25	86	70 - 130

Method Blank QCBatch: QC13561

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

Quality Control Report
Duplicate Samples

Duplicate QCBatch: QC13327

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH		7.7	7.7	s.u.	1	0	0.99

Duplicate QCBatch: QC13407

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance		15.7	15.8	μMHOS/cm	1	0	5.9

Duplicate QCBatch: QC13415

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		1240	1280	mg/L	1	3	8.9

Duplicate

QCBatch: QC13443

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	7
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	7
Bicarbonate Alkalinity		50	52	mg/L as CaCo3	1	3	7
Total Alkalinity		50	52	mg/L as CaCo3	1	3	7

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC13341

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	11.99	11.67	mg/L	1	12.50	<2.0	95	2	90 - 110	20
Fluoride	2.46	2.32	mg/L	1	2.50	<0.2	98	5	90 - 110	20
Nitrate-N	2.40	2.38	mg/L	1	2.50	<0.2	96	0	90 - 110	20
Sulfate	11.92	11.69	mg/L	1	12.50	<2.0	95	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: QC13342

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	11.88	11.79	mg/L	1	12.50	<2.0	95	0	90 - 110	20
Fluoride	2.35	2.40	mg/L	1	2.50	<0.2	94	2	90 - 110	20
Nitrate-N	2.36	2.35	mg/L	1	2.50	<0.2	94	0	90 - 110	20
Sulfate	11.75	11.83	mg/L	1	12.50	<2.0	94	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: QC13465

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Copper	0.126	0.126	mg/L	1	0.12	<0.0125	100	0	75 - 125	20
Total Molybdenum	0.517	0.528	mg/L	1	0.50	<0.050	103	2	75 - 125	20
Total Zinc	0.251	0.251	mg/L	1	0.25	<0.025	100	0	75 - 125	20

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

Laboratory Control Spikes

QCBatch: QC13466

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Aluminum	1.01	0.839	mg/L	1	1	<0.1	101	18	75 - 125	20

Continued ...

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Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Arsenic	0.609	0.615	mg/L	1	0.50	<0.05	121	0	75 - 125	20
Total Barium	1.03	0.98	mg/L	1	1	<0.1	103	4	75 - 125	20
Total Boron	0.0507	0.0478	mg/L	1	0.05	<0.01	101	5	75 - 125	20
Total Cadmium	0.25	0.254	mg/L	1	0.25	<0.025	100	1	75 - 125	20
Total Chromium	0.101	0.103	mg/L	1	0.10	<0.01	101	1	75 - 125	20
Total Cobalt	0.251	0.257	mg/L	1	0.25	<0.025	100	2	75 - 125	20
Total Copper	0.127	0.129	mg/L	1	0.12	<0.0125	101	1	75 - 125	20
Total Iron	0.522	0.496	mg/L	1	0.50	<0.05	104	5	75 - 125	20
Total Lead	0.503	0.518	mg/L	1	0.50	<0.01	100	6	75 - 125	20
Total Manganese	0.249	0.254	mg/L	1	0.25	<0.025	99	1	75 - 125	20
Total Molybdenum	0.515	0.527	mg/L	1	0.50	<0.050	103	2	75 - 125	20
Total Nickel	0.246	0.257	mg/L	1	0.25	<0.025	98	4	75 - 125	20
Total Selenium	0.464	0.481	mg/L	1	0.50	<0.05	92	3	75 - 125	20
Total Silver	0.124	0.126	mg/L	1	0.12	<0.0125	99	1	75 - 125	20
Total Zinc	0.254	0.257	mg/L	1	0.25	<0.025	101	1	75 - 125	20

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

Laboratory Control Spikes

QCBatch: QC13479

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.098	0.097	mg/L	1	0.10	<0.001	98	1	80 - 120	20
Benzene	0.098	0.097	mg/L	1	0.10	<0.001	98	1	80 - 120	20
Toluene	0.101	0.101	mg/L	1	0.10	<0.001	101	0	80 - 120	20
Ethylbenzene	0.104	0.103	mg/L	1	0.10	<0.001	104	0	80 - 120	20
M,P,O-Xylene	0.313	0.31	mg/L	1	0.30	<0.001	104	0	80 - 120	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.096	0.092	mg/L	1	0.10	96	92	72 - 128
4-BFB	0.105	0.101	mg/L	1	0.10	105	101	72 - 128

Laboratory Control Spikes

QCBatch: QC13480

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	0.948	0.898	mg/L	1	1	<0.1	94	5	70 - 130	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.096	0.095	mg/L	1	0.10	96	95	70 - 130
4-BFB	0.092	0.092	mg/L	1	0.10	92	92	70 - 130

Laboratory Control Spikes

QCBatch: QC13498

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	20.9	20.9	mg/L	0.10	250	<5	83	0	70 - 130	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
n-Octane	27.9	27.5	mg/L	0.10	25	111	110	70 - 130

Laboratory Control Spikes

QCBatch: QC13561

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	98.2	99.5	mg/L	1	100	<0.50	98	1	75 - 125	20
Dissolved Magnesium	93.2	94.5	mg/L	1	100	<0.50	93	1	75 - 125	20
Dissolved Potassium	94.8	96.6	mg/L	1	100	<0.50	94	1	75 - 125	20
Dissolved Sodium	91.6	93	mg/L	1	100	<0.50	91	1	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: QC13341

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	134.63	132.95	mg/L	1	62.50	70.0	103	1	52 - 131	20
Fluoride	13.77	13.10	mg/L	1	12.50	3.46	82	5	80 - 113	20
Nitrate-N	13.48	13.77	mg/L	1	12.50	2.11	90	2	84 - 105	20
Sulfate	136.11	136.66	mg/L	1	62.50	72.0	102	0	79 - 104	20

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

Matrix Spikes

QCBatch: QC13342

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
CL	3734.90	3699.14	mg/L	1	1250	2420	105	1	52 - 131	20
Fluoride	234.22	239.92	mg/L	1	250		93	2	80 - 113	20
Nitrate-N	247.27	254.47	mg/L	1	250		90	3	84 - 105	20
Sulfate	1606.68	1661.50	mg/L	1	1250		97	3	79 - 104	20

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

Matrix Spikes

QCBatch: QC13465

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Aluminum	[17] 11	[18] 10	mg/L	10	1	8.13	287	42	75 - 125	20
Total Arsenic	0.587	0.581	mg/L	1	0.50	<0.05	117	1	75 - 125	20
Total Barium	1.67	1.65	mg/L	1	1	0.738	93	2	75 - 125	20
Total Boron	0.201	0.203	mg/L	1	0.05	0.155	92	4	75 - 125	20
Total Cadmium	0.222	0.222	mg/L	1	0.25	<0.025	88	0	75 - 125	20
Total Chromium	0.113	0.113	mg/L	1	0.10	0.02	93	0	75 - 125	20
Total Cobalt	0.237	0.237	mg/L	1	0.25	<0.025	94	0	75 - 125	20
Total Copper	0.135	0.136	mg/L	1	0.12	<0.0125	108	0	75 - 125	20
Total Iron	7	7	mg/L	10	0.50	8.13	200	0	75 - 125	20
Total Lead	0.482	0.481	mg/L	1	0.50	<0.01	96	0	75 - 125	20
Total Manganese	0.511	0.508	mg/L	1	0.25	0.28	92	1	75 - 125	20
Total Molybdenum	0.575	0.563	mg/L	10	0.50	<0.500	12	2	75 - 125	20
Total Nickel	0.224	0.223	mg/L	1	0.25	<0.025	89	0	75 - 125	20
Total Selenium	0.437	0.449	mg/L	1	0.50	<0.05	87	2	75 - 125	20
Total Silver	0.118	0.119	mg/L	1	0.12	<0.0125	94	0	75 - 125	20
Total Zinc	0.236	0.234	mg/L	1	0.25	<0.025	94	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: QC13466

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Aluminum	[19] 49	[20] 36.2	mg/L	100	1	40.7	830	673	75 - 125	20
Total Arsenic	0.62	0.588	mg/L	1	0.50	<0.05	124	5	75 - 125	20
Total Barium	2.42	2.4	mg/L	10	1	1.41	101	2	75 - 125	20
Total Boron	0.322000	0.319000	mg/L	10	0.05	0.277000	90	6	75 - 125	20
Total Cadmium	0.218	0.213	mg/L	1	0.25	<0.025	87	2	75 - 125	20
Total Chromium	0.177	0.165	mg/L	1	0.10	0.078	99	12	75 - 125	20
Total Cobalt	0.246	0.242	mg/L	1	0.25	<0.025	98	1	75 - 125	20
Total Copper	0.148	0.145	mg/L	1	0.12	0.016	105	2	75 - 125	20
Total Iron	[21] 37.8	32.2	mg/L	100	0.50	31.7	1220	169	75 - 125	20
Total Lead	0.485	0.475	mg/L	1	0.50	<0.01	97	4	75 - 125	20
Total Manganese	0.881	0.824	mg/L	1	0.25	0.621	104	24	75 - 125	20
Total Molybdenum	0.461	0.444	mg/L	1	0.50	<0.050	92	4	75 - 125	20
Total Nickel	[22] 0.115	[23] 0.131	mg/L	1	0.25	<0.025	46	13	75 - 125	20
Total Selenium	0.424	0.419	mg/L	1	0.50	<0.05	84	1	75 - 125	20
Total Silver	0.112	0.112	mg/L	1	0.12	<0.0125	89	0	75 - 125	20
Total Zinc	0.29	0.277	mg/L	1	0.25	0.069	88	6	75 - 125	20

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

Matrix Spikes

QCBatch: QC13561

[17]Matrix spike recovery invalid due to required dilution. LCS demonstrates process under control
[18]Matrix spike recovery invalid due to required dilution. LCS demonstrates process under control.
[19]Matrix spike recovery invalid due to required dilution. LCS demonstrates process under control.
[20]Matrix spike recovery invalid due to required dilution. LCS demonstrates process under control.
[21]Matrix spike invalid due to required dilution. LCS demonstrates process under control.
[22]Matrix spike recovery invalid due to matrix difficulties. LCS demonstrates process under control.
[23]Matrix spike recovery invalid due to matrix difficulties. LCS demonstrates process under control.

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	162	165	mg/L	1	100	65.2	96	3	75 - 125	20
Dissolved Magnesium	117	120	mg/L	1	100	23.1	93	3	75 - 125	20
Dissolved Potassium	115	116	mg/L	1	100	9	106	0	75 - 125	20
Dissolved Sodium	197	196	mg/L	1	100	107.7	89	1	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

ICV (1) QCBatch: QC13327

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.0	100	-0.1 s.u. - +0.1 s.u.	8/14/01

CCV (1) QCBatch: QC13341

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.83	94	90 - 110	8/14/01
Fluoride		mg/L	2.50	2.33	93	90 - 110	8/14/01
Nitrate-N		mg/L	2.50	2.36	94	90 - 110	8/14/01
Sulfate		mg/L	12.50	11.64	93	90 - 110	8/14/01

ICV (1) QCBatch: QC13341

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	12.01	96	90 - 110	8/14/01
Fluoride		mg/L	2.50	2.46	98	90 - 110	8/14/01
Nitrate-N		mg/L	2.50	2.42	96	90 - 110	8/14/01
Sulfate		mg/L	12.50	12.11	96	90 - 110	8/14/01

CCV (1) QCBatch: QC13342

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	12.68	101	90 - 110	8/14/01
Fluoride		mg/L	2.50	2.31	92	90 - 110	8/14/01

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.41	96	90 - 110	8/14/01
Sulfate		mg/L	12.50	12.88	103	90 - 110	8/14/01

ICV (1) QCBatch: QC13342

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
CL		mg/L	12.50	11.83	94	90 - 110	8/14/01
Fluoride		mg/L	2.50	2.33	93	90 - 110	8/14/01
Nitrate-N		mg/L	2.50	2.36	94	90 - 110	8/14/01
Sulfate		mg/L	12.50	11.64	93	90 - 110	8/14/01

CCV (1) QCBatch: QC13407

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		μMHOS/cm	1412	1411	99	90 - 110	8/16/01

ICV (1) QCBatch: QC13407

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		μMHOS/cm	1400	1424	101	90 - 110	8/16/01

CCV (1) QCBatch: QC13415

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	961	96	90 - 110	8/17/01

ICV (1) QCBatch: QC13415

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	954	95	90 - 110	8/17/01

CCV (1) QCBatch: QC13443

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	20	0	90 - 110	8/16/01
Carbonate Alkalinity		mg/L as CaCo3	0	220	0	90 - 110	8/16/01
Bicarbonate Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	8/16/01
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	8/16/01

ICV (1) QCBatch: QC13443

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	8/16/01
Carbonate Alkalinity		mg/L as CaCo3	0	232	0	90 - 110	8/16/01
Bicarbonate Alkalinity		mg/L as CaCo3	0	12	0	90 - 110	8/16/01
Total Alkalinity		mg/L as CaCo3	250	244	97	90 - 110	8/16/01

CCV (1) QCBatch: QC13465

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Copper		mg/L	0.25	0.262	104	90 - 110	8/20/01
Total Molybdenum		mg/L	1	1.050000	105	90 - 110	8/20/01
Total Zinc		mg/L	0.50	0.529	105	90 - 110	8/20/01

ICV (1) QCBatch: QC13465

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Copper		mg/L	0.25	0.251	100	90 - 110	8/20/01
Total Molybdenum		mg/L	1	0.999	100	90 - 110	8/20/01
Total Zinc		mg/L	0.50	0.501	100	90 - 110	8/20/01

CCV (1) QCBatch: QC13466

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	2	2.13	106	90 - 110	8/20/01
Total Arsenic		mg/L	1	1.09	109	90 - 110	8/20/01
Total Barium		mg/L	2	2.1	105	90 - 110	8/20/01
Total Boron		mg/L	0.10	0.106000	106	90 - 110	8/20/01
Total Cadmium		mg/L	0.50	0.536	107	90 - 110	8/20/01

Continued ...

... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Chromium		mg/L	0.20	0.219	109	90 - 110	8/20/01
Total Cobalt		mg/L	0.50	0.545	109	90 - 110	8/20/01
Total Copper		mg/L	0.25	0.269	107	90 - 110	8/20/01
Total Iron		mg/L	1	1.06	106	90 - 110	8/20/01
Total Lead		mg/L	1	1.08	108	90 - 110	8/20/01
Total Manganese		mg/L	0.50	0.534	106	90 - 110	8/20/01
Total Molybdenum		mg/L	1	1.090000	109	90 - 110	8/20/01
Total Nickel		mg/L	0.50	0.541	108	90 - 110	8/20/01
Total Selenium		mg/L	1	1.1	110	90 - 110	8/20/01
Total Silver		mg/L	0.25	0.263	105	90 - 110	8/20/01
Total Zinc		mg/L	0.50	0.54	108	90 - 110	8/20/01

ICV (1)

QCBatch: QC13466

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	2	2.04	102	90 - 110	8/20/01
Total Arsenic		mg/L	1	1.02	102	90 - 110	8/20/01
Total Barium		mg/L	2	2.01	100	90 - 110	8/20/01
Total Boron		mg/L	0.10	0.103000	103	90 - 110	8/20/01
Total Cadmium		mg/L	0.50	0.506	101	90 - 110	8/20/01
Total Chromium		mg/L	0.20	0.202	101	90 - 110	8/20/01
Total Cobalt		mg/L	0.50	0.505	101	90 - 110	8/20/01
Total Copper		mg/L	0.25	0.251	100	90 - 110	8/20/01
Total Iron		mg/L	1	1.01	101	90 - 110	8/20/01
Total Lead		mg/L	1	1	100	90 - 110	8/20/01
Total Manganese		mg/L	0.50	0.504	100	90 - 110	8/20/01
Total Molybdenum		mg/L	1	1.000000	100	90 - 110	8/20/01
Total Nickel		mg/L	0.50	0.502	100	90 - 110	8/20/01
Total Selenium		mg/L	1	1.02	102	90 - 110	8/20/01
Total Silver		mg/L	0.25	0.252	100	90 - 110	8/20/01
Total Zinc		mg/L	0.50	0.501	100	90 - 110	8/20/01

CCV (1)

QCBatch: QC13479

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.094	94	85 - 115	8/20/01
Benzene		mg/L	0.10	0.094	94	85 - 115	8/20/01
Toluene		mg/L	0.10	0.096	96	85 - 115	8/20/01
Ethylbenzene		mg/L	0.10	0.098	98	85 - 115	8/20/01
M,P,O-Xylene		mg/L	0.30	0.296	98	85 - 115	8/20/01

CCV (2)

QCBatch: QC13479

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.094	94	85 - 115	8/20/01
Benzene		mg/L	0.10	0.09	90	85 - 115	8/20/01
Toluene		mg/L	0.10	0.093	93	85 - 115	8/20/01
Ethylbenzene		mg/L	0.10	0.095	95	85 - 115	8/20/01
M,P,O-Xylene		mg/L	0.30	0.286	95	85 - 115	8/20/01

ICV (1) QCBatch: QC13479

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.091	91	85 - 115	8/20/01
Benzene		mg/L	0.10	0.089	89	85 - 115	8/20/01
Toluene		mg/L	0.10	0.092	92	85 - 115	8/20/01
Ethylbenzene		mg/L	0.10	0.093	93	85 - 115	8/20/01
M,P,O-Xylene		mg/L	0.30	0.282	94	85 - 115	8/20/01

CCV (1) QCBatch: QC13480

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1	0.951	95	85 - 115	8/20/01

CCV (2) QCBatch: QC13480

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1	1.05	105	85 - 115	8/20/01

ICV (1) QCBatch: QC13480

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1	0.908	90	85 - 115	8/20/01

CCV (1) QCBatch: QC13498

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	284	113	85 - 115	8/19/01
n-Octane		mg/L	250	306	122	85 - 115	8/19/01

