

3R - 252

REPORTS

DATE:

2003



Infrastructure, buildings, environment, communications

William C. Olson
Environmental Bureau
State of New Mexico
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

RECEIVED

FEB 03 2003

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

ARCADIS G&M, Inc.
1004 Big Spring Street
Suite 300
Midland
Texas 79701
Tel 915-687-5400
Fax 915-687-5401

Environmental

Subject:

ChevronTexaco #2 (North) Gas Plant-Analytical Results
Eunice, Lea County, New Mexico

Dear Mr. Olson:

Midland, TX
30 January 2003

As requested, enclosed are copies of analytical results obtained from our most recent groundwater monitoring event. The analytical results correspond to groundwater samples collected from monitoring wells located east of Main Street (State Loop 207) and south of Continental Street. In addition, a hydraulic gradient map generated during our September 2002 monitoring event is enclosed.

Contact:
A. Joseph Reed

Currently we have not received analytical results from MW054SA, MW056SA or MW057SA. A copy of these analytical results will be forwarded at a later date. Please feel free to contact us with any questions or concerns.

Extension:
915-687-5400

Very truly yours,
ARCADIS G&M, Inc.

Luke Markham
Scientist

Hank W. McConnell
Task Manager

A. Joseph Reed
Senior Expert Advisor

cc: Scott Toner (ChevronTexaco)
Tom Domme (Miller Stratvert)

OCD FILES

35MM DRAWINGS

3R 252

FILE NUMBER

Reports

DOCUMENT TYPE

2003

NO OF DWGS

16
BOX

RECEIVED
DEC 23 2002
KELLEY & MILLER

ANALYTICAL REPORT

JOB NUMBER: 216299

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/18/2002



Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/18/02

Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/18/2002

Job Number.: 216299
Customer....: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216299-1	WOODELL-WW	Water	12/04/2002	13:45	12/05/2002	10:40
216299-2	GOPWW2	Water	12/04/2002	15:40	12/05/2002	10:40

LABORATORY TEST RESULTS

Job Number: 216299

Date: 12/18/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: WOODELL-WW
Date Sampled.....: 12/04/2002
Time Sampled.....: 13:45
Sample Matrix.....: Water

Laboratory Sample ID: 216299-1
Date Received.....: 12/05/2002
Time Received.....: 10:40

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	<0.05	0.05	mg/L	12/16/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/09/02	crw

Date: 12/18/2002

ATTN: Steve Tischer

Laboratory Sample ID: 216299-2
Date Received.....: 12/05/2002
Time Received.....: 10:40

Page 3

QUALITY CONTROL RESULTS

Job Number.: 216299

Report Date.: 12/18/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 60108

Method Description.: Metals Analysis (ICAP)

Parameter.....: Chromium (Cr)

Batch.....: 75891

Units.....: mg/L

Analyst....: jem

Test Code.: CR

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	1.95954864		2.00		98.0	%	90-110	12/16/2002	1818
ICV		M0346	1.02837176		1.00		102.8	%	90-110	12/16/2002	1826
ICV		M0337	0.98313207		1.00		98.3	%	90-110	12/16/2002	1834
ICB			-0.0007117							12/16/2002	1842
LSC		M0341	0.00377346		1.00					12/16/2002	1845
CCV		M0341	0.90356863		1.00		90.4	%	90-110	12/16/2002	1901
CCB			-0.0021955							12/16/2002	1909
MB		3010	-0.0022740							12/16/2002	1913
LCS		M345	0.46899392		0.500		93.8	%	90-110	12/16/2002	1916
CCB			-0.0065309							12/16/2002	1954
MS 216331-1		M345	0.47760260		0.500	-0.0011924	95.8	%	75-125	12/16/2002	2006
MSD 216331-1		M345	0.47068852	0.47760260	0.500	-0.0011924	94.4	%	75-125	12/16/2002	2010
							1.5	R 20			
PDS 216331-1		M345B	0.92770285		1.00	-0.0011924	92.9	%	75-125	12/16/2002	2013
PSD 216331-1		M345B	0.94962959	0.92770285	1.00	-0.0011924	95.1	%	75-125	12/16/2002	2017
							2.3	R 20			
		M0341	0.90682687		1.00		90.7	%	90-110	12/16/2002	2038
			-0.0091733							12/16/2002	2046
Mo		3010	-0.0106375							12/16/2002	2127
LCS		M345	0.50935874		0.500		101.9	%	90-110	12/16/2002	2131
CCV		M0341	0.97124875		1.00		97.1	%	90-110	12/16/2002	2135
CCB			-0.0114641							12/16/2002	2142
MS 216331-2		M345	0.51355136		0.500	-0.0123129	105.2	%	75-125	12/16/2002	2154
MSD 216331-2		M345	0.51554657	0.51355136	0.500	-0.0123129	105.6	%	75-125	12/16/2002	2158
							0.4	R 20			
CCV		M0341	1.03733294		1.00		103.7	%	90-110	12/16/2002	2227
CCB			-0.0135250							12/16/2002	2234
CCV		M0341	1.08538351		1.00		108.5	%	90-110	12/16/2002	2326
CCB			-0.0138218							12/16/2002	2333
CCV		M0341	1.08536300		1.00		108.5	%	90-110	12/16/2002	2355
CCB			-0.0137043							12/17/2002	0003

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/18/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/18/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data *cp Non-STL Subcontract Lab *xx

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000700.0004
Project Location Chevron/Texaco N. Eunice
Laboratory STL-CC
Project Manager Hank McConnell
Sampler(s)/Affiliation LM/RM/ARCADIS

ANALYSIS / METHOD / SIZE

Total Cr. Dissolved HNO3 (1) 500 ml plastic

216299

Sample ID/Location	Matrix	Date/Time Sampled	Time	Remarks	Total
Woodell-WW	L	12/4/02	1345		1
GOPW22	L	12/4/02	1540		1
Sample Matrix: L = Liquid; S = Solid; A = Air					Total No. of Bottles/Containers
Relinquished by: <u>[Signature]</u>					2

Organization: ARCADIS Date 12/4/02 Time 1805 Seal Intact? Yes No N/A

Organization: ARCADIS Date 12/4/02 Time 1805 Seal Intact? Yes No N/A

Organization: 837162832795 Date 12/5/02 Time 1040 Seal Intact? Yes No N/A

Organization: 837162832795 Date 12/5/02 Time 1040 Seal Intact? Yes No N/A

Special Instructions/Remarks: *Total Cr was field filtered*

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

.pjsckl	Job Sample Receipt Checklist Report	V2
Job Number.: 216299 Location.: 57203 Check List Number.: 1 Description.: Customer Job ID..... Job Check List Date.: Date of the Report...: 12/05/2002 Project Number.: 98000024 Project Description.: MT000700 Texaco-Report in ppm Project Manager.....: crs Customer.....: ARCADIS / G&M Contact.: Steve Tischer		
Questions ?	(Y/N) Comments	
How did samples arrive?..... Y FED EX DELIVERED Chain-of-Custody Present?..... Y Custody seal on shipping container?..... Y ...If "yes", custody seal intact?..... Y Custody seals on sample containers?..... N ...if "yes", custody seal intact?..... Samples chilled?..... N Temperature blank in cooler?..... N Temp of cooler acceptable? (0.05 to 6.00 deg C) Y METALS ONLY Samples received intact (good condition)?..... Y Volatile samples acceptable? (no headspace)..... N/A Correct containers used?..... Y Adequate sample volume provided?..... Y Samples preserved correctly?..... Y Samples received within holding-time?..... Y Agreement between COC and sample labels?..... Y Additional..... Comments..... Sample Custodian Signature..... <i>aw 12/5/02</i>		

ANALYTICAL REPORT

JOB NUMBER: 216440

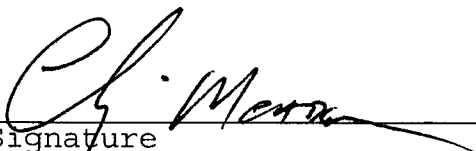
Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/19/2002

RECEIVED
DEC 23 2002
ALCOHOL


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/20/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673
FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/19/2002

Job Number.: 216440
Customer...: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID.....: MT000700.0004
Project Description.....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216440-1	MW021A	Water	12/11/2002	10:40	12/12/2002	09:35
216440-2	MW021	Water	12/11/2002	12:55	12/12/2002	09:35

LABORATORY TEST RESULTS

Job Number: 216440

Date: 12/19/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW021A
Date Sampled.....: 12/11/2002
Time Sampled.....: 10:40
Sample Matrix.....: Water

Laboratory Sample ID: 216440-1
Date Received.....: 12/12/2002
Time Received.....: 09:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	<0.05	0.05	mg/L	12/18/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/13/02	crw

LABORATORY TEST RESULTS

Job Number: 216440

Date: 12/19/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW021
Date Sampled.....: 12/11/2002
Time Sampled.....: 12:55
Sample Matrix.....: Water

Laboratory Sample ID: 216440-2
Date Received.....: 12/12/2002
Time Received.....: 09:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	<0.05	0.05	mg/L	12/18/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/13/02	crw

QUALITY CONTROL RESULTS

Job Number.: 216440

Report Date.: 12/19/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Batch.....: 75965

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CR

Parameter.....: Chromium (Cr)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	2.01822428		2.00		100.9	%	90-110	12/18/2002	1759
ICV		M0346	1.01733303		1.00		101.7	%	90-110	12/18/2002	1807
ICV		M0337	1.03869439		1.00		103.9	%	90-110	12/18/2002	1814
ICB			0.00004294							12/18/2002	1822
CCV		M0341	1.02770440		1.00		102.8	%	90-110	12/18/2002	1842
CCB			0.00004392							12/18/2002	1849
MB		3010	0.00023290							12/18/2002	1853
LCS		M345	0.50640398		0.500		101.3	%	90-110	12/18/2002	1857
MS 216419-1		M345	0.51373279		0.500	0.00052588	102.6	%	75-125	12/18/2002	1904
MSD 216419-1		M345	0.51966854	0.51373279	0.500	0.00052588	103.8	%	75-125	12/18/2002	1908
							1.1	R 20			
CCV		M0341	1.02474988		1.00		102.5	%	90-110	12/18/2002	1934
CCB			0.00005888							12/18/2002	1941
CCV		M0341	1.00732464		1.00		100.7	%	90-110	12/18/2002	2029
CCB			0.00003426							12/18/2002	2037
MB		3010	0.00005726							12/18/2002	2059
LCS		M345	0.49481825		0.500		99.0	%	90-110	12/18/2002	2103
MS 216440-1		M345	0.47218802		0.500	0.02933409	88.6	%	75-125	12/18/2002	2111
MSD 216440-1		M345	0.50133680	0.47218802	0.500	0.02933409	94.4	%	75-125	12/18/2002	2116
							6.0	R 20			
CCV		M0341	1.01810520		1.00		101.8	%	90-110	12/18/2002	2125
CCB			0.00013074							12/18/2002	2132
CCV		M0341	1.04478039		1.00		104.5	%	90-110	12/18/2002	2222
CCB			-0.0013301							12/18/2002	2229
CCV		M0341	1.03083074		1.00		103.1	%	90-110	12/18/2002	2314
CCB			-0.0004959							12/18/2002	2321

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/19/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
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- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

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ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/19/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD Method (Matrix) Duplicate
ED Extraction Duplicate
DD Digestion Duplicate
PDD Post Digestion Duplicate
PSD Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

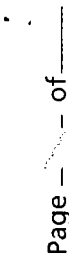
Client provided data *cp Non-STL Subcontract Lab *xx

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
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- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
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- - Used to indicate that a standard is outside specified quality control limits.

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- U - Indicates that a value is less than the MDL or was not detected.



CHAIN-OF-CUSTODY RECORD

Laboratory Task Order No./P.O. No. _____

ADIS

Project Number/Name MT000700.0004

Project Location
Chevron/Texaco N. Eunice

Laboratory
STL-CC

Project Manager Hank McConnell

LM/RM/ARCADIS

Sample ID/Location	Matrix	Date/ Time Sampled	Time

Remarks	Total
---------	-------

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air	Total No. of Bottles/ Containers	2
---	-------------------------------------	---

Relinquished by: [Signature] Organization: ARCADIS Date 12/11/02 Time 1830

Received by: FedEx Organization: _____ Date / / Time _____

Seal Intact? Yes No N/A

Relinquished by: <u>Fatek</u>	Organization: _____	Date: <u>1/1/12</u>	Time: _____	Seal Intact? <u>Yes</u>
Received by: <u>Chen</u>	Organization: <u>STLCC</u>	Date: <u>12/12/12</u>	Time: <u>0935</u>	Seal Intact? <u>No</u>

Special Instructions/Remarks:

Total Cr was field filtered

FD # 837162832-740

Delivery Method: ☐ In Person☒ Common Carrier Fed Ex☐ Lab Courier ☐ Other☐ Other

SPECIFY

PECIFY

pjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216440	Location.: 57203	Check List Number.: 1	Description.:	
Customer Job ID.....:		Job Check List Date.:		Date of the Report...: 12/13/2002
Project Number.: 98000024	Project Description.: MT000700	Texaco-Report in ppm		Project Manager.....: crs
Customer.....: ARCADIS / G&M		Contact.: Steve Tischer		
Questions ?	(Y/N) Comments			
How did samples arrive?.....	Y	FED EX DELIVERED		
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	N			
Temperature blank in cooler?.....	N			
Temp of cooler acceptable? (0.05 to 6.00 deg C)	N	METALS ONLY		
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....		N/A		
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....		COW 12/13/02		

ANALYTICAL REPORT

JOB NUMBER: 216411

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 01/03/2003

RECEIVED

JAN 09 2003

ARCADIS Geraghty & Miller



Signature

Name: Charles Sassine

Title: Laboratory Supervisor

E-Mail: csassine@stl-inc.com

1/3/2003

Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673
FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 01/03/2003

Job Number.: 216411
Customer....: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216411-1	MW021A	Water	12/11/2002	10:40	12/12/2002	09:35
216411-2	MW021	Water	12/11/2002	12:55	12/12/2002	09:35
216411-3	MW015	Water	12/11/2002	16:40	12/12/2002	09:35
216411-4	MW015A	Water	12/11/2002	15:20	12/12/2002	09:35
216411-5	TRIP BLANK	Water	12/11/2002	00:00	12/12/2002	09:35

LABORATORY TEST RESULTS

Job Number: 216411

Date: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW021A
Date Sampled.....: 12/11/2002
Time Sampled.....: 10:40
Sample Matrix.....: Water

Laboratory Sample ID: 216411-1
Date Received.....: 12/12/2002
Time Received.....: 09:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.009	0.005	mg/L	12/12/02	edr
EPA 300.0	Chloride	5800	500	mg/L	12/13/02	cnw

LABORATORY TEST RESULTS

Job Number: 216411

Date: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW021
Date Sampled.....: 12/11/2002
Time Sampled.....: 12:55
Sample Matrix.....: Water

Laboratory Sample ID: 216411-2
Date Received.....: 12/12/2002
Time Received.....: 09:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	<0.005	0.005	mg/L	12/12/02	edr
EPA 300.0	Chloride	410	50	mg/L	12/12/02	cnw
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	12/15/02	rec
	Ethylbenzene	ND	0.002	mg/L	12/15/02	rec
	Toluene	ND	0.002	mg/L	12/15/02	rec
	Xylenes (total)	ND	0.002	mg/L	12/15/02	rec
SW-846 3510C	Extraction (Sep. Funnel) SVOC					
	Separatory Funnel Liq/Liq Extraction	Complete			01/23/02	*he
'846 8015B	Total Extractable Petroleum Hydrocarbons					
	TVPH - Gasoline Range Organics	ND	0.05	mg/L	12/23/02	*he
	TEPH - Diesel Range Organics	ND	0.50	mg/L	12/26/02	*he

Job Number: 216411

LABORATORY TEST RESULTS

Date: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW015
Date Sampled.....: 12/11/2002
Time Sampled.....: 16:40
Sample Matrix.....: Water

Laboratory Sample ID: 216411-3
Date Received.....: 12/12/2002
Time Received.....: 09:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.014	0.005	mg/L	12/12/02	edr
EPA 300.0	Chloride	3100	200	mg/L	12/12/02	cnw

LABORATORY TEST RESULTS

Job Number: 216411

Date: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW015A
Date Sampled.....: 12/11/2002
Time Sampled.....: 15:20
Sample Matrix.....: Water

Laboratory Sample ID: 216411-4
Date Received.....: 12/12/2002
Time Received.....: 09:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	<0.005	0.005	mg/L	12/12/02	edr
EPA 300.0	Chloride	320	50	mg/L	12/12/02	cnw

LABORATORY TEST RESULTS

Job Number: 216411

Date: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: TRIP BLANK
Date Sampled.....: 12/11/2002
Time Sampled.....: 00:00
Sample Matrix.....: Water

Laboratory Sample ID: 216411-5
Date Received.....: 12/12/2002
Time Received.....: 09:35

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	12/17/02	rec
	Ethylbenzene	ND	0.002	mg/L	12/17/02	rec
	Toluene	ND	0.002	mg/L	12/17/02	rec
	Xylenes (total)	ND	0.002	mg/L	12/17/02	rec

QUALITY CONTROL RESULTS

Job Number.: 216411

Report Date.: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 7197
 Method Description.: Chromium, Hexavalent
 Parameter.....: Hexavalent Chromium

Batch.....: 75769
 Units.....: mg/L

Analyst....: edr
 Test Code.: CR6

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M121202C	0.0231		0.02500		92.4	%	90-110	12/12/2002	1237
ICB			-0.0025							12/12/2002	1238
LCS		M121202R	0.0446		0.05000		89.2	%	75-125	12/12/2002	1239
MB			0.0006							12/12/2002	1240
MS	216411-2	M121202R	0.0408		0.05000	-0.0006	82.8	%	75-125	12/12/2002	1243
MSD	216411-2	M121202R	0.0433	0.0408	0.05000	-0.0006	87.8	%	75-125	12/12/2002	1244
							5.9	R 20			
CCV		M121202C	0.0218		0.02500		87.2	%	80-120	12/12/2002	1247
CCB			0.0016							12/12/2002	1248

Test Method.....: EPA 300.0
 Method Description.: Ion Chromatography Analysis
 Parameter.....: Chloride

Batch.....: 75793
 Units.....: mg/L

Analyst....: cnw
 Test Code.: CHL

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
		121202	-0.0395							12/12/2002	1430
ICV		IC21212F	10.6324		10.00		106.3	%	90-110	12/12/2002	1437
MB		121202	-0.0456							12/12/2002	1443
LCS		IC21212D	10.0391		10.00		100.4	%	90-110	12/12/2002	1450
CCB		121202	-0.0432							12/12/2002	1602
CCV		IC21212F	10.1270		10.00		101.3	%	90-110	12/12/2002	1608
MS	216407-2	IC21212E	18.7507		10.00	7.9458	108.0	%	75-125	12/12/2002	1641
MSD	216407-2	IC21212E	19.0847	18.7507	10.00	7.9458	111.4	%	75-125	12/12/2002	1648
							1.8	R 20			
CCB		121202	-0.0686							12/12/2002	1708
CCV		IC21212F	10.0283		10.00		100.3	%	90-110	12/12/2002	1714
MS	216411-2	IC21212E	18.9813		10.00	8.1448	108.4	%	75-125	12/12/2002	1727
MSD	216411-2	IC21212E	18.9214	18.9813	10.00	8.1448	107.8	%	75-125	12/12/2002	1734
							0.3	R 20			
CCB		121202	0.0000							12/12/2002	1753
CCV		IC21212F	10.0924		10.00		100.9	%	90-110	12/12/2002	1800

Test Method.....: EPA 300.0
 Method Description.: Ion Chromatography Analysis
 Parameter.....: Chloride

Batch.....: 75797
 Units.....: mg/L

Analyst....: cnw
 Test Code.: CHL

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		121302	0.0997							12/13/2002	0900
ICV		IC21213F	9.8477		10.00		98.5	%	90-110	12/13/2002	0912
MB		121302	0.0951							12/13/2002	0923
LCS		IC21213D	9.6949		10.00		96.9	%	90-110	12/13/2002	0935
MS	216078-2	IC21213E	19.4960		10.00	10.3336	91.6	%	75-125	12/13/2002	1009
MSD	216078-2	IC21213E	19.7433	19.4960	10.00	10.3336	94.1	%	75-125	12/13/2002	1021
							1.3	R 20			
MS	216411-1	IC21213E	15.6527		10.00	5.8973	97.6	%	75-125	12/13/2002	1044
MSD	216411-1	IC21213E	15.7367	15.6527	10.00	5.8973	98.4	%	75-125	12/13/2002	1055
							0.5	R 20			
		121302	0.0000							12/13/2002	1118
CCV		IC21213F	10.1310		10.00		101.3	%	90-110	12/13/2002	1130

Job Number.: 216411

QUALITY CONTROL RESULTS

Report Date.: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: EPA 300.0

Batch.....: 75797

Analyst...: cnw

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Test Code.: CHL

Parameter.....: Chloride

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCB		121302	0.0919							12/13/2002	1310
CCV		IC21213F	10.1167		10.00		101.2	%	90-110	12/13/2002	1319
CCB		121302	0.0000							12/13/2002	1421
CCV		IC21213F	10.1133		10.00		101.1	%	90-110	12/13/2002	1430

QUALITY CONTROL RESULTS

Job Number.: 216411

Report Date.: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B

Method Description.: Volatile Organics - Aromatics

Units.....: ug/L

Batch.....: 75846

Analyst....: rec

CCV	Continuing Calibration Verification	V120102CCV			12/15/2002	1039
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	20.706		20.000000		103.5	%	85-115
Ethylbenzene	21.531		20.000000		107.7	%	85-115
tert-Butyl Methyl Ether (MTBE)	106.172		100.000000		106.2	%	85-115
Toluene	20.176		20.000000		100.9	%	85-115
Xylenes (total)	65.405		60.000000		109.0	%	85-115
m&p-Xylenes	43.492		40.000000		108.7	%	85-115
o-Xylene	21.913		20.000000		109.6	%	85-115

MB	Method Blank	12152002			12/15/2002	1157
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	ND						
Ethylbenzene	ND						
tert-Butyl Methyl Ether (MTBE)	ND						
Toluene	ND						
Xylenes (total)	ND						
m&p-Xylenes	ND						
o-Xylene	ND						

MS	Matrix Spike	V120102CCV	216410-4	10	12/15/2002	1315
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	12.580		10.000000	2.070	105.1	%	79-115
Ethylbenzene	52.790		10.000000	44.960	78.3	%	83-115
tert-Butyl Methyl Ether (MTBE)	60.791		50.000000	5.385	110.8	%	85-115
Toluene	15.701		10.000000	6.077	96.2	%	85-115
Xylenes (total)	94.445		30.000000	67.874	88.6	%	85-117
m&p-Xylenes	52.665		20.000000	34.452	91.1	%	82-116
o-Xylene	41.780		10.000000	33.422	83.6	%	85-119

MSD	Matrix Spike Duplicate	V120102CCV	216410-4	10	12/15/2002	1354
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	13.076	12.580	10.000000	2.070	110.1	%	79-115
					3.9	R	20
Ethylbenzene	52.861	52.790	10.000000	44.960	79.0	%	83-115
					0.1	R	20
tert-Butyl Methyl Ether (MTBE)	61.378	60.791	50.000000	5.385	112.0	%	85-115
					1.0	R	20
Toluene	15.621	15.701	10.000000	6.077	95.4	%	85-115
					0.5	R	20
Xylenes (total)	94.563	94.445	30.000000	67.874	89.0	%	85-117
					0.1	R	20
m&p-Xylenes	52.780	52.665	20.000000	34.452	91.6	%	82-116
					0.2	R	20

Page 9 * %=% REC, R=RPD, A=ABS Diff., D=% Diff.