CCV (2)

QCBatch: QC13498

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	230	92	85 - 115	8/19/01
n-Octane		mg/L	250	298	119	85 - 115	8/19/01

ICV (1)

QCBatch: QC13498

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	218	87	85 - 115	8/19/01
n-Octane		mg/L	250	277	110	85 - 115	8/19/01

CCV (1)

QCBatch: QC13561

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	24.1	96	90 - 110	8/23/01
Dissolved Magnesium		mg/L	25	23.6	94	90 - 110	8/23/01
Dissolved Potassium		mg/L	25	23.3	93	90 - 110	8/23/01
Dissolved Sodium		mg/L	25	23.5	94	90 - 110	8/23/01

ICV (1)

QCBatch: QC13561

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	24.9	99	95 - 105	8/23/01
Dissolved Magnesium		mg/L	25	24.9	99	95 - 105	8/23/01
Dissolved Potassium		mg/L	25	25.2	100	95 - 105	8/23/01
Dissolved Sodium		mg/L	25	25.2	100	95 - 105	8/23/01

177064-71

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El Paso, Texas 79932
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Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0108 1410

Company Name: AMEC — Phone #: 505/821-1801

Address: (Street, City, Zip) 8519 JEFFERSON NE, ALBUQUERQUE — Fax #: 505/821-7371

Contact Person: BOB WILCOX 505/821-1801 OR 505/327-7928

Invoice to: (If different from above)

Project #: 151700035 — Project Name: "EUDRICH FARM"

Project Location: MONUMENT - FT B. — Sampler Signature: B.M. Hinkle

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
177064	MW-1A	1	1L	X								X		8.10.01	13:50
	MW-1B	1	0.25L	X					X					8.10.01	13:50
	MW-1C	4	500ml	X				X						8.10.01	13:50
177065	MW-2A	1	1/2L	X								X		8.9.01	18:20
	MW-2B	1	1/4L	X					X					8.9.01	18:20
	MW-2C	4	500ml	X				X						8.9.01	18:20
177066	MW-3A	1	1/2L	X								X		8.9.01	19:55
	MW-3B	1	1/4L	X					X					8.9.01	19:55
	MW-3C	4	500ml	X				X						8.9.01	19:55
177067	MW-4A	1	1/2L	X								X		8.10.01	19:05
MARK STRZELEC	MW-4B	1	1/4L	X					X					8.10.01	19:05

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	~~TPH 418.1/TX1005~~ TPH GRO + DRO	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CATIONS/ANIONS	NM WQCC - METALS	TDS	Turn Around Time if different from standard	Hold
	X	X																	
															X	X	X		
	X	X																	
															X		X		
																X			
	X	X																	
															X		X		
																X			
	X	X																	
															X		X		
																X			

Relinquished by: B.M. Hinkle — Date: 08.13.01 — Time: 16:30

Received by: — Date: — Time:

Relinquished by: — Date: — Time:

Received by: — Date: — Time:

Relinquished by: — Date: — Time:

Received at Laboratory by: Vicki Hensley — Date: 8-14-01 — Time: 1000

LAB USE ONLY #1

Intact Y / N

Headspace Y / N

Temp 4 °

Log-in Review

REMARKS: SEND LAB RESULTS TO: WILLIAM OLSEN (SEE PAGE 2)
#2 505/821-7371 } BOB
#3 505/326-5721 } WILCOX

☐ Check If Special Reporting Limits Are Needed

8/31

Carrier # 1Z 045 82W 01 4190 3421

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

ORIGINAL COPY

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 of our work and stating either the testing criteria you require or identifying the agency to which the results will be submitted.

Article 2: Our General Responsibilities

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 skill 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 our 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 are 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 provisions 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 performed 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 no 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 level and type of radioactive activity. This information will be given to us in writing as a part of the Chain of Custody/Analysis Request and will precede or accompany samples suspected of containing hazardous substances.

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 of our report. We will extend the retention period if you so direct. Following the retention period we will dispose of non-hazardous samples. We may return highly hazardous, acutely toxic, or radioactive samples and samples containers and residues to you. You agree to accept them.

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 authorized to 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 if we 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 reason for 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 and 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 alleged to be incorrect. 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 not to 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 until 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 involved in 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 testing 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 cost of 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 liable 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 recommend 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 or to others.

8.4 If it is claimed by a third party that we did not complete an acceptable analysis, at your request we 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 efforts 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 attorney's 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 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 of 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 date 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 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 you.

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 matters 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, labor 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. Upon 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 after 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.

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1 (800) 378-1296

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Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #_____

Company Name: AMES
Phone #: 505/821-1801
Address: (Street, City, Zip) 8519 JEFFERSON NE, ALBUQUERQUE
Fax #: 505/821-7371
Contact Person: BOB WILCOX
505/821-1801 OR 505/821-7928 327
Invoice to: (If different from above)
Project #: 151700035
Project Name: "ELDRICH RANCH"
Project Location: MONUMENT-RT 8
Sampler Signature: B.M. Hunsaker III

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
177067	MW-4C	4	500ml	X				X						08.10.01	9:05
177068	MW-5A	1	1/2L	X								X		08.10.01	12:05
	MW-5B	1	1/4L	X					X					8.10	12:05
	MW-5C	4	500ml	X				X						8.10.01	12:05
177069	MW-5D (DUPLIC.)	1	1/2L	X								X		8.10.01	12:05
	MW-5E (DUPLIC.)	1	1/4L	X					X					8.10.01	12:05
	MW-5F (DUPLIC.)	4	500ml	X				X						8.10.01	12:05
177070	MW-6A	1	1/2L	X								X		8.10.01	10:35
	MW-6B	1	1/4L	X					X					8.10.01	10:35
	MW-6C	4	500ml	X				X						8.10.01	10:35
MARK STRZELEWICZ	MW-7A	1	1/2L	X								X		8.10.01	12:30

ANALYSIS REQUEST	MTBE 8021B/602	BTEX 8021B/602	~~TRH 418.1/TPX1005~~ TPH 600, 020	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CATIONS/ANIONS	NM WQCC METALS	TDS			Turn Around Time if different from standard	Hold
		X	X													X	X	X				
																X	X	X				
																	X					
		X	X																			
																X	X	X				
																	X					
		X	X																			
																X	X	X				
		X	X																			
																	X					
																X	X	X				

	Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	B.M. Hunsaker III	08.13.01	16:30			
	Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	Relinquished by:	Date:	Time:	Received at Laboratory by: Vicki Quealy	Date: 8.14.01	Time: 1000

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp 4 °C
Log-in Review

REMARKS: SEND LAB RESULTS TO:
WILLIAM C. OLSEN (ENVIRONM. BUREAU
1220 SOUTH ST. FRANCIS DR.
SANTA FE, NM 87505
COPY - FAX 505/821-7371 (BOB WILCOX)
COPY - FAX 505/326-5721

☐ Check If Special Reporting Limits Are Needed

Carrier # 17045 82W01 4190 3421

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

ORIGINAL COPY

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 of our work and stating either the testing criteria you require or identifying the agency to which the results will be submitted.

Article 2: Our General Responsibilities

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 skill 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 our 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 are 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 provisions 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 performed 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 no 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 level and type of radioactive activity. This information will be given to us in writing as a part of the Chain of Custody/Analysis Request and will precede or accompany samples suspected of containing hazardous substances.

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 of our report. We will extend the retention period if you so direct. Following the retention period we will dispose of non-hazardous samples. We may return highly hazardous, acutely toxic, or radioactive samples and samples containers and residues to you. You agree to accept them.

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 authorized to 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 if we 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 reason for 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 and 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 alleged to be incorrect. 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 not to 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 until 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 involved in 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 testing 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 cost of 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 liable 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 recommend 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 or to others.

8.4 If it is claimed by a third party that we did not complete an acceptable analysis, at your request we 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 efforts 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 attorney's 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 of 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 date 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 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 you.

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 matters 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, labor 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. Upon 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 after 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.

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

TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

Company Name: AMEC
Phone #: 505/821-1801
Address: (Street, City, Zip) 8519 JEFFERSON NE, ALBUQUERQUE
Fax #: 505/821-7371
Contact Person: BOB WILCOX 505/821-1801 OR 505/327-7928
Invoice to: (If different from above)
Project #: 1517000035
Project Name: "EDRICH RANCH"
Project Location: MONUMENT - PT. 8
Sampler Signature: [signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
177071	MW-7B	1	1/4 L	X					X					08-10-01	14:30
	MW-7C	4	500 ml	X				X						08-10-01	14:30
	RINS IT (AMBER)	1	1/2 L	X								X		08-10-01	15:15

ANALYSIS REQUEST
(Circle or Specify Method No.)

FIELD CODE	MTBE 8021B/602	BTEX 8021B/602	~~TPH 418.1/TX1005~~ TPH DRO, GRO	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	CATIONS/ANIONS	NM WQCC - METALS	TDS		Turn Around Time if different from standard	Hold
MW-7B																	X				
MW-7C		X	X																		
RINS IT (AMBER)																					

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
MARK STRZECZYK [signature]	08-13-01	16:30			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: [signature]	8-14-01	10:02

LAB USE ONLY
Intact (Y) / N
Headspace Y / N
Temp 4 °
Log-in Review

REMARKS: SEND TO OLSEN (SEE PAGE #2)
#2 BOB WILCOX 505/821-7371
#3 FAX 505/326-5721

☐ Check If Special Reporting Limits Are Needed

Carrier # 1Z 045 82W01 4190 3421

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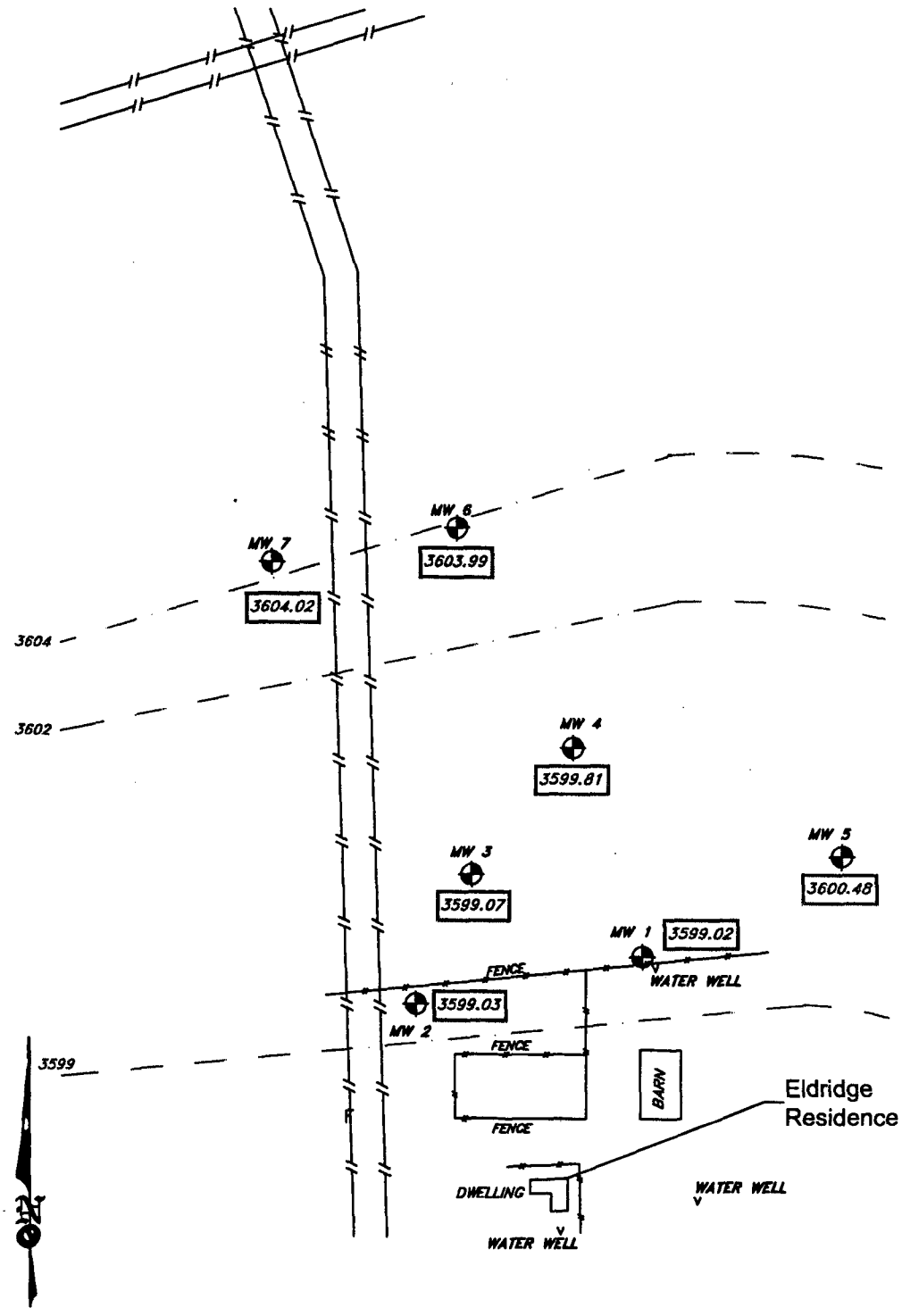


LEGEND

- Monitor Well Location
- Pipe Line
- Groundwater Elevation
- Groundwater Elevation Contour
- V Water Well

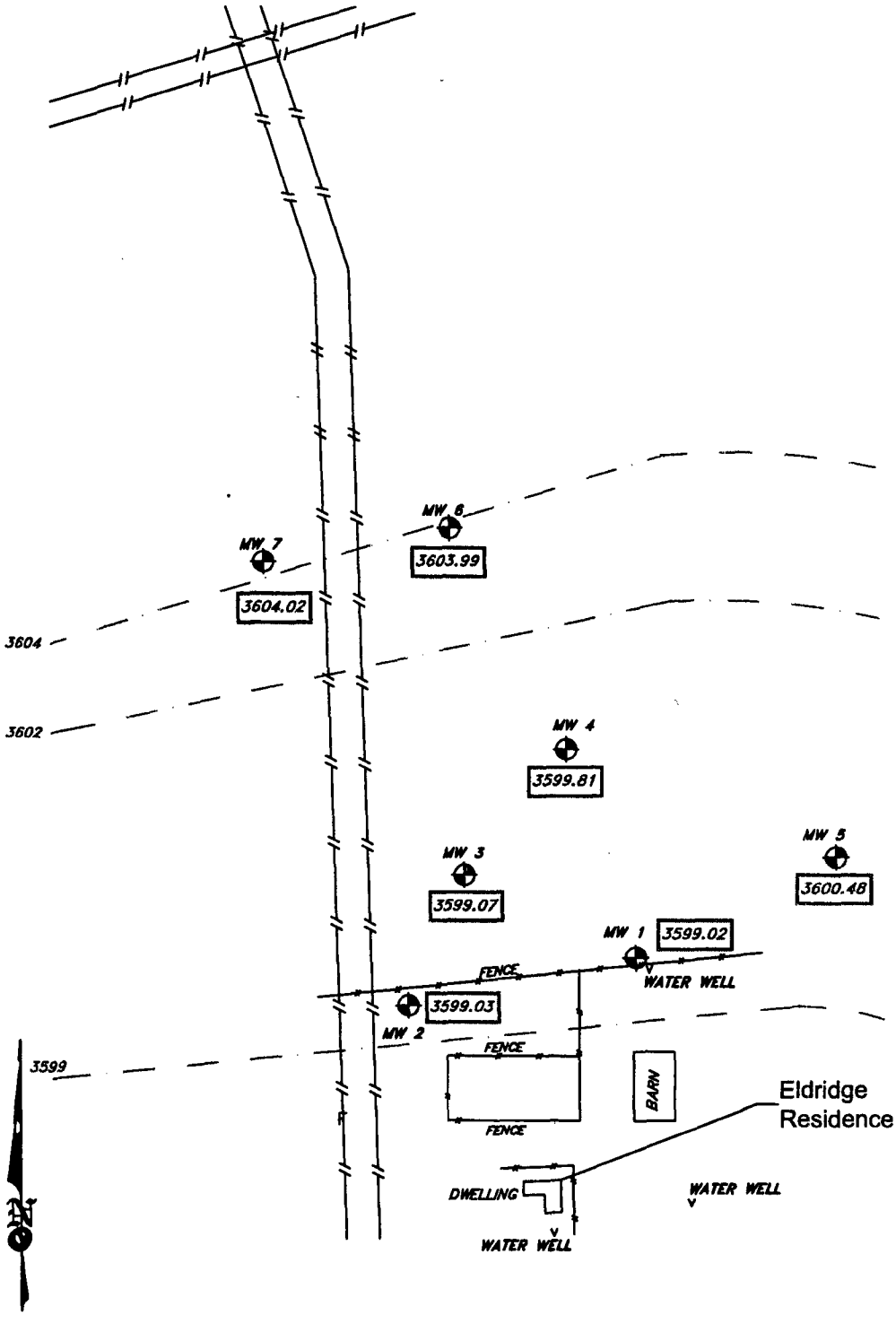
Eldridge Ranch
Lea County, New Mexico
AMEC Project No. 1-517-000035