QUALITY CONTROL RESULTS

Job Number.: 216411

Report Date.: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MSD	Matrix Spike Duplicate	V120102CCV	216410-4	10	12/15/2002	1354
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
o-Xylene	41.783	41.780	10.000000	33.422	83.6 0.0	% 85-119 R 20

SB	Spiked Blank	V120102SBW			12/15/2002	1118
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.893		20.000000		99.5	% 79-115
Ethylbenzene	19.652		20.000000		98.3	% 83-115
tert-Butyl Methyl Ether (MTBE)	109.947		100.000000		109.9	% 85-115
Toluene	19.362		20.000000		96.8	% 85-115
Xylenes (total)	41.808		40.000000		104.5	% 85-117
m&p-Xylenes	20.915		20.000000		104.6	% 82-116
o-Xylene	20.893		20.000000		104.5	% 85-119

st Method.....: SW-846 8021B	Units.....: ug/L	Analyst....: rec
Method Description.: Volatile Organics - Aromatics	Batch.....: 75923	

CCV	Continuing Calibration Verification	V120102CCV			12/17/2002	0902
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.709		20.000000		98.5	% 85-115
Ethylbenzene	19.560		20.000000		97.8	% 85-115
tert-Butyl Methyl Ether (MTBE)	101.977		100.000000		102.0	% 85-115
Toluene	19.709		20.000000		98.5	% 85-115
Xylenes (total)	58.663		60.000000		97.8	% 85-115
m&p-Xylenes	39.166		40.000000		97.9	% 85-115
o-Xylene	19.497		20.000000		97.5	% 85-115

CCV	Continuing Calibration Verification	V120102CCV			12/17/2002	2304
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.759		20.000000		98.8	% 85-115
Ethylbenzene	19.716		20.000000		98.6	% 85-115
tert-Butyl Methyl Ether (MTBE)	100.487		100.000000		100.5	% 85-115
Toluene	19.731		20.000000		98.7	% 85-115
Xylenes (total)	59.101		60.000000		98.5	% 85-115
m&p-Xylenes	39.379		40.000000		98.4	% 85-115
o-Xylene	19.722		20.000000		98.6	% 85-115

QUALITY CONTROL RESULTS

Job Number.: 216411

Report Date.: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank	12172002			12/17/2002	1022

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	ND					
Ethylbenzene	ND					
tert-Butyl Methyl Ether (MTBE)	ND					
Toluene	ND					
Xylenes (total)	ND					
m&p-Xylenes	ND					
o-Xylene	ND					

MB	Method Blank	12172002			12/18/2002	0024
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	ND					
Ethylbenzene	ND					
tert-Butyl Methyl Ether (MTBE)	ND					
Toluene	ND					
Xylenes (total)	ND					
m&p-Xylenes	ND					
o-Xylene	ND					

MS	Matrix Spike	V120102CCV	216470-1	5	12/17/2002	1303
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	23.912		20.000000	4.188	98.6	% 79-115
Ethylbenzene	85.816		20.000000	68.706	85.5	% 83-115
tert-Butyl Methyl Ether (MTBE)	286.494		100.000000	196.326	90.2	% 85-115
Toluene	20.259		20.000000	ND	101.3	% 85-115
Xylenes (total)	66.023		60.000000	7.299	97.9	% 85-117
m&p-Xylenes	43.454		40.000000	4.174	98.2	% 82-116
o-Xylene	22.569		20.000000	3.125	97.2	% 85-119

MS	Matrix Spike	V120102CCV	216424-9		12/18/2002	0424
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.287		20.000000	ND	96.4	% 79-115
Ethylbenzene	18.994		20.000000	ND	95.0	% 83-115
tert-Butyl Methyl Ether (MTBE)	94.029		100.000000	ND	94.0	% 85-115
Toluene	18.740		20.000000	ND	93.7	% 85-115
Xylenes (total)	55.605		60.000000	ND	92.7	% 85-117
m&p-Xylenes	37.184		40.000000	ND	93.0	% 82-116
o-Xylene	18.421		20.000000	ND	92.1	% 85-119

QUALITY CONTROL RESULTS

Job Number.: 216411

Report Date.: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	V120102CCV	216470-1	5	12/17/2002	1343

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	24.181	23.912	20.000000	4.188	100.0 1.1	% 79-115 R 20
Ethylbenzene	86.830	85.816	20.000000	68.706	90.6 1.2	% 83-115 R 20
tert-Butyl Methyl Ether (MTBE)	288.290	286.494	100.000000	196.326	92.0 0.6	% 85-115 R 20
Toluene	20.415	20.259	20.000000	ND	102.1 0.8	% 85-115 R 20
Xylenes (total)	66.799	66.023	60.000000	7.299	99.2 1.2	% 85-117 R 20
m&p-Xylenes	43.965	43.454	40.000000	4.174	99.5 1.2	% 82-116 R 20
o-Xylene	22.834	22.569	20.000000	3.125	98.5 1.2	% 85-119 R 20

MSD	Matrix Spike Duplicate	V120102CCV	216424-9		12/18/2002	0505
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	20.894	19.287	20.000000	ND	104.5 8.0	% 79-115 R 20
Ethylbenzene	18.865	18.994	20.000000	ND	94.3 0.7	% 83-115 R 20
tert-Butyl Methyl Ether (MTBE)	92.612	94.029	100.000000	ND	92.6 1.5	% 85-115 R 20
Toluene	18.657	18.740	20.000000	ND	93.3 0.4	% 85-115 R 20
Xylenes (total)	55.197	55.605	60.000000	ND	92.0 0.7	% 85-117 R 20
m&p-Xylenes	36.935	37.184	40.000000	ND	92.3 0.7	% 82-116 R 20
o-Xylene	18.261	18.421	20.000000	ND	91.3 0.9	% 85-119 R 20

SB	Spiked Blank	V120102SBW			12/17/2002	0942
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.506		20.000000		97.5	% 79-115
Ethylbenzene	19.690		20.000000		98.5	% 83-115
tert-Butyl Methyl Ether (MTBE)	101.038		100.000000		101.0	% 85-115
Toluene	20.137		20.000000		100.7	% 85-115
Xylenes (total)	41.011		40.000000		102.5	% 85-117
m&p-Xylenes	20.114		20.000000		100.6	% 82-116
o-Xylene	20.897		20.000000		104.5	% 85-119

QUALITY CONTROL RESULTS

Job Number.: 216411

Report Date.: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
SB	Spiked Blank	V120102SBW			12/17/2002	2344

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.282		20.000000		96.4	% 79-115
Ethylbenzene	19.409		20.000000		97.0	% 83-115
tert-Butyl Methyl Ether (MTBE)	100.426		100.000000		100.4	% 85-115
Toluene	19.733		20.000000		98.7	% 85-115
Xylenes (total)	40.534		40.000000		101.3	% 85-117
m&p-Xylenes	19.833		20.000000		99.2	% 82-116
o-Xylene	20.701		20.000000		103.5	% 85-119

Test Method.....: SW846 8015B

Units.....: mg/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 65550

CCV	Continuing Calibration Verification	BX102502B			12/23/2002	0903
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	237.389		0.000000		95.0	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/23/2002	1332
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	242.967		0.000000		97.2	% 85.0-115.0

LCS	Laboratory Control Sample	BXS121902D	65550-1		12/23/2002	0957
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	239.076		0.000000		95.6	% 78-140

MB	Method Blank		65550-1		12/23/2002	1102
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	3.67803					

MS	Matrix Spike	BX102502B	246344-1		12/23/2002	1242
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	244.156		0.000000	ND	97.7	% 70-130

QUALITY CONTROL RESULTS

Job Number.: 216411

Report Date.: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	BX102502B	246344-1		12/23/2002	1307

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	246.833	244.156	0.000000	ND	98.7 1.1	% 70-130 R 20

Test Method.....: SW846 8015B

Units.....: mg/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 65739

LCS	Laboratory Control Sample	GC121702A	65453		12/26/2002	1638
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	785.58		1000.000000		78.6	% 69-118

MB	Method Blank	GC121702	65453		12/26/2002	1638
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	ND					

SB	Spiked Blank	GC121702B	65453		12/26/2002	1722
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	691.90		1000.000000	ND	69	% 70.0-130.0

SBD	Spiked Blank Duplicate	GC121702B	65453		12/26/2002	1722
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	817.19	691.90	1000.000000	ND	81.7 16.6	% 70-130 R 20

SURROGATE RECOVERIES REPORT

Job Number.: 216411

Report Date.: 01/03/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 65550

Analyst.....: *he

Equipment Code: BTEX07

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV	1	47.6685	50.00	95.3	70-139		12/23/2002	0903
65550-1		LCS	1	50.4594	50.00	100.9	70-139		12/23/2002	0957
65550-1		MB	1	49.3977	50.00	98.8	70-139		12/23/2002	1102
246344-1			1	49.6038	50.00	99.2	70-139		12/23/2002	1217
246344-1		MS	1	51.6425	50.00	103.3	70-139		12/23/2002	1242
246344-1		MSD	1	51.0899	50.00	102.2	70-139		12/23/2002	1307
		CCV	1	49.2853	50.00	98.6	70-139		12/23/2002	1332

Surrogate	Units
ifluorotoluene	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV	1	48.2554		96.5	68-143		12/23/2002	0903
65550-1		LCS	1	44.6790		89.4	68-143		12/23/2002	0957
65550-1		MB	1	44.6685		89.3	68-143		12/23/2002	1102
246344-1			1	45.6215		91.2	68-143		12/23/2002	1217
246344-1		MS	1	49.3610		98.7	68-143		12/23/2002	1242
246344-1		MSD	1	49.5968		99.2	68-143		12/23/2002	1307
		CCV	1	48.7801		97.6	68-143		12/23/2002	1332

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 65739

Analyst.....: *he

Equipment Code: EXTGC01

Surrogate	Units
	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
65453--21		MB	1.000000	45.03	50.000	90.1	60-140		12/26/2002	1638
65453--21		LCS	1.000000	46.10	50.000	92.2	60-140		12/26/2002	1638
65453--21		SBD	1.000000	43.95	50.000	87.9	60-140		12/26/2002	1722
65453--21		SB	1.000000	37.27	50.000	74.5	60-140		12/26/2002	1722
246344-1			1.000000	39.39	50.000	78.8	60-140		12/26/2002	1805

SURROGATE RECOVERIES REPORT

Job Number.: 216411

Report Date.: 01/03/2003

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Volatile Organics - Aromatics
Batch.....: 75846Method Code.....: 8020
Analyst.....: rec

Equipment Code:

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		21.181	20.00000	105.9	77-115		12/15/2002	1039
		SB		19.918	20.00000	99.6	77-115		12/15/2002	1118
		MB		19.226	20.00000	96.1	77-115		12/15/2002	1157
216410-4			10	20.139	20.00000	100.7	77-115		12/15/2002	1236
216410-4		MS	10	20.002	20.00000	100.0	77-115		12/15/2002	1315
216410-4		MSD	10	19.910	20.00000	99.5	77-115		12/15/2002	1354
216410-1			20	18.944	20.00000	94.7	77-115		12/15/2002	1433
216410-2				18.577	20.00000	92.9	77-115		12/15/2002	1511
216410-3				18.186	20.00000	90.9	77-115		12/15/2002	1550
216410-5				18.822	20.00000	94.1	77-115		12/15/2002	1629
216410-6			20	19.597	20.00000	98.0	77-115		12/15/2002	1708
216410-7				17.945	20.00000	89.7	77-115		12/15/2002	1747
216411-2				18.065	20.00000	90.3	77-115		12/15/2002	1826
216412-1				18.592	20.00000	93.0	77-115		12/15/2002	1905

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		20.231	20.00000	101.2	68-118		12/15/2002	1039
		SB		20.757	20.00000	103.8	68-118		12/15/2002	1118
		MB		19.095	20.00000	95.5	68-118		12/15/2002	1157
216410-4			10	21.696	20.00000	108.5	68-118		12/15/2002	1236
216410-4		MS	10	21.382	20.00000	106.9	68-118		12/15/2002	1315
216410-4		MSD	10	21.060	20.00000	105.3	68-118		12/15/2002	1354
216410-1			20	18.734	20.00000	93.7	68-118		12/15/2002	1433
216410-2				19.314	20.00000	96.6	68-118		12/15/2002	1511
216410-3				17.585	20.00000	87.9	68-118		12/15/2002	1550
216410-5				18.065	20.00000	90.3	68-118		12/15/2002	1629
216410-6			20	19.471	20.00000	97.4	68-118		12/15/2002	1708
216410-7				16.718	20.00000	83.6	68-118		12/15/2002	1747
216411-2				17.709	20.00000	88.5	68-118		12/15/2002	1826
216412-1				18.673	20.00000	93.4	68-118		12/15/2002	1905

SURROGATE RECOVERIES REPORT

Job Number.: 216411

Report Date.: 01/03/2003

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Volatile Organics - Aromatics
Batch.....: 75923Method Code.....: 8020
Analyst.....: rec

Equipment Code:

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		18.630	20.00000	93.2	77-115		12/17/2002	0902
		SB		18.574	20.00000	92.9	77-115		12/17/2002	0942
		MB		18.183	20.00000	90.9	77-115		12/17/2002	1022
216388-46				18.146	20.00000	90.7	77-115		12/17/2002	1102
216411-5				18.127	20.00000	90.6	77-115		12/17/2002	1142
216470-1			5	18.705	20.00000	93.5	77-115		12/17/2002	1222
216470-1		MS	5	18.767	20.00000	93.8	77-115		12/17/2002	1303
216470-1		MSD	5	18.833	20.00000	94.2	77-115		12/17/2002	1343
216471-1			10	18.613	20.00000	93.1	77-115		12/17/2002	1423
216471-2				18.078	20.00000	90.4	77-115		12/17/2002	1503
216471-3				18.262	20.00000	91.3	77-115		12/17/2002	1543
471-4				19.506	20.00000	97.5	77-115		12/17/2002	1623
474-1			2	18.909	20.00000	94.5	77-115		12/17/2002	1703
216474-2			20	18.846	20.00000	94.2	77-115		12/17/2002	1743
216395-1			40	18.712	20.00000	93.6	77-115		12/17/2002	1823
216395-2			50	19.084	20.00000	95.4	77-115		12/17/2002	1903
216395-3			40	18.601	20.00000	93.0	77-115		12/17/2002	1943
216395-4			100	18.760	20.00000	93.8	77-115		12/17/2002	2023
216395-5				19.028	20.00000	95.1	77-115		12/17/2002	2104
216395-6				18.004	20.00000	90.0	77-115		12/17/2002	2144
216395-7			40	18.385	20.00000	91.9	77-115		12/17/2002	2224
		CCV		18.757	20.00000	93.8	77-115		12/17/2002	2304
		SB		18.829	20.00000	94.1	77-115		12/17/2002	2344
		MB		18.090	20.00000	90.5	77-115		12/18/2002	0024
216481-2				18.179	20.00000	90.9	77-115		12/18/2002	0104
216481-1				20.030	20.00000	100.2	77-115		12/18/2002	0144
216482-1				17.303	20.00000	86.5	77-115		12/18/2002	0224
216482-5				17.502	20.00000	87.5	77-115		12/18/2002	0304
216424-9				18.641	20.00000	93.2	77-115		12/18/2002	0344
216424-9		MS		18.759	20.00000	93.8	77-115		12/18/2002	0424
216424-9		MSD		18.859	20.00000	94.3	77-115		12/18/2002	0505
216424-10				17.968	20.00000	89.8	77-115		12/18/2002	0545
216424-11				20.115	20.00000	100.6	77-115		12/18/2002	0625
216424-12			200	18.816	20.00000	94.1	77-115		12/18/2002	0705
216424-13				18.377	20.00000	91.9	77-115		12/18/2002	0745
216424-14				18.119	20.00000	90.6	77-115		12/18/2002	0825

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		18.950	20.00000	94.8	68-118		12/17/2002	0902
		SB		18.892	20.00000	94.5	68-118		12/17/2002	0942
		MB		18.209	20.00000	91.0	68-118		12/17/2002	1022

SURROGATE RECOVERIES REPORT

Job Number.: 216411

Report Date.: 01/03/2003

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
216388-46				18.381	20.00000	91.9	68-118		12/17/2002	1102
216411-5				18.364	20.00000	91.8	68-118		12/17/2002	1142
216470-1			5	19.887	20.00000	99.4	68-118		12/17/2002	1222
216470-1		MS	5	19.628	20.00000	98.1	68-118		12/17/2002	1303
216470-1		MSD	5	19.583	20.00000	97.9	68-118		12/17/2002	1343
216471-1			10	18.679	20.00000	93.4	68-118		12/17/2002	1423
216471-2				18.075	20.00000	90.4	68-118		12/17/2002	1503
216471-3				18.205	20.00000	91.0	68-118		12/17/2002	1543
216471-4				19.549	20.00000	97.7	68-118		12/17/2002	1623
216474-1			2	19.456	20.00000	97.3	68-118		12/17/2002	1703
216474-2			20	19.026	20.00000	95.1	68-118		12/17/2002	1743
216395-1			40	19.709	20.00000	98.5	68-118		12/17/2002	1823
216395-2			50	19.871	20.00000	99.4	68-118		12/17/2002	1903
216395-3			40	19.437	20.00000	97.2	68-118		12/17/2002	1943
216395-4			100	19.129	20.00000	95.6	68-118		12/17/2002	2023
395-5				19.371	20.00000	96.9	68-118		12/17/2002	2104
395-6				17.976	20.00000	89.9	68-118		12/17/2002	2144
216395-7			40	18.965	20.00000	94.8	68-118		12/17/2002	2224
		CCV		18.990	20.00000	95.0	68-118		12/17/2002	2304
		SB		19.012	20.00000	95.1	68-118		12/17/2002	2344
		MB		18.256	20.00000	91.3	68-118		12/18/2002	0024
216481-2				18.210	20.00000	91.0	68-118		12/18/2002	0104
216481-1				23.778	20.00000	118.9	68-118	X	12/18/2002	0144
216482-1				17.548	20.00000	87.7	68-118		12/18/2002	0224
216482-5				17.936	20.00000	89.7	68-118		12/18/2002	0304
216424-9				18.159	20.00000	90.8	68-118		12/18/2002	0344
216424-9		MS		19.152	20.00000	95.8	68-118		12/18/2002	0424
216424-9		MSD		19.374	20.00000	96.9	68-118		12/18/2002	0505
216424-10				18.290	20.00000	91.5	68-118		12/18/2002	0545
216424-11				20.771	20.00000	103.9	68-118		12/18/2002	0625
216424-12			200	18.487	20.00000	92.4	68-118		12/18/2002	0705
216424-13				17.847	20.00000	89.2	68-118		12/18/2002	0745
216424-14				18.087	20.00000	90.4	68-118		12/18/2002	0825

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 01/03/2003

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 01/03/2003

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx
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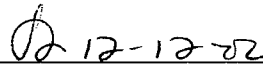
EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- ^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



rpjsckl	Job Sample Receipt Checklist Report		V2
Job Number.: 216411 Location.: 57203 Check List Number.: 1 Description.: Customer Job ID.....: Job Check List Date.: Project Number.: 98000024 Project Description.: MT000700 Texaco-Report in ppm Customer.....: ARCADIS / G&M Contact.: Steve Tischer Date of the Report.: 12/12/2002 Project Manager.....: crs			
Questions ?	(Y/N) Comments		
How did samples arrive?.....	Y	FED EX	
Chain-of-Custody Present?.....	Y		
Custody seal on shipping container?.....	Y		
...If "yes", custody seal intact?.....	Y		
Custody seals on sample containers?.....	N		
...If "yes", custody seal intact?.....			
Samples chilled?.....	Y		
Temperature blank in cooler?.....	Y	0.0 DEGREES C	
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y		
Samples received intact (good condition)?.....	Y		
Volatile samples acceptable? (no headspace).....	Y		
Correct containers used?.....	Y		
Adequate sample volume provided?.....	Y		
Samples preserved correctly?.....	Y		
Samples received within holding-time?.....	Y		
Agreement between COC and sample labels?.....	Y		
Additional.....			
Comments.....			
Sample Custodian Signature.....			

ANALYTICAL REPORT

JOB NUMBER: 216572

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

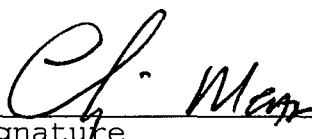
Attention: Steve Tischer

Date: 01/09/2003

RECEIVED

JAN 14 2003

ARCADIS Geraghty & Miller


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com


Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673
FAX...: 361/289-2471

CASE NARRATIVE**Job Number 216572****January 9, 2003****Hexavalent Chromium Analysis**

Sample 216572-1 was analyzed for dissolved hexavalent chromium using EPA Method 7197. The method required holding time for this analysis is 24 hours from collection to analysis. This sample was received at the laboratory after the holding time had expired. Results from expired samples should be flagged and used at the client's discretion.

Please call if you have any questions regarding this report or if we can be of further assistance.



Anh Tran
QA Assistant

SAMPLE INFORMATION

Date: 01/09/2003

Job Number.: 216572
Customer...: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216572-1	MW-043	Water	12/19/2002	09:55	12/20/2002	12:10
216572-2	TRIP BLANK	Water	12/19/2002	00:00	12/20/2002	12:10

Job Number: 216572

LABORATORY TEST RESULTS

Date: 01/09/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW-043
Date Sampled.....: 12/19/2002
Time Sampled.....: 09:55
Sample Matrix.....: Water

Laboratory Sample ID: 216572-1
Date Received.....: 12/20/2002
Time Received.....: 12:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.60	0.05	mg/L	12/20/02	edr
EPA 300.0	Chloride	820	50	mg/L	12/23/02	cnw
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	12/30/02	rjt
	Ethylbenzene	ND	0.002	mg/L	12/30/02	rjt
	Toluene	ND	0.002	mg/L	12/30/02	rjt
	Xylenes (total)	ND	0.002	mg/L	12/30/02	rjt
SW-846 3510C	Extraction (Sep. Funnel) SVOC					
	Separatory Funnel Liq/Liq Extraction	Complete			12/30/02	*he
846 8015B	Total Extractable Petroleum Hydrocarbons					
	TEPH - Diesel Range Organics	0.44	0.25	mg/L	12/31/02	*he
	TEPH - Gasoline Range Organics	ND	0.05	mg/L	12/30/02	*he

LABORATORY TEST RESULTS

Job Number: 216572

Date: 01/09/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: TRIP BLANK
Date Sampled.....: 12/19/2002
Time Sampled.....: 00:00
Sample Matrix.....: Water

Laboratory Sample ID: 216572-2
Date Received.....: 12/20/2002
Time Received.....: 12:10

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	12/30/02	rjt
	Ethylbenzene	ND	0.002	mg/L	12/30/02	rjt
	Toluene	ND	0.002	mg/L	12/30/02	rjt
	Xylenes (total)	ND	0.002	mg/L	12/30/02	rjt

Job Number.: 216572

QUALITY CONTROL RESULTS

Report Date.: 01/09/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 7197
 Method Description.: Chromium, Hexavalent
 Parameter.....: Hexavalent Chromium

Batch.....: 76060
 Units.....: mg/L

Analyst....: edr
 Test Code.: CR6

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M122002C	0.0243		0.02500		97.2	%	90-110	12/20/2002	1409
ICB			0.0008							12/20/2002	1411
LCS		M122002R	0.0441		0.05000		88.2	%	75-125	12/20/2002	1414
MB			0.0012							12/20/2002	1418
MS	216573-2	M122002R	0.0633		0.05000	0.0203	86.0	%	75-125	12/20/2002	1436
MSD	216573-2	M122002R	0.0584	0.0633	0.05000	0.0203	76.2	%	75-125	12/20/2002	1441
							8.1	R 20			
CCV		M122002C	0.0235		0.02500		94.0	%	80-120	12/20/2002	1445
CCB			0.0029							12/20/2002	1448
CCV		M122002C	0.0250		0.02500		100.0	%	80-120	12/20/2002	1455
CCB			0.0038							12/20/2002	1457
CCV		M122002C	0.0275		0.02500		110.0	%	80-120	12/20/2002	1504
CCB			0.0037							12/20/2002	1506

Test Method.....: EPA 300.0
 Method Description.: Ion Chromatography Analysis
 Parameter.....: Chloride

Batch.....: 76116
 Units.....: mg/L

Analyst....: cnw
 Test Code.: CHL

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		122302	0.0546							12/23/2002	1040
ICV		IC21223F	10.1021		10.00		101.0	%	90-110	12/23/2002	1049
MB		122302	0.0579							12/23/2002	1058
LCS		IC21223D	10.0282		10.00		100.3	%	90-110	12/23/2002	1107
CCB		122302	0.0077							12/23/2002	1304
CCV		IC21223F	10.1292		10.00		101.3	%	90-110	12/23/2002	1313
MS	216536-2	IC21223E	21.2482		10.00	11.9022	93.5	%	75-125	12/23/2002	1340
MSD	216536-2	IC21223E	21.2269	21.2482	10.00	11.9022	93.2	%	75-125	12/23/2002	1349
							0.1	R 20			
CCB		122302	-0.0070							12/23/2002	1510
CCV		IC21223F	10.0299		10.00		100.3	%	90-110	12/23/2002	1519
MB		122302	0.0048							12/23/2002	1528
LCS		IC21223D	9.9531		10.00		99.5	%	90-110	12/23/2002	1537
MS	216541-8	IC21223E	20.0619		10.00	10.8205	92.4	%	75-125	12/23/2002	1604
MSD	216541-8	IC21223E	20.1567	20.0619	10.00	10.8205	93.4	%	75-125	12/23/2002	1613
							0.5	R 20			
CCB		122302	-0.0011							12/23/2002	1734
CCV		IC21223F	10.0460		10.00		100.5	%	90-110	12/23/2002	1743
MS	216538-4	IC21223E	16.9031		10.00	7.0535	98.5	%	75-125	12/23/2002	1828
MSD	216538-4	IC21223E	16.7668	16.9031	10.00	7.0535	97.1	%	75-125	12/23/2002	1837
							0.8	R 20			
CCB		122302	0.0000							12/23/2002	1931
CCV		IC21223F	10.0917		10.00		100.9	%	90-110	12/23/2002	1940

QUALITY CONTROL RESULTS

Job Number.: 216572

Report Date.: 01/09/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B

Units.....: ug/L

Analyst....: rjt

Method Description.: Volatile Organics - Aromatics

Batch.....: 76237

CCV	Continuing Calibration Verification	V120102CCV			12/30/2002	0914
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	18.58		20.000000		92.9	% 85-115
Ethylbenzene	18.76		20.000000		93.8	% 85-115
tert-Butyl Methyl Ether (MTBE)	86.50		100.000000		86.5	% 85-115
Toluene	18.27		20.000000		91.3	% 85-115
Xylenes (total)	56.10		60.000000		93.5	% 85-115
m&p-Xylenes	37.48		40.000000		93.7	% 85-115
o-Xylene	18.62		20.000000		93.1	% 85-115

MB	Method Blank	123002			12/30/2002	1025
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	ND					
Ethylbenzene	ND					
tert-Butyl Methyl Ether (MTBE)	ND					
Toluene	ND					
Xylenes (total)	ND					
m&p-Xylenes	ND					
o-Xylene	ND					

MS	Matrix Spike	V120102CCV	216561-7	40	12/30/2002	1547
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	77.15		20.000000	59.06	90.5	% 79-115
Ethylbenzene	24.89		20.000000	6.32	92.8	% 83-115
tert-Butyl Methyl Ether (MTBE)	233.82		100.000000	148.18	85.6	% 85-115
Toluene	20.17		20.000000	2.17	90.0	% 85-115
Xylenes (total)	61.61		60.000000	6.16	92.4	% 85-117
m&p-Xylenes	42.74		40.000000	6.16	91.5	% 82-116
o-Xylene	18.87		20.000000	ND	94.3	% 85-119

MSD	Matrix Spike Duplicate	V120102CCV	216561-7	40	12/30/2002	1624
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	76.10	77.15	20.000000	59.06	85.2	% 79-115
					1.4	R 20
Ethylbenzene	24.92	24.89	20.000000	6.32	93.0	% 83-115
					0.1	R 20
tert-Butyl Methyl Ether (MTBE)	230.05	233.82	100.000000	148.18	81.9	% 85-115
					1.6	R 20
Toluene	20.14	20.17	20.000000	2.17	89.8	% 85-115
					0.1	R 20
Xylenes (total)	61.88	61.61	60.000000	6.16	92.9	% 85-117
					0.4	R 20
m&p-Xylenes	42.91	42.74	40.000000	6.16	91.9	% 82-116
					0.4	R 20

Page 5 * % = REC, R = RPD, A = ABS Diff., D = % Diff.

QUALITY CONTROL RESULTS

Job Number.: 216572

Report Date.: 01/09/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	V120102CCV	216561-7	40	12/30/2002	1624

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
o-Xylene	18.97	18.87	20.000000	ND	94.8 0.5	% 85-119 R 20

SB	Spiked Blank	V120102SBW			12/30/2002	0950
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.69		20.000000		98.5	% 79-115
Ethylbenzene	19.23		20.000000		96.2	% 83-115
tert-Butyl Methyl Ether (MTBE)	98.04		100.000000		98.0	% 85-115
Toluene	19.28		20.000000		96.4	% 85-115
Xylenes (total)	39.83		40.000000		99.6	% 85-117
m&p-Xylenes	19.56		20.000000		97.8	% 82-116
o-Xylene	20.27		20.000000		101.3	% 85-119

Test Method.....: SW846 8015B

Units.....: mg/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 65976

LCS	Laboratory Control Sample	GC121702A	65761		12/31/2002	1457
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	809.40		1000.000000		80.9	% 69-118

MB	Method Blank	GC121702	65761		12/31/2002	1150
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	ND		2000			

SB	Spiked Blank	GC121702B	65761		12/31/2002	1457
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	897.29		1000.000000	ND	90	% 70.0-130.0

SBD	Spiked Blank Duplicate	GC121702	65761		12/31/2002	1540
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	1004.38	897.29	1000.000000	ND	100.4 11.3	% 70-130 R 20

QUALITY CONTROL RESULTS

Job Number.: 216572

Report Date.: 01/09/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW846 8015B

Units.....: ug/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 66209

CCV	Continuing Calibration Verification	BX102502B			12/30/2002	0839
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	257.470		250.000000		103.0	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/30/2002	1443
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	242.258		250.000000		96.9	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/30/2002	1925
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	262.711		250.000000		105.1	% 85.0-115.0

LCS	Laboratory Control Sample	BXS121702F	66209-1		12/30/2002	0916
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	272.022		250.000000		108.8	% 78-140

MB	Method Blank		66209-1		12/30/2002	1003
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	3.15715					

MS	Matrix Spike	BX102502B	246700-1		12/30/2002	1355
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	233.331		250.000000	ND	93.3	% 70-130

MSD	Matrix Spike Duplicate	BX102502B	246700-1		12/30/2002	1419
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	220.325	233.331	250.000000	ND	88.1 5.7	% 70-130 R 20

SURROGATE RECOVERIES REPORT

Job Number.: 216572

Report Date.: 01/09/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 65976

Analyst.....: *he

Equipment Code: EXTGC01

Surrogate	Units
	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
65761--21		MB	1.000000	39.08	50.000	78.2	60-140		12/31/2002	1150
65761--21		LCS	1.000000	45.14	50.000	90.3	60-140		12/31/2002	1457
65761--21		SB	1.000000	53.48	50.000	107.0	60-140		12/31/2002	1457
246700-1			1.000000	43.51	50.000	87.0	60-140		12/31/2002	1540
65761--21		SBD	1.000000	49.18	50.000	98.4	60-140		12/31/2002	1540
246700-3			1.000000	50.73	50.000	101.5	60-140		12/31/2002	1624
246700-2			1.000000	49.78	50.000	99.6	60-140		12/31/2002	1624
246700-4			1.000000	49.57	50.000	99.1	60-140		12/31/2002	1707
246700-5			1.000000	54.75	50.000	109.5	60-140		12/31/2002	1707

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 66209

Analyst.....: *he

Equipment Code: BTEX04

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV	1	47.5563	50.00	95.1	70-139		12/30/2002	0839
66209-1		LCS	1	49.1629	50.00	98.3	70-139		12/30/2002	0916
66209-1		MB	1	48.7569	50.00	97.5	70-139		12/30/2002	1003
246700-1			1	49.2479	50.00	98.5	70-139		12/30/2002	1051
246700-2			1	49.9528	50.00	99.9	70-139		12/30/2002	1115
246700-3			1	48.8015	50.00	97.6	70-139		12/30/2002	1220
246700-4			1	49.7820	50.00	99.6	70-139		12/30/2002	1243
246700-5			1	51.2528	50.00	102.5	70-139		12/30/2002	1307
246700-1		MS	1	48.9570	50.00	97.9	70-139		12/30/2002	1355
246700-1		MSD	1	47.4418	50.00	94.9	70-139		12/30/2002	1419
		CCV	1	49.0223	50.00	98.0	70-139		12/30/2002	1443
		CCV	1	49.5899	50.00	99.2	70-139		12/30/2002	1925

Surrogate	Units
Trifluorotoluene	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV	1	55.6360		111.3	68-143		12/30/2002	0839
66209-1		LCS	1	55.8773		111.8	68-143		12/30/2002	0916
209-1		MB	1	43.4659		86.9	68-143		12/30/2002	1003
700-1			1	41.9690		83.9	68-143		12/30/2002	1051
246700-2			1	44.1541		88.3	68-143		12/30/2002	1115

SURROGATE RECOVERIES REPORT

Job Number.: 216572

Report Date.: 01/09/2003

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Fischer

Surrogate	Units
Trifluorotoluene	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
246700-3			1	52.8878		105.8	68-143		12/30/2002	1220
246700-4			1	52.1623		104.3	68-143		12/30/2002	1243
246700-5			1	52.0014		104.0	68-143		12/30/2002	1307
246700-1		MS	1	45.0782		90.2	68-143		12/30/2002	1355
246700-1		MSD	1	44.8335		89.7	68-143		12/30/2002	1419
		CCV	1	55.8787		111.8	68-143		12/30/2002	1443
		CCV	1	54.8040		109.6	68-143		12/30/2002	1925

Method.....: Volatile Organics - Aromatics
 Batch.....: 76237

Method Code.....: 8020

Analyst.....: rjt

Equipment Code:

Surrogate	Units
(Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		19.52	20.00000	97.6	77-115		12/30/2002	0914
		SB		19.60	20.00000	98.0	77-115		12/30/2002	0950
		MB		18.85	20.00000	94.2	77-115		12/30/2002	1025
216561-5				19.07	20.00000	95.3	77-115		12/30/2002	1355
216561-6				19.25	20.00000	96.2	77-115		12/30/2002	1432
216561-7			40	19.31	20.00000	96.5	77-115		12/30/2002	1509
216561-7		MS	40	19.53	20.00000	97.7	77-115		12/30/2002	1547
216561-7		MSD	40	19.46	20.00000	97.3	77-115		12/30/2002	1624
216568-1				18.88	20.00000	94.4	77-115		12/30/2002	1701
216568-2				18.65	20.00000	93.2	77-115		12/30/2002	1739
216568-3				18.92	20.00000	94.6	77-115		12/30/2002	1816
216569-1				18.69	20.00000	93.5	77-115		12/30/2002	1853
216569-3				18.79	20.00000	94.0	77-115		12/30/2002	1930
216572-1				18.76	20.00000	93.8	77-115		12/30/2002	2008
216572-2				18.73	20.00000	93.7	77-115		12/30/2002	2045
216624-1				18.85	20.00000	94.2	77-115		12/30/2002	2122
216624-2				18.76	20.00000	93.8	77-115		12/30/2002	2159
216644-1			40	19.41	20.00000	97.0	77-115		12/30/2002	2237
216644-2				19.04	20.00000	95.2	77-115		12/30/2002	2314
216645-1			40	19.86	20.00000	99.3	77-115		12/30/2002	2351

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		18.87	20.00000	94.3	68-118		12/30/2002	0914
		SB		18.93	20.00000	94.7	68-118		12/30/2002	0950
		MB		18.31	20.00000	91.5	68-118		12/30/2002	1025

SURROGATE RECOVERIES REPORT

Job Number.: 216572

Report Date.: 01/09/2003

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
216561-5				18.06	20.00000	90.3	68-118		12/30/2002	1355
216561-6				18.45	20.00000	92.2	68-118		12/30/2002	1432
216561-7			40	19.11	20.00000	95.5	68-118		12/30/2002	1509
216561-7		MS	40	19.34	20.00000	96.7	68-118		12/30/2002	1547
216561-7		MSD	40	19.06	20.00000	95.3	68-118		12/30/2002	1624
216568-1				17.80	20.00000	89.0	68-118		12/30/2002	1701
216568-2				17.64	20.00000	88.2	68-118		12/30/2002	1739
216568-3				17.87	20.00000	89.3	68-118		12/30/2002	1816
216569-1				17.90	20.00000	89.5	68-118		12/30/2002	1853
216569-3				17.90	20.00000	89.5	68-118		12/30/2002	1930
216572-1				18.10	20.00000	90.5	68-118		12/30/2002	2008
216572-2				17.85	20.00000	89.2	68-118		12/30/2002	2045
216624-1				18.03	20.00000	90.2	68-118		12/30/2002	2122
216624-2				18.00	20.00000	90.0	68-118		12/30/2002	2159
216644-1			40	19.04	20.00000	95.2	68-118		12/30/2002	2237
544-2				18.04	20.00000	90.2	68-118		12/30/2002	2314
5645-1			40	19.21	20.00000	96.0	68-118		12/30/2002	2351

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 01/09/2003

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 01/09/2003

DUPLICATE QC SAMPLE IDENTIFICATION

MD Method (Matrix) Duplicate
ED Extraction Duplicate
DD Digestion Duplicate
PDD Post Digestion Duplicate
PSD Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data *cp Non-STL Subcontract Lab *xx

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.

rpjsckl	Job Sample Receipt Checklist Report		V2
Job Number.: 216572	Location.: 57203	Check List Number.: 1	Description.:
Customer Job ID.....:	Job Check List Date.:		Date of the Report...: 12/20/2002
Project Number.: 98000024	Project Description.: MT000700 Texaco-Report in ppm		Project Manager.....: crs
Customer.....: ARCADIS / G&M	Contact.: Steve Tischer		

Questions ?	(Y/N) Comments
How did samples arrive?.....	FEDEX
Chain-of-Custody Present?.....	Y
Custody seal on shipping container?.....	Y
...If "yes", custody seal intact?.....	Y
Custody seals on sample containers?.....	N
...If "yes", custody seal intact?.....	
Samples chilled?.....	Y
Temperature blank in cooler?.....	Y 0.5 DEGREES C
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y
Samples received intact (good condition)?.....	Y
Volatile samples acceptable? (no headspace).....	Y
Correct containers used?.....	Y
Adequate sample volume provided?.....	Y
Samples preserved correctly?.....	Y
Samples received within holding-time?.....	N SX 1 RECEIVED PAST HOLDING TIME FOR HEX CHROME---CHARLIE SASSINE
Agreement between COC and sample labels?.....	Y NOTIFIED CLIENT
Additional.....	
Comments.....	
Sample Custodian Signature.....	QAB 12/20/02

RECEIVED

JAN 24 2003

ARCADIS Geraghty & Miller

ANALYTICAL REPORT

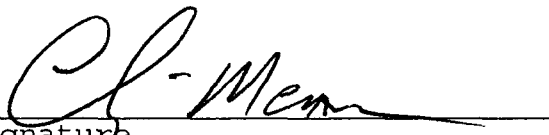
JOB NUMBER: 216692

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 01/16/2003


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

1/17/03
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 01/16/2003

Job Number.: 216692
Customer....: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216692-1	MW047	Water	01/02/2003	11:05	01/03/2003	11:00
216692-2	MW014	Water	01/02/2003	12:45	01/03/2003	11:00
216692-3	MW025	Water	01/02/2003	14:10	01/03/2003	11:00
216692-4	MW044	Water	01/02/2003	16:20	01/03/2003	11:00
216692-5	TRIP BLANK	Water	01/02/2003	00:00	01/03/2003	11:00

LABORATORY TEST RESULTS

Job Number: 216692

Date: 01/16/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW047
Date Sampled.....: 01/02/2003
Time Sampled.....: 11:05
Sample Matrix.....: Water

Laboratory Sample ID: 216692-1
Date Received.....: 01/03/2003
Time Received.....: 11:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.19	0.05	mg/L	01/03/03	edr
EPA 300.0	Chloride	580	50	mg/L	01/07/03	cnw
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	01/07/03	rh
	Ethylbenzene	ND	0.002	mg/L	01/07/03	rh
	Toluene	ND	0.002	mg/L	01/07/03	rh
	Xylenes (total)	ND	0.002	mg/L	01/07/03	rh
SW-846 3510C	Extraction (Sep. Funnel) SVOC					
	Separatory Funnel Liq/Liq Extraction	Complete			01/08/03	*he
SW-846 8015B	Total Extractable Petroleum Hydrocarbons					
	TEPH - Diesel Range Organics	ND	0.25	mg/L	01/13/03	*he
	TEPH - Gasoline Range Organics	ND	0.05	mg/L	01/08/03	*he

LABORATORY TEST RESULTS

Job Number: 216692

Date: 01/16/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW014
Date Sampled.....: 01/02/2003
Time Sampled.....: 12:45
Sample Matrix.....: Water

Laboratory Sample ID: 216692-2
Date Received.....: 01/03/2003
Time Received.....: 11:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.20	0.05	mg/L	01/03/03	edr
EPA 300.0	Chloride	1900	200	mg/L	01/07/03	cnw

LABORATORY TEST RESULTS

Job Number: 216692

Date: 01/16/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW025
Date Sampled.....: 01/02/2003
Time Sampled.....: 14:10
Sample Matrix.....: Water

Laboratory Sample ID: 216692-3
Date Received.....: 01/03/2003
Time Received.....: 11:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.006	0.005	mg/L	01/03/03	edr
EPA 300.0	Chloride	140	20	mg/L	01/08/03	cnw

LABORATORY TEST RESULTS

Job Number: 216692

Date: 01/16/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW044
Date Sampled.....: 01/02/2003
Time Sampled.....: 16:20
Sample Matrix.....: Water

Laboratory Sample ID: 216692-4
Date Received.....: 01/03/2003
Time Received.....: 11:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.16	0.05	mg/L	01/03/03	edr
EPA 300.0	Chloride	790	50	mg/L	01/07/03	cnw
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	01/07/03	rh
	Ethylbenzene	ND	0.002	mg/L	01/07/03	rh
	Toluene	ND	0.002	mg/L	01/07/03	rh
	Xylenes (total)	ND	0.002	mg/L	01/07/03	rh
SW-846 3510C	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			01/08/03	*he
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	0.42	0.25	mg/L	01/13/03	*he
	TEPH - Diesel Range Organics	ND	0.05	mg/L	01/08/03	*he
	TEPH - Gasoline Range Organics					

Job Number: 216692

LABORATORY TEST RESULTS

Date: 01/16/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: TRIP BLANK
Date Sampled.....: 01/02/2003
Time Sampled.....: 00:00
Sample Matrix.....: Water

Laboratory Sample ID: 216692-5
Date Received.....: 01/03/2003
Time Received.....: 11:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	01/08/03	rh
	Ethylbenzene	ND	0.002	mg/L	01/08/03	rh
	Toluene	ND	0.002	mg/L	01/08/03	rh
	Xylenes (total)	ND	0.002	mg/L	01/08/03	rh

QUALITY CONTROL RESULTS

Job Number.: 216692

Report Date.: 01/16/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 7197

Batch.....: 76306

Analyst....: edr

Method Description.: Chromium, Hexavalent

Units.....: mg/L

Test Code.: CR6

Parameter.....: Hexavalent Chromium

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M010303C	0.0248		0.02500		99.2	%	90-110	01/03/2003	1213
ICB			0.0006							01/03/2003	1214
LCS		M010303R	0.0484		0.05000		96.8	%	75-125	01/03/2003	1215
MB			-0.0012							01/03/2003	1217
MS	216691-1	M010303R	0.0547		0.05000	0.0016	106.2	%	75-125	01/03/2003	1219
MSD	216691-1	M010303R	0.0594	0.0547	0.05000	0.0016	115.6	%	75-125	01/03/2003	1221
							8.2	R 20			
CCV		M010303C	0.0230		0.02500		92.0	%	80-120	01/03/2003	1228
CCB			0.0001							01/03/2003	1229
CCV		M010303C	0.0244		0.02500		97.6	%	80-120	01/03/2003	1235
CCB			0.0019							01/03/2003	1236

Test Method.....: EPA 300.0

Batch.....: 76350

Analyst....: cnw

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Test Code.: CHL

Parameter.....: Chloride

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		010703	0.45002							01/07/2003	0843
ICV		IC30107F	10.7054		10.00		107.1	%	90-110	01/07/2003	0852
MB		010703	0.3483							01/07/2003	0901
LCS		IC30107D	9.1593		10.00		91.6	%	90-110	01/07/2003	0910
MS	216690-3	IC30107E	16.6382		10.00	6.3645	103.7	%	75-125	01/07/2003	1041
MSD	216690-3	IC30107E	16.2747	16.6382	10.00	6.3645	100.1	%	75-125	01/07/2003	1050
							2.2	R 20			
CCB		010703	0.3922							01/07/2003	1118
CCV		IC30107F	10.946		10.00		109.5	%	90-110	01/07/2003	1127
MB		010703	0.0000							01/07/2003	1136
LCS		IC30107D	10.7241		10.00		107.2	%	90-110	01/07/2003	1145
CCB		010703	0.4251							01/07/2003	1343
CCV		IC30107F	10.4562		10.00		104.6	%	90-110	01/07/2003	1353
MS	216662-2	IC30107E	11.0422		10.00	1.9472	91.0	%	75-125	01/07/2003	1420
MSD	216662-2	IC30107E	10.5827	11.0422	10.00	1.9472	86.4	%	75-125	01/07/2003	1429
							4.2	R 20			
CCB		010703	0.5065							01/07/2003	1551
CCV		IC30107F	9.8493		10.00		98.5	%	90-110	01/07/2003	1600

Test Method.....: EPA 300.0

Batch.....: 76385

Analyst....: cnw

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Test Code.: CHL

Parameter.....: Chloride

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		010803	0.0000							01/08/2003	0900
ICV		IC30108F	9.9260		10.00		99.3	%	90-110	01/08/2003	0907
MB		010803	0.0000							01/08/2003	0915
LCS		IC30108D	10.1487		10.00		101.5	%	90-110	01/08/2003	0922
MS	216661-2	IC30108E	22.4291		10.00	11.5289	109.0	%	75-125	01/08/2003	0958
MSD	216661-2	IC30108E	22.5382	22.4291	10.00	11.5289	110.1	%	75-125	01/08/2003	1005
							0.5	R 20			
CCB		010803	0.0000							01/08/2003	1056

QUALITY CONTROL RESULTS

Job Number.: 216692

Report Date.: 01/16/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: EPA 300.0

Batch.....: 76385

Analyst....: cnw

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Test Code.: CHL

Parameter.....: Chloride

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCV		IC30108F	9.7833		10.00		97.8	%	90-110	01/08/2003	1104
MS	216692-3	IC30108E	34.4084		10.00	27.7025	67.1	%	75-125	01/08/2003	1140
MSD	216692-3	IC30108E	34.4195	34.4084	10.00	27.7025	67.2	%	75-125	01/08/2003	1147
							0.0	R	20		
CCB		010803	0.0011							01/08/2003	1253
CCV		IC30108F	9.9941		10.00		99.9	%	90-110	01/08/2003	1300
MB		010803	0.0000							01/08/2003	1307
LCS		IC30108D	9.9243		10.00		99.2	%	90-110	01/08/2003	1315
MS	216728-1	IC30108E	21.4776		10.00	12.1522	93.3	%	75-125	01/08/2003	1344
MSD	216728-1	IC30108E	21.4687	21.4776	10.00	12.1522	93.2	%	75-125	01/08/2003	1351
							0.0	R	20		
CCB		010803	0.0165							01/08/2003	1449
CCV		IC30108F	9.9040		10.00		99.0	%	90-110	01/08/2003	1456
MS	216750-2	IC30108E	13.1305		10.00	3.0127	101.2	%	75-125	01/08/2003	1511
MSD	216750-2	IC30108E	13.0604	13.1305	10.00	3.0127	100.5	%	75-125	01/08/2003	1518
							0.5	R	20		
MS	216686-1	IC30108E	10.1123		10.00	0.0000	101.1	%	75-125	01/08/2003	1525
	216686-1	IC30108E	10.1784	10.1123	10.00	0.0000	101.8	%	75-125	01/08/2003	1533
							0.7	R	20		
MS	216692-3	IC30108E	17.4556		10.00	6.9062	105.5	%	75-125	01/08/2003	1547
MSD	216692-3	IC30108E	17.0324	17.4556	10.00	6.9062	101.3	%	75-125	01/08/2003	1555
							2.5	R	20		
CCB		010803	0.0000							01/08/2003	1653
CCV		IC30108F	9.7999		10.00		98.0	%	90-110	01/08/2003	1700

QUALITY CONTROL RESULTS

Job Number.: 216692

Report Date.: 01/16/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B

Units.....: ug/L

Analyst....: rh

Method Description.: Volatile Organics - Aromatics

Batch.....: 76412

CCV	Continuing Calibration Verification	V010203CCV			01/07/2003	1218
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	18.724		20.000000		93.6	%	85-115
Ethylbenzene	19.742		20.000000		98.7	%	85-115
tert-Butyl Methyl Ether (MTBE)	88.458		100.000000		88.5	%	85-115
Toluene	19.063		20.000000		95.3	%	85-115
Xylenes (total)	60.40		60.000000		100.7	%	85-115
m&p-Xylenes	40.523		40.000000		101.3	%	85-115
o-Xylene	19.881		20.000000		99.4	%	85-115

MB	Method Blank	010703			01/07/2003	1355
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Petroleum	ND						
Ethylbenzene	ND						
tert-Butyl Methyl Ether (MTBE)	ND						
Toluene	ND						
Xylenes (total)	ND						
m&p-Xylenes	ND						
o-Xylene	ND						

MS	Matrix Spike	V010203CCV	216702-1	100	01/07/2003	1532
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	21.763		20.000000	4.325	87.2	%	79-115
Ethylbenzene	25.613		20.000000	6.893	93.6	%	83-115
tert-Butyl Methyl Ether (MTBE)	355.431		100.000000	274.552	80.9	%	85-115
Toluene	17.930		20.000000	ND	89.7	%	85-115
Xylenes (total)	57.816		60.000000	ND	96.4	%	85-117
m&p-Xylenes	38.680		40.000000	ND	96.7	%	82-116
o-Xylene	19.136		20.000000	ND	95.7	%	85-119

MSD	Matrix Spike Duplicate	V010203CCV	216702-1	100	01/07/2003	1620
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	21.562	21.763	20.000000	4.325	86.2	%	79-115
					0.9	R	20
Ethylbenzene	25.493	25.613	20.000000	6.893	93.0	%	83-115
					0.5	R	20
tert-Butyl Methyl Ether (MTBE)	350.287	355.431	100.000000	274.552	75.7	%	85-115
					1.5	R	20
Toluene	17.778	17.930	20.000000	ND	88.9	%	85-115
					0.9	R	20
Xylenes (total)	57.687	57.816	60.000000	ND	96.1	%	85-117
					0.2	R	20
m&p-Xylenes	38.563	38.680	40.000000	ND	96.4	%	82-116
					0.3	R	20

Page 9 * % = REC, R = RPD, A = ABS Diff., D = % Diff.