amec
8519 Jefferson NE
Albuquerque, New Mexico 87113

Ground Water Elevation Contour Map

Figure No. 3

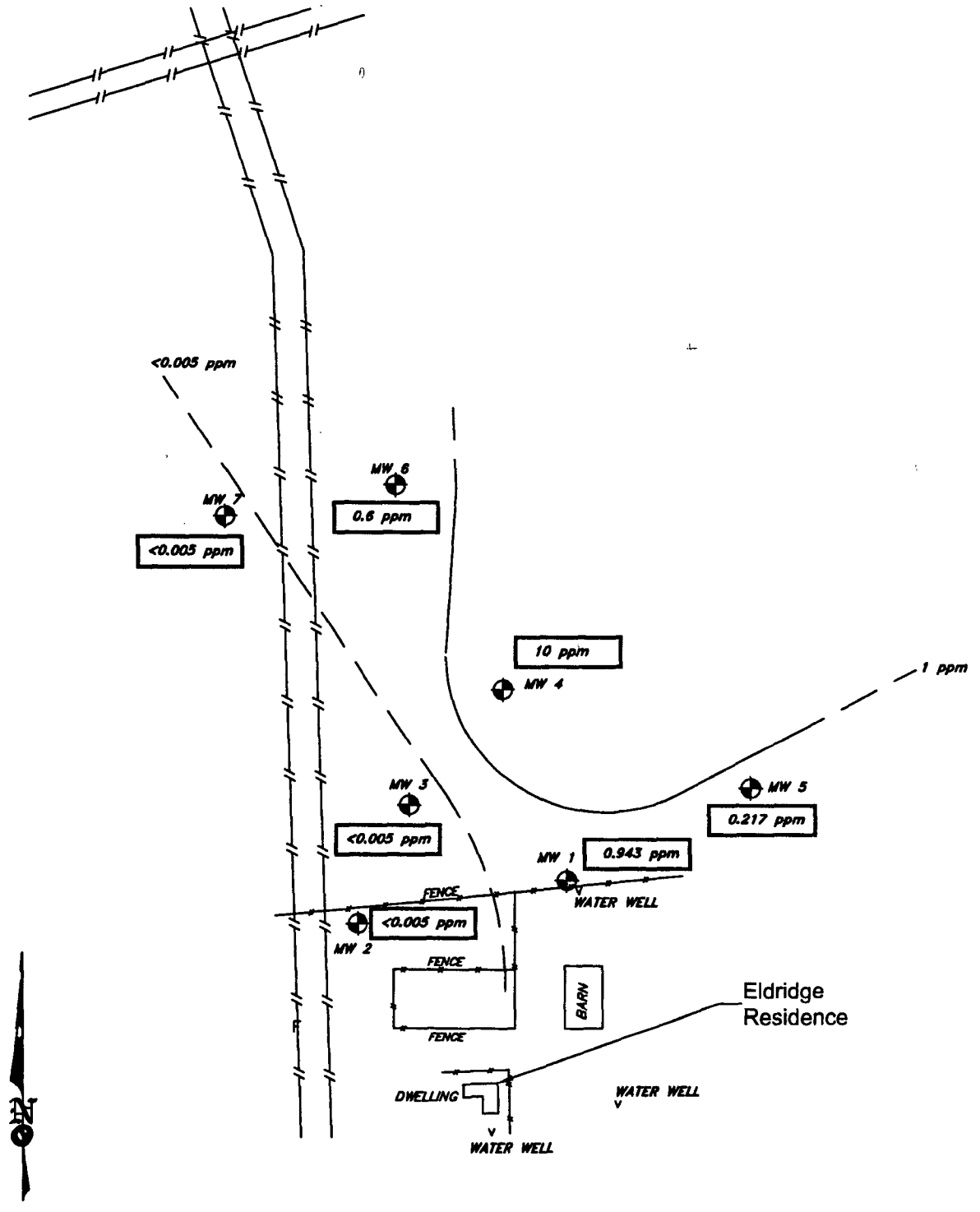
Date Drawn: 4 September 2001 | Drawn By: RJT | Checked By: BEW



LEGEND

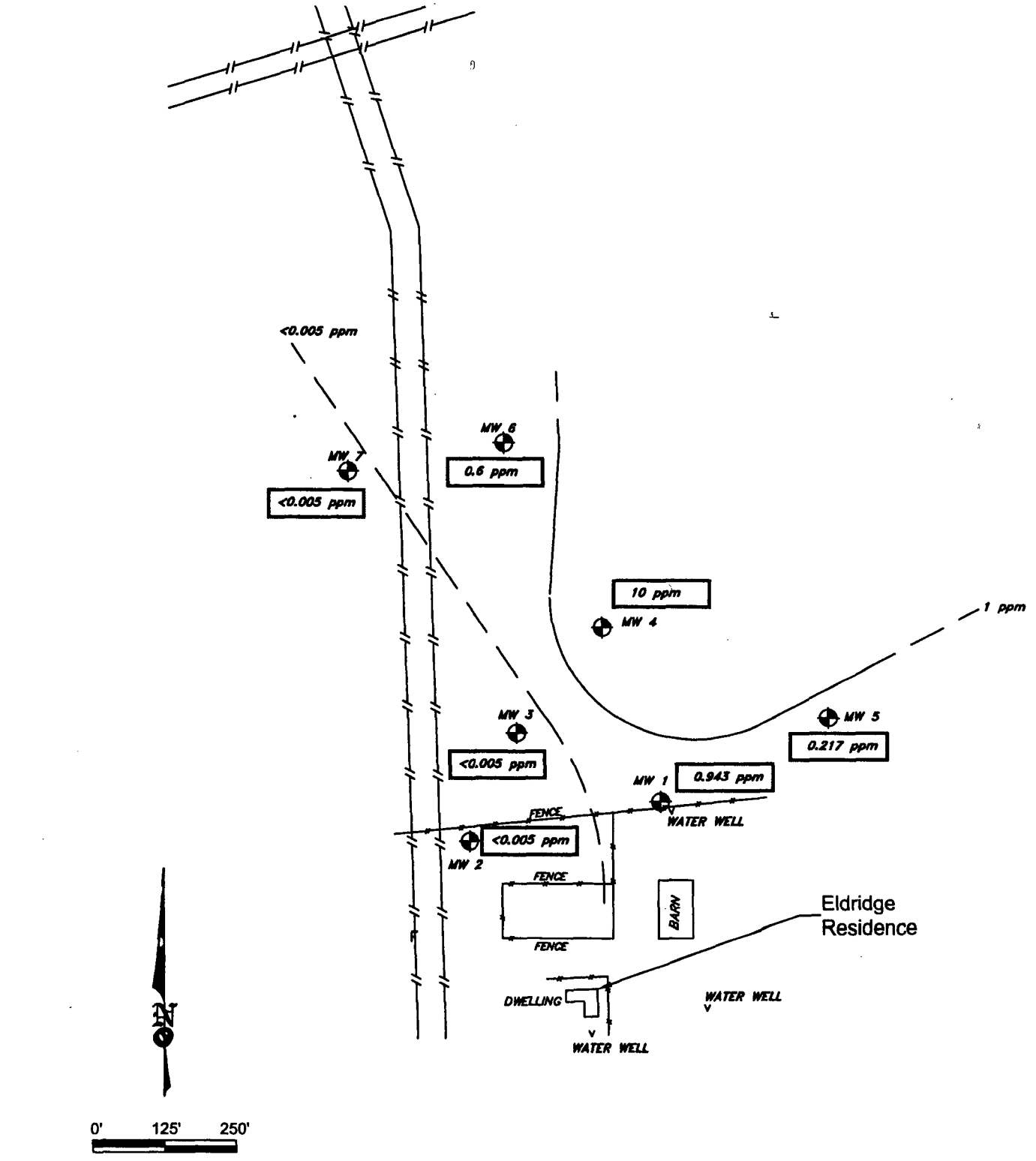
- Monitor Well Location
- Pipe Line
- Groundwater Elevation
- Groundwater Elevation Contour
- V Water Well

Eldridge Ranch Lea County, New Mexico AMEC Project No. 1-517-000035	amec 8519 Jefferson NE Albuquerque, New Mexico 87113	**Ground Water Elevation Contour Map**	Figure No. 3
		Date Drawn: 4 September 2001	Drawn By: RJT Checked By: BEW



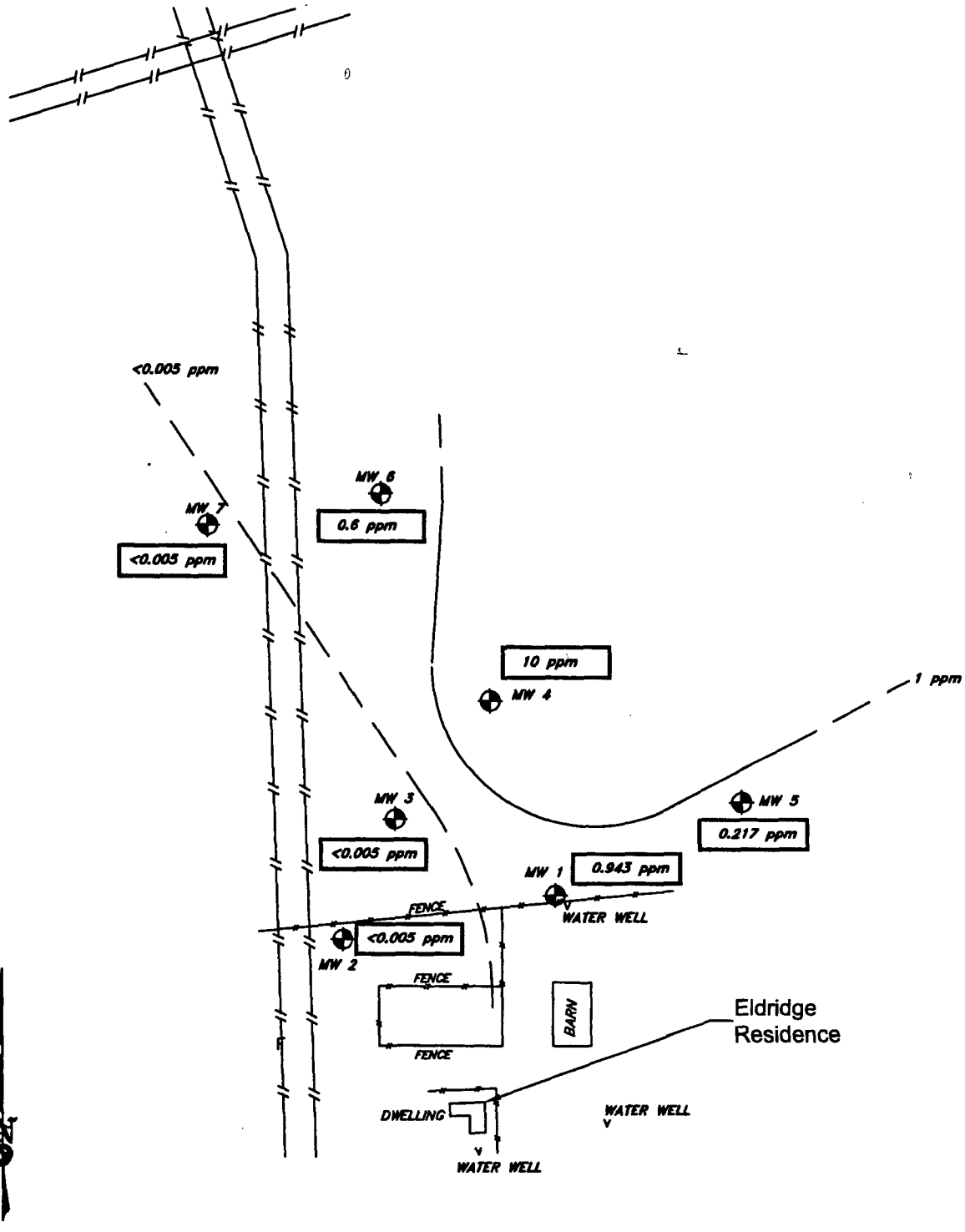
Samples were obtained during August 2001

Eldridge Ranch Lea County, New Mexico AMEC Project No. 1-517-000035	amec 8519 Jefferson NE Albuquerque, New Mexico 87113	**Benzene Concentration Contours in Ground Water**	Figure No. 4
		Date Drawn: 4 September 2001	Drawn By: RJT Checked By: BEW



Samples were obtained during August 2001

Eldridge Ranch Lea County, New Mexico AMEC Project No. 1-517-000035	amec 8519 Jefferson NE Albuquerque, New Mexico 87113	**Benzene Concentration Contours in Ground Water**	Figure No. **4**
		Date Drawn: 4 September 2001	Drawn By: RJT Checked By: BEW



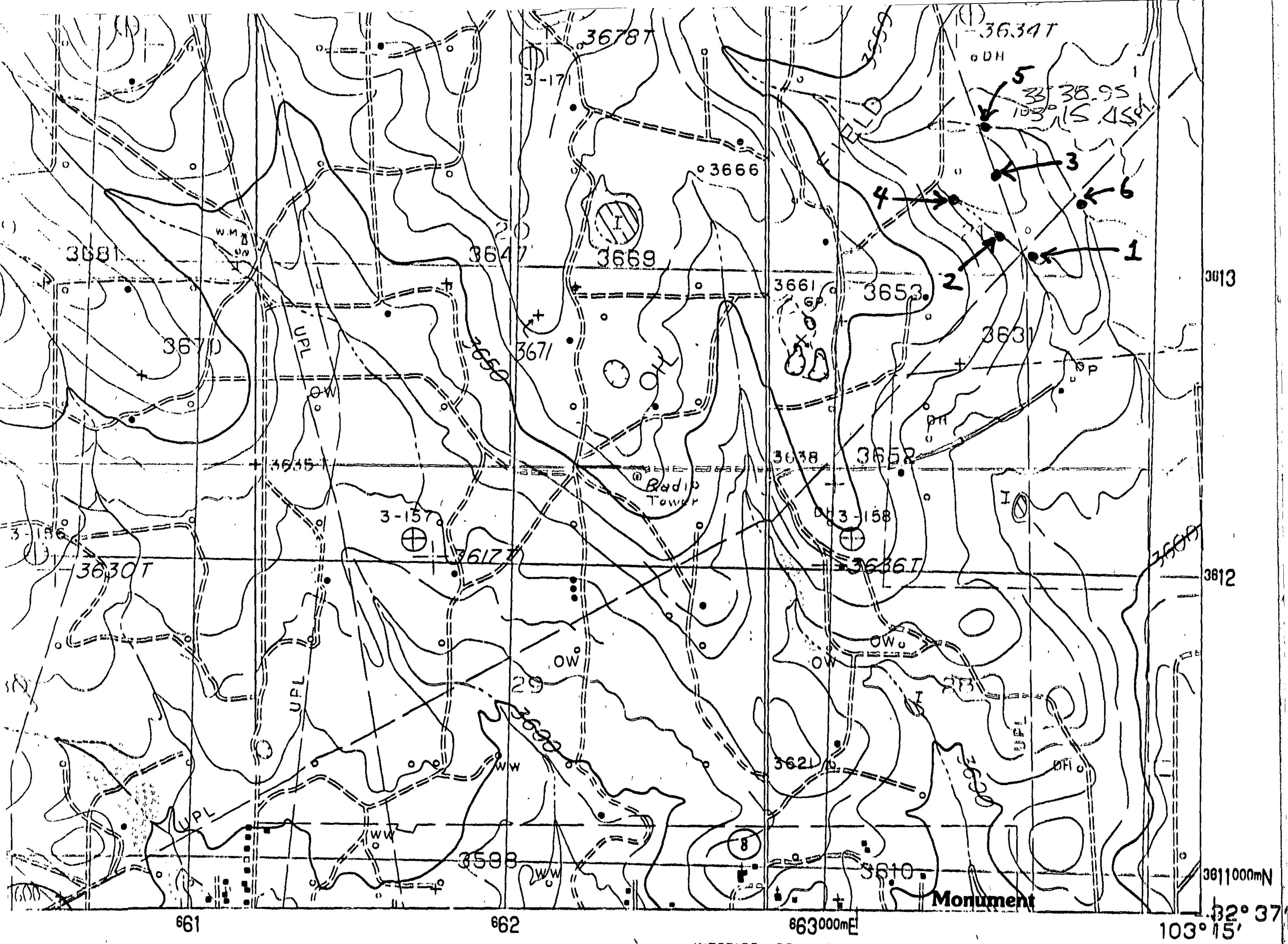
0' 125' 250'