Job Number.: 216692		QUALITY CONTROL RESULTS			Report Date.: 01/16/2003	
CUSTOMER: ARCADIS / G&M		PROJECT: MT000700.0004			ATTN: Steve Tischer	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

MSD	Matrix Spike Duplicate	V010203CCV	216702-1	100	01/07/2003	1620
-----	------------------------	------------	----------	-----	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
o-Xylene	19.124	19.136	20.000000	ND	95.6 0.1	% 85-119 R 20

SB	Spiked Blank	V010203SBW			01/07/2003	1306
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.685		20.000000		98.4	% 79-115
Ethylbenzene	19.673		20.000000		98.4	% 83-115
tert-Butyl Methyl Ether (MTBE)	96.693		100.000000		96.7	% 85-115
Toluene	19.829		20.000000		99.1	% 85-115
Xylenes (total)	41.68		40.000000		104.2	% 85-117
m&p-Xylenes	20.538		20.000000		102.7	% 82-116
o-Xylene	21.155		20.000000		105.8	% 85-119

st Method.....: SW846 8015B

Units.....: ug/L

Analyst....: *he

chod Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 66360

CCV	Continuing Calibration Verification	BX102502B			01/08/2003	1510
-----	-------------------------------------	-----------	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	224.009		250.000000		89.6	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			01/08/2003	1841
-----	-------------------------------------	-----------	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	214.224		250.000000		85.7	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			01/08/2003	1907
-----	-------------------------------------	-----------	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	219.082		250.000000		87.6	% 85.0-115.0

LCS	Laboratory Control Sample	BXS010803C	66360-1		01/08/2003	1544
-----	---------------------------	------------	---------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	250.139		250.000000		100.1	% 78-140

QUALITY CONTROL RESULTS

Job Number.: 216692

Report Date.: 01/16/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MB	Method Blank		66360-1		01/08/2003	1610

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	8.31919					

MS	Matrix Spike	BX102502B	247075-1		01/08/2003	1751
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	203.778		250.000000	ND	80.2	% 70-130

MSD	Matrix Spike Duplicate	BX102502B	247075-1		01/08/2003	1816
-----	------------------------	-----------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	209.798	203.778	250.000000	ND	82.6 2.9	% 70-130 R 20

st Method.....: SW846 8015B

Units.....: mg/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 66706

LCS	Laboratory Control Sample	GC121702A	66321		01/13/2003	1655
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	1050.12		1000.000000		105.0	% 69-118

MB	Method Blank	GC121702	66321		01/13/2003	1611
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	ND					

SB	Spiked Blank	GC121702B	66321		01/13/2003	1739
----	--------------	-----------	-------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	1101.21		1000.000000	ND	110	% 70.0-130.0

SBD	Spiked Blank Duplicate	GC121702B	66321		01/13/2003	1824
-----	------------------------	-----------	-------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	932.00	1101.21	1000.000000	ND	93.2 16.6	% 70-130 R 20

SURROGATE RECOVERIES REPORT

Job Number.: 216692

Report Date.: 01/16/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 66360

Analyst.....: *he

Equipment Code: BTEX07

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV	1	46.6851	50.00	93.4	70-139		01/08/2003	1510
66360-1		LCS	1	48.4624	50.00	96.9	70-139		01/08/2003	1544
66360-1		MB	1	49.1648	50.00	98.3	70-139		01/08/2003	1610
247075-1			1	49.3170	50.00	98.6	70-139		01/08/2003	1635
247075-2			1	50.4266	50.00	100.9	70-139		01/08/2003	1700
247075-1		MS	1	48.3408	50.00	96.7	70-139		01/08/2003	1751
247075-1		MSD	1	47.7826	50.00	95.6	70-139		01/08/2003	1816
		CCV	1	48.8907	50.00	97.8	70-139		01/08/2003	1841
		CCV	1	49.3711	50.00	98.7	70-139		01/08/2003	1907

Surrogate	Units
Trifluorotoluene	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV	1	48.9108		97.8	68-143		01/08/2003	1510
66360-1		LCS	1	44.5097		89.0	68-143		01/08/2003	1544
66360-1		MB	1	44.6101		89.2	68-143		01/08/2003	1610
247075-1			1	43.6201		87.2	68-143		01/08/2003	1635
247075-2			1	44.4050		88.8	68-143		01/08/2003	1700
247075-1		MS	1	42.5123		85.0	68-143		01/08/2003	1751
247075-1		MSD	1	40.5947		81.2	68-143		01/08/2003	1816
		CCV	1	45.5106		91.0	68-143		01/08/2003	1841
		CCV	1	46.3953		92.8	68-143		01/08/2003	1907

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 66706

Analyst.....: *he

Equipment Code: EXTGC01

Surrogate	Units
	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
66321--21		MB	1.000000	52.14	50.000	104.3	60-140		01/13/2003	1611
66321--21		LCS	1.000000	54.45	50.000	108.9	60-140		01/13/2003	1655
66321--21		SB	1.000000	58.60	50.000	117.2	60-140		01/13/2003	1739
66321--21		SBD	1.000000	49.10	50.000	98.2	60-140		01/13/2003	1824
247075-1			1.000000	50.46	50.000	100.9	60-140		01/13/2003	1910
247075-2			1.000000	55.80	50.000	111.6	60-140		01/13/2003	1955

SURROGATE RECOVERIES REPORT

Job Number.: 216692

Report Date.: 01/16/2003

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Volatile Organics - Aromatics
Batch.....: 76412Method Code.....: 8020
Analyst.....: rh

Equipment Code:

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		20.015	20.00000	100.1	77-115		01/07/2003	1218
		SB		19.983	20.00000	99.9	77-115		01/07/2003	1306
		MB		19.909	20.00000	99.5	77-115		01/07/2003	1355
216702-1			100	19.585	20.00000	97.9	77-115		01/07/2003	1443
216702-1		MS	100	19.911	20.00000	99.6	77-115		01/07/2003	1532
216702-1		MSD	100	19.944	20.00000	99.7	77-115		01/07/2003	1620
216702-2			200	19.803	20.00000	99.0	77-115		01/07/2003	1709
216702-3			100	19.840	20.00000	99.2	77-115		01/07/2003	1757
216702-4			200	19.769	20.00000	98.8	77-115		01/07/2003	1845
216702-5			100	19.997	20.00000	100.0	77-115		01/07/2003	1934
216688-1				19.991	20.00000	100.0	77-115		01/07/2003	2022
216688-3				20.023	20.00000	100.1	77-115		01/07/2003	2111
216688-4				20.052	20.00000	100.3	77-115		01/07/2003	2159
216692-1				20.075	20.00000	100.4	77-115		01/07/2003	2247
216692-4				20.056	20.00000	100.3	77-115		01/07/2003	2336
216692-5				20.226	20.00000	101.1	77-115		01/08/2003	0024
216695-1				20.230	20.00000	101.2	77-115		01/08/2003	0113
216720-5				20.005	20.00000	100.0	77-115		01/08/2003	0201
216702-2			10	17.581	20.00000	87.9	77-115		01/08/2003	0250
216702-3			10	19.623	20.00000	98.1	77-115		01/08/2003	0338

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		19.011	20.00000	95.1	68-118		01/07/2003	1218
		SB		18.794	20.00000	94.0	68-118		01/07/2003	1306
		MB		18.561	20.00000	92.8	68-118		01/07/2003	1355
216702-1			100	18.525	20.00000	92.6	68-118		01/07/2003	1443
216702-1		MS	100	18.724	20.00000	93.6	68-118		01/07/2003	1532
216702-1		MSD	100	18.606	20.00000	93.0	68-118		01/07/2003	1620
216702-2			200	18.006	20.00000	90.0	68-118		01/07/2003	1709
216702-3			100	18.079	20.00000	90.4	68-118		01/07/2003	1757
216702-4			200	17.918	20.00000	89.6	68-118		01/07/2003	1845
216702-5			100	18.296	20.00000	91.5	68-118		01/07/2003	1934
216688-1				18.287	20.00000	91.4	68-118		01/07/2003	2022
216688-3				18.287	20.00000	91.4	68-118		01/07/2003	2111
216688-4				18.401	20.00000	92.0	68-118		01/07/2003	2159
216692-1				18.457	20.00000	92.3	68-118		01/07/2003	2247
216692-4				18.449	20.00000	92.2	68-118		01/07/2003	2336
216692-5				18.474	20.00000	92.4	68-118		01/08/2003	0024
216695-1				20.598	20.00000	103.0	68-118		01/08/2003	0113
216720-5				18.244	20.00000	91.2	68-118		01/08/2003	0201
216702-2			10	19.144	20.00000	95.7	68-118		01/08/2003	0250

SURROGATE RECOVERIES REPORT

Job Number.: 216692

Report Date.: 01/16/2003

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
216702-3			10	17.302	20.00000	86.5	68-118		01/08/2003	0338

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 01/16/2003

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 01/16/2003

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx
----------------------	-----	-------------------------	-----

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- ^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.

Laboratory Task Order No./P.O. No. 6692

CHAIN-OF-CUSTODY RECORD

Page 1 of 1Project Number/Name MT000700.0004Project Location Chevron/Texaco N. EuniceLaboratory STL-CCProject Manager Hank McConnellSampler(s)/Affiliation RS/ARCADIS

ANALYSIS / METHOD / SIZE					
Hex Cr, Dissolved*	NEAT	BTEX	(3) 40-ml vial	HCL	
(1) 1-liter plastic					
TPH (GRO)	(3) 40-ml vial	HCL			
TPH (DRO)	NEAT				
(2) amber liter					
Chlorides	(1) 1-liter plastic	NEAT			

Sample ID/Location MW 047 Date/Time 2-JAN-2003 1105Matrix L Sampled XXXXXXTime 1245Time 1410Time 1620

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Remarks

Total

10

2

2

10

1

1

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/
Containers 16Relinquished by: [Signature] Organization: ARCADIS Date: 1/2/03 Time: 1830 Seal Intact? Yes No N/AReceived by: FedEx Organization: [Signature] Date: 1/3/03 Time: 1100 Seal Intact? Yes No N/ARelinquished by: FedEx Organization: [Signature] Date: 1/3/03 Time: 1100 Seal Intact? Yes No N/AReceived by: Chevron/Texaco Organization: [Signature] Date: 1/3/03 Time: 1100 Seal Intact? Yes No N/ASpecial Instructions/Remarks: * Hex Cr was field filtered*Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ OtherDelivery Method: FedEx # 827162832913Delivery Method: Fed ExDelivery Method: SpecifyDelivery Method: AG 05-12/01

.pjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216692	Location.: 57203	Check List Number.: 1	Description.:	
Customer Job ID.....:	Job Check List Date.:		Date of the Report...: 01/03/2003	
Project Number.: 98000024	Project Description.: MT000700 Texaco-Report in ppm		Project Manager.....: crs	
Customer.....: ARCADIS / G&M	Contact.: Steve Tischer			
Questions ?	(Y/N) Comments			
How did samples arrive?.....	Y FED EX			
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	Y			
Temperature blank in cooler?.....	Y 0.5 DEGREES C			
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....	Y			
Correct containers used?.....	Y			
..adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....	 1-3-03			

ANALYTICAL REPORT

JOB NUMBER: 216377

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischler

Date: 12/23/2002



Signature

Name: Charles Sassine

Title: Laboratory Supervisor

E-Mail: csassine@stl-inc.com

12/23/2002

Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/23/2002

Job Number.: 216377
Customer....: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216377-1	MW020	Water	12/09/2002	12:10	12/10/2002	09:30
216377-2	MW020A	Water	12/09/2002	10:20	12/10/2002	09:30
216377-3	LORDWW	Water	12/09/2002	14:55	12/10/2002	09:30
216377-4	MW046A	Water	12/09/2002	16:00	12/10/2002	09:30
216377-5	MW002A	Water	12/09/2002	12:30	12/10/2002	09:30

LABORATORY TEST RESULTS

Job Number: 216377

Date: 12/23/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW020

Date Sampled.....: 12/09/2002

Time Sampled.....: 12:10

Sample Matrix.....: Water

Laboratory Sample ID: 216377-1

Date Received.....: 12/10/2002

Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	<0.05	0.05	mg/L	12/19/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/11/02	crw

LABORATORY TEST RESULTS

Job Number: 216377

Date: 12/23/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW020A
Date Sampled.....: 12/09/2002
Time Sampled.....: 10:20
Sample Matrix.....: Water

Laboratory Sample ID: 216377-2
Date Received.....: 12/10/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	<0.05	0.05	mg/L	12/19/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/11/02	crw

LABORATORY TEST RESULTS

Job Number: 216377

Date: 12/23/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Fischer

Customer Sample ID: LORDWW
Date Sampled.....: 12/09/2002
Time Sampled.....: 14:55
Sample Matrix.....: Water

Laboratory Sample ID: 216377-3
Date Received.....: 12/10/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	<0.05	0.05	mg/L	12/19/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/11/02	crw

LABORATORY TEST RESULTS

Job Number: 216377

Date: 12/23/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW046A
Date Sampled.....: 12/09/2002
Time Sampled.....: 16:00
Sample Matrix.....: Water

Laboratory Sample ID: 216377-4
Date Received.....: 12/10/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	0.07	0.05	mg/L	12/19/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/11/02	crw

LABORATORY TEST RESULTS

Job Number: 216377

Date: 12/23/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Fischer

Customer Sample ID: MW002A

Date Sampled.....: 12/09/2002

Time Sampled.....: 12:30

Sample Matrix.....: Water

Laboratory Sample ID: 216377-5

Date Received.....: 12/10/2002

Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	<0.05	0.05	mg/L	12/18/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/12/02	crw

QUALITY CONTROL RESULTS

Job Number.: 216377

Report Date.: 12/23/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Batch.....: 75927

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CR

Parameter.....: Chromium (Cr)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	1.99514085		2.00		99.8	%	90-110	12/17/2002	2306
ICV		M0346	1.08720908		1.00		108.7	%	90-110	12/17/2002	2314
ICV		M0337	1.04435393		1.00		104.4	%	90-110	12/17/2002	2322
ICB			0.00011451							12/17/2002	2329
CCV		M0341	1.02485532		1.00		102.5	%	90-110	12/17/2002	2350
CCB			0.00005768							12/17/2002	2358
CCV		M0341	1.01751479		1.00		101.8	%	90-110	12/18/2002	0043
CCB			0.00058827							12/18/2002	0050
MB		3010	0.00058990							12/18/2002	0110
LCS		M345	0.49519766		0.500		99.0	%	90-110	12/18/2002	0114
MS	216461-1	M345	0.49499291		0.500	0.01074134	96.9	%	75-125	12/18/2002	0122
MSD	216461-1	M345	0.50188207	0.49499291	0.500	0.01074134	98.2	%	75-125	12/18/2002	0126
							1.4	R 20			
CCV		M0341	1.00043020		1.00		100.0	%	90-110	12/18/2002	0135
CCB			-0.0000916							12/18/2002	0143
CCV		M0341	0.99652899		1.00		99.7	%	90-110	12/18/2002	0231
			0.00054860							12/18/2002	0239
		3010	0.00069511							12/18/2002	0247
LCS		M345	0.48967408		0.500		97.9	%	90-110	12/18/2002	0251
MS	216479-3	M345	0.42028419		0.500	0.00709907	82.6	%	75-125	12/18/2002	0316
MSD	216479-3	M345	0.41034284		0.500	0.00709907	80.6	%	75-125	12/18/2002	0320
CCV		M0341	0.98339513		1.00		98.3	%	90-110	12/18/2002	0325
CCB			0.00020549							12/18/2002	0332
MB		3010	0.00029177							12/18/2002	0346
LCS		M345	0.47939465		0.500		95.9	%	90-110	12/18/2002	0350
MS	216379-1	M345	0.57198841		0.500	0.10436608	93.5	%	75-125	12/18/2002	0402
MSD	216379-1	M345	0.56752543	0.57198841	0.500	0.10436608	92.6	%	75-125	12/18/2002	0406
							0.8	R 20			
CCV		M0341	0.96538518		1.00		96.5	%	90-110	12/18/2002	0419
CCB			0.00007444							12/18/2002	0427
MD	216479-3		0.00678337			0.00709907	0.00031570	A	0.0500000	12/18/2002	0503
CCV		M0341	0.95440109		1.00		95.4	%	90-110	12/18/2002	0515
CCB			0.00028315							12/18/2002	0522

Test Method.....: SW-846 6010B

Batch.....: 76011

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CR

Parameter.....: Chromium (Cr)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0344	9.9834		10.0		99.8	%	90-110	12/19/2002	1036
ICV		M0346	1.0400		1.00		104.0	%	90-110	12/19/2002	1054
ICV		M0337	1.0468		1.00		104.7	%	90-110	12/19/2002	1108
ICB			-0.0064							12/19/2002	1126
CCV		M0342	5.0652		5.00		101.3	%	90-110	12/19/2002	1140
CCB			-0.0021							12/19/2002	1141
MB		3010	0.0026							12/19/2002	1229
LCS		M345	0.5323		0.500		106.5	%	90-110	12/19/2002	1232
MB		3010	0.0037							12/19/2002	1239
		M345	0.5358		0.500		107.2	%	90-110	12/19/2002	1242
		M0342	5.1113		5.00		102.2	%	90-110	12/19/2002	1254
LCB			0.0019							12/19/2002	1256

Job Number.: 216377

QUALITY CONTROL RESULTS

Report Date.: 12/23/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Batch.....: 76011

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CR

Parameter.....: Chromium (Cr)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB		3010	0.0014							12/19/2002	1409
LCS		M345	0.5256		0.500		105.1	%	90-110	12/19/2002	1412
MB		3010	0.0026							12/19/2002	1419
LCS		M345	0.5290		0.500		105.8	%	90-110	12/19/2002	1432
MB		3010	0.0014							12/19/2002	1438
LCS		M345	0.5202		0.500		104.0	%	90-110	12/19/2002	1440
CCV		M0342	5.0075		5.00		100.2	%	90-110	12/19/2002	1509
CCB			0.0023							12/19/2002	1511
MB		3010	0.0037							12/19/2002	1543
LCS		M345	0.5097		0.500		101.9	%	90-110	12/19/2002	1548
MB		3010	0.0040							12/19/2002	1602
LCS		M345	0.5121		0.500		102.4	%	90-110	12/19/2002	1605
PDS 216419-1		M345D	2.0201		2.00	0.0026	100.9	%	75-125	12/19/2002	1614
PSD 216419-1		M345D	2.0182	2.0201	2.00	0.0026	100.8	%	75-125	12/19/2002	1615
							0.1	R 20			
CCV		M0342	5.1761		5.00		103.5	%	90-110	12/19/2002	1632
			0.0037							12/19/2002	1633
		M0342	5.0070		5.00		100.1	%	90-110	12/19/2002	1714
CCB			0.0037							12/19/2002	1716

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/23/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/23/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx
----------------------	-----	-------------------------	-----

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- ^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



CHAIN-OF-CUSTODY RECORD

Sampler(s)/Affiliation

Sample ID/Location	Date/ Time	Matrix	Sampled	Lab #	Time
				xxxxxx	

Remarks

Total

[illegible]Total No. of Bottles/
Containers

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>12/9/02</u>	Time <u>1830</u>	Seal Intact? <u>Yes</u>
Received by: <u>Fed Ex</u>	Organization: <u></u>	Date <u>1/1</u>	Time <u></u>	Seal Intact? <u>N/A</u>

Relinquished by: <u>1 FedEx</u>	Organization: _____	Date <u>12/10/02</u>	Time <u>0930</u>	Seal Intact? Yes No N/A
Received by: <u>Mr. Jankus</u>	Organization: <u>ST-CC</u>	Date <u>12/10/02</u>	Time <u>0930</u>	

Special Instructions/Remarks:

Total Cr was field filtered

Delivery Method: ☐ In Person☒ Common Carrier Fed Ex☐ Lab Courier☐ Other

SPECIFY

SPECIFY

AG 05-12/01

rpjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 216377 Location.: 57203 Check List Number.: 1 Description.:
Customer Job ID..... Job Check List Date.:
Project Number.: 98000024 Project Description.: MT000700 Texaco-Report in ppm
Customer.....: ARCADIS / G&M Contact.: Steve Tischer

Date of the Report...: 12/10/2002
Project Manager.....: crs

Questions ?

(Y/N) Comments

How did samples arrive?..... Y FED EX
Chain-of-Custody Present?..... Y
Custody seal on shipping container?..... Y
...If "yes", custody seal intact?..... Y
Custody seals on sample containers?..... N
...If "yes", custody seal intact?.....
Samples chilled?..... N
Temperature blank in cooler?..... N
Temp of cooler acceptable? (0.05 to 6.00 deg C) NA METALS ONLY
Samples received intact (good condition)?..... Y
Volatile samples acceptable? (no headspace)..... NA
Correct containers used?..... Y
Adequate sample volume provided?..... Y
Samples preserved correctly?..... Y
Samples received within holding-time?..... Y
Agreement between COC and sample labels?..... Y
Additional.....
Comments.....
Sample Custodian Signature.....

 12-10-02

RECEIVED

DEC 20 2002

1000 P. 111 J. & Miller

ANALYTICAL REPORT

JOB NUMBER: 216359

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/16/2002


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/16/02
Date

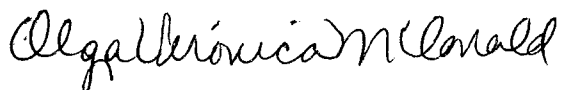
Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673
FAX...: 361/289-2471

CASE NARRATIVE**Job Number 216359****December 16, 2002****Hexavalent Chromium Analysis**

Sample 216359-2 was analyzed for hexavalent chromium using EPA Method 7197. The sample was received with little holding time remaining. The analysis was done after the holding time had expired. Results from expired analyses should be flagged accordingly and used at the client's discretion.

Please contact me at 361-289-2673 or omcdonald@stl-inc.com if you have any questions regarding this report or if we can be of further assistance.



Olga Verónica McDonald
QA Manager

SAMPLE INFORMATION

Date: 12/16/2002

Job Number.: 216359
Customer....: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216359-1	MW020	Water	12/09/2002	12:10	12/10/2002	09:30
216359-2	MW020A	Water	12/09/2002	10:20	12/10/2002	09:30
216359-3	LORD WW	Water	12/09/2002	14:55	12/10/2002	09:30

LABORATORY TEST RESULTS

Job Number: 216359

Date: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW020
Date Sampled.....: 12/09/2002
Time Sampled.....: 12:10
Sample Matrix.....: Water

Laboratory Sample ID: 216359-1
Date Received.....: 12/10/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	<0.005	0.005	mg/L	12/10/02	edr
EPA 300.0	Chloride	610	50	mg/L	12/11/02	cnw

LABORATORY TEST RESULTS

Job Number: 216359

Date: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW020A
Date Sampled.....: 12/09/2002
Time Sampled.....: 10:20
Sample Matrix.....: Water

Laboratory Sample ID: 216359-2
Date Received.....: 12/10/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.022	0.005	mg/L	12/10/02	edr
EPA 300.0	Chloride	370	50	mg/L	12/11/02	cnw

Job Number: 216359

LABORATORY TEST RESULTS

Date: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: LORD WW
Date Sampled.....: 12/09/2002
Time Sampled.....: 14:55
Sample Matrix.....: Water

Laboratory Sample ID: 216359-3
Date Received.....: 12/10/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.007	0.005	mg/L	12/10/02	edr
EPA 300.0	Chloride	90	10	mg/L	12/11/02	cnw

QUALITY CONTROL RESULTS

Job Number.: 216359

Report Date.: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 7197

Batch.....: 75641

Analyst....: edr

Method Description.: Chromium, Hexavalent

Units.....: mg/L

Test Code.: CR6

Parameter.....: Hexavalent Chromium

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M121002C	0.0263		0.02500		105.2	%	90-110	12/10/2002	1210
ICB			-0.0003							12/10/2002	1212
LCS		M121002R	0.0518		0.05000		103.6	%	75-125	12/10/2002	1214
MB			-0.0008							12/10/2002	1217
MS	216359-1	M121002R	0.0529		0.05000	0.0008	104.2	%	75-125	12/10/2002	1224
MSD	216359-1	M121002R	0.0499	0.0529	0.05000	0.0008	98.2	%	75-125	12/10/2002	1226
							5.8	R 20			
CCV		M121002C	0.0226		0.02500		90.4	%	80-120	12/10/2002	1232
CCB			-0.0003							12/10/2002	1234
CCV		M121002C	0.0245		0.02500		98.0	%	80-120	12/10/2002	1241
CCB			-0.0005							12/10/2002	1243

Test Method.....: EPA 300.0

Batch.....: 75691

Analyst....: cnw

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Test Code.: CHL

Parameter.....: Chloride

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCB		121102	0.0000							12/11/2002	0830
CCV		IC21210F	9.7892		10.00		97.9	%	90-110	12/11/2002	0839
MB		121102	0.0000							12/11/2002	0848
LCS		IC21210D	9.9118		10.00		99.1	%	90-110	12/11/2002	0857
MS	216322-3	IC21210E	18.6347		10.00	9.2852	93.5	%	75-125	12/11/2002	0932
MSD	216322-3	IC21210E	18.3850	18.6347	10.00	9.2852	91.0	%	75-125	12/11/2002	0941
							1.3	R 20			
CCB		121102	0.0000							12/11/2002	1051
CCV		IC21210F	9.8279		10.00		98.3	%	90-110	12/11/2002	1100
MS	216325-2	IC21210E	16.1616		10.00	6.5833	95.8	%	75-125	12/11/2002	1118
MSD	216325-2	IC21210E	15.5933	16.1616	10.00	6.5833	90.1	%	75-125	12/11/2002	1127
							3.6	R 20			
CCB		121102	0.0000							12/11/2002	1220
CCV		IC21210F	9.7696		10.00		97.7	%	90-110	12/11/2002	1229
MB		121102	0.0000							12/11/2002	1237
LCS		IC21210D	9.8273		10.00		98.3	%	90-110	12/11/2002	1246
MS	216359-1	IC21210E	21.0326		10.00	12.2424	87.9	%	75-125	12/11/2002	1330
MSD	216359-1	IC21210E	20.9451	21.0326	10.00	12.2424	87.0	%	75-125	12/11/2002	1339
							0.4	R 20			
CCB		121102	0.1975							12/11/2002	1441
CCV		IC21210F	9.8325		10.00		98.3	%	90-110	12/11/2002	1450

Test Method.....: EPA 300.0

Batch.....: 75734

Analyst....: cnw

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Test Code.: CHL

Parameter.....: Chloride

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		121102	0.0973							12/11/2002	1500
ICV		IC21211F	9.6873		10.00		96.9	%	90-110	12/11/2002	1510
MB		121102	0.0914							12/11/2002	1520
LCS		IC21211D	9.8419		10.00		98.4	%	90-110	12/11/2002	1530
MS	216359-3	IC21211E	18.6226		10.00	9.1974	94.3	%	75-125	12/11/2002	1610

QUALITY CONTROL RESULTS

Job Number.: 216359

Report Date.: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: EPA 300.0

Batch.....: 75734

Analyst....: cnw

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Test Code.: CHL

Parameter.....: Chloride

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MSD	216359-3	IC21211E	18.0788	18.6226	10.00	9.1974	88.8	%	75-125	12/11/2002	1620
							3.0	R	20		
MS	216343-3	IC21211E	26.5151		10.00	17.0152	95.0	%	75-125	12/11/2002	1720
MSD	216343-3	IC21211E	26.5707	26.5151	10.00	17.0152	95.6	%	75-125	12/11/2002	1730
							0.2	R	20		
CCB		121102	0.0978							12/11/2002	1750
CCV		IC21211F	9.6547		10.00		96.5	%	90-110	12/11/2002	1800

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/16/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

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SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/16/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
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PSD	Post Digestion/Distillation Spike Duplicate

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Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data *cp Non-STL Subcontract Lab *xx

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



CHAIN-OF-CUSTODY RECORD

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Project Number/Name	MT000700.0004
---------------------	---------------

Project Location	Chevron/Texaco N. Eunice

Laboratory STL-CC

Project Manager Hank McConnell

Sampler(s)/Affiliation		LM/RM/ARCADIS
------------------------	--	----------------------

Sample ID/Location	Matrix	Sampled	Date/ Time	Time

MW020	L	12-9-02	1210
MW020A	L	12-9-02	1020
LO020W	L	12-9-02	1455

[illegible]

--	--	--	--

[illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible][illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by:  Organized by: 

Received by _____ Organizational _____

Relinquished by: Fred Cox Organized

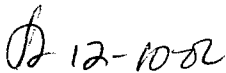
Special Instructions/Remarks:

*Hex Cr was fine

120

02 ☒ Common ☐ Is Bases ☐ Method

Delivery Method: ☐ In Person ☒ Online

pjsckl	Job Sample Receipt Checklist Report	V2
Job Number.: 216359 Location.: 57203 Check List Number.: 1 Customer Job ID.....: Job Check List Date.: Project Number.: 98000024 Project Description.: MT000700 Texaco-Report in ppm Customer.....: ARCADIS / G&M Contact.: Steve Tischer Date of the Report...: 12/10/2002 Project Manager.....: crs		
Questions ?	(Y/N) Comments	
How did samples arrive?.....	Y	FED EX
Chain-of-Custody Present?.....	Y	
Custody seal on shipping container?.....	Y	
...If "yes", custody seal intact?.....	Y	
Custody seals on sample containers?.....	N	
...If "yes", custody seal intact?.....		
Samples chilled?.....	Y	
Temperature blank in cooler?.....	Y	0.5 DEGREES C
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y	
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		NA
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Additional.....		
Comments.....		
Sample Custodian Signature.....		