LEGEND

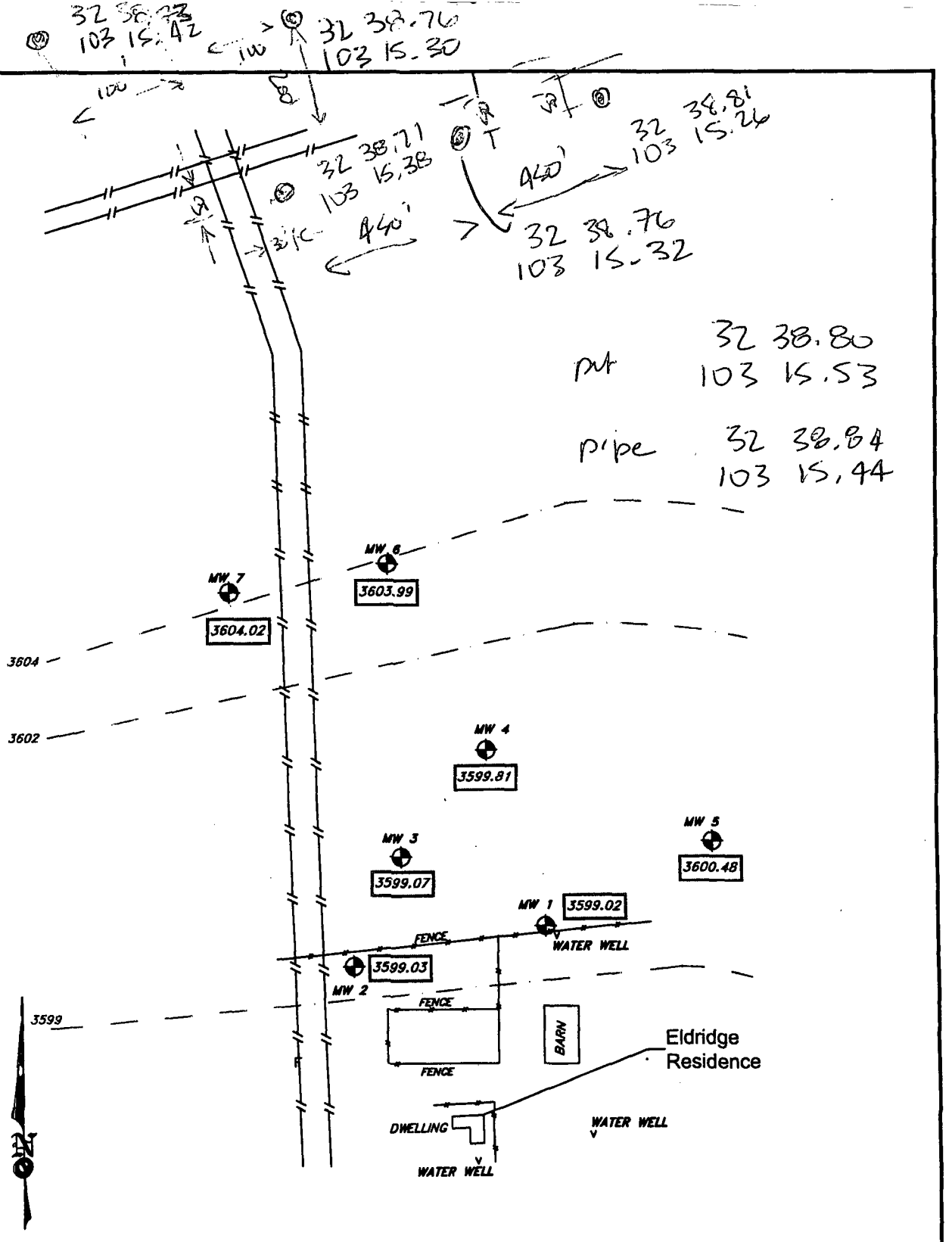
- Monitor Well Location
- Pipe Line
- Benzene Concentration (ppm)
- Benzene Concentration ISO Contour
- Water Well

Samples were obtained during August 2001

Eldridge Ranch Lea County, New Mexico AMEC Project No. 1-517-000035	amec 8519 Jefferson NE Albuquerque, New Mexico 87113	**Benzene Concentration Contours in Ground Water**	Figure No. 4
		Date Drawn: 4 September 2001	Drawn By: RJT Checked By: BEW



INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA— 1985



LEGEND

- Monitor Well Location
- Pipe Line
- Groundwater Elevation
- Groundwater Elevation Contour
- Water Well

Eldridge Ranch Lea County, New Mexico AMEC Project No. 1-517-000035	amec 8519 Jefferson NE Albuquerque, New Mexico 87113	**Ground Water Elevation Contour Map**	Figure No. **3**
		Date Drawn: 4 September 2001	Drawn By: RJT Checked By: BEW

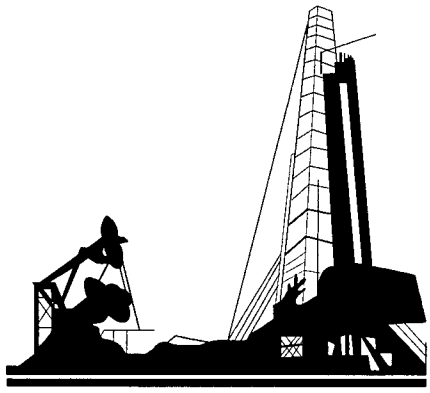
Eldridge Ranch
Chevron Well Site
1/18/02

Eldridge Ranch
East of Chevron Well
Old rustal pipeline repair?
1/18/02

1/18/02

Eldridge Ranch
Pipeline from Chevron well?
Crossing Llano + Duke N-S pipelines
east of Chevron well

1/18/02
Eldridge Ranch
Llano, Duke & Sid Richardson
pipeline junction



TRANSMITTAL COVER SHEET

OIL CONSERVATION DIVISION
1220 S. ST. FRANCIS DRIVE
SANTA FE, NM 87505
(505) 476-3440
(505)476-3462 (Fax)

PLEASE DELIVER THIS FAX:

TO: Bob Wilcox – Amec

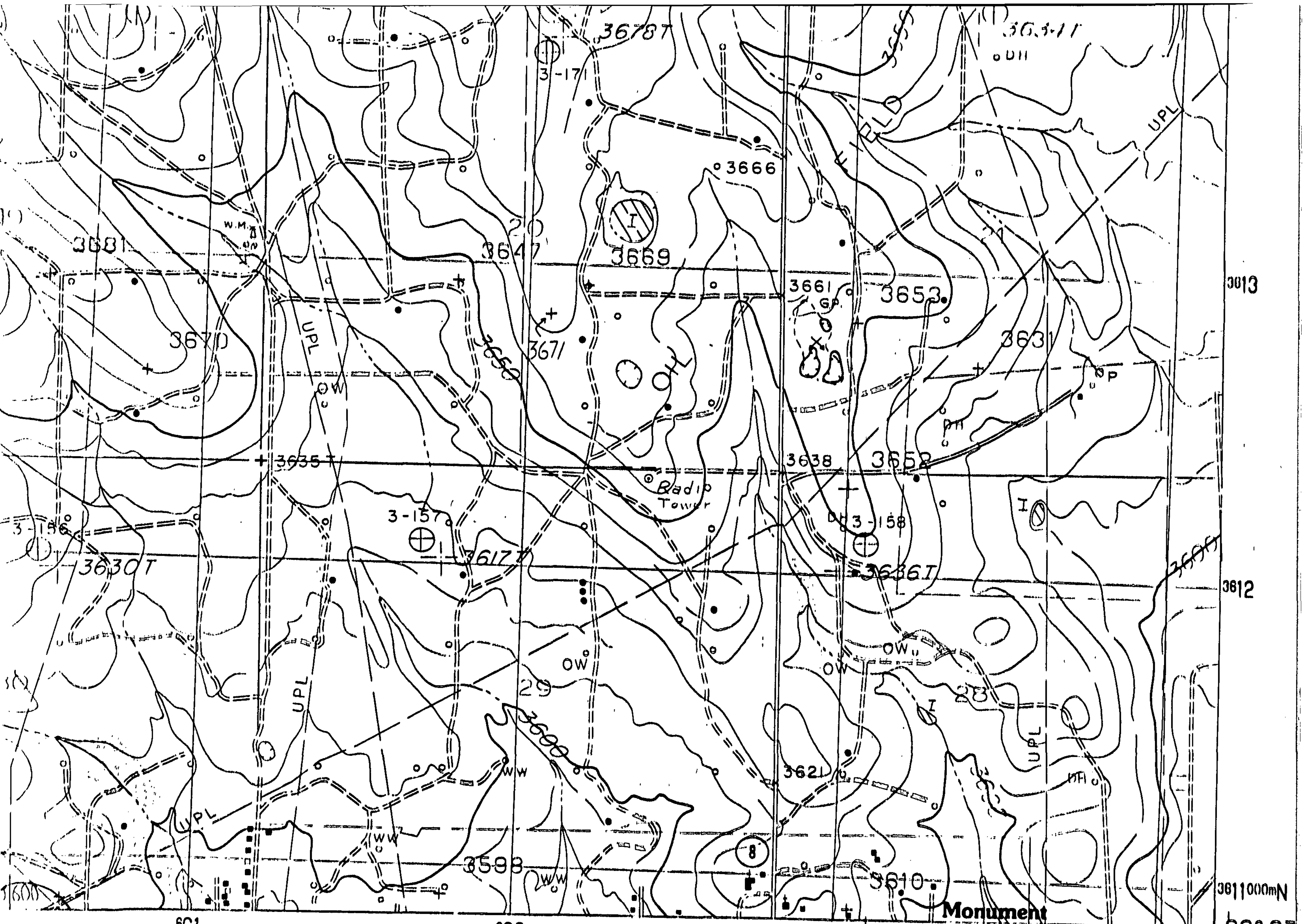
FROM: Bill Olson

DATE: 1/22/02

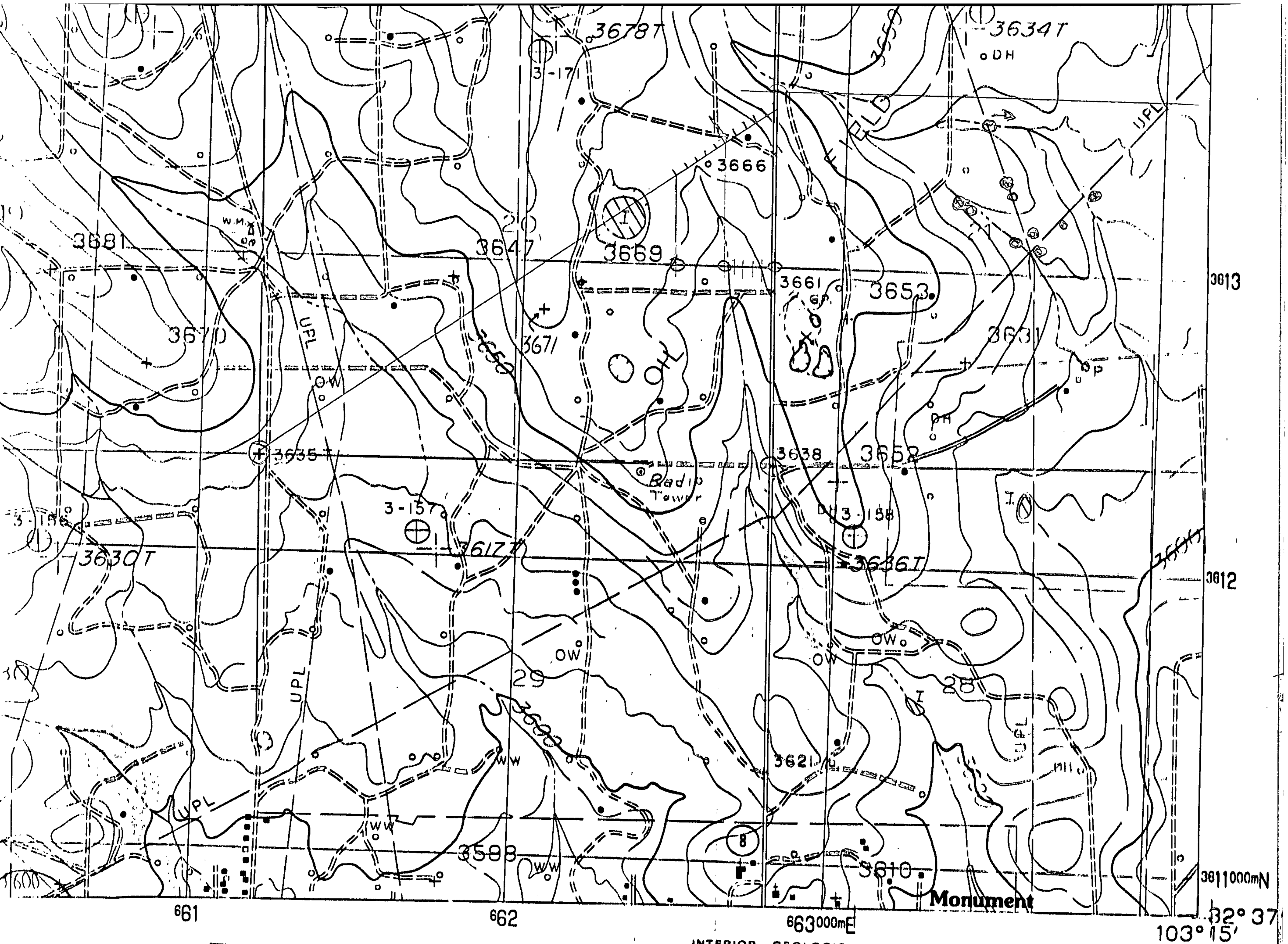
PAGES: 2 w/cover

SUBJECT: Eldridge Ranch Monitor Wells

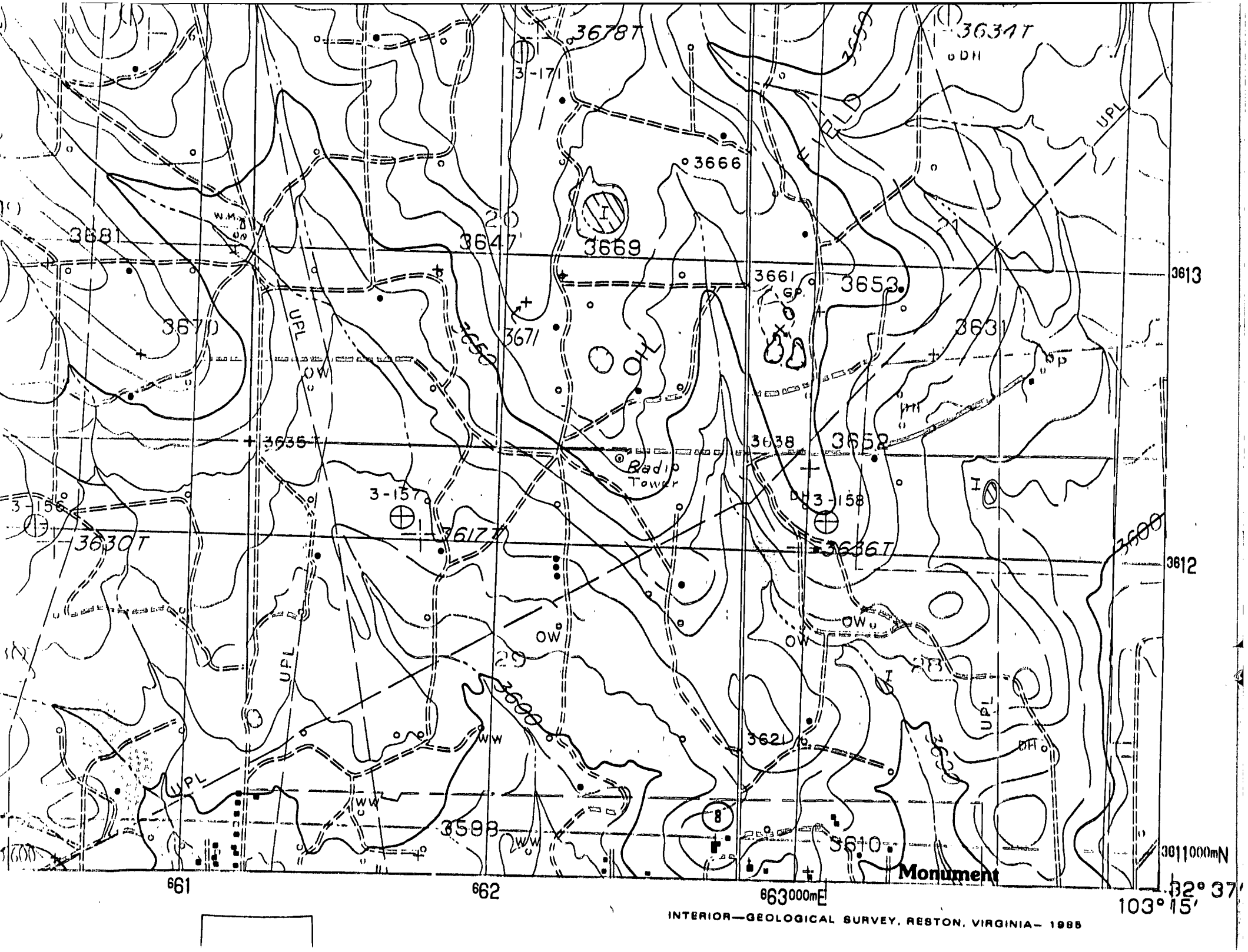
IF YOU HAVE TROUBLE RECEIVING THIS FAX, PLEASE CALL THE OFFICE NUMBER ABOVE.