ANALYTICAL REPORT

JOB NUMBER: 216280

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

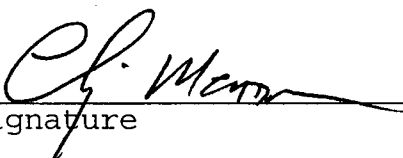
Attention: Steve Tischer

Date: 12/16/2002

RECEIVED

DEC 20 2002

ARCADIS Geraghty & Miller


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/16/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673
FAX...: 361/289-2471

CASE NARRATIVE

Job Number 216280

December 16, 2002

Hexavalent Chromium Analysis

Sample 216280-2 was analyzed for hexavalent chromium using EPA Method 7197. The sample was received at the laboratory with little holding time left. The sample was analyzed on the same day as received. However, the method required holding time had expired just before the analysis could start. Results from expired samples should be flagged and used at the client's discretion.

Please call if you have any questions regarding this report or if we can be of further assistance.



Anh Tran
QA Assistant

Date: 12/16/2002

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Page 1

Job Number: 216280

LABORATORY TEST RESULTS

Date: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: WOODCELL-WW
Date Sampled.....: 12/04/2002
Time Sampled.....: 13:45
Sample Matrix.....: Water

Laboratory Sample ID: 216280-1
Date Received.....: 12/05/2002
Time Received.....: 10:40

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.008	0.005	mg/L	12/05/02	edr
EPA 300.0	Chloride	700	50	mg/L	12/10/02	cnw

LABORATORY TEST RESULTS

Job Number: 216280

Date: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: ROWLAND-WW
Date Sampled.....: 12/04/2002
Time Sampled.....: 10:55
Sample Matrix.....: Water

Laboratory Sample ID: 216280-2
Date Received.....: 12/05/2002
Time Received.....: 10:40

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	<0.005	0.005	mg/L	12/05/02	edr
EPA 300.0	Chloride	790	50	mg/L	12/10/02	cnw

LABORATORY TEST RESULTS

Job Number: 216280

Date: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: GOPWW2
Date Sampled.....: 12/04/2002
Time Sampled.....: 15:40
Sample Matrix.....: Water

Laboratory Sample ID: 216280-3
Date Received.....: 12/05/2002
Time Received.....: 10:40

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	<0.005	0.005	mg/L	12/05/02	edr
EPA 300.0	Chloride	700	50	mg/L	12/10/02	cnw

QUALITY CONTROL RESULTS

Job Number.: 216280

Report Date.: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 7197

Batch.....: 75509

Analyst....: edr

Method Description.: Chromium, Hexavalent

Units.....: mg/L

Test Code.: CR6

Parameter.....: Hexavalent Chromium

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M120502C	0.0246		0.02500		98.4	%	90-110	12/05/2002	1337
ICB			0.0009							12/05/2002	1338
LCS		M120502R	0.0509		0.05000		101.8	%	75-125	12/05/2002	1340
MB			0.0012							12/05/2002	1342
CCV		M120502C	0.0238		0.02500		95.2	%	80-120	12/05/2002	1353
CCB			0.0017							12/05/2002	1354
MS	216274-1	M120502R	0.0546		0.05000	0.0063	96.6	%	75-125	12/05/2002	1359
MSD	216274-1	M120502R	0.0520	0.0546	0.05000	0.0063	91.4	%	75-125	12/05/2002	1401
							4.9	R 20			
CCV		M120502C	0.0263		0.02500		105.2	%	80-120	12/05/2002	1409
CCB			0.0029							12/05/2002	1410

Test Method.....: EPA 300.0

Batch.....: 75681

Analyst....: cnw

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Test Code.: CHL

Parameter.....: Chloride

	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		121002	0.1008							12/10/2002	1510
ICV		IC21210F	9.8263		10.00		98.3	%	90-110	12/10/2002	1519
MB		121002	0.0904							12/10/2002	1527
LCS		IC21210D	9.9427		10.00		99.4	%	90-110	12/10/2002	1536
MS	216355-3	IC21210E	28.4888		10.00	33.4373	-49.5	%	75-125	12/10/2002	1610
MSD	216355-3	IC21210E	28.5612	28.4888	10.00	33.4373	-48.8	%	75-125	12/10/2002	1619
							0.3	R 20			
CCB		121002	0.1064							12/10/2002	1711
CCV		IC21210F	9.8461		10.00		98.5	%	90-110	12/10/2002	1720
MS	216312-1	IC21210E	18.8762		10.00	9.9862	88.9	%	75-125	12/10/2002	1837
MSD	216312-1	IC21210E	18.7034	18.8762	10.00	9.9862	87.2	%	75-125	12/10/2002	1846
							0.9	R 20			
CCB		121002	0.0713							12/10/2002	1912
CCV		IC21210F	9.7408		10.00		97.4	%	90-110	12/10/2002	1920
MB		121002	0.1066							12/10/2002	1929
LCS		IC21210D	9.8237		10.00		98.2	%	90-110	12/10/2002	1938
MS	216325-2	IC21210E	12.7477		10.00	3.4269	93.2	%	75-125	12/10/2002	2113
MSD	216325-2	IC21210E	12.8260	12.7477	10.00	3.4269	94.0	%	75-125	12/10/2002	2121
							0.6	R 20			
CCB		121002	0.0000							12/10/2002	2130
CCV		IC21210F	9.7704		10.00		97.7	%	90-110	12/10/2002	2139
MS	216338-2	IC21210E	24.4610		10.00	15.6835	87.8	%	75-125	12/10/2002	2239
MSD	216338-2	IC21210E	24.3275	24.4610	10.00	15.6835	86.4	%	75-125	12/10/2002	2248
							0.5	R 20			
CCB		121002	0.1001							12/10/2002	2256
CCV		IC21210F	9.7946		10.00		97.9	%	90-110	12/10/2002	2305

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/16/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/16/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx
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EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- ^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.

Laboratory Task Order No./P.O. No. 16280

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name MT000700.0004
Project Location Chevron/Texaco N. Eunice
Laboratory STL-CC
Project Manager Hank McConnell
Sampler(s)/Affiliation LM/RM/ARCADIS

ANALYSIS / METHOD / SIZE	
Hex Cr, Dissolved *	(1) 1-liter plastic
Chlorides	(1) 1-liter plastic
NEAT	NEAT

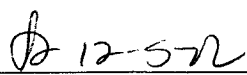
Sample ID/Location	Matrix	Date/Time Sampled	Time	Remarks	Total
Woodell-WW	L	12/4/02	1345	1	2
ROWLAND-WW	L	12/4/02	1055	1	2
GOPHER	L	12/4/02	1540	1	2
Temp Blank	L				1
Total No. of Bottles/Containers					7

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: [Signature] Organization: ARCADIS Date: 12/4/02 Time: 1805 Seal Intact? Yes No N/A
Received by: [Signature] Organization: ARCADIS Date: 12/4/02 Time: 1805 Seal Intact? Yes No N/A
Relinquished by: [Signature] Organization: 8371 6283 2784 Date: 12/5/02 Time: 1040 Seal Intact? Yes No N/A
Received by: [Signature] Organization: 8371 6283 2784 Date: 12/5/02 Time: 1040 Seal Intact? Yes No N/A

Special Instructions/Remarks: *Hex Cr was field filtered*

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other
SPECIFY AG 05-12/01

.pjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216280	Location.: 57203	Check List Number.: 1	Description.:	
Customer Job ID.....	Job Check List Date.:		Date of the Report...: 12/05/2002	
Project Number.: 98000024	Project Description.: MT000700 Texaco-Report in ppm		Project Manager.....: crs	
Customer.....: ARCADIS / G&M	Contact.: Steve Tischer			
Questions ?	(Y/N) Comments			
How did samples arrive?.....	Y	FED EX		
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	Y			
Temperature blank in cooler?.....	Y	-0.2 DEGREES C		
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....	Y			
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....				



STL Corpus Christi

MW019A

12-2-02

ANALYTICAL REPORT

JOB NUMBER: 216208

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/10/2002

RECEIVED

DEC 13 2002

ARCADIS Geraghty & Miller


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/10/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/10/2002

Job Number.: 216208
Customer...: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216208-1	MW019A	Water	12/02/2002	13:20	12/03/2002	09:25



STL Corpus Christi

LABORATORY TEST RESULTS

Job Number: 216208

Date: 12/10/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW019A
Date Sampled.....: 12/02/2002
Time Sampled.....: 13:20
Sample Matrix.....: Water

Laboratory Sample ID: 216208-1
Date Received.....: 12/03/2002
Time Received.....: 09:25

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.013	0.005	mg/L	12/03/02	edr
EPA 300.0	Chloride	360	50	mg/L	12/05/02	cnw



STL Corpus Christi

QUALITY CONTROL RESULTS

Job Number.: 216208

Report Date.: 12/10/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 7197
Method Description.: Chromium, Hexavalent
Parameter.....: Hexavalent Chromium

Batch.....: 75400
Units.....: mg/L

Analyst....: edr
Test Code.: CR6

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M120302C	0.0257				102.8	%	90-110	12/03/2002	1222
ICB			0.0033							12/03/2002	1223
LCS		M120302R	0.0429				85.8	%	75-125	12/03/2002	1224
MB			0.0020							12/03/2002	1228
MS	216208-1	M120302R	0.0544			0.0132	82.4	%	75-125	12/03/2002	1231
MSD	216208-1	M120302R	0.0584	0.0544		0.0132	90.4	%	75-125	12/03/2002	1234
							7.1	R 20			
CCV		M120302C	0.0232				92.8	%	80-120	12/03/2002	1236
CCB			0.0023							12/03/2002	1237

Test Method.....: EPA 300.0
Method Description.: Ion Chromatography Analysis
Parameter.....: Chloride

Batch.....: 75528
Units.....: mg/L

Analyst....: cnw
Test Code.: CHL

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
		1205002	0.4421							12/05/2002	0945
ICV		IC21205F	9.8091		10.00		98.1	%	90-110	12/05/2002	0954
MB		120502	0.4356							12/05/2002	1003
LCS		IC21205D	9.8139		10.00		98.1	%	90-110	12/05/2002	1012
MS	216254-1	IC21205E	40.5293		10.00	34.4690	60.6	%	75-125	12/05/2002	1038
MSD	216254-1	IC21205E	40.8071	40.5293	10.00	34.4690	63.4	%	75-125	12/05/2002	1047
							0.7	R 20			
MS	216219-2	IC21205E	9.9079		10.00	0.7507	91.6	%	75-125	12/05/2002	1140
MSD	216219-2	IC21205E	9.9652	9.9079	10.00	0.7507	92.1	%	75-125	12/05/2002	1149
							0.6	R 20			
CCB		120502	0.5925							12/05/2002	1206
CCV		IC21205F	9.8850		10.00		98.8	%	90-110	12/05/2002	1215
CCB		120502	0.3708							12/05/2002	1326
CCV		IC21205F	9.8155		10.00		98.2	%	90-110	12/05/2002	1335
MS	216186-3	IC21205E	20.7321		10.00	11.6406	90.9	%	75-125	12/05/2002	1512
MSD	216186-3	IC21205E	21.3661	20.7321	10.00	11.6406	97.3	%	75-125	12/05/2002	1521
							3.0	R 20			
CCB		120502	0.3830							12/05/2002	1530
CCV		IC21205F	9.7655		10.00		97.7	%	90-110	12/05/2002	1538
MB		120502	0.3744							12/05/2002	1547
LCS		IC21205D	9.9444		10.00		99.4	%	90-110	12/05/2002	1556
MS	216241-2	IC21205E	37.5574		10.00	30.6490	69.1	%	75-125	12/05/2002	1640
MSD	216241-2	IC21205E	37.5729	37.5574	10.00	30.6490	69.2	%	75-125	12/05/2002	1649
							0.0	R 20			
CCB		120502	0.3577							12/05/2002	1751
CCV		IC21205F	9.8357		10.00		98.4	%	90-110	12/05/2002	1800
MS	216254-1	IC21205E	18.0418		10.00	12.6451	54.0	%	75-125	12/05/2002	1902
MSD	216254-1	IC21205E	18.9978	18.0418	10.00	12.6451	63.5	%	75-125	12/05/2002	1910
							5.2	R 20			
MS	216267-4	IC21205E	36.5275		10.00	28.8148	77.1	%	75-125	12/05/2002	2003
MSD	216267-4	IC21205E	36.4260	36.5275	10.00	28.8148	76.1	%	75-125	12/05/2002	2012
							0.3	R 20			
CCB		120502	0.5831							12/05/2002	2021
CCV		IC21205F	10.1434		10.00		101.4	%	90-110	12/05/2002	2030

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/10/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check



STL Corpus Christi

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/10/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

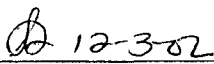
Client provided data	*cp	Non-STL Subcontract Lab	*xx
----------------------	-----	-------------------------	-----

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.

.pjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216208	Location.: 57203	Check List Number.: 1	Description.:	
Customer Job ID.....:	Job Check List Date.:		Date of the Report.: 12/03/2002	
Project Number.: 98000024	Project Description.: MT000700 Texaco-Report in ppm		Project Manager.....: crs	
Customer.....: ARCADIS / G&M	Contact.: Steve Tischer			
Questions ?	(Y/N) Comments			
How did samples arrive?.....	Y	FED EX		
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	Y			
Temperature blank in cooler?.....	Y	0.7 DEGREES C		
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....	Y			
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....	 12-3-02			



STL Corpus Christi

MW019A

12-2-02

ANALYTICAL REPORT

JOB NUMBER: 216213

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

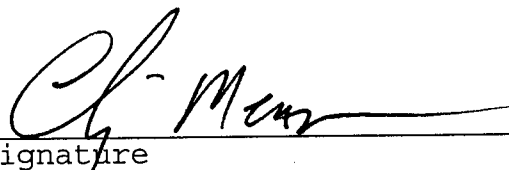
Attention: Steve Tischer

Date: 12/09/2002

RECEIVED

DEC 13 2002

ARCADIS Geraghty & Miller


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/9/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/09/2002

Job Number.: 216213
Customer....: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216213-1	MW019A	Water	12/02/2002	13:20	12/03/2002	09:25

LABORATORY TEST RESULTS

Job Number: 216213

Date: 12/09/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW019A
Date Sampled.....: 12/02/2002
Time Sampled.....: 13:20
Sample Matrix.....: Water

Laboratory Sample ID: 216213-1
Date Received.....: 12/03/2002
Time Received.....: 09:25

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	<0.05	0.05	mg/L	12/04/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			12/03/02	crw

QUALITY CONTROL RESULTS

Job Number.: 216213

Report Date.: 12/09/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Fischer

Test Method.....: SW-846 60108

Batch.....: 75478

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CR

Parameter.....: Chromium (Cr)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	1.98331565		2.00		99.2	%	90-110	12/04/2002	1118
ICV		M0346	0.99287485		1.00		99.3	%	90-110	12/04/2002	1124
ICV		M0337	1.03237400		1.00		103.2	%	90-110	12/04/2002	1130
ICB			0.00056189							12/04/2002	1135
LSC		M0341	0.00540923		1.00					12/04/2002	1138
CCV		M0341	0.99798671		1.00		99.8	%	90-110	12/04/2002	1153
CCB			0.00053783							12/04/2002	1159
MB		3010	0.00062988							12/04/2002	1222
LCS		M345	0.50570219		0.500		101.1	%	90-110	12/04/2002	1228
CCV		M0341	1.00220929		1.00		100.2	%	90-110	12/04/2002	1231
CCB			0.00053867							12/04/2002	1237
CCV		M0341	0.99314688		1.00		99.3	%	90-110	12/04/2002	1316
CCB			-0.0009597							12/04/2002	1322
CCV		M0341	0.99983733		1.00		100.0	%	90-110	12/04/2002	1400
CCB			0.00004827							12/04/2002	1405
MB		3010	-0.0000769							12/04/2002	1424
S		M345	0.51226572		0.500		102.5	%	90-110	12/04/2002	1427
		M0341	1.00887111		1.00		100.9	%	90-110	12/04/2002	1440
CCB			-0.0002871							12/04/2002	1445
MS	216165-1	M345	0.48175742		0.500	0.00293500	95.8	%	75-125	12/04/2002	1452
MSD	216165-1	M345	0.48219961	0.48175742	0.500	0.00293500	95.9	%	75-125	12/04/2002	1456
							0.1	R	20		
MB		3050	0.00078961							12/04/2002	1507
LCS		M345	0.49722215		0.500		99.4	%	90-110	12/04/2002	1510
MS	216139-2	M345	0.55751647		0.500	0.07416402	96.7	%	75-125	12/04/2002	1520
CCV		M0341	1.00660488		1.00		100.7	%	90-110	12/04/2002	1524
CCB			0.00024889							12/04/2002	1530
MSD	216139-2	M345	0.55727528	0.55751647	0.500	0.07416402	96.6	%	75-125	12/04/2002	1533
							0.0	R	20		
MB		3051	0.00083501							12/04/2002	1536
LCS		M345	0.50931581		0.500		101.9	%	90-110	12/04/2002	1542
MS	216127-1	M345	0.51897622		0.500	0.00083200	103.6	%	75-125	12/04/2002	1548
MSD	216127-1	M345	0.51003810	0.51897622	0.500	0.00083200	101.8	%	75-125	12/04/2002	1551
							1.7	R	20		
MB		3010	0.00027208							12/04/2002	1557
LCS		M345	0.50244852		0.500		100.5	%	90-110	12/04/2002	1600
CCV		M0341	1.00548965		1.00		100.5	%	90-110	12/04/2002	1603
CCB			0.00089300							12/04/2002	1608
MS	216167-1	M345	0.51101685		0.500	-0.0003842	102.3	%	75-125	12/04/2002	1621
MSD	216167-1	M345	0.49654599	0.51101685	0.500	-0.0003842	99.4	%	75-125	12/04/2002	1639
							2.9	R	20		
CCV		M0341	1.00655340		1.00		100.7	%	90-110	12/04/2002	1700
CCB			0.00066356							12/04/2002	1706

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/09/2002

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RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/09/2002

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DD	Digestion Duplicate
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Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx
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pjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216213	Location.: 57203	Check List Number.: 1	Description.:	
Customer Job ID.....		Job Check List Date.:		Date of the Report...: 12/03/2002
Project Number.: 98000024	Project Description.: MT000700	Texaco-Report in ppm		Project Manager.....: crs
Customer.....: ARCADIS / G&M		Contact.: Steve Tischer		
Questions ?	(Y/N) Comments			
How did samples arrive?.....	Y	FED EX		
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	N			
Temperature blank in cooler?.....	N			
Temp of cooler acceptable? (0.05 to 6.00 deg C)		NA METALS ONLY		
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....		NA		
Correct containers used?.....	Y			
..adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....				

12-3-02

ANALYTICAL REPORT

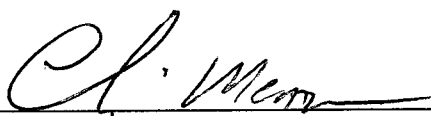
JOB NUMBER: 216312

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/30/2002



Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/30/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/30/2002

Job Number.: 216312
Customer...: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216312-1	MW034	Water	12/05/2002	13:40	12/06/2002	09:30
216312-2	MW041A	Water	12/05/2002	15:05	12/06/2002	09:30
216312-3	TRIP BLANK	Water	12/05/2002	00:00	12/06/2002	09:30

Job Number: 216312

LABORATORY TEST RESULTS

Date: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW034
Date Sampled.....: 12/05/2002
Time Sampled.....: 13:40
Sample Matrix.....: WaterLaboratory Sample ID: 216312-1
Date Received.....: 12/06/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.23	0.05	mg/L	12/06/02	edr
EPA 300.0	Chloride	500	50	mg/L	12/10/02	cnw
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	12/09/02	rec
	Ethylbenzene	ND	0.002	mg/L	12/09/02	rec
	Toluene	ND	0.002	mg/L	12/09/02	rec
	Xylenes (total)	ND	0.002	mg/L	12/09/02	rec
SW-846 3510C	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			12/09/02	*he
SW-846 8015B	Total Extractable Petroleum Hydrocarbons					
	TVPH - Gasoline Range Organics	ND	0.05	mg/L	12/10/02	*he
	TEPH - Diesel Range Organics	ND	0.50	mg/L	12/11/02	*he

LABORATORY TEST RESULTS

Job Number: 216312

Date: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW041A
Date Sampled.....: 12/05/2002
Time Sampled.....: 15:05
Sample Matrix.....: Water

Laboratory Sample ID: 216312-2
Date Received.....: 12/06/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.20	0.05	mg/L	12/06/02	edr
EPA 300.0	Chloride	410	50	mg/L	12/10/02	cnw

Job Number: 216312

LABORATORY TEST RESULTS

Date: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: TRIP BLANK
Date Sampled.....: 12/05/2002
Time Sampled.....: 00:00
Sample Matrix.....: Water

Laboratory Sample ID: 216312-3
Date Received.....: 12/06/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	12/10/02	rec
	Ethylbenzene	ND	0.002	mg/L	12/10/02	rec
	Toluene	ND	0.002	mg/L	12/10/02	rec
	Xylenes (total)	ND	0.002	mg/L	12/10/02	rec

QUALITY CONTROL RESULTS

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-B46 7197

Batch.....: 75541

Analyst....: edr

Method Description.: Chromium, Hexavalent

Units.....: mg/L

Test Code.: CR6

Parameter.....: Hexavalent Chromium

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M120602C	0.0250		0.02500		100.0	%	90-110	12/06/2002	1127
ICB			0.0009							12/06/2002	1128
LCS		M120602R	0.0487		0.05000		97.4	%	75-125	12/06/2002	1129
MB			0.0026							12/06/2002	1131
CCV		M120602C	0.0251		0.02500		100.4	%	80-120	12/06/2002	1140
CCB			0.0034							12/06/2002	1141
MS 216313-2		M120602R	0.0553		0.05000	0.0026	105.4	%	75-125	12/06/2002	1144
MSD 216313-2		M120602R	0.0543	0.0553	0.05000	0.0026	103.4	%	75-125	12/06/2002	1145
							1.8	R 20			
CCV		M120602C	0.0256		0.02500		102.4	%	80-120	12/06/2002	1147
CCB			0.0035							12/06/2002	1148

Test Method.....: EPA 300.0

Batch.....: 75681

Analyst....: cnw

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Test Code.: CHL

Parameter.....: Chloride

	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		121002	0.1008							12/10/2002	1510
ICV		IC21210F	9.8263		10.00		98.3	%	90-110	12/10/2002	1519
MB		121002	0.0904							12/10/2002	1527
LCS		IC21210D	9.9427		10.00		99.4	%	90-110	12/10/2002	1536
CCB		121002	0.1064							12/10/2002	1711
CCV		IC21210F	9.8461		10.00		98.5	%	90-110	12/10/2002	1720
MS 216312-1		IC21210E	18.8762		10.00	9.9862	88.9	%	75-125	12/10/2002	1837
MSD 216312-1		IC21210E	18.7034	18.8762	10.00	9.9862	87.2	%	75-125	12/10/2002	1846
							0.9	R 20			
CCB		121002	0.0713							12/10/2002	1912
CCV		IC21210F	9.7408		10.00		97.4	%	90-110	12/10/2002	1920
MB		121002	0.1066							12/10/2002	1929
LCS		IC21210D	9.8237		10.00		98.2	%	90-110	12/10/2002	1938
MS 216325-2		IC21210E	12.7477		10.00	3.4269	93.2	%	75-125	12/10/2002	2113
MSD 216325-2		IC21210E	12.8260	12.7477	10.00	3.4269	94.0	%	75-125	12/10/2002	2121
							0.6	R 20			
CCB		121002	0.0000							12/10/2002	2130
CCV		IC21210F	9.7704		10.00		97.7	%	90-110	12/10/2002	2139
MS 216338-2		IC21210E	24.4610		10.00	15.6835	87.8	%	75-125	12/10/2002	2239
MSD 216338-2		IC21210E	24.3275	24.4610	10.00	15.6835	86.4	%	75-125	12/10/2002	2248
							0.5	R 20			
CCB		121002	0.1001							12/10/2002	2256
CCV		IC21210F	9.7946		10.00		97.9	%	90-110	12/10/2002	2305

QUALITY CONTROL RESULTS

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B

Units.....: ug/L

Analyst....: rec

Method Description.: Volatile Organics - Aromatics

Batch.....: 75636

CCV	Continuing Calibration Verification	V120102CCV			12/09/2002	0940
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	18.759		20.000000		93.8	% 85-115
Ethylbenzene	17.363		20.000000		86.8	% 85-115
tert-Butyl Methyl Ether (MTBE)	95.974		100.000000		96.0	% 85-115
Toluene	17.733		20.000000		88.7	% 85-115
Xylenes (total)	54.424		60.000000		90.7	% 85-115
m&p-Xylenes	36.335		40.000000		90.8	% 85-115
o-Xylene	18.089		20.000000		90.4	% 85-115

MB	Method Blank	12092002			12/09/2002	1122
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	ND					
Ethylbenzene	ND					
tert-Butyl Methyl Ether (MTBE)	ND					
Toluene	ND					
Xylenes (total)	ND					
m&p-Xylenes	ND					
o-Xylene	ND					

MS	Matrix Spike	V120102CCV	216303-36		12/09/2002	1355
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	9.310		10.000000	ND	93.1	% 79-115
Ethylbenzene	8.425		10.000000	ND	84.2	% 83-115
tert-Butyl Methyl Ether (MTBE)	48.471		50.000000	ND	96.9	% 85-115
Toluene	8.627		10.000000	ND	86.3	% 85-115
Xylenes (total)	26.886		30.000000	ND	89.6	% 85-117
m&p-Xylenes	18.008		20.000000	ND	90.0	% 82-116
o-Xylene	8.878		10.000000	ND	88.8	% 85-119

MSD	Matrix Spike Duplicate	V120102CCV	216303-36		12/09/2002	1446
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	8.966	9.310	10.000000	ND	89.7	% 79-115
					3.8	R 20
Ethylbenzene	8.446	8.425	10.000000	ND	84.5	% 83-115
					0.2	R 20
tert-Butyl Methyl Ether (MTBE)	45.010	48.471	50.000000	ND	90.0	% 85-115
					7.4	R 20
Toluene	8.580	8.627	10.000000	ND	85.8	% 85-115
					0.5	R 20
Xylenes (total)	26.655	26.886	30.000000	ND	88.8	% 85-117
					0.9	R 20
m&p-Xylenes	17.984	18.008	20.000000	ND	89.9	% 82-116
					0.1	R 20

QUALITY CONTROL RESULTS

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MSD	Matrix Spike Duplicate	V120102CCV	216303-36		12/09/2002	1446
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
o-Xylene	8.671	8.878	10.000000	ND	86.7 2.5	% 85-119 R 20

SB	Spiked Blank	V120102SBW			12/09/2002	1031
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	20.666		20.000000		103.3	% 79-115
Ethylbenzene	19.047		20.000000		95.2	% 83-115
tert-Butyl Methyl Ether (MTBE)	105.140		100.000000		105.1	% 85-115
Toluene	19.846		20.000000		99.2	% 85-115
Xylenes (total)	41.264		40.000000		103.2	% 85-117
m&p-Xylenes	20.501		20.000000		102.5	% 82-116
o-Xylene	20.763		20.000000		103.8	% 85-119

st Method.....: SW-846 8021B

Units.....: ug/L

Analyst....: rec

Method Description.: Volatile Organics - Aromatics

Batch.....: 75686

CCV	Continuing Calibration Verification	V120102CCV			12/10/2002	0821
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	21.434		20.000000		107.2	% 85-115
Ethylbenzene	19.941		20.000000		99.7	% 85-115
tert-Butyl Methyl Ether (MTBE)	97.374		100.000000		97.4	% 85-115
Toluene	20.005		20.000000		100.0	% 85-115
Xylenes (total)	59.384		60.000000		99.0	% 85-115
m&p-Xylenes	39.684		40.000000		99.2	% 85-115
o-Xylene	19.700		20.000000		98.5	% 85-115

MB	Method Blank	12102002			12/10/2002	0941
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	ND					
Ethylbenzene	ND					
tert-Butyl Methyl Ether (MTBE)	ND					
Toluene	ND					
Xylenes (total)	ND					
m&p-Xylenes	ND					
o-Xylene	ND					

QUALITY CONTROL RESULTS

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	V120102CCV	216303-38	400	12/10/2002	1222
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	100.025		10.000000	89.888	101.4	% 79-115
Ethylbenzene	9.740		10.000000	ND	97.4	% 83-115
tert-Butyl Methyl Ether (MTBE)	49.251		50.000000	ND	98.5	% 85-115
Toluene	9.812		10.000000	ND	98.1	% 85-115
Xylenes (total)	29.508		30.000000	ND	98.4	% 85-117
m&p-Xylenes	19.730		20.000000	ND	98.7	% 82-116
o-Xylene	9.778		10.000000	ND	97.8	% 85-119

MSD	Matrix Spike Duplicate	V120102CCV	216303-38	400	12/10/2002	1303
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	97.980	100.025	10.000000	89.888	80.9	% 79-115
					2.1	R 20
Ethylbenzene	9.468	9.740	10.000000	ND	94.7	% 83-115
					2.8	R 20
tert-Butyl Methyl Ether (MTBE)	47.891	49.251	50.000000	ND	95.8	% 85-115
					2.8	R 20
Toluene	9.580	9.812	10.000000	ND	95.8	% 85-115
					2.4	R 20
Xylenes (total)	28.702	29.508	30.000000	ND	95.7	% 85-117
					2.8	R 20
m&p-Xylenes	19.175	19.730	20.000000	ND	95.9	% 82-116
					2.9	R 20
o-Xylene	9.527	9.778	10.000000	ND	95.3	% 85-119
					2.6	R 20

SB	Spiked Blank	V120102SBW			12/10/2002	0901
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.180		20.000000		95.9	% 79-115
Ethylbenzene	19.053		20.000000		95.3	% 83-115
tert-Butyl Methyl Ether (MTBE)	103.639		100.000000		103.6	% 85-115
Toluene	19.593		20.000000		98.0	% 85-115
Xylenes (total)	39.562		40.000000		98.9	% 85-117
m&p-Xylenes	19.423		20.000000		97.1	% 82-116
o-Xylene	20.139		20.000000		100.7	% 85-119

Test Method.....: SW846 8015B

Units.....: mg/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 65049

LCS	Laboratory Control Sample	GC082802A	64586		12/10/2002	2113
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	1235.87		1000.000000		123.6	% 70-130

QUALITY CONTROL RESULTS

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MB	Method Blank	GC102202	64586		12/10/2002	2027
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	ND					

SB	Spiked Blank	GC100902	64586		12/10/2002	2159
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	825.40		1000.000000	ND	83	% 70.0-130.0

SBD	Spiked Blank Duplicate	GC100902	64586		12/10/2002	2245
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	883.51	825.40	1000.000000	ND	88.4 6.8	% 70-130 R 20

st Method.....: SW846 8015B

Units.....: mg/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 65151

CCV	Continuing Calibration Verification	BX102502B			12/10/2002	0939
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	250.060		0.000000		100.0	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/10/2002	1524
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	269.450		0.000000		107.8	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/10/2002	1807
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	240.831		0.000000		96.3	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/11/2002	0745
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	256.118		0.000000		102.4	% 85.0-115.0

QUALITY CONTROL RESULTS

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCV	Continuing Calibration Verification	BX102502B			12/11/2002	1522
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	256.419		0.000000		102.6	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/11/2002	1820
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	257.776		0.000000		103.1	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/12/2002	0815
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	270.144		0.000000		108.1	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/12/2002	1329
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	269.728		0.000000		107.9	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/12/2002	1559
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	252.116		0.000000		100.8	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/13/2002	0839
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	268.478		0.000000		107.4	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/13/2002	1409
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	276.059		0.000000		110.4	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/13/2002	1912
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	226.856		0.000000		90.7	% 85.0-115.0

QUALITY CONTROL RESULTS

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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LCS	Laboratory Control Sample	BXS120502E	651511-1		12/10/2002	1038
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	238.484		0.000000		95.4	% 78-140

LCS	Laboratory Control Sample	BXS120502E	651512-2		12/11/2002	1547
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	248.081		0.000000		99.2	% 78-140

LCS	Laboratory Control Sample	BXS120502E	651513-3		12/13/2002	1457
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	215.865		0.000000		86.3	% 78-140

	Method Blank		651511-1		12/10/2002	1103
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	ND					

MB	Method Blank		651512-2		12/11/2002	1611
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	12.6552					

MB	Method Blank		651513-3		12/13/2002	1525
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	9.11715					

MS	Matrix Spike	BX102502B	245547-1		12/10/2002	1431
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	226.927		0.000000	ND	86.9	% 70-130

MS	Matrix Spike	BX102502B	245697-1		12/11/2002	1730
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	193.054		0.000000	9.49495	73.4	% 70-130

QUALITY CONTROL RESULTS

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	BX102502B	245835-1		12/13/2002	1808
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	216.325		0.000000	ND	80.9	% 70-130

MSD	Matrix Spike Duplicate	BX102502B	245547-1		12/10/2002	1457
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	235.422	226.927	0.000000	ND	90.3 3.7	% 70-130 R 20

MSD	Matrix Spike Duplicate	BX102502B	245697-1		12/11/2002	1754
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	220.767	193.054	0.000000	9.49495	84.5 13.4	% 70-130 R 20

MSD	Matrix Spike Duplicate	BX102502B	245835-1		12/13/2002	1841
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	212.355	216.325	0.000000	ND	79.3 1.9	% 70-130 R 20

SURROGATE RECOVERIES REPORT

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 65049

Analyst.....: *he

Equipment Code: EXTGC01

Surrogate	Units
	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
64586--21		MB	1.000000	31.17	50.000	62.3	60-140		12/10/2002	2027
64586--21		LCS	1.000000	43.29	50.000	86.6	60-140		12/10/2002	2113
64586--21		SB	1.000000	33.74	50.000	67.5	60-140		12/10/2002	2159
64586--21		SBD	1.000000	36.64	50.000	73.3	60-140		12/10/2002	2245
245547-1			1.000000	44.82	50.000	89.6	60-140		12/11/2002	0615
245547-2			1.000000	45.92	50.000	91.8	60-140		12/11/2002	0700
245547-3			1.000000	40.96	50.000	81.9	60-140		12/11/2002	0745
245547-4			1.000000	37.60	50.000	75.2	60-140		12/11/2002	0830

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 65151

Analyst.....: *he

Equipment Code: BTEX04

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
651511-1		CCV	1	46.6935	50.00	93.4	70-139		12/10/2002	0939
651511-1		LCS	1	47.3732	50.00	94.7	70-139		12/10/2002	1038
651511-1		MB	1	46.4499	50.00	92.9	70-139		12/10/2002	1103
245547-1			1	47.8735	50.00	95.7	70-139		12/10/2002	1407
245547-1		MS	1	47.7479	50.00	95.5	70-139		12/10/2002	1431
245547-1		MSD	1	48.0155	50.00	96.0	70-139		12/10/2002	1457
		CCV	1	48.4634	50.00	96.9	70-139		12/10/2002	1524
245547-2			1	49.6470	50.00	99.3	70-139		12/10/2002	1651
245547-3			1	49.4449	50.00	98.9	70-139		12/10/2002	1716
245547-4			1	48.3255	50.00	96.7	70-139		12/10/2002	1742
		CCV	1	47.7576	50.00	95.5	70-139		12/10/2002	1807
		CCV	1	47.4036	50.00	94.8	70-139		12/11/2002	0745
		CCV	1	50.9057	50.00	101.8	70-139		12/11/2002	1522
651512-2		LCS	1	48.0209	50.00	96.0	70-139		12/11/2002	1547
651512-2		MB	1	48.7526	50.00	97.5	70-139		12/11/2002	1611
245697-1		MS	1	47.9571	50.00	95.9	70-139		12/11/2002	1730
245697-1		MSD	1	49.3520	50.00	98.7	70-139		12/11/2002	1754
		CCV	1	46.9014	50.00	93.8	70-139		12/11/2002	1820
		CCV	1	49.0484	50.00	98.1	70-139		12/12/2002	0815
		CCV	1	48.9969	50.00	98.0	70-139		12/12/2002	1329
		CCV	1	48.6071	50.00	97.2	70-139		12/12/2002	1559
		CCV	1	50.5458	50.00	101.1	70-139		12/13/2002	0839
		CCV	1	51.3114	50.00	102.6	70-139		12/13/2002	1409
651513-3		LCS	1	50.4318	50.00	100.9	70-139		12/13/2002	1457
513-3		MB	1	49.9415	50.00	99.9	70-139		12/13/2002	1525
335-1			1	51.9297	50.00	103.9	70-139		12/13/2002	1553
245835-2			1	50.6451	50.00	101.3	70-139		12/13/2002	1631

SURROGATE RECOVERIES REPORT

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
245835-1		MS	1	49.9462	50.00	99.9	70-139		12/13/2002	1808
245835-1		MSD	1	49.9875	50.00	100.0	70-139		12/13/2002	1841
		CCV	1	49.1270	50.00	98.3	70-139		12/13/2002	1912

Surrogate	Units
Trifluorotoluene	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV	1	46.8369		93.7	68-143		12/10/2002	0939
651511-1		LCS	1	39.6217		79.2	68-143		12/10/2002	1038
651511-1		MB	1	49.9643		99.9	68-143		12/10/2002	1103
245547-1			1	50.6182		101.2	68-143		12/10/2002	1407
245547-1		MS	1	49.7650		99.5	68-143		12/10/2002	1431
245547-1		MSD	1	50.0965		100.2	68-143		12/10/2002	1457
		CCV	1	54.8892		109.8	68-143		12/10/2002	1524
245547-2			1	50.4277		100.9	68-143		12/10/2002	1651
245547-3			1	50.2350		100.5	68-143		12/10/2002	1716
245547-4			1	41.3574		82.7	68-143		12/10/2002	1742
		CCV	1	39.3963		78.8	68-143		12/10/2002	1807
		CCV	1	45.2374		90.5	68-143		12/11/2002	0745
		CCV	1	53.3912		106.8	68-143		12/11/2002	1522
651512-2		LCS	1	54.1209		108.2	68-143		12/11/2002	1547
651512-2		MB	1	51.1051		102.2	68-143		12/11/2002	1611
245697-1		MS	1	43.2237		86.4	68-143		12/11/2002	1730
245697-1		MSD	1	50.2589		100.5	68-143		12/11/2002	1754
		CCV	1	54.5310		109.1	68-143		12/11/2002	1820
		CCV	1	53.3579		106.7	68-143		12/12/2002	0815
		CCV	1	52.9805		106.0	68-143		12/12/2002	1329
		CCV	1	45.7319		91.5	68-143		12/12/2002	1559
		CCV	1	52.1117		104.2	68-143		12/13/2002	0839
		CCV	1	56.4666		112.9	68-143		12/13/2002	1409
651513-3		LCS	1	45.5668		91.1	68-143		12/13/2002	1457
651513-3		MB	1	41.4269		82.9	68-143		12/13/2002	1525
245835-1			1	51.8751		103.8	68-143		12/13/2002	1553
245835-2			1	50.7725		101.5	68-143		12/13/2002	1631
245835-1		MS	1	51.1920		102.4	68-143		12/13/2002	1808
245835-1		MSD	1	52.7894		105.6	68-143		12/13/2002	1841
		CCV	1	53.0907		106.2	68-143		12/13/2002	1912

SURROGATE RECOVERIES REPORT

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Volatile Organics - Aromatics
Batch.....: 75636Method Code.....: 8020
Analyst.....: rec

Equipment Code:

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		18.197	20.00000	91.0	77-115		12/09/2002	0940
		SB		18.555	20.00000	92.8	77-115		12/09/2002	1031
		MB		18.059	20.00000	90.3	77-115		12/09/2002	1122
216303-37				17.809	20.00000	89.0	77-115		12/09/2002	1213
216303-36				18.452	20.00000	92.3	77-115		12/09/2002	1304
216303-36		MS		18.266	20.00000	91.3	77-115		12/09/2002	1355
216303-36		MSD		18.301	20.00000	91.5	77-115		12/09/2002	1446
216303-39				17.762	20.00000	88.8	77-115		12/09/2002	1537
216303-40			2	18.582	20.00000	92.9	77-115		12/09/2002	1628
216304-1			2	19.446	20.00000	97.2	77-115		12/09/2002	1719
216312-1				17.198	20.00000	86.0	77-115		12/09/2002	1810

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		20.062	20.00000	100.3	68-118		12/09/2002	0940
		SB		20.880	20.00000	104.4	68-118		12/09/2002	1031
		MB		17.969	20.00000	89.8	68-118		12/09/2002	1122
216303-37				19.077	20.00000	95.4	68-118		12/09/2002	1213
216303-36				19.545	20.00000	97.7	68-118		12/09/2002	1304
216303-36		MS		20.177	20.00000	100.9	68-118		12/09/2002	1355
216303-36		MSD		20.338	20.00000	101.7	68-118		12/09/2002	1446
216303-39				18.773	20.00000	93.9	68-118		12/09/2002	1537
216303-40			2	18.637	20.00000	93.2	68-118		12/09/2002	1628
216304-1			2	25.562	20.00000	127.8	68-118	X	12/09/2002	1719
216312-1				17.965	20.00000	89.8	68-118		12/09/2002	1810

Method.....: Volatile Organics - Aromatics
Batch.....: 75686Method Code.....: 8020
Analyst.....: rec

Equipment Code:

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		19.800	20.00000	99.0	77-115		12/10/2002	0821
		SB		19.394	20.00000	97.0	77-115		12/10/2002	0901
		MB		18.926	20.00000	94.6	77-115		12/10/2002	0941
210177-3			800	22.426	20.00000	112.1	77-115		12/10/2002	1022

SURROGATE RECOVERIES REPORT

Job Number.: 216312

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
216303-35			200	19.286	20.00000	96.4	77-115		12/10/2002	1102
216303-38			400	19.683	20.00000	98.4	77-115		12/10/2002	1142
216303-38		MS	400	19.865	20.00000	99.3	77-115		12/10/2002	1222
216303-38		MSD	400	19.664	20.00000	98.3	77-115		12/10/2002	1303
216305-1			40	19.239	20.00000	96.2	77-115		12/10/2002	1343
216310-1				18.274	20.00000	91.4	77-115		12/10/2002	1423
216303-41				18.559	20.00000	92.8	77-115		12/10/2002	1503
216310-2				18.774	20.00000	93.9	77-115		12/10/2002	1543
216312-3				19.184	20.00000	95.9	77-115		12/10/2002	1624
216322-1				18.881	20.00000	94.4	77-115		12/10/2002	1704
216323-1				18.913	20.00000	94.6	77-115		12/10/2002	1744
216325-1				18.947	20.00000	94.7	77-115		12/10/2002	1824
216303-28				18.903	20.00000	94.5	77-115		12/10/2002	1904
216347-1			10	19.302	20.00000	96.5	77-115		12/10/2002	1945
216347-2			100	19.356	20.00000	96.8	77-115		12/10/2002	2025
216348-1			200	18.851	20.00000	94.3	77-115		12/10/2002	2105
216348-2			40	18.997	20.00000	95.0	77-115		12/10/2002	2145
216348-3			50	18.917	20.00000	94.6	77-115		12/10/2002	2226
216348-4			40	19.219	20.00000	96.1	77-115		12/10/2002	2306
216322-6			50	19.109	20.00000	95.5	77-115		12/10/2002	2346

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		18.811	20.00000	94.1	68-118		12/10/2002	0821
		SB		18.487	20.00000	92.4	68-118		12/10/2002	0901
		MB		17.659	20.00000	88.3	68-118		12/10/2002	0941
216177-3			800	24.486	20.00000	122.4	68-118	X	12/10/2002	1022
216303-35			200	17.969	20.00000	89.8	68-118		12/10/2002	1102
216303-38			400	17.985	20.00000	89.9	68-118		12/10/2002	1142
216303-38		MS	400	18.434	20.00000	92.2	68-118		12/10/2002	1222
216303-38		MSD	400	18.140	20.00000	90.7	68-118		12/10/2002	1303
216305-1			40	18.262	20.00000	91.3	68-118		12/10/2002	1343
216310-1				16.501	20.00000	82.5	68-118		12/10/2002	1423
216303-41				16.985	20.00000	84.9	68-118		12/10/2002	1503
216310-2				17.383	20.00000	86.9	68-118		12/10/2002	1543
216312-3				17.686	20.00000	88.4	68-118		12/10/2002	1624
216322-1				17.652	20.00000	88.3	68-118		12/10/2002	1704
216323-1				17.653	20.00000	88.3	68-118		12/10/2002	1744
216325-1				17.513	20.00000	87.6	68-118		12/10/2002	1824
216303-28				17.607	20.00000	88.0	68-118		12/10/2002	1904
216347-1			10	18.136	20.00000	90.7	68-118		12/10/2002	1945
216347-2			100	17.835	20.00000	89.2	68-118		12/10/2002	2025
216348-1			200	17.625	20.00000	88.1	68-118		12/10/2002	2105
216348-2			40	18.007	20.00000	90.0	68-118		12/10/2002	2145
216348-3			50	17.948	20.00000	89.7	68-118		12/10/2002	2226
216348-4			40	17.830	20.00000	89.2	68-118		12/10/2002	2306

Job Number.: 216312

SURROGATE RECOVERIES REPORT

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
216322-6			50	18.131	20.00000	90.7	68-118		12/10/2002	2346

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/30/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/30/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data *cp Non-STL Subcontract Lab *xx

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- ^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.

Laboratory Task Order No./P.O. No. 2318

CHAIN-OF-CUSTODY RECORD

Page - of -

Project Number/Name MT000700.0004

Project Location Chevron/Texaco N. Eunice

Laboratory STL-CC

Project Manager Hank McConnell

Sampler(s)/Affiliation LM/RM/ARCADIS

Laboratory STL-CCProject Manager Hank McConnell

Sampler(s)/Affiliation **LM/RM/ARCADIS**

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>12/5/02</u>	Time <u>1830</u>	Seal Intact? <u>Yes</u>
Received by: <u>[Signature]</u>	Organization: <u>[Signature]</u>	Date <u>1/1</u>	Time <u>1</u>	Seal Intact? <u>N/A</u>

Relinquished by: <u>Fed Ex</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	Seal Intact? _____
Received by: <u>Gregory Williams</u>	Organization: <u>STCC</u>	Date: <u>12/10/07</u>	Time: <u>0930</u>	Yes ☒ No ☐ N/A

Special Instructions/Remarks:

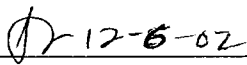
Hex Cr was field filtered

83716283 2854

Delivery Method: ☐ In Person☒ Common Carrier Fed Ex SPECIFY ☐ Lab Courier☐ Other

SPECIFY

AG 05-12/01

.pjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216312	Location.: 57203	Check List Number.: 1	Description.:	
Customer Job ID.....:	Job Check List Date.:		Date of the Report...: 12/06/2002	
Project Number.: 98000024	Project Description.: MT000700 Texaco-Report in ppm		Project Manager.....: crs	
Customer.....: ARCADIS / G&M	Contact.: Steve Tischer			
Questions ?	(Y/N) Comments			
How did samples arrive?.....	Y	FED EX		
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	Y			
Temperature blank in cooler?.....	Y	0.0 DEGREES C		
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....	Y			
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....				