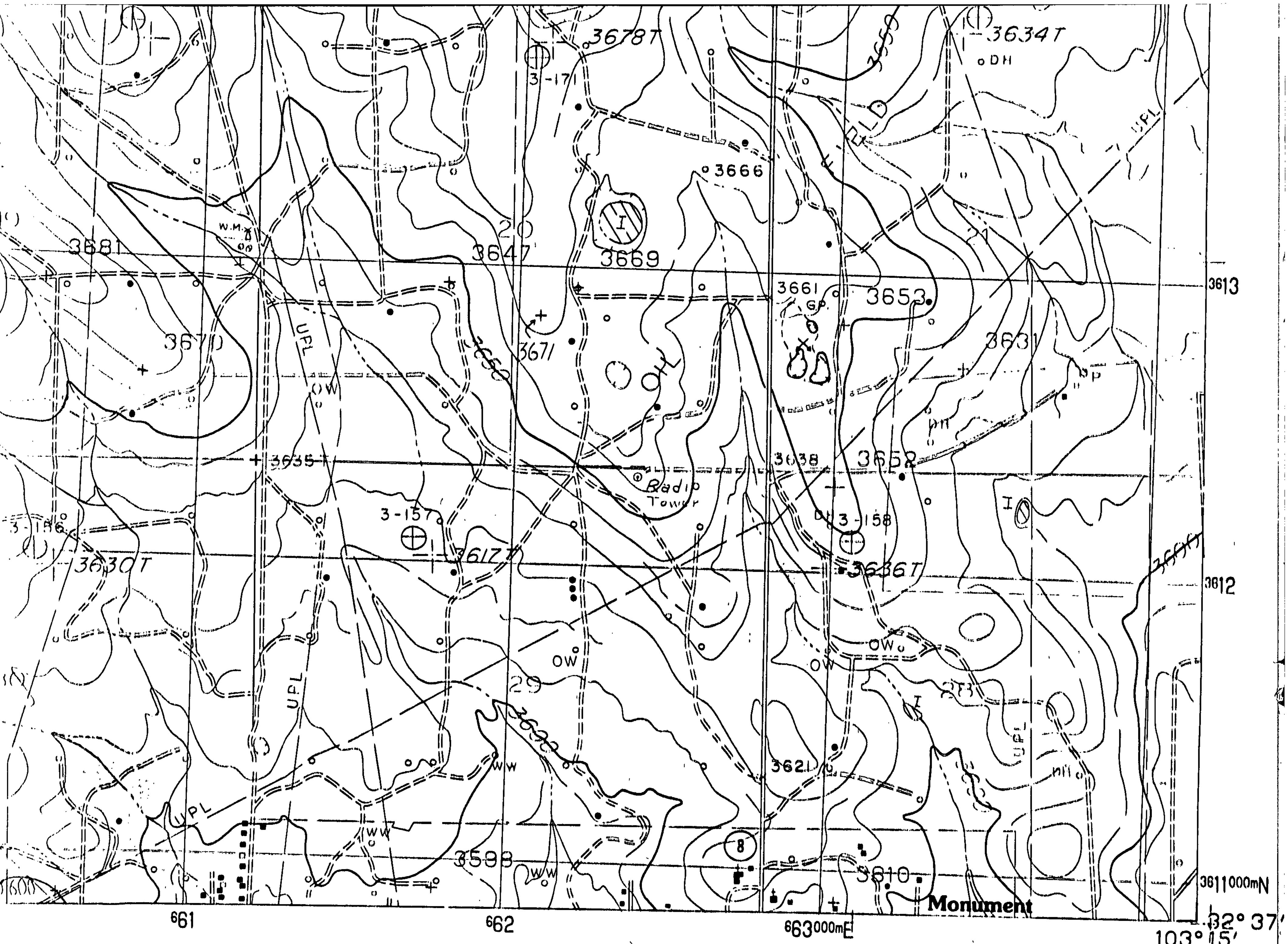
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA— 1986



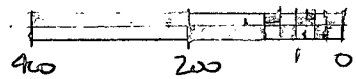
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA— 1986



INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA— 1985



INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA— 1980



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88 84 80 76 72 68 64 62 58 54 50

58 54 50 46 42 38 34 30 26

Summary Report

Bill Wilcox
AMEC
8519 Jefferson NE
Albuquerqe, NM 87113

Report Date: March 28, 2002

Order ID Number: A02030516

Project Number: 1517000035
Project Name: Eldrich Ranch
Project Location: Monument,NM

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
192183	MW-12	Water	3/3/02	:	3/5/02
192184	MW-9	Water	3/3/02	:	3/5/02
192185	MW-8	Water	3/3/02	:	3/5/02
192186	MW-11	Water	3/3/02	:	3/5/02
192187	MW-10	Water	3/3/02	:	3/5/02
192188	MW-13	Water	3/3/02	:	3/5/02
192189	MW-14	Water	3/3/02	:	3/5/02
192190	Trip Blank	Water	3/3/02	:	3/5/02

0 This report consists of a total of 7 page(s) and is intended only as a summary of results for the sample(s) listed above.

	BTEX					TPH DRO	TPH GRO
Sample - Field Code	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)	DRO (ppm)	GRO (ppm)
192183 - MW-12	9.68	0.281	<0.100	<0.100	9.96	<5.00	22.2
192184 - MW-9	<0.005	<0.005	<0.005	<0.005	<0.005	<5.00	<0.5
192185 - MW-8	8.60	0.462	<0.100	0.197	9.26	<5.00	20.6
192186 - MW-11	27.8	2.49	<0.200	0.376	30.7	<5.00	68.3
192187 - MW-10	10.6	<0.100	<0.100	<0.100	10.6	<5.00	19.7
192188 - MW-13	19.8	5.95	0.205	0.432	26.4	<5.00	58
192189 - MW-14	1.04	0.0059	<0.005	0.0085	1.05	<5.00	2.13
192190 - Trip Blank	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.5

Sample: 192183 - MW-12

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		276	mg/L as CaCo3
Total Alkalinity		276	mg/L as CaCo3
Specific Conductance		1490	μMHOS/cm
Total Mercury		<0.0002	mg/L
Chloride		234	mg/L
Fluoride	[1]	2.52	mg/L

Continued on next page ...

[1]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

Sample 192183 continued ...

Param	Flag	Result	Units
Nitrate-N		<1.00	mg/L
Sulfate		32.8	mg/L
Dissolved Calcium		99	mg/L
Dissolved Magnesium		35.1	mg/L
Dissolved Potassium		6.88	mg/L
Dissolved Sodium		125	mg/L
Total Dissolved Solids		850	mg/L
Total Aluminum		59.5	mg/L
Total Arsenic		0.0658	mg/L
Total Barium		9.41	mg/L
Total Boron		.264	mg/L
Total Cadmium		<0.005	mg/L
Total Chromium		0.196	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		0.0307	mg/L
Total Iron		39.8	mg/L
Total Lead		0.0232	mg/L
Total Manganese		0.554	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		0.0253	mg/L
Total Selenium		<0.050	mg/L
Total Silica		7.30	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		0.0749	mg/L
pH	[2]	7.4	s.u.

Sample: 192184 - MW-9

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		222	mg/L as CaCo3
Total Alkalinity		222	mg/L as CaCo3
Specific Conductance		734	μMHOS/cm
Total Mercury		<0.0002	mg/L
Chloride		34.8	mg/L
Fluoride	[3]	1.93	mg/L
Nitrate-N		1.31	mg/L
Sulfate		45.3	mg/L
Dissolved Calcium		78.5	mg/L
Dissolved Magnesium		14.1	mg/L
Dissolved Potassium		5.66	mg/L
Dissolved Sodium		47.1	mg/L
Total Dissolved Solids		484	mg/L
Total Aluminum		94.6	mg/L
Total Arsenic		<0.050	mg/L
Total Barium		2.84	mg/L
Total Boron		.259	mg/L
Total Cadmium		<0.005	mg/L

Continued on next page ...

[2]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

[3]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

Sample 192184 continued ...

Param	Flag	Result	Units
Total Chromium		0.191	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		0.0352	mg/L
Total Iron		66.1	mg/L
Total Lead		0.0212	mg/L
Total Manganese		1.29	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		0.0632	mg/L
Total Selenium		<0.050	mg/L
Total Silica		10.5	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		0.140	mg/L
pH	[4]	7.5	s.u.

Sample: 192185 - MW-8

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		322	mg/L as CaCo3
Total Alkalinity		322	mg/L as CaCo3
Specific Conductance		961	μMHOS/cm
Total Mercury		<0.0002	mg/L
Chloride		69.4	mg/L
Fluoride	[5]	1.93	mg/L
Nitrate-N		<1.00	mg/L
Sulfate		11.9	mg/L
Dissolved Calcium		129	mg/L
Dissolved Magnesium		23.1	mg/L
Dissolved Potassium		< 5	mg/L
Dissolved Sodium		48.5	mg/L
Total Dissolved Solids		607	mg/L
Total Aluminum		3.39	mg/L
Total Arsenic		<0.050	mg/L
Total Barium		2.03	mg/L
Total Boron		0.130	mg/L
Total Cadmium		<0.005	mg/L
Total Chromium		0.0145	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		<0.0125	mg/L
Total Iron		3.21	mg/L
Total Lead		0.0105	mg/L
Total Manganese		0.128	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.050	mg/L
Total Silica		38.6	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		0.0439	mg/L

Continued on next page ...

[4]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

[5]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

Sample 192185 continued ...

Param	Flag	Result	Units
pH	[6]	7.4	s.u.

Sample: 192186 - MW-11

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		316	mg/L as CaCo3
Total Alkalinity		316	mg/L as CaCo3
Specific Conductance		1070	μMHOS/cm
Total Mercury		<0.0002	mg/L
Chloride		87.3	mg/L
Fluoride	[7]	1.92	mg/L
Nitrate-N		<1.00	mg/L
Sulfate		12.2	mg/L
Dissolved Calcium		142	mg/L
Dissolved Magnesium		22.9	mg/L
Dissolved Potassium		5.48	mg/L
Dissolved Sodium		50.1	mg/L
Total Dissolved Solids		639	mg/L
Total Aluminum		4.66	mg/L
Total Arsenic		<0.050	mg/L
Total Barium		2.94	mg/L
Total Boron		0.139	mg/L
Total Cadmium		0.00898	mg/L
Total Chromium		0.0324	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		<0.0125	mg/L
Total Iron		3.42	mg/L
Total Lead		<0.010	mg/L
Total Manganese		0.204	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.050	mg/L
Total Silica		25.8	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		<0.025	mg/L
pH	[8]	7.3	s.u.

Sample: 192187 - MW-10

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		278	mg/L as CaCo3
Total Alkalinity		278	mg/L as CaCo3

Continued on next page ...

[6]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

[7]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

[8]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

Sample 192187 continued ...

Param	Flag	Result	Units
Specific Conductance		911	µMHOS/cm
Total Mercury		<0.0002	mg/L
Chloride		56.0	mg/L
Fluoride	[9]	2.22	mg/L
Nitrate-N		<1.00	mg/L
Sulfate		19.0	mg/L
Dissolved Calcium		89.9	mg/L
Dissolved Magnesium		20.3	mg/L
Dissolved Potassium		5.29	mg/L
Dissolved Sodium		52.1	mg/L
Total Dissolved Solids		581	mg/L
Total Aluminum		60	mg/L
Total Arsenic		<0.050	mg/L
Total Barium		3.34	mg/L
Total Boron		0.194	mg/L
Total Cadmium		<0.005	mg/L
Total Chromium		0.316	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		0.0273	mg/L
Total Iron		47.6	mg/L
Total Lead		0.0197	mg/L
Total Manganese		0.376	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		0.0339	mg/L
Total Selenium		<0.050	mg/L
Total Silica		7.16	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		0.0884	mg/L
pH	[10]	7.3	s.u.

Sample: 192188 - MW-13

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		308	mg/L as CaCo3
Total Alkalinity		308	mg/L as CaCo3
Specific Conductance		888	µMHOS/cm
Total Mercury		<0.0002	mg/L
Chloride		72.4	mg/L
Fluoride	[11]	2.39	mg/L
Nitrate-N		<1.00	mg/L
Sulfate		11.0	mg/L
Dissolved Calcium		103	mg/L
Dissolved Magnesium		21.8	mg/L
Dissolved Potassium		7.28	mg/L
Dissolved Sodium		49.9	mg/L

Continued on next page ...

[9]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

[10]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

[11]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

Sample 192188 continued ...

Param	Flag	Result	Units
Total Dissolved Solids		547	mg/L
Total Aluminum		7.28	mg/L
Total Arsenic		<0.050	mg/L
Total Barium		4.61	mg/L
Total Boron		0.120	mg/L
Total Cadmium		<0.005	mg/L
Total Chromium		0.0118	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		<0.0125	mg/L
Total Iron		5.01	mg/L
Total Lead		<0.010	mg/L
Total Manganese		0.0948	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.050	mg/L
Total Silica		36.4	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		0.0437	mg/L
pH	[12]	7.4	s.u.

Sample: 192189 - MW-14

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		322	mg/L as CaCo3
Total Alkalinity		322	mg/L as CaCo3
Specific Conductance		863	μMHOS/cm
Total Mercury		<0.0002	mg/L
Chloride		41.0	mg/L
Fluoride	[13]	1.73	mg/L
Nitrate-N		<1.00	mg/L
Sulfate		10.8	mg/L
Dissolved Calcium		94.6	mg/L
Dissolved Magnesium		20.4	mg/L
Dissolved Potassium		5.62	mg/L
Dissolved Sodium		45.4	mg/L
Total Dissolved Solids		521	mg/L
Total Aluminum		20.3	mg/L
Total Arsenic		<0.050	mg/L
Total Barium		1.66	mg/L
Total Boron		0.145	mg/L
Total Cadmium		<0.005	mg/L
Total Chromium		0.034	mg/L
Total Cobalt		<0.025	mg/L
Total Copper		<0.0125	mg/L
Total Iron		13.9	mg/L
Total Lead		0.0112	mg/L
Total Manganese		0.353	mg/L

Continued on next page ...

[12]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

[13]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

Sample 192189 continued ...

Param	Flag	Result	Units
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Selenium		<0.050	mg/L
Total Silica		40.0	mg/L
Total Silver		<0.0125	mg/L
Total Zinc		0.0465	mg/L
pH	[14]	7.5	s.u.

[14]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

Cation-Anion Balance Sheet

DATE: 3/18/02 WS

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	Bromide ppm	TDS ppm	EC µMHOs/cm
192183	99	35.1	125	6.88	276	32.8	234	0	2.52	0	850	1490
192184	78.5	14.1	47.1	5.66	222	45.3	34.8	1.31	1.93	0	484	734
192185	129	23.1	48.5	0	322	11.9	69.4	0	1.93	0	607	961
192186	142	22.9	50.1	5.48	316	12.2	87.3	0	1.92	0	639	1070
192187	89.9	20.3	52.1	5.29	278	19	56	0	2.22	0	581	911
192188	103	21.8	49.9	7.28	308	11	72.4	0	2.39	0	547	888
192189	94.6	20.4	45.4	5.62	322	10.8	41	0	1.73	0	521	863

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	Bromide in meq/L	**Cations in meq/L**	**Anions in meq/L**	**Percentage Error**
192183	4.94	2.89	5.44	0.18	5.52	0.68	6.60	0	0.1326528	0	13.44	12.94	3.830980304
192184	3.92	1.16	2.05	0.14	4.44	0.94	0.98	0.0935209	0.1015952	0	7.27	6.56	10.28269172
192185	6.44	1.90	2.11	0.00	6.44	0.25	1.96	0	0.1015952	0	10.45	8.75	17.71953913
192186	7.09	1.88	2.18	0.14	6.32	0.25	2.46	0	0.1010688	0	11.29	9.14	21.06920257
192187	4.49	1.67	2.27	0.14	5.56	0.40	1.58	0	0.1168608	0	8.56	7.65	11.1775934
192188	5.14	1.79	2.17	0.19	6.16	0.23	2.04	0	0.1258096	0	9.29	8.56	8.216853148
192189	4.72	1.68	1.97	0.14	6.44	0.22	1.16	0	0.0910672	0	8.52	7.91	7.369030601

	EC/Cation	EC/Anion				
192183	1344.19694	1293.66888	range	1341	to	1639
192184	727.10718	655.99701	range	660.6	to	807.4
192185	1044.7749	874.71272	range	864.9	to	1057.1
192186	1128.97694	913.78058	range	963	to	1177
192187	855.81652	765.22008	range	819.9	to	1002.1
192188	929.04944	855.72336	range	799.2	to	976.8
192189	851.79156	791.25332	range	776.7	to	949.3

TDS/EC	TDS/Cat	TDS/Anion	
0.57	0.63	0.66	needs to be 0.55-0.77
0.66	0.67	0.74	needs to be 0.55-0.77
0.63	0.58	0.69	needs to be 0.55-0.77
0.60	0.57	0.70	needs to be 0.55-0.77
0.64	0.68	0.76	needs to be 0.55-0.77
0.62	0.59	0.64	needs to be 0.55-0.77
0.60	0.61	0.66	needs to be 0.55-0.77

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Bill Wilcox
AMEC
8519 Jefferson NE
Albuquerqe, NM 87113

Report Date: March 28, 2002

Order ID Number: A02030516

Project Number: 1517000035
Project Name: Eldrich Ranch
Project Location: Monument,NM

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

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
192183	MW-12	Water	3/3/02	:	3/5/02
192184	MW-9	Water	3/3/02	:	3/5/02
192185	MW-8	Water	3/3/02	:	3/5/02
192186	MW-11	Water	3/3/02	:	3/5/02
192187	MW-10	Water	3/3/02	:	3/5/02
192188	MW-13	Water	3/3/02	:	3/5/02
192189	MW-14	Water	3/3/02	:	3/5/02
192190	Trip Blank	Water	3/3/02	:	3/5/02

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. Note: the RDL is equal to MQL for all organic analytes including TPH.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 192183 - MW-12

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC18845	Date Analyzed:	3/12/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB18252	Date Prepared:	3/12/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		276	mg/L as CaCo3	1	1
Total Alkalinity		276	mg/L as CaCo3	1	1

Sample: 192183 - MW-12

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18654	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		9.68	mg/L	100	0.001
Toluene		0.281	mg/L	100	0.001
Ethylbenzene		<0.100	mg/L	100	0.001
M,P,O-Xylene		<0.100	mg/L	100	0.001
Total BTEX		9.96	mg/L	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.096	mg/L	100	0.10	96	70 - 130
4-BFB		0.071	mg/L	100	0.10	71	70 - 130

Sample: 192183 - MW-12

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC18675	Date Analyzed:	3/7/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18119	Date Prepared:	3/7/02

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		1490	μMHOS/cm	1	

Sample: 192183 - MW-12

Analysis:	Hg, Total	Analytical Method:	S 7470A	QC Batch:	QC18633	Date Analyzed:	3/6/02
Analyst:	BC	Preparation Method:	N/A	Prep Batch:	PB18076	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 192183 - MW-12

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC18706	Date Analyzed:	3/5/02
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB18061	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		234	mg/L	10	0.50
Fluoride	[1]	2.52	mg/L	5	0.20
Nitrate-N		<1.00	mg/L	5	0.20
Sulfate		32.8	mg/L	5	0.50

Sample: 192183 - MW-12

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC18989	Date Analyzed:	3/19/02
Analyst:	BC	Preparation Method:	S 3005A	Prep Batch:	PB18309	Date Prepared:	3/19/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		99	mg/L	100	0.50
Dissolved Magnesium		35.1	mg/L	10	0.50
Dissolved Potassium		6.88	mg/L	10	0.50
Dissolved Sodium		125	mg/L	10	0.50

Sample: 192183 - MW-12

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC18679	Date Analyzed:	3/6/02
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB18121	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		850	mg/L	2	10

Sample: 192183 - MW-12

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC18664	Date Analyzed:	3/6/02
Analyst:	MM	Preparation Method:	3510C - Mod.	Prep Batch:	PB18105	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<5.00	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		13.1	mg/L	0.10	150	87	70 - 130

Sample: 192183 - MW-12

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC18646	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
GRO		22.2	mg/L	100	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.102	mg/L	100	0.10	102	70 - 130

Continued ...