RECEIVED
DEC 23 2002
ARCADIS Geraghty & Miller

ANALYTICAL REPORT

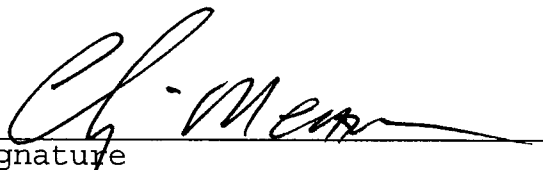
JOB NUMBER: 216336

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/19/2002


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/19/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/19/2002

Job Number.: 216336
Customer...: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216336-1	MW034	Water	12/05/2002	13:40	12/06/2002	09:30
216336-2	MW041A	Water	12/05/2002	15:05	12/06/2002	09:30

LABORATORY TEST RESULTS

Job Number: 216336

Date: 12/19/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW034
Date Sampled.....: 12/05/2002
Time Sampled.....: 13:40
Sample Matrix.....: Water

Laboratory Sample ID: 216336-1
Date Received.....: 12/06/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	0.28	0.05	mg/L	12/16/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/10/02	crw

LABORATORY TEST RESULTS

Job Number: 216336

Date: 12/19/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW041A
Date Sampled.....: 12/05/2002
Time Sampled.....: 15:05
Sample Matrix.....: Water

Laboratory Sample ID: 216336-2
Date Received.....: 12/06/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	0.31	0.05	mg/L	12/16/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/10/02	crw

QUALITY CONTROL RESULTS

Job Number.: 216336

Report Date.: 12/19/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Batch.....: 75891

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CR

Parameter.....: Chromium (Cr)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	1.95954864		2.00		98.0	%	90-110	12/16/2002	1818
ICV		M0346	1.02837176		1.00		102.8	%	90-110	12/16/2002	1826
ICV		M0337	0.98313207		1.00		98.3	%	90-110	12/16/2002	1834
ICB			-0.0007117							12/16/2002	1842
LSC		M0341	0.00377346		1.00					12/16/2002	1845
CCV		M0341	0.90356863		1.00		90.4	%	90-110	12/16/2002	1901
CCB			-0.0021955							12/16/2002	1909
MB		3010	-0.0022740							12/16/2002	1913
LCS		M345	0.46899392		0.500		93.8	%	90-110	12/16/2002	1916
CCB			-0.0065309							12/16/2002	1954
MS 216331-1		M345	0.47760260		0.500	-0.0011924	95.8	%	75-125	12/16/2002	2006
MSD 216331-1		M345	0.47068852	0.47760260	0.500	-0.0011924	94.4	%	75-125	12/16/2002	2010
							1.5	R 20			
PDS 216331-1		M345B	0.92770285		1.00	-0.0011924	92.9	%	75-125	12/16/2002	2013
PSD 216331-1		M345B	0.94962959	0.92770285	1.00	-0.0011924	95.1	%	75-125	12/16/2002	2017
							2.3	R 20			
CCV		M0341	0.90682687		1.00		90.7	%	90-110	12/16/2002	2038
			-0.0091733							12/16/2002	2046
Mo		3010	-0.0106375							12/16/2002	2127
LCS		M345	0.50935874		0.500		101.9	%	90-110	12/16/2002	2131
CCV		M0341	0.97124875		1.00		97.1	%	90-110	12/16/2002	2135
CCB			-0.0114641							12/16/2002	2142
MS 216331-2		M345	0.51355136		0.500	-0.0123129	105.2	%	75-125	12/16/2002	2154
MSD 216331-2		M345	0.51554657	0.51355136	0.500	-0.0123129	105.6	%	75-125	12/16/2002	2158
							0.4	R 20			
CCV		M0341	1.03733294		1.00		103.7	%	90-110	12/16/2002	2227
CCB			-0.0135250							12/16/2002	2234
CCV		M0341	1.08538351		1.00		108.5	%	90-110	12/16/2002	2326
CCB			-0.0138218							12/16/2002	2333
CCV		M0341	1.08536300		1.00		108.5	%	90-110	12/16/2002	2355
CCB			-0.0137043							12/17/2002	0003

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/19/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/19/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx
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EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



Laboratory Task Order No./P.O. No.:

CHAIN-OF-CUSTODY RECORD

Page — — of —

Project Number/Name	MT000700.0004
Project Location	Chevron/Texaco N. Eunice
Laboratory	STL-CC
Project Manager	Hank McConnell
Sampler(s)/Affiliation	LM/RM/ARCADIS

216336

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date: <u>1/1</u>	Time: <u>1830</u>	Seal Intact? <u>Yes</u>
Received by: <u>[Signature]</u>	Organization: <u>FedEx</u>	Date: <u>1/1</u>	Time: <u>1830</u>	Seal Intact? <u>No</u>
Relinquished by: <u>[Signature]</u>	Organization: <u>FedEx</u>	Date: <u>1/1</u>	Time: <u>1830</u>	Seal Intact? <u>Yes</u>
Received by: <u>[Signature]</u>	Organization: <u>SP-CC</u>	Date: <u>1/1</u>	Time: <u>1830</u>	Seal Intact? <u>No</u>

Special Instructions/Remarks:

Total Cr was field filtered

FedEx# 837162832773

Delivery Method: ☒ In Person

☒ Common Carrier Fed Ex☐ Lab Courier☐ Other

SPECIFY

AG 05-12/01

pjsckl	Job Sample Receipt Checklist Report		V2
Job Number.: 216336	Location.: 57203	Check List Number.: 1	Description.:
Customer Job ID.....:	Job Check List Date.:		Date of the Report...: 12/06/2002
Project Number.: 98000024	Project Description.: MT000700 Texaco-Report in ppm		Project Manager.....: crs
Customer.....: ARCADIS / G&M	Contact.: Steve Tischer		
Questions ?	(Y/N) Comments		
How did samples arrive?..... Y FED EX DELIVERED			
Chain-of-Custody Present?..... Y			
Custody seal on shipping container?..... Y			
...If "yes", custody seal intact?..... Y			
Custody seals on sample containers?..... N			
...If "yes", custody seal intact?.....			
Samples chilled?..... N			
Temperature blank in cooler?..... N			
Temp of cooler acceptable? (0.05 to 6.00 deg C) N METALS ONLY			
Samples received intact (good condition)?..... Y			
Volatile samples acceptable? (no headspace)..... N/A			
Correct containers used?..... Y			
Adequate sample volume provided?..... Y			
Samples preserved correctly?..... Y			
Samples received within holding-time?..... Y			
Agreement between COC and sample labels?..... Y			
Additional.....			
Comments.....			
Sample Custodian Signature.....			

cow 12/6/02

MW 48 SA
MW 49 SA

12-4-02

TraceAnalysis, Inc.

6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: December 18, 2002 Order Number: A02120501
MT000700.0004 N/A

Page Number: 1 of 1
Chevron/Texaco N. Eunice

Summary Report

Hank McConnell
Arcadis Geraghty & Miller
1004 N Big Spring St. Suite 300
Midland, TX 79701

Report Date: December 18, 2002

Order ID Number: A02120501

Project Number: MT000700.0004
Project Name: N/A
Project Location: Chevron/Texaco N. Eunice

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215086	MW 48 SA	Water	12/4/02	11:55	12/5/02
215087	MW 49 SA	Water	12/4/02	14:55	12/5/02

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.

Sample - Field Code	BTEX					TPH DRO	TPH GRO
	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	M,P,O-Xylene (ppm)	Total BTEX (ppm)	DRO (ppm)	GRO (ppm)
215086 - MW 48 SA	<0.001	<0.001	<0.001	<0.001	<0.001	<5.00	<0.1
215087 - MW 49 SA	<0.001	<0.001	<0.001	<0.001	<0.001	<5.00	<0.1

Sample: 215086 - MW 48 SA

Param	Flag	Result	Units
Hexavalent Chromium	1	0.163	mg/L
Dissolved Chromium		0.157	mg/L
Chloride		441	mg/L

Sample: 215087 - MW 49 SA

Param	Flag	Result	Units
Hexavalent Chromium	2	0.054	mg/L
Dissolved Chromium		0.0523	mg/L
Chloride		3010	mg/L

¹Dissolved

²Dissolved

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

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
155 McCutcheon, Suite H

Lubbock, Texas 79424
El Paso, Texas 79932

800•378•1296
888•588•3443

806•794•1296
915•585•3443

FAX 806•794•1298
FAX 915•585•4944

E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Hank McConnell
Arcadis Geraghty & Miller
1004 N Big Spring St. Suite 300
Midland, TX 79701

Report Date: December 18, 2002

Order ID Number: A02120501

Project Number: MT000700.0004
Project Name: N/A
Project Location: Chevron/Texaco N. Eunice

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
215086	MW 48 SA	Water	12/4/02	11:55	12/5/02
215087	MW 49 SA	Water	12/4/02	14:55	12/5/02

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.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

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: 215086 - MW 48 SA

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC25434 Date Analyzed: 12/5/02
Analyst: CG Preparation Method: S 5030B Prep Batch: PB23590 Date Prepared: 12/5/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.001	mg/L	1	0.001
Toluene		<0.001	mg/L	1	0.001
Ethylbenzene		<0.001	mg/L	1	0.001
M,P,O-Xylene		<0.001	mg/L	1	0.001
Total BTEX		<0.001	mg/L	1	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.0945	mg/L	1	0.10	94	70 - 130
4-BFB		0.0928	mg/L	1	0.10	93	70 - 130

Sample: 215086 - MW 48 SA

Analysis: CR6 Analytical Method: SM 3500-Cr D QC Batch: QC25357 Date Analyzed: 12/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23535 Date Prepared: 12/5/02

Param	Flag	Result	Units	Dilution	RDL
Hexavalent Chromium	1	0.163	mg/L	1	0.01

Sample: 215086 - MW 48 SA

Analysis: Dissolved Metals Analytical Method: S 6010B QC Batch: QC25500 Date Analyzed: 12/10/02
Analyst: RR Preparation Method: E 3005A Prep Batch: PB23571 Date Prepared: 12/6/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Chromium		0.157	mg/L	1.10	0.01

Sample: 215086 - MW 48 SA

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25405 Date Analyzed: 12/6/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23564 Date Prepared: 12/6/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		441	mg/L	10	1

Sample: 215086 - MW 48 SA

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC25396 Date Analyzed: 12/6/02
Analyst: BP Preparation Method: 3510C - Mod. Prep Batch: PB23557 Date Prepared: 12/5/02

¹Dissolved

Report Date: December 18, 2002
MT000700.0004

Order Number: A02120501
N/A

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Chevron/Texaco N. Eunice

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		12.4	mg/L	0.10	15	82	70 - 130

Sample: 215086 - MW 48 SA

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC25435 Date Analyzed: 12/5/02
Analyst: CG Preparation Method: 5030 Prep Batch: PB23590 Date Prepared: 12/5/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<0.1	mg/L	1	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.106	mg/L	1	0.10	106	70 - 130
4-BFB		0.104	mg/L	1	0.10	104	70 - 130

Sample: 215087 - MW 49 SA

Analysis: BTEX Analytical Method: S 8021B QC Batch: QC25434 Date Analyzed: 12/5/02
Analyst: CG Preparation Method: S 5030B Prep Batch: PB23590 Date Prepared: 12/5/02

Param	Flag	Result	Units	Dilution	RDL
Benzene		<0.001	mg/L	1	0.001
Toluene		<0.001	mg/L	1	0.001
Ethylbenzene		<0.001	mg/L	1	0.001
M,P,O-Xylene		<0.001	mg/L	1	0.001
Total BTEX		<0.001	mg/L	1	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.094	mg/L	1	0.10	94	70 - 130
4-BFB		0.0919	mg/L	1	0.10	92	70 - 130

Sample: 215087 - MW 49 SA

Analysis: CR6 Analytical Method: SM 3500-Cr D QC Batch: QC25357 Date Analyzed: 12/5/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23535 Date Prepared: 12/5/02

Param	Flag	Result	Units	Dilution	RDL
Hexavalent Chromium	²	0.054	mg/L	1	0.01

²Dissolved

Report Date: December 18, 2002
MT000700.0004

Order Number: A02120501
N/A

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Chevron/Texaco N. Eunice

Sample: 215087 - MW 49 SA

Analysis: Dissolved Metals Analytical Method: S 6010B QC Batch: QC25500 Date Analyzed: 12/10/02
Analyst: RR Preparation Method: E 3005A Prep Batch: PB23571 Date Prepared: 12/6/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Chromium		0.0523	mg/L	1.10	0.01

Sample: 215087 - MW 49 SA

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25405 Date Analyzed: 12/6/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23564 Date Prepared: 12/6/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		3010	mg/L	100	1

Sample: 215087 - MW 49 SA

Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC25396 Date Analyzed: 12/6/02
Analyst: BP Preparation Method: 3510C - Mod. Prep Batch: PB23557 Date Prepared: 12/5/02

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		11.6	mg/L	0.10	15	77	70 - 130

Sample: 215087 - MW 49 SA

Analysis: TPH GRO Analytical Method: 8015B QC Batch: QC25435 Date Analyzed: 12/5/02
Analyst: CG Preparation Method: 5030 Prep Batch: PB23590 Date Prepared: 12/5/02

Param	Flag	Result	Units	Dilution	RDL
GRO		<0.1	mg/L	1	0.10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
TFT		0.108	mg/L	1	0.10	108	70 - 130
4-BFB		0.103	mg/L	1	0.10	103	70 - 130

Quality Control Report Method Blank

Method Blank QCBatch: QC25357

Param	Flag	Results	Units	Reporting Limit
Hexavalent Chromium		<0.01	mg/L	0.01

Method Blank QCBatch: QC25396

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		11.0	mg/L	0.10	150	7	70 - 130

Method Blank QCBatch: QC25405

Param	Flag	Results	Units	Reporting Limit
Chloride		<1.0	mg/L	1

Method Blank QCBatch: QC25434

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		0.091	mg/L	1	0.10	91	70 - 130
4-BFB		0.089	mg/L	1	0.10	89	70 - 130

Method Blank QCBatch: QC25435

Report Date: December 18, 2002
MT000700.0004

Order Number: A02120501
N/A

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Chevron/Texaco N. Eunice

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		0.103	mg/L	1	0.10	103	70 - 130
4-BFB		0.099	mg/L	1	0.10	99	70 - 130

Method Blank

QCBatch: QC25500

Param	Flag	Results	Units	Reporting Limit
Dissolved Chromium		<0.011	mg/L	0.01

Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC25357

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Hexavalent Chromium	0.500	0.496	mg/L	1	0.50	<0.01	100	0	83 - 116	20

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

Laboratory Control Spikes

QCBatch: QC25396

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
DRO	25.2	26.6	mg/L	0.10	25	<5.00	100	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
n-Triacontane	11.4	11.6	mg/L	0.10	15	76	77	70 - 130

Laboratory Control Spikes

QCBatch: QC25405

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	11.38	11.32	mg/L	1	12.50	<1.0	91	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: QC25434

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.095	0.093	mg/L	1	0.10	<0.001	95	2	70 - 130	20
Benzene	0.094	0.093	mg/L	1	0.10	<0.001	94	1	70 - 130	20
Toluene	0.094	0.094	mg/L	1	0.10	<0.001	94	0	70 - 130	20
Ethylbenzene	0.095	0.095	mg/L	1	0.10	<0.001	95	0	70 - 130	20
M,P,O-Xylene	0.286	0.286	mg/L	1	0.30	<0.001	95	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
TFT	0.089	0.090	mg/L	1	0.10	89	90	70 - 130
4-BFB	0.092	0.091	mg/L	1	0.10	92	91	70 - 130

Laboratory Control Spikes

QCBatch: QC25435

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
GRO	0.988	1.1	mg/L	1	1	<0.1	98	10	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	0.113	0.111	mg/L	1	0.10	113	111	70 - 130
4-BFB	0.108	0.107	mg/L	1	0.10	108	107	70 - 130

Laboratory Control Spikes

QCBatch: QC25500

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Chromium	0.102	0.102	mg/L	1.20	0.10	<0.011	102	0	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: QC25357

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Hexavalent Chromium	0.537	0.541	mg/L	1	0.50	0.054	96	0	83 - 116	20

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

Matrix Spikes QCBatch: QC25405

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	4080	4080	mg/L	1	1250	3010	85	0	48 - 127	20

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

Matrix Spikes QCBatch: QC25500

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Chromium	0.256	0.257	mg/L	1.20	0.10	0.157	99	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

CCV (1) QCBatch: QC25357

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hexavalent Chromium		mg/L	0.50	0.490	98	85 - 115	12/5/02

ICV (1) QCBatch: QC25357

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hexavalent Chromium		mg/L	0.50	0.488	97	85 - 115	12/5/02

CCV (1) QCBatch: QC25396

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	240	96	75 - 125	12/6/02

ICV (1) QCBatch: QC25396

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	231	92	75 - 125	12/6/02

CCV (1)

QCBatch: QC25405

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.40	91	90 - 110	12/6/02

ICV (1)

QCBatch: QC25405

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.69	93	90 - 110	12/6/02

CCV (1)

QCBatch: QC25434

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.093	93	85 - 115	12/5/02
Benzene		mg/L	0.10	0.094	94	85 - 115	12/5/02
Toluene		mg/L	0.10	0.095	95	85 - 115	12/5/02
Ethylbenzene		mg/L	0.10	0.096	96	85 - 115	12/5/02
M,P,O-Xylene		mg/L	0.30	0.286	95	85 - 115	12/5/02

ICV (1)

QCBatch: QC25434

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.102	102	85 - 115	12/5/02
Benzene		mg/L	0.10	0.096	96	85 - 115	12/5/02
Toluene		mg/L	0.10	0.098	98	85 - 115	12/5/02
Ethylbenzene		mg/L	0.10	0.099	99	85 - 115	12/5/02
M,P,O-Xylene		mg/L	0.30	0.296	98	85 - 115	12/5/02

CCV (1)

QCBatch: QC25435

Report Date: December 18, 2002
MT000700.0004

Order Number: A02120501
N/A

Page Number: 10 of 10
Chevron/Texaco N. Eunice

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1	0.855	85	85 - 115	12/5/02

ICV (1)

QCBatch: QC25435

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1	0.977	97	85 - 115	12/5/02

CCV (1)

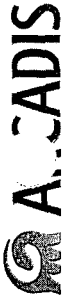
QCBatch: QC25500

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Chromium		mg/L	0.20	0.206	103	90 - 110	12/10/02

ICV (1)

QCBatch: QC25500

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Chromium		mg/L	0.20	0.201	100	90 - 110	12/10/02



Project Number/Name MT000700.0004
Project Location Chevron/Texaco N. Eunice
Laboratory ~~BBB~~ TRACE
Project Manager Hank McConnell
Sampler(s)/Affiliation LM/RM/ARCADIS

[illegible]

Relinquished by:	Organization:	ARCADIS	Date	Time	Seal Intact?
Received by: Helen Shethan	Organization: Grace Analysis		Date 12/04/02	Time 1740	Yes No N/A
Relinquished by: Helen Shethan	Organization: Grace Analysis		Date 12/04/02	Time 1740	Yes No N/A
Received by: Helen Shethan	Organization: Grace Analysis		Date 12/04/02	Time 1830	Seal Intact?
Relinquished by: Helen Shethan	Organization: Grace Analysis		Date 12/04/02	Time 1830	Yes No N/A
Received by: Helen Shethan	Organization: Grace Analysis		Date 12/04/02	Time 1830	Seal Intact?
Relinquished by: Helen Shethan	Organization: Grace Analysis		Date 12/04/02	Time 1830	Yes No N/A

Special Instructions/Remarks:

Hex Cr was field filtered

Delivery Method: ☐ In Person ☒ Common Carrier ~~Lab Courier~~ Specimen ☐ Lab Courier ☐ Other MA
SPECIFY 2' Branded for 7/11, 13a, 2 (QR-1) MCL (2111210)
SPECIFY AG 05-1201

RECEIVED
DEC 22 2002
ALB
STEVE TISCHER

ANALYTICAL REPORT

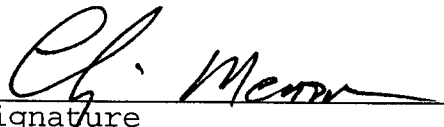
JOB NUMBER: 216300

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/18/2002


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/18/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673
FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/18/2002

Job Number.: 216300
Customer...: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216300-1	MW048SA	Water	12/04/2002	11:55	12/05/2002	10:40
216300-2	MW049SA	Water	12/04/2002	14:55	12/05/2002	10:40

Date: 12/18/2002

ATTN: Steve Tischer

Laboratory Sample ID: 216300-1
Date Received.....: 12/05/2002
Time Received.....: 10:40

Page 2

LABORATORY TEST RESULTS

Job Number: 216300

Date: 12/18/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW049SA
Date Sampled.....: 12/04/2002
Time Sampled.....: 14:55
Sample Matrix.....: Water

Laboratory Sample ID: 216300-2
Date Received.....: 12/05/2002
Time Received.....: 10:40

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	0.07	0.05	mg/L	12/16/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/09/02	crw

QUALITY CONTROL RESULTS

Job Number.: 216300

Report Date.: 12/18/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Batch.....: 75891

Analyst...: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CR

Parameter.....: Chromium (Cr)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	1.95954864		2.00		98.0	%	90-110	12/16/2002	1818
ICV		M0346	1.02837176		1.00		102.8	%	90-110	12/16/2002	1826
ICV		M0337	0.98313207		1.00		98.3	%	90-110	12/16/2002	1834
ICB			-0.0007117							12/16/2002	1842
LSC		M0341	0.00377346		1.00					12/16/2002	1845
CCV		M0341	0.90356863		1.00		90.4	%	90-110	12/16/2002	1901
CCB			-0.0021955							12/16/2002	1909
MB		3010	-0.0022740							12/16/2002	1913
LCS		M345	0.46899392		0.500		93.8	%	90-110	12/16/2002	1916
CCB			-0.0065309							12/16/2002	1954
MS 216331-1		M345	0.47760260		0.500	-0.0011924	95.8	%	75-125	12/16/2002	2006
MSD 216331-1		M345	0.47068852	0.47760260	0.500	-0.0011924	94.4	%	75-125	12/16/2002	2010
							1.5	R 20			
PDS 216331-1		M345B	0.92770285		1.00	-0.0011924	92.9	%	75-125	12/16/2002	2013
PSD 216331-1		M345B	0.94962959	0.92770285	1.00	-0.0011924	95.1	%	75-125	12/16/2002	2017
							2.3	R 20			
CCV		M0341	0.90682687		1.00		90.7	%	90-110	12/16/2002	2038
			-0.0091733							12/16/2002	2046
MB		3010	-0.0106375							12/16/2002	2127
LCS		M345	0.50935874		0.500		101.9	%	90-110	12/16/2002	2131
CCV		M0341	0.97124875		1.00		97.1	%	90-110	12/16/2002	2135
CCB			-0.0114641							12/16/2002	2142
MS 216331-2		M345	0.51355136		0.500	-0.0123129	105.2	%	75-125	12/16/2002	2154
MSD 216331-2		M345	0.51554657	0.51355136	0.500	-0.0123129	105.6	%	75-125	12/16/2002	2158
							0.4	R 20			
CCV		M0341	1.03733294		1.00		103.7	%	90-110	12/16/2002	2227
CCB			-0.0135250							12/16/2002	2234
CCV		M0341	1.08538351		1.00		108.5	%	90-110	12/16/2002	2326
CCB			-0.0138218							12/16/2002	2333
CCV		M0341	1.08536300		1.00		108.5	%	90-110	12/16/2002	2355
CCB			-0.0137043							12/17/2002	0003

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/18/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/18/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx
----------------------	-----	-------------------------	-----

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- ^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



Page — of —

Laboratory Task Order No./P.O. No.: _____

Project Number/Name	MT000700.0004
Project Location	Chevron/Texaco N. Eunice
Laboratory	STL-CC
Project Manager	Hank McConnell
Sampler(s)/Affiliation	LM/RM/ARCADIS

ANALYSIS / METHOD / SIZE

Total Cr, Dissolved
HNO₃ 500 ml
(1) plastic

Sample ID/Location	Matrix	Date XXXXXX	Time XXXXXX
		Sampled	XXXXXX

Remarks

Total

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>2/04/</u>	Time <u>1530</u>	Seal Intact?
Received by: <u>Red EX</u>	Organization: _____	Date <u>/ /</u>	Time _____	☒ Yes ☐ No ☐ N/A

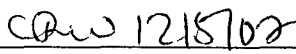
Relinquished by:	FedEx	Organization:	837102832795	Date	12/05/02	Time	1040	Seal Intact?	
Received by:	Java Samkander	Organization:	SAC	Date	12/05/02	Time	1040	(Yes) No	N/A

Special Instructions/Remarks:

Total Cr was field filtered

Delivery Method: ☐ In Person☒ Common Carrier Fed Ex SPECIFY☐ Lab Courier☐ Other

SPECIFY

jsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216300	Location.: 57203	Check List Number.: 1	Description.:	
Customer Job ID.....:		Job Check List Date.:		Date of the Report...: 12/05/2002
Project Number.: 98000024	Project Description.: MT000700	Texaco-Report in ppm		Project Manager.....: crs
Customer.....: ARCADIS / G&M		Contact.: Steve Tischer		
Questions ?	(Y/N) Comments			
How did samples arrive?.....	Y	FED EX DELIVERED		
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	N			
Temperature blank in cooler?.....	N			
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y	METALS ONLY		
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....		N/A		
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....				