[1]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-BFB		0.073	mg/L	100	0.10	73	70 - 130

Sample: 192183 - MW-12

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC18682	Date Analyzed:	3/7/02
Analyst:	RR	Preparation Method:	S 3010A	Prep Batch:	PB18085	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		59.5	mg/L	100	0.10
Total Arsenic		0.0658	mg/L	1	0.05
Total Barium		9.41	mg/L	10	0.10
Total Boron		.264	mg/L	10	0.005
Total Cadmium		<0.005	mg/L	1	0.005
Total Chromium		0.196	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		0.0307	mg/L	1	0.01
Total Iron		39.8	mg/L	100	0.05
Total Lead		0.0232	mg/L	1	0.01
Total Manganese		0.554	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		0.0253	mg/L	1	0.02
Total Selenium		<0.050	mg/L	1	0.05
Total Silica		7.30	mg/L	10	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		0.0749	mg/L	1	0.02

Sample: 192183 - MW-12

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC18639	Date Analyzed:	3/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18081	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
pH	[2]	7.4	s.u.	1	1

Sample: 192184 - MW-9

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC18845	Date Analyzed:	3/12/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB18252	Date Prepared:	3/12/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		222	mg/L as CaCo3	1	1
Total Alkalinity		222	mg/L as CaCo3	1	1

Sample: 192184 - MW-9

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18654	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB18095	Date Prepared:	3/6/02

[2]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		<0.005	mg/L	5	0.001
Total BTEX		<0.005	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.095	mg/L	5	0.10	95	70 - 130
4-BFB		0.068	mg/L	5	0.10	68	70 - 130

Sample: 192184 - MW-9

Analysis: Conductivity Analytical Method: SM 2510B QC Batch: QC18675 Date Analyzed: 3/7/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB18119 Date Prepared: 3/7/02

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		734	μMHOS/cm	1	

Sample: 192184 - MW-9

Analysis: Hg, Total Analytical Method: S 7470A QC Batch: QC18633 Date Analyzed: 3/6/02
Analyst: BC Preparation Method: N/A Prep Batch: PB18076 Date Prepared: 3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 192184 - MW-9

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC18706 Date Analyzed: 3/5/02
Analyst: JS Preparation Method: N/A Prep Batch: PB18061 Date Prepared: 3/5/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		34.8	mg/L	5	0.50
Fluoride	[3]	1.93	mg/L	5	0.20
Nitrate-N		1.31	mg/L	5	0.20
Sulfate		45.3	mg/L	5	0.50

Sample: 192184 - MW-9

Analysis: Salts Analytical Method: E 200.7 QC Batch: QC18989 Date Analyzed: 3/19/02
Analyst: BC Preparation Method: S 3005A Prep Batch: PB18309 Date Prepared: 3/19/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		78.5	mg/L	100	0.50
Dissolved Magnesium		14.1	mg/L	10	0.50
Dissolved Potassium		5.66	mg/L	10	0.50
Dissolved Sodium		47.1	mg/L	10	0.50

[3]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

Sample: 192184 - MW-9

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC18679	Date Analyzed:	3/6/02
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB18121	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		484	mg/L	1	10

Sample: 192184 - MW-9

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC18664	Date Analyzed:	3/6/02
Analyst:	MM	Preparation Method:	3510C - Mod.	Prep Batch:	PB18105	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<5.00	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		12.9	mg/L	0.10	150	86	70 - 130

Sample: 192184 - MW-9

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC18646	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<0.5	mg/L	5	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.1	mg/L	5	0.10	100	70 - 130
4-BFB		0.07	mg/L	5	0.10	70	70 - 130

Sample: 192184 - MW-9

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC18682	Date Analyzed:	3/7/02
Analyst:	RR	Preparation Method:	S 3010A	Prep Batch:	PB18085	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		94.6	mg/L	100	0.10
Total Arsenic		<0.050	mg/L	1	0.05
Total Barium		2.84	mg/L	1	0.10
Total Boron		.259	mg/L	10	0.005
Total Cadmium		<0.005	mg/L	1	0.005
Total Chromium		0.191	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		0.0352	mg/L	1	0.01
Total Iron		66.1	mg/L	100	0.05
Total Lead		0.0212	mg/L	1	0.01
Total Manganese		1.29	mg/L	10	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		0.0632	mg/L	1	0.02

Continued ...

... *Continued* Sample: 192184 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Selenium		<0.050	mg/L	1	0.05
Total Silica		10.5	mg/L	10	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		0.140	mg/L	1	0.02

Sample: 192184 - MW-9

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC18639	Date Analyzed:	3/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18081	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
pH	[4]	7.5	s.u.	1	1

Sample: 192185 - MW-8

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC18845	Date Analyzed:	3/12/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB18252	Date Prepared:	3/12/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		322	mg/L as CaCo3	1	1
Total Alkalinity		322	mg/L as CaCo3	1	1

Sample: 192185 - MW-8

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18654	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		8.60	mg/L	100	0.001
Toluene		0.462	mg/L	100	0.001
Ethylbenzene		<0.100	mg/L	100	0.001
M,P,O-Xylene		0.197	mg/L	100	0.001
Total BTEX		9.26	mg/L	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.094	mg/L	100	0.10	94	70 - 130
4-BFB	[5]	0.069	mg/L	100	0.10	68	70 - 130

Sample: 192185 - MW-8

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC18675	Date Analyzed:	3/7/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18119	Date Prepared:	3/7/02

[4]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.
[5]Low BFB recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		961	μMHOS/cm	1	

Sample: 192185 - MW-8

Analysis: Hg, Total | Analytical Method: S 7470A | QC Batch: QC18633 | Date Analyzed: 3/6/02
Analyst: BC | Preparation Method: N/A | Prep Batch: PB18076 | Date Prepared: 3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 192185 - MW-8

Analysis: Ion Chromatography (IC) | Analytical Method: E 300.0 | QC Batch: QC18706 | Date Analyzed: 3/5/02
Analyst: JS | Preparation Method: N/A | Prep Batch: PB18061 | Date Prepared: 3/5/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		69.4	mg/L	5	0.50
Fluoride	[6]	1.93	mg/L	5	0.20
Nitrate-N		<1.00	mg/L	5	0.20
Sulfate		11.9	mg/L	5	0.50

Sample: 192185 - MW-8

Analysis: Salts | Analytical Method: E 200.7 | QC Batch: QC18989 | Date Analyzed: 3/19/02
Analyst: BC | Preparation Method: S 3005A | Prep Batch: PB18309 | Date Prepared: 3/19/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		129	mg/L	10	0.50
Dissolved Magnesium		23.1	mg/L	10	0.50
Dissolved Potassium		< 5	mg/L	10	0.50
Dissolved Sodium		48.5	mg/L	10	0.50

Sample: 192185 - MW-8

Analysis: TDS | Analytical Method: E 160.1 | QC Batch: QC18679 | Date Analyzed: 3/6/02
Analyst: JS | Preparation Method: N/A | Prep Batch: PB18121 | Date Prepared: 3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		607	mg/L	1	10

Sample: 192185 - MW-8

Analysis: TPH DRO | Analytical Method: Mod. 8015B | QC Batch: QC18664 | Date Analyzed: 3/6/02
Analyst: MM | Preparation Method: 3510C - Mod. | Prep Batch: PB18105 | Date Prepared: 3/6/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<5.00	mg/L	0.10	50

[6]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		13.0	mg/L	0.10	150	87	70 - 130

Sample: 192185 - MW-8

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC18646	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
GRO		20.6	mg/L	100	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.094	mg/L	100	0.10	94	70 - 130
4-BFB		0.07	mg/L	100	0.10	70	70 - 130

Sample: 192185 - MW-8

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC18682	Date Analyzed:	3/7/02
Analyst:	RR	Preparation Method:	S 3010A	Prep Batch:	PB18085	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		3.39	mg/L	1	0.10
Total Arsenic		<0.050	mg/L	1	0.05
Total Barium		2.03	mg/L	1	0.10
Total Boron		0.130	mg/L	1	0.005
Total Cadmium		<0.005	mg/L	1	0.005
Total Chromium		0.0145	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		<0.0125	mg/L	1	0.01
Total Iron		3.21	mg/L	10	0.05
Total Lead		0.0105	mg/L	1	0.01
Total Manganese		0.128	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.050	mg/L	1	0.05
Total Silica		38.6	mg/L	100	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		0.0439	mg/L	1	0.02

Sample: 192185 - MW-8

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC18639	Date Analyzed:	3/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18081	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
pH	[7]	7.4	s.u.	1	1

[7]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

Sample: 192186 - MW-11

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC18845	Date Analyzed:	3/12/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB18252	Date Prepared:	3/12/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		316	mg/L as CaCo3	1	1
Total Alkalinity		316	mg/L as CaCo3	1	1

Sample: 192186 - MW-11

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18654	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		27.8	mg/L	200	0.001
Toluene		2.49	mg/L	200	0.001
Ethylbenzene		<0.200	mg/L	200	0.001
M,P,O-Xylene		0.376	mg/L	200	0.001
Total BTEX		30.7	mg/L	200	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.099	mg/L	200	0.10	99	70 - 130
4-BFB		0.072	mg/L	200	0.10	72	70 - 130

Sample: 192186 - MW-11

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC18675	Date Analyzed:	3/7/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18119	Date Prepared:	3/7/02

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		1070	μMHOS/cm	1	

Sample: 192186 - MW-11

Analysis:	Hg, Total	Analytical Method:	S 7470A	QC Batch:	QC18634	Date Analyzed:	3/6/02
Analyst:	BC	Preparation Method:	N/A	Prep Batch:	PB18076	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 192186 - MW-11

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC18706	Date Analyzed:	3/5/02
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB18061	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		87.3	mg/L	5	0.50

Continued ...

... *Continued* Sample: 192186 Analysis: Ion Chromatography (IC)

Param	Flag	Result	Units	Dilution	RDL
Fluoride	[8]	1.92	mg/L	5	0.20
Nitrate-N		<1.00	mg/L	5	0.20
Sulfate		12.2	mg/L	5	0.50

Sample: 192186 - MW-11

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC18989	Date Analyzed:	3/19/02
Analyst:	BC	Preparation Method:	S 3005A	Prep Batch:	PB18309	Date Prepared:	3/19/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		142	mg/L	10	0.50
Dissolved Magnesium		22.9	mg/L	10	0.50
Dissolved Potassium		5.48	mg/L	10	0.50
Dissolved Sodium		50.1	mg/L	10	0.50

Sample: 192186 - MW-11

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC18679	Date Analyzed:	3/6/02
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB18121	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		639	mg/L	1	10

Sample: 192186 - MW-11

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC18664	Date Analyzed:	3/6/02
Analyst:	MM	Preparation Method:	3510C - Mod.	Prep Batch:	PB18105	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<5.00	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		12.2	mg/L	0.10	150	81	70 - 130

Sample: 192186 - MW-11

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC18646	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
GRO		68.3	mg/L	200	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.107	mg/L	200	0.10	107	70 - 130

Continued ...

[8]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-BFB		0.074	mg/L	200	0.10	74	70 - 130

Sample: 192186 - MW-11

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC18682	Date Analyzed:	3/7/02
Analyst:	RR	Preparation Method:	S 3010A	Prep Batch:	PB18085	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		4.66	mg/L	1	0.10
Total Arsenic		<0.050	mg/L	1	0.05
Total Barium		2.94	mg/L	1	0.10
Total Boron		0.139	mg/L	1	0.005
Total Cadmium		0.00898	mg/L	1	0.005
Total Chromium		0.0324	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		<0.0125	mg/L	1	0.01
Total Iron		3.42	mg/L	1	0.05
Total Lead		<0.010	mg/L	1	0.01
Total Manganese		0.204	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.050	mg/L	1	0.05
Total Silica		25.8	mg/L	10	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		<0.025	mg/L	1	0.02

Sample: 192186 - MW-11

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC18639	Date Analyzed:	3/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18081	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
pH	[9]	7.3	s.u.	1	1

Sample: 192187 - MW-10

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC18845	Date Analyzed:	3/12/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB18252	Date Prepared:	3/12/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		278	mg/L as CaCo3	1	1
Total Alkalinity		278	mg/L as CaCo3	1	1

Sample: 192187 - MW-10

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18654	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB18095	Date Prepared:	3/6/02

[9]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

Param	Flag	Result	Units	Dilution	RDL
Benzene		10.6	mg/L	100	0.001
Toluene		<0.100	mg/L	100	0.001
Ethylbenzene		<0.100	mg/L	100	0.001
M,P,O-Xylene		<0.100	mg/L	100	0.001
Total BTEX		10.6	mg/L	100	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.097	mg/L	100	0.10	97	70 - 130
4-BFB	[10]	0.069	mg/L	100	0.10	69	70 - 130

Sample: 192187 - MW-10

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC18675	Date Analyzed:	3/7/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18119	Date Prepared:	3/7/02

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		911	μMHOS/cm	1	

Sample: 192187 - MW-10

Analysis:	Hg, Total	Analytical Method:	S 7470A	QC Batch:	QC18634	Date Analyzed:	3/6/02
Analyst:	BC	Preparation Method:	N/A	Prep Batch:	PB18076	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 192187 - MW-10

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC18706	Date Analyzed:	3/5/02
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB18061	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		56.0	mg/L	5	0.50
Fluoride	[11]	2.22	mg/L	5	0.20
Nitrate-N		<1.00	mg/L	5	0.20
Sulfate		19.0	mg/L	5	0.50

Sample: 192187 - MW-10

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC18989	Date Analyzed:	3/19/02
Analyst:	BC	Preparation Method:	S 3005A	Prep Batch:	PB18309	Date Prepared:	3/19/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		89.9	mg/L	100	0.50
Dissolved Magnesium		20.3	mg/L	10	0.50
Dissolved Potassium		5.29	mg/L	10	0.50

Continued ...

[10] Low BFB recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

[11] Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

... Continued Sample: 192187 Analysis: Salts

Param	Flag	Result	Units	Dilution	RDL
Dissolved Sodium		52.1	mg/L	10	0.50

Sample: 192187 - MW-10

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC18679	Date Analyzed:	3/6/02
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB18121	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		581	mg/L	1	10

Sample: 192187 - MW-10

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC18664	Date Analyzed:	3/6/02
Analyst:	MM	Preparation Method:	3510C - Mod.	Prep Batch:	PB18105	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<5.00	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		14.1	mg/L	0.10	150	94	70 - 130

Sample: 192187 - MW-10

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC18646	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
GRO		19.7	mg/L	100	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.098	mg/L	100	0.10	98	70 - 130
4-BFB		0.071	mg/L	100	0.10	71	70 - 130

Sample: 192187 - MW-10

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC18682	Date Analyzed:	3/7/02
Analyst:	RR	Preparation Method:	S 3010A	Prep Batch:	PB18085	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		60	mg/L	100	0.10
Total Arsenic		<0.050	mg/L	1	0.05
Total Barium		3.34	mg/L	1	0.10
Total Boron		0.194	mg/L	1	0.005
Total Cadmium		<0.005	mg/L	1	0.005
Total Chromium		0.316	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02

Continued ...

... *Continued* Sample: 192187 Analysis: Total Metals

Param	Flag	Result	Units	Dilution	RDL
Total Copper		0.0273	mg/L	1	0.01
Total Iron		47.6	mg/L	100	0.05
Total Lead		0.0197	mg/L	1	0.01
Total Manganese		0.376	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		0.0339	mg/L	1	0.02
Total Selenium		<0.050	mg/L	1	0.05
Total Silica		7.16	mg/L	10	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		0.0884	mg/L	1	0.02

Sample: 192187 - MW-10

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC18639	Date Analyzed:	3/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18081	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
pH	[12]	7.3	s.u.	1	1

Sample: 192188 - MW-13

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC18845	Date Analyzed:	3/12/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB18252	Date Prepared:	3/12/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		308	mg/L as CaCo3	1	1
Total Alkalinity		308	mg/L as CaCo3	1	1

Sample: 192188 - MW-13

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18654	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		19.8	mg/L	200	0.001
Toluene		5.95	mg/L	200	0.001
Ethylbenzene		0.205	mg/L	200	0.001
M,P,O-Xylene		0.432	mg/L	200	0.001
Total BTEX		26.4	mg/L	200	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.097	mg/L	200	0.10	97	70 - 130
4-BFB	[13]	0.069	mg/L	200	0.10	69	70 - 130

[12]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.
[13]Low BFB recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

Sample: 192188 - MW-13

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC18675	Date Analyzed:	3/7/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18119	Date Prepared:	3/7/02

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		888	μMHOS/cm	1	

Sample: 192188 - MW-13

Analysis:	Hg, Total	Analytical Method:	S 7470A	QC Batch:	QC18634	Date Analyzed:	3/6/02
Analyst:	BC	Preparation Method:	N/A	Prep Batch:	PB18076	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

Sample: 192188 - MW-13

Analysis:	Ion Chromatography (IC)	Analytical Method:	E 300.0	QC Batch:	QC18706	Date Analyzed:	3/5/02
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB18061	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		72.4	mg/L	5	0.50
Fluoride	[14]	2.39	mg/L	5	0.20
Nitrate-N		<1.00	mg/L	5	0.20
Sulfate		11.0	mg/L	5	0.50

Sample: 192188 - MW-13

Analysis:	Salts	Analytical Method:	E 200.7	QC Batch:	QC18989	Date Analyzed:	3/19/02
Analyst:	BC	Preparation Method:	S 3005A	Prep Batch:	PB18309	Date Prepared:	3/19/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		103	mg/L	10	0.50
Dissolved Magnesium		21.8	mg/L	10	0.50
Dissolved Potassium		7.28	mg/L	10	0.50
Dissolved Sodium		49.9	mg/L	10	0.50

Sample: 192188 - MW-13

Analysis:	TDS	Analytical Method:	E 160.1	QC Batch:	QC18679	Date Analyzed:	3/6/02
Analyst:	JS	Preparation Method:	N/A	Prep Batch:	PB18121	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		547	mg/L	1	10

Sample: 192188 - MW-13

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	QC Batch:	QC18664	Date Analyzed:	3/6/02
Analyst:	MM	Preparation Method:	3510C - Mod.	Prep Batch:	PB18105	Date Prepared:	3/6/02

[14] Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

Param	Flag	Result	Units	Dilution	RDL
DRO		<5.00	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		12.2	mg/L	0.10	150	81	70 - 130

Sample: 192188 - MW-13

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC18646	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
GRO		58	mg/L	200	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.103	mg/L	200	0.10	103	70 - 130
4-BFB		0.071	mg/L	200	0.10	71	70 - 130

Sample: 192188 - MW-13

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC18682	Date Analyzed:	3/7/02
Analyst:	RR	Preparation Method:	S 3010A	Prep Batch:	PB18085	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		7.28	mg/L	10	0.10
Total Arsenic		<0.050	mg/L	1	0.05
Total Barium		4.61	mg/L	10	0.10
Total Boron		0.120	mg/L	1	0.005
Total Cadmium		<0.005	mg/L	1	0.005
Total Chromium		0.0118	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		<0.0125	mg/L	1	0.01
Total Iron		5.01	mg/L	10	0.05
Total Lead		<0.010	mg/L	1	0.01
Total Manganese		0.0948	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.050	mg/L	1	0.05
Total Silica		36.4	mg/L	100	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		0.0437	mg/L	1	0.02

Sample: 192188 - MW-13

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC18639	Date Analyzed:	3/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18081	Date Prepared:	3/5/02

Continued ...

... Continued Sample: 192188 Analysis: pH

Param	Flag	Result	Units	Dilution	RDL
pH	[15]	7.4	s.u.	1	1

Sample: 192189 - MW-14

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch:	QC18845	Date Analyzed:	3/12/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch:	PB18252	Date Prepared:	3/12/02

Param	Flag	Result	Units	Dilution	RDL
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonate Alkalinity		322	mg/L as CaCo3	1	1
Total Alkalinity		322	mg/L as CaCo3	1	1

Sample: 192189 - MW-14

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18654	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		1.04	mg/L	5	0.001
Toluene		0.0059	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		0.0085	mg/L	5	0.001
Total BTEX		1.05	mg/L	5	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.094	mg/L	5	0.10	94	70 - 130
4-BFB		0.07	mg/L	5	0.10	70	70 - 130

Sample: 192189 - MW-14

Analysis:	Conductivity	Analytical Method:	SM 2510B	QC Batch:	QC18675	Date Analyzed:	3/7/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18119	Date Prepared:	3/7/02

Param	Flag	Result	Units	Dilution	RDL
Specific Conductance		863	μMHOS/cm	1	

Sample: 192189 - MW-14

Analysis:	Hg, Total	Analytical Method:	S 7470A	QC Batch:	QC18634	Date Analyzed:	3/6/02
Analyst:	BC	Preparation Method:	N/A	Prep Batch:	PB18076	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Mercury		<0.0002	mg/L	1	0.0002

[15]Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

Sample: 192189 - MW-14

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC18706 Date Analyzed: 3/5/02
Analyst: JS Preparation Method: N/A Prep Batch: PB18061 Date Prepared: 3/5/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		41.0	mg/L	5	0.50
Fluoride	[16]	1.73	mg/L	5	0.20
Nitrate-N		<1.00	mg/L	5	0.20
Sulfate		10.8	mg/L	5	0.50

Sample: 192189 - MW-14

Analysis: Salts Analytical Method: E 200.7 QC Batch: QC19022 Date Analyzed: 3/22/02
Analyst: BC Preparation Method: S 3005A Prep Batch: PB18381 Date Prepared: 3/21/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Calcium		94.6	mg/L	10	0.50
Dissolved Magnesium		20.4	mg/L	10	0.50
Dissolved Potassium		5.62	mg/L	10	0.50
Dissolved Sodium		45.4	mg/L	10	0.50

Sample: 192189 - MW-14

Analysis: TDS Analytical Method: E 160.1 QC Batch: QC18679 Date Analyzed: 3/6/02
Analyst: JS Preparation Method: N/A Prep Batch: PB18121 Date Prepared: 3/5/02

Param	Flag	Result	Units	Dilution	RDL
Total Dissolved Solids		521	mg/L	1	10

Sample: 192189 - MW-14

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC18664 Date Analyzed: 3/6/02
Analyst: MM Preparation Method: 3510C - Mod. Prep Batch: PB18105 Date Prepared: 3/6/02

Param	Flag	Result	Units	Dilution	RDL
DRO		<5.00	mg/L	0.10	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		11.7	mg/L	0.10	150	78	70 - 130

Sample: 192189 - MW-14

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC18646 Date Analyzed: 3/6/02
Analyst: CG Preparation Method: 5030 Prep Batch: PB18095 Date Prepared: 3/6/02

Param	Flag	Result	Units	Dilution	RDL
GRO		2.13	mg/L	5	0.10

[16]Fluoride re-ran on IC030702-1.sch (PB18139; QC18710). ICV %IA = 92; CCV %IA = 91; matrix spikes RPD = 3, %EA = 88; LCS spikes RPD = 3, %EA = 91.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.093	mg/L	5	0.10	93	70 - 130
4-BFB		0.073	mg/L	5	0.10	73	70 - 130

Sample: 192189 - MW-14

Analysis:	Total Metals	Analytical Method:	S 6010B	QC Batch:	QC18682	Date Analyzed:	3/7/02
Analyst:	RR	Preparation Method:	S 3010A	Prep Batch:	PB18085	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Total Aluminum		20.3	mg/L	100	0.10
Total Arsenic		<0.050	mg/L	1	0.05
Total Barium		1.66	mg/L	1	0.10
Total Boron		0.145	mg/L	1	0.005
Total Cadmium		<0.005	mg/L	1	0.005
Total Chromium		0.034	mg/L	1	0.01
Total Cobalt		<0.025	mg/L	1	0.02
Total Copper		<0.0125	mg/L	1	0.01
Total Iron		13.9	mg/L	10	0.05
Total Lead		0.0112	mg/L	1	0.01
Total Manganese		0.353	mg/L	1	0.02
Total Molybdenum		<0.050	mg/L	1	0.05
Total Nickel		<0.025	mg/L	1	0.02
Total Selenium		<0.050	mg/L	1	0.05
Total Silica		40.0	mg/L	100	0.05
Total Silver		<0.0125	mg/L	1	0.01
Total Zinc		0.0465	mg/L	1	0.02

Sample: 192189 - MW-14

Analysis:	pH	Analytical Method:	E 150.1	QC Batch:	QC18639	Date Analyzed:	3/5/02
Analyst:	JSW	Preparation Method:	N/A	Prep Batch:	PB18081	Date Prepared:	3/5/02

Param	Flag	Result	Units	Dilution	RDL
pH	[17]	7.5	s.u.	1	1

Sample: 192190 - Trip Blank

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC18654	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	S 5030B	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.005	mg/L	5	0.001
Toluene		<0.005	mg/L	5	0.001
Ethylbenzene		<0.005	mg/L	5	0.001
M,P,O-Xylene		<0.005	mg/L	5	0.001
Total BTEX		<0.005	mg/L	5	0.001

[17] Sample was received out of holding time. Test should be ran in the field. Sample was tested as soon as it came in.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.097	mg/L	5	0.10	97	70 - 130
4-BFB	[18]	0.07	mg/L	5	0.10	70	70 - 130

Sample: 192190 - Trip Blank

Analysis:	TPH GRO	Analytical Method:	8015B	QC Batch:	QC18646	Date Analyzed:	3/6/02
Analyst:	CG	Preparation Method:	5030	Prep Batch:	PB18095	Date Prepared:	3/6/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<0.5	mg/L	5	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.103	mg/L	5	0.10	103	70 - 130
4-BFB		0.07	mg/L	5	0.10	70	70 - 130

[18]Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

Quality Control Report
Method Blank

Method Blank

QCBatch: QC18633

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Method Blank

QCBatch: QC18634

Param	Flag	Results	Units	Reporting Limit
Total Mercury		<0.0002	mg/L	0.0002

Method Blank

QCBatch: QC18646

Param	Flag	Results	Units	Reporting Limit
GRO		<0.1	mg/L	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.102	mg/L	1	0.10	102	70 - 130
4-BFB		0.0704	mg/L	1	0.10	70	70 - 130

Method Blank

QCBatch: QC18654

Param	Flag	Results	Units	Reporting Limit
Benzene		<0.001	mg/L	0.001
Toluene		<0.001	mg/L	0.001
Ethylbenzene		<0.001	mg/L	0.001
M,P,O-Xylene		<0.001	mg/L	0.001
Total BTEX		<0.001	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.0977	mg/L	1	0.10	98	70 - 130
4-BFB	[19]	0.0687	mg/L	1	0.10	68	70 - 130

Method Blank

QCBatch: QC18664

[19] Low BFB surrogate recovery due to prep. TFT surrogate recovery shows the method to be in control.

Param	Flag	Results	Units	Reporting Limit
DRO		<5.00	mg/L	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		13.6	mg/L	0.10	150	90	70 - 130

Method Blank

QCBatch: QC18675

Param	Flag	Results	Units	Reporting Limit
Specific Conductance		4.98	μMHOS/cm	

Method Blank

QCBatch: QC18679

Param	Flag	Results	Units	Reporting Limit
Total Dissolved Solids		<10	mg/L	10

Method Blank

QCBatch: QC18682

Param	Flag	Results	Units	Reporting Limit
Total Aluminum		<0.100	mg/L	0.10
Total Arsenic		<0.050	mg/L	0.05
Total Barium		<0.100	mg/L	0.10
Total Boron		0.007	mg/L	0.005
Total Cadmium		<0.005	mg/L	0.005
Total Chromium		<0.010	mg/L	0.01
Total Cobalt		<0.025	mg/L	0.02
Total Copper		<0.0125	mg/L	0.01
Total Iron		<0.050	mg/L	0.05
Total Lead		<0.010	mg/L	0.01
Total Manganese		<0.025	mg/L	0.02
Total Molybdenum		<0.050	mg/L	0.05
Total Nickel		<0.025	mg/L	0.02
Total Selenium		<0.050	mg/L	0.05
Total Silica		<0.050	mg/L	0.05
Total Silver		<0.0125	mg/L	0.01
Total Zinc		<0.025	mg/L	0.02

Method Blank

QCBatch: QC18706

Param	Flag	Results	Units	Reporting Limit
Chloride		<2.0	mg/L	0.50

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Param	Flag	Results	Units	Reporting Limit
Nitrate-N		<0.2	mg/L	0.20
Sulfate		<0.2	mg/L	0.50

Method Blank QCBatch: QC18845

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

Method Blank QCBatch: QC18989

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

Method Blank QCBatch: QC19022

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

Quality Control Report
Duplicate Samples

Duplicate QCBatch: QC18639

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

Duplicate QCBatch: QC18675

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance		1065	1070	µMHOS/cm	1	0	3.5

Duplicate QCBatch: QC18679

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids		1842	1810	mg/L	1	1	9.7

Duplicate QCBatch: QC18845

Param	Flag	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	6.6
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	6.6
Bicarbonate Alkalinity		328	316	mg/L as CaCo3	1	3	6.6
Total Alkalinity		328	316	mg/L as CaCo3	1	3	6.6

Quality Control Report
Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC18633

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00102	0.00108	mg/L	1	0.001	<0.0002	102	5	87 - 125	20

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

Laboratory Control Spikes QCBatch: QC18634

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00102	0.00108	mg/L	1	0.001	<0.0002	102	5	87 - 125	20

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

Laboratory Control Spikes QCBatch: QC18646

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	0.957	0.947	mg/L	1	1	<0.1	95	1	78 - 113	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.09	0.0915	mg/L	1	0.10	90	91	70 - 130
4-BFB	0.0917	0.0929	mg/L	1	0.10	91	92	70 - 130

Laboratory Control Spikes

QCBatch: QC18654

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.101	0.100	mg/L	1	0.10	<0.001	101	1	82 - 111	7
Benzene	0.103	0.103	mg/L	1	0.10	<0.001	103	0	86 - 106	5
Toluene	0.103	0.104	mg/L	1	0.10	<0.001	103	1	82 - 108	4
Ethylbenzene	0.104	0.104	mg/L	1	0.10	<0.001	104	0	86 - 115	6
M,P,O-Xylene	0.315	0.318	mg/L	1	0.30	<0.001	105	1	79 - 122	29

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
TFT	0.101	0.100	mg/L	1	0.10	101	100	70 - 130
4-BFB	0.0964	0.0962	mg/L	1	0.10	96	96	70 - 130

Laboratory Control Spikes

QCBatch: QC18664

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	23.1	24.0	mg/L	0.10	250	<5.00	92	4	70 - 130	20

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

Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits
n-Triacontane	13.0	13.4	mg/L	0.10	150	87	89	70 - 130

Laboratory Control Spikes

QCBatch: QC18682

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Aluminum	0.946	0.935	mg/L	1	1	<0.100	95	1	75 - 125	20
Total Arsenic	0.463	0.468	mg/L	1	0.50	<0.050	93	1	75 - 125	20
Total Barium	1.06	1.05	mg/L	1	1	<0.100	106	1	75 - 125	20
Total Boron	0.0499	0.049	mg/L	1	0.05	0.007	86	2	75 - 125	20
Total Cadmium	0.240	0.240	mg/L	1	0.25	<0.005	96	0	75 - 125	20
Total Chromium	0.108	0.105	mg/L	1	0.10	<0.010	108	3	75 - 125	20
Total Cobalt	0.260	0.260	mg/L	1	0.25	<0.025	104	0	75 - 125	20
Total Copper	0.121	0.121	mg/L	1	0.12	<0.0125	97	0	75 - 125	20
Total Iron	0.533	0.543	mg/L	1	0.50	<0.050	107	2	75 - 125	20
Total Lead	0.484	0.479	mg/L	1	0.50	<0.010	97	1	75 - 125	20
Total Manganese	0.264	0.263	mg/L	1	0.25	<0.025	106	0	75 - 125	20
Total Molybdenum	0.538	0.536	mg/L	1	0.50	<0.050	108	0	75 - 125	20
Total Nickel	0.260	0.259	mg/L	1	0.25	<0.025	104	0	75 - 125	20

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Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Selenium	0.429	0.407	mg/L	1	0.50	<0.050	86	5	75 - 125	20
Total Silica	0.484	0.480	mg/L	1	0.50	<0.050	97	1	75 - 125	20
Total Silver	0.123	0.123	mg/L	1	0.12	<0.0125	98	0	75 - 125	20
Total Zinc	0.249	0.253	mg/L	1	0.25	<0.025	100	2	75 - 125	20

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

Laboratory Control Spikes

QCBatch: QC18706

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	11.47	11.43	mg/L	1	12.50	<2.0	91	0	90 - 110	20
Nitrate-N	2.31	2.30	mg/L	1	2.50	<0.2	92	0	90 - 110	20
Sulfate	11.50	11.46	mg/L	1	12.50	<0.2	92	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: QC18989

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	104	107	mg/L	1	100	<0.5	104	2	75 - 125	20
Dissolved Magnesium	103	106	mg/L	1	100	<0.5	103	2	75 - 125	20
Dissolved Potassium	102	107	mg/L	1	100	<0.5	102	4	75 - 125	20
Dissolved Sodium	106	107	mg/L	1	100	<0.5	106	0	75 - 125	20

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

Laboratory Control Spikes

QCBatch: QC19022

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	105	102	mg/L	1	100	<0.5	105	2	75 - 125	20
Dissolved Magnesium	102	102	mg/L	1	100	<0.5	102	0	75 - 125	20
Dissolved Potassium	103	99	mg/L	1	100	<0.5	103	3	75 - 125	20
Dissolved Sodium	101	98.6	mg/L	1	100	<0.5	101	2	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: QC18633

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	0.00124	0.00123	mg/L	1	0.001	<0.0002	124	0	40 - 177	20

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

Matrix Spikes

QCBatch: QC18634

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Mercury	[20] 0.00044	[21] 0.00045	mg/L	1	0.001	<0.0002	44	2	40 - 177	20

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

Matrix Spikes

QCBatch: QC18682

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Total Aluminum	4.42	4.55	mg/L	1	1	3.39	103	11	75 - 125	20
Total Arsenic	0.487	0.481	mg/L	1	0.50	<0.050	97	1	75 - 125	20
Total Barium	2.95	2.95	mg/L	1	1	2.03	91	0	75 - 125	20
Total Boron	0.183	0.181	mg/L	1	0.05	0.130	105	3	75 - 125	20
Total Cadmium	0.216	0.213	mg/L	1	0.25	<0.005	86	1	75 - 125	20
Total Chromium	0.108	0.107	mg/L	1	0.10	0.0145	93	1	75 - 125	20
Total Cobalt	0.228	0.226	mg/L	1	0.25	<0.025	91	0	75 - 125	20
Total Copper	0.116	0.116	mg/L	1	0.12	<0.0125	92	0	75 - 125	20
Total Iron	3.58	3.52	mg/L	1	0.50	3.21	74	17	75 - 125	20
Total Lead	0.419	0.415	mg/L	1	0.50	0.0105	81	0	75 - 125	20
Total Manganese	0.360	0.358	mg/L	1	0.25	0.128	92	0	75 - 125	20
Total Molybdenum	0.490	0.485	mg/L	1	0.50	<0.050	98	1	75 - 125	20
Total Nickel	0.225	0.223	mg/L	1	0.25	<0.025	90	0	75 - 125	20
Total Selenium	0.402	0.396	mg/L	1	0.50	<0.050	80	1	75 - 125	20
Total Silica	[22] 40.1	[23] 38.7	mg/L	100	0.50	38.6	303	171	75 - 125	20
Total Silver	0.116	0.115	mg/L	1	0.12	<0.0125	92	0	75 - 125	20
Total Zinc	0.267	0.264	mg/L	1	0.25	0.0439	89	1	75 - 125	20

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

Matrix Spikes

QCBatch: QC18706

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	98.27	97.97	mg/L	1	62.50	41.0	91	0	52 - 131	20
Nitrate-N	12.17	12.11	mg/L	1	12.50	<1.00	97	0	84 - 105	20
Sulfate	67.69	67.28	mg/L	1	62.50	10.8	91	1	79 - 104	20

[20]MS RESULTS INVALID DUE TO SPIKING ERROR. USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.
[21]MS RESULTS INVALID DUE TO SPIKING ERROR. USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.
[22]Matrix spike recovery invalid due to required dilution. LCS demonstrates process under control.
[23]Matrix spike recovery invalid due to required dilution. LCS demonstrates process under control.

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

Matrix Spikes

QCBatch: QC18989

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	[24] 265	128	mg/L	1	100	129	136	16	75 - 125	20
Dissolved Magnesium	147	105	mg/L	1	100	23.1	123	15	75 - 125	20
Dissolved Potassium	122	148	mg/L	1	100	4.24	117	20	75 - 125	20
Dissolved Sodium	171		mg/L	1	100	48.5	122		75 - 125	

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

Matrix Spikes

QCBatch: QC19022

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Calcium	243	232	mg/L	1	100	120	123	9	75 - 125	20
Dissolved Magnesium	[25] 305	286	mg/L	1	100	173	132	15	75 - 125	20
Dissolved Potassium	138	128	mg/L	1	100	31.2	106	9	75 - 125	20
Dissolved Sodium	201	184	mg/L	1	100	86.6	114	16	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: QC18633

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00111	111	80 - 120	3/6/02

ICV (1)

QCBatch: QC18633

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00107	107	80 - 120	3/6/02

CCV (1)

QCBatch: QC18634

[24] MS RECOVERY INVALID DUE TO DILUTION FACTOR, USE LCS/LCSD TO DEMONSTRATE THE RUN IS UNDER CONTROL.
[25] ms recovery invalid due to matrix effect, use lcs/lcsd to demonstrate the run is under control.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00110	110	80 - 120	3/6/02

ICV (1) QCBatch: QC18634

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.001	0.00107	107	80 - 120	3/6/02

CCV (1) QCBatch: QC18639

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.1	101	-0.1 s.u. - +0.1 s.u.	3/5/02

ICV (1) QCBatch: QC18639

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7	7.1	101	-0.1 s.u. - +0.1 s.u.	3/5/02

CCV (1) QCBatch: QC18646

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1	0.99	99	85 - 115	3/6/02

ICV (1) QCBatch: QC18646

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1	0.877	87	85 - 115	3/6/02

CCV (1) QCBatch: QC18654

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.113	113	85 - 115	3/6/02
Benzene		mg/L	0.10	0.101	101	85 - 115	3/6/02
Toluene		mg/L	0.10	0.102	102	85 - 115	3/6/02
Ethylbenzene		mg/L	0.10	0.101	101	85 - 115	3/6/02
M,P,O-Xylene		mg/L	0.30	0.310	103	85 - 115	3/6/02

CCV (2) QCBatch: QC18654

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.091	91	85 - 115	3/6/02
Benzene		mg/L	0.10	0.0988	98	85 - 115	3/6/02
Toluene		mg/L	0.10	0.099	99	85 - 115	3/6/02
Ethylbenzene		mg/L	0.10	0.098	98	85 - 115	3/6/02
M,P,O-Xylene		mg/L	0.30	0.301	100	85 - 115	3/6/02

ICV (1) QCBatch: QC18654

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.101	101	85 - 115	3/6/02
Benzene		mg/L	0.10	0.103	103	85 - 115	3/6/02
Toluene		mg/L	0.10	0.104	104	85 - 115	3/6/02
Ethylbenzene		mg/L	0.10	0.104	104	85 - 115	3/6/02
M,P,O-Xylene		mg/L	0.30	0.318	106	85 - 115	3/6/02

CCV (1) QCBatch: QC18664

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	230	92	75 - 125	3/6/02

CCV (2) QCBatch: QC18664

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	238	95	75 - 125	3/6/02

ICV (1) QCBatch: QC18664

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	232	93	75 - 125	3/6/02

CCV (1) QCBatch: QC18675

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		μMHOS/cm	1412	1411	99	90 - 110	3/7/02

ICV (1) QCBatch: QC18675

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		μMHOS/cm	1409	1437	101	90 - 110	3/7/02

CCV (1) QCBatch: QC18679

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1006	100	90 - 110	3/6/02

ICV (1) QCBatch: QC18679

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	986	98	90 - 110	3/6/02

CCV (1) QCBatch: QC18682

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	2	1.96	98	90 - 110	3/7/02
Total Arsenic		mg/L	1	1.00	100	90 - 110	3/7/02
Total Barium		mg/L	2	2.07	104	90 - 110	3/7/02
Total Boron		mg/L	0.10	0.103	96	90 - 110	3/7/02
Total Cadmium		mg/L	0.50	0.518	104	90 - 110	3/7/02
Total Chromium		mg/L	0.20	0.206	103	90 - 110	3/7/02
Total Cobalt		mg/L	0.50	0.512	102	90 - 110	3/7/02
Total Copper		mg/L	0.25	0.247	99	90 - 110	3/7/02

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... Continued

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Iron		mg/L	1	1.01	101	90 - 110	3/7/02
Total Lead		mg/L	1	1.03	103	90 - 110	3/7/02
Total Manganese		mg/L	0.50	0.512	102	90 - 110	3/7/02
Total Molybdenum		mg/L	1	1.02	102	90 - 110	3/7/02
Total Nickel		mg/L	0.50	0.513	103	90 - 110	3/7/02
Total Selenium		mg/L	1	1.01	101	90 - 110	3/7/02
Total Silica		mg/L	1	0.993	99	90 - 110	3/7/02
Total Silver		mg/L	0.25	0.256	102	90 - 110	3/7/02
Total Zinc		mg/L	0.50	0.517	103	90 - 110	3/7/02

ICV (1) QCBatch: QC18682

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	2	1.93	96	90 - 110	3/7/02
Total Arsenic		mg/L	1	0.981	98	90 - 110	3/7/02
Total Barium		mg/L	2	1.99	100	90 - 110	3/7/02
Total Boron		mg/L	0.10	0.102	95	90 - 110	3/7/02
Total Cadmium		mg/L	0.50	0.497	99	90 - 110	3/7/02
Total Chromium		mg/L	0.20	0.200	100	90 - 110	3/7/02
Total Cobalt		mg/L	0.50	0.497	99	90 - 110	3/7/02
Total Copper		mg/L	0.25	0.245	98	90 - 110	3/7/02
Total Iron		mg/L	1	0.986	99	90 - 110	3/7/02
Total Lead		mg/L	1	1.00	100	90 - 110	3/7/02
Total Manganese		mg/L	0.50	0.496	99	90 - 110	3/7/02
Total Molybdenum		mg/L	1	0.989	99	90 - 110	3/7/02
Total Nickel		mg/L	0.50	0.496	99	90 - 110	3/7/02
Total Selenium		mg/L	1	0.997	100	90 - 110	3/7/02
Total Silica		mg/L	1	0.981	98	90 - 110	3/7/02
Total Silver		mg/L	0.25	0.247	99	90 - 110	3/7/02
Total Zinc		mg/L	0.50	0.497	99	90 - 110	3/7/02

CCV (1) QCBatch: QC18706

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.37	90	90 - 110	3/5/02
Nitrate-N		mg/L	2.50	2.30	92	90 - 110	3/5/02
Sulfate		mg/L	12.50	11.48	91	90 - 110	3/5/02

ICV (1) QCBatch: QC18706

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.79	94	90 - 110	3/5/02
Nitrate-N		mg/L	2.50	2.30	92	90 - 110	3/5/02
Sulfate		mg/L	12.50	11.81	94	90 - 110	3/5/02

CCV (1) QCBatch: QC18845

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	3/12/02
Carbonate Alkalinity		mg/L as CaCo3	0	232	0	90 - 110	3/12/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	10	0	90 - 110	3/12/02
Total Alkalinity		mg/L as CaCo3	250	242	96	90 - 110	3/12/02

ICV (1) QCBatch: QC18845

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	90 - 110	3/12/02
Carbonate Alkalinity		mg/L as CaCo3	0	228	0	90 - 110	3/12/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	10	0	90 - 110	3/12/02
Total Alkalinity		mg/L as CaCo3	250	238	95	90 - 110	3/12/02

CCV (1) QCBatch: QC18989

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.2	100	90 - 110	3/19/02
Dissolved Magnesium		mg/L	25	24.9	99	90 - 110	3/19/02
Dissolved Potassium		mg/L	25	25.0	100	90 - 110	3/19/02
Dissolved Sodium		mg/L	25	24.8	99	90 - 110	3/19/02

ICV (1) QCBatch: QC18989

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	24.8	99	95 - 105	3/19/02
Dissolved Magnesium		mg/L	25	24.5	98	95 - 105	3/19/02
Dissolved Potassium		mg/L	25	23.7	94	95 - 105	3/19/02
Dissolved Sodium		mg/L	25	24.5	98	95 - 105	3/19/02

CCV (1)

QCBatch: QC19022

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25.2	100	90 - 110	3/22/02
Dissolved Magnesium		mg/L	25	24.7	98	90 - 110	3/22/02
Dissolved Potassium		mg/L	25	24	96	90 - 110	3/22/02
Dissolved Sodium		mg/L	25	24.1	96	90 - 110	3/22/02

ICV (1)

QCBatch: QC19022

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25	25	100	95 - 105	3/22/02
Dissolved Magnesium		mg/L	25	24.7	98	95 - 105	3/22/02
Dissolved Potassium		mg/L	25	24.8	99	95 - 105	3/22/02
Dissolved Sodium		mg/L	25	24.7	98	95 - 105	3/22/02

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

TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0203051 6

Company Name: AMEC — Phone #: 505 | 821-1801

Address: (Street, City, Zip) 8519 JEFFERSON NE / ALBUQUERQUE — Fax #: 505 | 821-7371

Contact Person: BOB WILCOX 505 | 821-1801 or 505 | 327-7928

Invoice to: (If different from above) WILLIAM OLSON NM-OCD 505 | 476-3491

Project #: 2517000002 — Project Name: ELDRIDGE RANCH

Project Location: MONUMENT - RT. 8.5" — Sampler Signature: [signature]

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE		PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE		SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH ~~418.1/TX1005~~ TPH	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	MAJOR CATIONS/ANIONS	NM WQCC	TDS		Turn Around Time if different from standard	Hold
	MW-11 (CONTIN.) C	2	40	X					X							3.3.02	15:36		X	X																		
87	MW-10 A	1	1000	X									X			3.3.02	16:25																X		X			
	B	1	500	X						X						"	"																	X				
	C	2	40	X					X							"	"		X	X																		
88	MW-13 A	1	1000	X									X			3.3.02	18:30																X		X			
	~~B~~	~~2~~ 1	500	X						X						"	"																	X				
	C	2	40	X					X							"	"		X	X																		
89	MW-14 A	1	1000	X									X			3.3.02	19:10																X		X			
	B	1	500	X						X						"	"																	X				
	C	2	40	X					X							"	"		X	X																		
90	~~TRIP BLANK~~	~~2~~	~~40~~	~~X~~					~~X~~							3.3.02	16:45		X																			

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
MARK STRZELCZYK [signature]	03.4.02	09:25			
Relinquished by: [signature]			Received by:		
Relinquished by:			Received at Laboratory by: [signature]	3502	1000

LAB USE ONLY
Intact (Y) / N
Headspace Y / N
Temp 5°
Log-in Review [initials]

REMARKS:

☐ Check If Special Reporting Limits Are Needed

Carrier # TNMTD 902-806-655-3

ORIGINAL COPY

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 of our work and stating either the testing criteria you require or identifying the agency to which the results will be submitted.

Article 2: Our General Responsibilities

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 skill 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 our 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 are 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 provisions 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 performed 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 no 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 level and type of radioactive activity. This information will be given to us in writing as a part of the Chain of Custody/Analysis Request and will precede or accompany samples suspected of containing hazardous substances.

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 of our report. We will extend the retention period if you so direct. Following the retention period we will dispose of non-hazardous samples. We may return highly hazardous, acutely toxic, or radioactive samples and samples containers and residues to you. You agree to accept them.

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 authorized to 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 if we 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 reason for 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 and 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 alleged to be incorrect. 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 not to 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 until 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 involved in 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 testing 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 cost of 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 liable 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 recommend 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 or to others

8.4 If it is claimed by a third party that we did not complete an acceptable analysis, at your request we 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 Disputs Resolution" (ADR) as a condition precedent to litigation and other remedies provided by law. Each of us agrees to exercise good faith efforts 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 attorney's 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 of 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 date 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 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 you.

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 matters 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, labor 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. Upon 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 after 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.

192183-90

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

TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # A0203051L

Company Name: AMEC Phone #: 505/821-1801

Address: (Street, City, Zip) 8519 JEFFERSON NE/ALBUQUERQUE Fax #: 505/821-7371

Contact Person: BOB WILCOX 505/821-1801 OR 505/327-7928

Invoice to: (If different from above) WILLIAM OLSEN 505/476-3491

Project #: 2517000002 Project Name: ELDRIDGE RANCH

Project Location: MONUMENT - RT 8.5" Sampler Signature: [signature]

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE		# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B/602	BTEX 8021B/602	~~TPH 418.1/TX1005~~ 8.0 TPH (GRO + DRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	MAJOR CATIONS/ANIONS	NMWQCC (WQCC metals per 20.6 water)	TDS	Cl, NO_3, SO_4, alk, F, Ca, K, Na, Mg, pH		Turn Around Time if different from standard	Hold
192183	MW-12	A	1	1000	X								X		3-3-02	12:58																X		X				
		B	1	500	X					X					"	"																	X					
		C	2	40	X				X						"	"		X	X																			
34	MW-9	A	1	1000	X								X		3-3-02	14:01																X		X				
		B	1	500	X					X					"	"																	X					
		C	2	40	X				X						"	"		X	X																			
85	MW-8	A	1	1000	X								X		3-3-02	14:58																X		X				
		B	1	500	X					X					"	"																	X					
		C	2	40	X				X						"	"		X	X																			
86	MW-11	A	1	1000	X								X		3-3-02	15:36																X		X				
		B	1	500	X					X																							X					

Relinquished by: MARK STRZELCZYK [signature] Date: 03-4-02 Time: 09:25
Received by: Date: Time:

Relinquished by: [signature] Date: Time:
Received by: Date: Time:

Relinquished by: Date: Time:
Received at Laboratory by: Vicki [signature] Date: 3-5-02 Time: 10:00

LAB USE ONLY
Intact (Y) / N
Headspace Y / N
Temp 5°
Log-in Review [initials]

REMARKS: 1) BILLING - PLEASE CALL WILLIAM OLSEN (OCD - SANTA FE/NM) 505/476-3491
2) SEND COPY OF LAB RESULTS TO AMEC - BOB WILCOX
☐ Check If Special Reporting Limits Are Needed
P4F 3/27/02

Carrier # TWIN-D 902-806-655-3

ORIGINAL COPY

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General Terms and Conditions

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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 alleged to be incorrect. 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 not to 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 until 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 involved in the response and attorney fees reasonably incurred in obtaining advice concerning the response, the preparation of the testimer, 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 testing 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 cost of 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 liable 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 recommend 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 or to others.

8.4 If it is claimed by a third party that we did not complete an acceptable analysis, at your request we 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 efforts 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 attorney's 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 of 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 date 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 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 you.

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 matters 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, labor 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. Upon 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 after 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.