RECEIVED
DEC 02 2003
ARCADIS Geraghty & Miller

ANALYTICAL REPORT

JOB NUMBER: 216275

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/30/2002


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/30/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673
FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/30/2002

Job Number.: 216275
Customer...: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID.....: MT000700.0004
Project Description.....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216275-1	MW048SA	Water	12/04/2002	14:55	12/05/2002	10:40
216275-2	TRIP BLANK	Water	12/04/2002	00:00	12/05/2002	10:40

LABORATORY TEST RESULTS

Job Number: 216275

Date: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW048SA
Date Sampled.....: 12/04/2002
Time Sampled.....: 14:55
Sample Matrix.....: Water

Laboratory Sample ID: 216275-1
Date Received.....: 12/05/2002
Time Received.....: 10:40

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.16	0.05	mg/L	12/05/02	edr
EPA 300.0	Chloride	430	50	mg/L	12/10/02	cnw
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	12/08/02	rec
	Ethylbenzene	ND	0.002	mg/L	12/08/02	rec
	Toluene	ND	0.002	mg/L	12/08/02	rec
	Xylenes (total)	ND	0.002	mg/L	12/08/02	rec
SW-846 3510C	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			12/09/02	*he
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	ND	0.05	mg/L	12/10/02	*he
	TVPH - Gasoline Range Organics		0.50	mg/L	12/11/02	*he
	TEPH - Diesel Range Organics	1.5				

LABORATORY TEST RESULTS

Job Number: 216275

Date: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: TRIP BLANK
Date Sampled.....: 12/04/2002
Time Sampled.....: 00:00
Sample Matrix.....: Water

Laboratory Sample ID: 216275-2
Date Received.....: 12/05/2002
Time Received.....: 10:40

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	12/08/02	rec
	Ethylbenzene	ND	0.002	mg/L	12/08/02	rec
	Toluene	ND	0.002	mg/L	12/08/02	rec
	Xylenes (total)	ND	0.002	mg/L	12/08/02	rec

QUALITY CONTROL RESULTS

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 7197

Method Description.: Chromium, Hexavalent

Parameter.....: Hexavalent Chromium

Batch.....: 75509

Units.....: mg/L

Analyst....: edr

Test Code.: CR6

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M120502C	0.0246		0.02500		98.4	%	90-110	12/05/2002	1337
ICB			0.0009							12/05/2002	1338
LCS		M120502R	0.0509		0.05000		101.8	%	75-125	12/05/2002	1340
MB			0.0012							12/05/2002	1342
CCV		M120502C	0.0238		0.02500		95.2	%	80-120	12/05/2002	1353
CCB			0.0017							12/05/2002	1354
MS	216274-1	M120502R	0.0546		0.05000	0.0063	96.6	%	75-125	12/05/2002	1359
MSD	216274-1	M120502R	0.0520	0.0546	0.05000	0.0063	91.4	%	75-125	12/05/2002	1401
							4.9	R 20			
CCV		M120502C	0.0263		0.02500		105.2	%	80-120	12/05/2002	1409
CCB			0.0029							12/05/2002	1410

Test Method.....: EPA 300.0

Method Description.: Ion Chromatography Analysis

Parameter.....: Chloride

Batch.....: 75681

Units.....: mg/L

Analyst....: cnw

Test Code.: CHL

	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		121002	0.1008							12/10/2002	1510
ICV		IC21210F	9.8263		10.00		98.3	%	90-110	12/10/2002	1519
MB		121002	0.0904							12/10/2002	1527
LCS		IC21210D	9.9427		10.00		99.4	%	90-110	12/10/2002	1536
CCB		121002	0.1064							12/10/2002	1711
CCV		IC21210F	9.8461		10.00		98.5	%	90-110	12/10/2002	1720
MS	216312-1	IC21210E	18.8762		10.00	9.9862	88.9	%	75-125	12/10/2002	1837
MSD	216312-1	IC21210E	18.7034	18.8762	10.00	9.9862	87.2	%	75-125	12/10/2002	1846
							0.9	R 20			
CCB		121002	0.0713							12/10/2002	1912
CCV		IC21210F	9.7408		10.00		97.4	%	90-110	12/10/2002	1920
MB		121002	0.1066							12/10/2002	1929
LCS		IC21210D	9.8237		10.00		98.2	%	90-110	12/10/2002	1938
MS	216325-2	IC21210E	12.7477		10.00	3.4269	93.2	%	75-125	12/10/2002	2113
MSD	216325-2	IC21210E	12.8260	12.7477	10.00	3.4269	94.0	%	75-125	12/10/2002	2121
							0.6	R 20			
CCB		121002	0.0000							12/10/2002	2130
CCV		IC21210F	9.7704		10.00		97.7	%	90-110	12/10/2002	2139
MS	216338-2	IC21210E	24.4610		10.00	15.6835	87.8	%	75-125	12/10/2002	2239
MSD	216338-2	IC21210E	24.3275	24.4610	10.00	15.6835	86.4	%	75-125	12/10/2002	2248
							0.5	R 20			
CCB		121002	0.1001							12/10/2002	2256
CCV		IC21210F	9.7946		10.00		97.9	%	90-110	12/10/2002	2305

QUALITY CONTROL RESULTS

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
---------	-------------	------------	--------	-----------------	------	------

Test Method.....: SW-846 8021B

Units.....: ug/L

Analyst....: rec

Method Description.: Volatile Organics - Aromatics

Batch.....: 75558

CCV	Continuing Calibration Verification	V120102CCV			12/07/2002	1620
-----	-------------------------------------	------------	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	19.131		20.000000		95.7	%	85-115
Ethylbenzene	19.061		20.000000		95.3	%	85-115
tert-Butyl Methyl Ether (MTBE)	100.118		100.000000		100.1	%	85-115
Toluene	18.680		20.000000		93.4	%	85-115
Xylenes (total)	56.938		60.000000		94.9	%	85-115
m&p-Xylenes	37.799		40.000000		94.5	%	85-115
o-Xylene	19.139		20.000000		95.7	%	85-115

MB	Method Blank	12072002			12/07/2002	1733
----	--------------	----------	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	ND						
Ethylbenzene	ND						
tert-Butyl Methyl Ether (MTBE)	ND						
Toluene	ND						
Xylenes (total)	ND						
m&p-Xylenes	ND						
o-Xylene	ND						

MS	Matrix Spike	V120102CCV	216239-8	20	12/07/2002	1924
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	9.888		10.000000	ND	98.9	%	79-115
Ethylbenzene	9.794		10.000000	ND	97.9	%	83-115
tert-Butyl Methyl Ether (MTBE)	295.657		50.000000	247.797	95.7	%	85-115
Toluene	9.666		10.000000	ND	96.7	%	85-115
Xylenes (total)	29.128		30.000000	ND	97.1	%	85-117
m&p-Xylenes	19.279		20.000000	ND	96.4	%	82-116
o-Xylene	9.849		10.000000	ND	98.5	%	85-119

MSD	Matrix Spike Duplicate	V120102CCV	216239-8	20	12/07/2002	2000
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	9.955	9.888	10.000000	ND	99.5	%	79-115
					0.7	R	20
Ethylbenzene	9.883	9.794	10.000000	ND	98.8	%	83-115
					0.9	R	20
tert-Butyl Methyl Ether (MTBE)	296.038	295.657	50.000000	247.797	96.5	%	85-115
					0.1	R	20
Toluene	9.760	9.666	10.000000	ND	97.6	%	85-115
					1.0	R	20
Xylenes (total)	29.426	29.128	30.000000	ND	98.1	%	85-117
					1.0	R	20
m&p-Xylenes	19.461	19.279	20.000000	ND	97.3	%	82-116
					0.9	R	20

QUALITY CONTROL RESULTS

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	V120102CCV	216239-8	20	12/07/2002	2000

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
o-Xylene	9.965	9.849	10.000000	ND	99.7 1.2	% 85-119 R 20

SB	Spiked Blank	V120102SBW			12/07/2002	1657
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	17.484		20.000000		87.4	% 79-115
Ethylbenzene	17.286		20.000000		86.4	% 83-115
tert-Butyl Methyl Ether (MTBE)	102.191		100.000000		102.2	% 85-115
Toluene	17.492		20.000000		87.5	% 85-115
Xylenes (total)	36.442		40.000000		91.1	% 85-117
m&p-Xylenes	17.544		20.000000		87.7	% 82-116
o-Xylene	18.898		20.000000		94.5	% 85-119

Test Method.....: SW-846 8021B

Units.....: ug/L

Analyst....: rec

Method Description.: Volatile Organics - Aromatics

Batch.....: 75591

CCV	Continuing Calibration Verification	V120102CCV			12/08/2002	1038
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	20.652		20.000000		103.3	% 85-115
Ethylbenzene	20.447		20.000000		102.2	% 85-115
tert-Butyl Methyl Ether (MTBE)	103.870		100.000000		103.9	% 85-115
Toluene	20.659		20.000000		103.3	% 85-115
Xylenes (total)	61.161		60.000000		101.9	% 85-115
m&p-Xylenes	40.827		40.000000		102.1	% 85-115
o-Xylene	20.334		20.000000		101.7	% 85-115

MB	Method Blank	12082002			12/08/2002	1154
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	ND					
Ethylbenzene	ND					
tert-Butyl Methyl Ether (MTBE)	ND					
Toluene	ND					
Xylenes (total)	ND					
m&p-Xylenes	ND					
o-Xylene	ND					

QUALITY CONTROL RESULTS

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Fischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	V120102CCV	216279-1		12/08/2002	1543
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	10.380		10.000000	ND	103.8	% 79-115
Ethylbenzene	10.080		10.000000	ND	100.8	% 83-115
tert-Butyl Methyl Ether (MTBE)	83.391		50.000000	29.761	107.3	% 85-115
Toluene	10.199		10.000000	ND	102.0	% 85-115
Xylenes (total)	29.742		30.000000	ND	99.1	% 85-117
m&p-Xylenes	19.819		20.000000	ND	99.1	% 82-116
o-Xylene	9.923		10.000000	ND	99.2	% 85-119

MSD	Matrix Spike Duplicate	V120102CCV	216279-1		12/08/2002	1621
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	10.331	10.380	10.000000	ND	103.3	% 79-115
					0.5	R 20
Ethylbenzene	9.848	10.080	10.000000	ND	98.5	% 83-115
					2.3	R 20
tert-Butyl Methyl Ether (MTBE)	80.795	83.391	50.000000	29.761	102.1	% 85-115
					3.2	R 20
Toluene	10.119	10.199	10.000000	ND	101.2	% 85-115
					0.8	R 20
Xylenes (total)	28.986	29.742	30.000000	ND	96.6	% 85-117
					2.6	R 20
m&p-Xylenes	19.324	19.819	20.000000	ND	96.6	% 82-116
					2.5	R 20
o-Xylene	9.662	9.923	10.000000	ND	96.6	% 85-119
					2.7	R 20

SB	Spiked Blank	V120102SBW			12/08/2002	1116
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.511		20.000000		97.6	% 79-115
Ethylbenzene	19.572		20.000000		97.9	% 83-115
tert-Butyl Methyl Ether (MTBE)	105.697		100.000000		105.7	% 85-115
Toluene	20.113		20.000000		100.6	% 85-115
Xylenes (total)	40.691		40.000000		101.7	% 85-117
m&p-Xylenes	19.995		20.000000		100.0	% 82-116
o-Xylene	20.696		20.000000		103.5	% 85-119

Test Method.....: SW846 8015B

Units.....: mg/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 65049

LCS	Laboratory Control Sample	GC082802A	64586		12/10/2002	2113
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	1235.87		1000.000000		123.6	% 70-130

QUALITY CONTROL RESULTS

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MB	Method Blank	GC102202	64586		12/10/2002	2027
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	ND					

SB	Spiked Blank	GC100902	64586		12/10/2002	2159
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	825.40		1000.000000	ND	83	% 70.0-130.0

SBD	Spiked Blank Duplicate	GC100902	64586		12/10/2002	2245
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	883.51	825.40	1000.000000	ND	88.4 6.8	% 70-130 R 20

st Method.....: SW846 8015B

Units.....: mg/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 65151

CCV	Continuing Calibration Verification	BX102502B			12/10/2002	0939
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	250.060		0.000000		100.0	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/10/2002	1524
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	269.450		0.000000		107.8	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/10/2002	1807
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	240.831		0.000000		96.3	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/11/2002	0745
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	256.118		0.000000		102.4	% 85.0-115.0

QUALITY CONTROL RESULTS

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCV	Continuing Calibration Verification	BX102502B			12/11/2002	1522
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	256.419		0.000000		102.6	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/11/2002	1820
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	257.776		0.000000		103.1	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/12/2002	0815
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	270.144		0.000000		108.1	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/12/2002	1329
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	269.728		0.000000		107.9	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/12/2002	1559
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	252.116		0.000000		100.8	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/13/2002	0839
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	268.478		0.000000		107.4	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/13/2002	1409
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	276.059		0.000000		110.4	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/13/2002	1912
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	226.856		0.000000		90.7	% 85.0-115.0

QUALITY CONTROL RESULTS

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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LCS	Laboratory Control Sample	BXS120502E	651511-1		12/10/2002	1038
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	238.484		0.000000		95.4	% 78-140

LCS	Laboratory Control Sample	BXS120502E	651512-2		12/11/2002	1547
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	248.081		0.000000		99.2	% 78-140

LCS	Laboratory Control Sample	BXS120502E	651513-3		12/13/2002	1457
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	215.865		0.000000		86.3	% 78-140

	Method Blank		651511-1		12/10/2002	1103
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	ND					

MB	Method Blank		651512-2		12/11/2002	1611
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	12.6552					

MB	Method Blank		651513-3		12/13/2002	1525
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	9.11715					

MS	Matrix Spike	BX102502B	245547-1		12/10/2002	1431
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	226.927		0.000000	ND	86.9	% 70-130

MS	Matrix Spike	BX102502B	245697-1		12/11/2002	1730
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	193.054		0.000000	9.49495	73.4	% 70-130

QUALITY CONTROL RESULTS

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	BX102502B	245835-1		12/13/2002	1808
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	216.325		0.000000	ND	80.9	% 70-130

MSD	Matrix Spike Duplicate	BX102502B	245547-1		12/10/2002	1457
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	235.422	226.927	0.000000	ND	90.3 3.7	% 70-130 R 20

MSD	Matrix Spike Duplicate	BX102502B	245697-1		12/11/2002	1754
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	220.767	193.054	0.000000	9.49495	84.5 13.4	% 70-130 R 20

MSD	Matrix Spike Duplicate	BX102502B	245835-1		12/13/2002	1841
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	212.355	216.325	0.000000	ND	79.3 1.9	% 70-130 R 20

SURROGATE RECOVERIES REPORT

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 65049

Analyst.....: *he

Equipment Code: EXTGC01

Surrogate	Units
	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
64586--21		MB	1.000000	31.17	50.000	62.3	60-140		12/10/2002	2027
64586--21		LCS	1.000000	43.29	50.000	86.6	60-140		12/10/2002	2113
64586--21		SB	1.000000	33.74	50.000	67.5	60-140		12/10/2002	2159
64586--21		SBD	1.000000	36.64	50.000	73.3	60-140		12/10/2002	2245
245547-1			1.000000	44.82	50.000	89.6	60-140		12/11/2002	0615
245547-2			1.000000	45.92	50.000	91.8	60-140		12/11/2002	0700
245547-3			1.000000	40.96	50.000	81.9	60-140		12/11/2002	0745
245547-4			1.000000	37.60	50.000	75.2	60-140		12/11/2002	0830

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 65151

Analyst.....: *he

Equipment Code: BTEX04

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
651511-1		CCV	1	46.6935	50.00	93.4	70-139		12/10/2002	0939
651511-1		LCS	1	47.3732	50.00	94.7	70-139		12/10/2002	1038
651511-1		MB	1	46.4499	50.00	92.9	70-139		12/10/2002	1103
245547-1			1	47.8735	50.00	95.7	70-139		12/10/2002	1407
245547-1		MS	1	47.7479	50.00	95.5	70-139		12/10/2002	1431
245547-1		MSD	1	48.0155	50.00	96.0	70-139		12/10/2002	1457
		CCV	1	48.4634	50.00	96.9	70-139		12/10/2002	1524
245547-2			1	49.6470	50.00	99.3	70-139		12/10/2002	1651
245547-3			1	49.4449	50.00	98.9	70-139		12/10/2002	1716
245547-4			1	48.3255	50.00	96.7	70-139		12/10/2002	1742
		CCV	1	47.7576	50.00	95.5	70-139		12/10/2002	1807
		CCV	1	47.4036	50.00	94.8	70-139		12/11/2002	0745
		CCV	1	50.9057	50.00	101.8	70-139		12/11/2002	1522
651512-2		LCS	1	48.0209	50.00	96.0	70-139		12/11/2002	1547
651512-2		MB	1	48.7526	50.00	97.5	70-139		12/11/2002	1611
245697-1		MS	1	47.9571	50.00	95.9	70-139		12/11/2002	1730
245697-1		MSD	1	49.3520	50.00	98.7	70-139		12/11/2002	1754
		CCV	1	46.9014	50.00	93.8	70-139		12/11/2002	1820
		CCV	1	49.0484	50.00	98.1	70-139		12/12/2002	0815
		CCV	1	48.9969	50.00	98.0	70-139		12/12/2002	1329
		CCV	1	48.6071	50.00	97.2	70-139		12/12/2002	1559
		CCV	1	50.5458	50.00	101.1	70-139		12/13/2002	0839
		CCV	1	51.3114	50.00	102.6	70-139		12/13/2002	1409
651513-3		LCS	1	50.4318	50.00	100.9	70-139		12/13/2002	1457
651513-3		MB	1	49.9415	50.00	99.9	70-139		12/13/2002	1525
135-1			1	51.9297	50.00	103.9	70-139		12/13/2002	1553
135-2			1	50.6451	50.00	101.3	70-139		12/13/2002	1631

SURROGATE RECOVERIES REPORT

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
245835-1		MS	1	49.9462	50.00	99.9	70-139		12/13/2002	1808
245835-1		MSD	1	49.9875	50.00	100.0	70-139		12/13/2002	1841
		CCV	1	49.1270	50.00	98.3	70-139		12/13/2002	1912

Surrogate	Units
Trifluorotoluene	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV	1	46.8369		93.7	68-143		12/10/2002	0939
651511-1		LCS	1	39.6217		79.2	68-143		12/10/2002	1038
651511-1		MB	1	49.9643		99.9	68-143		12/10/2002	1103
245547-1			1	50.6182		101.2	68-143		12/10/2002	1407
245547-1		MS	1	49.7650		99.5	68-143		12/10/2002	1431
245547-1		MSD	1	50.0965		100.2	68-143		12/10/2002	1457
		CCV	1	54.8892		109.8	68-143		12/10/2002	1524
245547-2			1	50.4277		100.9	68-143		12/10/2002	1651
245547-3			1	50.2350		100.5	68-143		12/10/2002	1716
245547-4			1	41.3574		82.7	68-143		12/10/2002	1742
		CCV	1	39.3963		78.8	68-143		12/10/2002	1807
		CCV	1	45.2374		90.5	68-143		12/11/2002	0745
		CCV	1	53.3912		106.8	68-143		12/11/2002	1522
651512-2		LCS	1	54.1209		108.2	68-143		12/11/2002	1547
651512-2		MB	1	51.1051		102.2	68-143		12/11/2002	1611
245697-1		MS	1	43.2237		86.4	68-143		12/11/2002	1730
245697-1		MSD	1	50.2589		100.5	68-143		12/11/2002	1754
		CCV	1	54.5310		109.1	68-143		12/11/2002	1820
		CCV	1	53.3579		106.7	68-143		12/12/2002	0815
		CCV	1	52.9805		106.0	68-143		12/12/2002	1329
		CCV	1	45.7319		91.5	68-143		12/12/2002	1559
		CCV	1	52.1117		104.2	68-143		12/13/2002	0839
		CCV	1	56.4666		112.9	68-143		12/13/2002	1409
651513-3		LCS	1	45.5668		91.1	68-143		12/13/2002	1457
651513-3		MB	1	41.4269		82.9	68-143		12/13/2002	1525
245835-1			1	51.8751		103.8	68-143		12/13/2002	1553
245835-2			1	50.7725		101.5	68-143		12/13/2002	1631
245835-1		MS	1	51.1920		102.4	68-143		12/13/2002	1808
245835-1		MSD	1	52.7894		105.6	68-143		12/13/2002	1841
		CCV	1	53.0907		106.2	68-143		12/13/2002	1912

SURROGATE RECOVERIES REPORT

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Volatile Organics - Aromatics
Batch.....: 75558Method Code.....: 8020
Analyst.....: rec

Equipment Code:

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		20.162	20.00000	100.8	77-115		12/07/2002	1620
		SB		20.243	20.00000	101.2	77-115		12/07/2002	1657
		MB		20.002	20.00000	100.0	77-115		12/07/2002	1733
216239-12				20.203	20.00000	101.0	77-115		12/07/2002	1810
216239-8			20	20.139	20.00000	100.7	77-115		12/07/2002	1847
216239-8		MS	20	20.087	20.00000	100.4	77-115		12/07/2002	1924
216239-8		MSD	20	20.169	20.00000	100.8	77-115		12/07/2002	2000
216233-1			100	19.758	20.00000	98.8	77-115		12/07/2002	2037
216233-3				19.702	20.00000	98.5	77-115		12/07/2002	2114
216233-4			40	19.682	20.00000	98.4	77-115		12/07/2002	2150
216233-5			10	19.620	20.00000	98.1	77-115		12/07/2002	2227
216233-6			100	19.642	20.00000	98.2	77-115		12/07/2002	2304
216233-7			20	19.600	20.00000	98.0	77-115		12/07/2002	2341
216239-1			200	19.599	20.00000	98.0	77-115		12/08/2002	0017
216239-2			2	19.343	20.00000	96.7	77-115		12/08/2002	0054
216239-4				20.186	20.00000	100.9	77-115		12/08/2002	0208
216239-6				19.925	20.00000	99.6	77-115		12/08/2002	0244
216239-7				20.038	20.00000	100.2	77-115		12/08/2002	0321
216239-9			2	19.863	20.00000	99.3	77-115		12/08/2002	0434
216239-10				20.122	20.00000	100.6	77-115		12/08/2002	0511
216239-11				20.065	20.00000	100.3	77-115		12/08/2002	0548
216261-1				18.882	20.00000	94.4	77-115		12/08/2002	0625
216277-1				19.014	20.00000	95.1	77-115		12/08/2002	0701
216275-1				20.028	20.00000	100.1	77-115		12/08/2002	0738

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		19.354	20.00000	96.8	68-118		12/07/2002	1620
		SB		19.540	20.00000	97.7	68-118		12/07/2002	1657
		MB		19.326	20.00000	96.6	68-118		12/07/2002	1733
216239-12				19.402	20.00000	97.0	68-118		12/07/2002	1810
216239-8			20	19.442	20.00000	97.2	68-118		12/07/2002	1847
216239-8		MS	20	19.380	20.00000	96.9	68-118		12/07/2002	1924
216239-8		MSD	20	19.418	20.00000	97.1	68-118		12/07/2002	2000
216233-1			100	19.063	20.00000	95.3	68-118		12/07/2002	2037
216233-3				19.263	20.00000	96.3	68-118		12/07/2002	2114
216233-4			40	19.091	20.00000	95.5	68-118		12/07/2002	2150
216233-5			10	19.445	20.00000	97.2	68-118		12/07/2002	2227
216233-6			100	19.024	20.00000	95.1	68-118		12/07/2002	2304
216233-7			20	19.220	20.00000	96.1	68-118		12/07/2002	2341
216239-1			200	18.840	20.00000	94.2	68-118		12/08/2002	0017
216239-2			2	19.763	20.00000	98.8	68-118		12/08/2002	0054

SURROGATE RECOVERIES REPORT

Job Number.: 216275

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
216239-4				19.186	20.00000	95.9	68-118		12/08/2002	0208
216239-6				18.844	20.00000	94.2	68-118		12/08/2002	0244
216239-7				18.945	20.00000	94.7	68-118		12/08/2002	0321
216239-9			2	19.452	20.00000	97.3	68-118		12/08/2002	0434
216239-10				19.019	20.00000	95.1	68-118		12/08/2002	0511
216239-11				19.080	20.00000	95.4	68-118		12/08/2002	0548
216261-1				17.076	20.00000	85.4	68-118		12/08/2002	0625
216277-1				17.874	20.00000	89.4	68-118		12/08/2002	0701
216275-1				19.064	20.00000	95.3	68-118		12/08/2002	0738

Method.....: Volatile Organics - Aromatics
Batch.....: 75591

Method Code.....: 8020
Analyst.....: rec

Equipment Code:

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		19.950	20.00000	99.8	77-115		12/08/2002	1038
		SB		19.809	20.00000	99.0	77-115		12/08/2002	1116
		MB		19.474	20.00000	97.4	77-115		12/08/2002	1154
216261-2				19.400	20.00000	97.0	77-115		12/08/2002	1232
216275-2				19.528	20.00000	97.6	77-115		12/08/2002	1311
216277-2				19.421	20.00000	97.1	77-115		12/08/2002	1349
216289-8				19.352	20.00000	96.8	77-115		12/08/2002	1427
216279-1				19.548	20.00000	97.7	77-115		12/08/2002	1505
216279-1		MS		19.656	20.00000	98.3	77-115		12/08/2002	1543
216279-1		MSD		19.681	20.00000	98.4	77-115		12/08/2002	1621
216289-2			200	19.685	20.00000	98.4	77-115		12/08/2002	1659
216289-3			100	19.796	20.00000	99.0	77-115		12/08/2002	1737
216289-6			50	19.736	20.00000	98.7	77-115		12/08/2002	1816
216290-1				19.301	20.00000	96.5	77-115		12/08/2002	1854
216290-2				19.508	20.00000	97.5	77-115		12/08/2002	1932
216290-3				19.283	20.00000	96.4	77-115		12/08/2002	2010
216290-4				19.161	20.00000	95.8	77-115		12/08/2002	2048
216290-5				19.329	20.00000	96.6	77-115		12/08/2002	2126
216290-6				19.207	20.00000	96.0	77-115		12/08/2002	2204
216290-7				19.342	20.00000	96.7	77-115		12/08/2002	2242
216290-8				19.414	20.00000	97.1	77-115		12/08/2002	2321
216290-9				19.392	20.00000	97.0	77-115		12/08/2002	2359
216290-10			2	19.311	20.00000	96.6	77-115		12/09/2002	0037
216290-11			2	19.532	20.00000	97.7	77-115		12/09/2002	0115

Job Number.: 216275

SURROGATE RECOVERIES REPORT

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		19.438	20.00000	97.2	68-118		12/08/2002	1038
		SB		19.194	20.00000	96.0	68-118		12/08/2002	1116
		MB		18.647	20.00000	93.2	68-118		12/08/2002	1154
216261-2				18.560	20.00000	92.8	68-118		12/08/2002	1232
216275-2				18.714	20.00000	93.6	68-118		12/08/2002	1311
216277-2				18.697	20.00000	93.5	68-118		12/08/2002	1349
216289-8				18.744	20.00000	93.7	68-118		12/08/2002	1427
216279-1				20.057	20.00000	100.3	68-118		12/08/2002	1505
216279-1		MS		19.799	20.00000	99.0	68-118		12/08/2002	1543
216279-1		MSD		20.488	20.00000	102.4	68-118		12/08/2002	1621
216289-2			200	19.095	20.00000	95.5	68-118		12/08/2002	1659
216289-3			100	19.605	20.00000	98.0	68-118		12/08/2002	1737
216289-6			50	20.149	20.00000	100.7	68-118		12/08/2002	1816
216290-1				18.153	20.00000	90.8	68-118		12/08/2002	1854
216290-2				18.703	20.00000	93.5	68-118		12/08/2002	1932
216290-3				18.260	20.00000	91.3	68-118		12/08/2002	2010
216290-4				18.452	20.00000	92.3	68-118		12/08/2002	2048
216290-5				18.609	20.00000	93.0	68-118		12/08/2002	2126
216290-6				18.721	20.00000	93.6	68-118		12/08/2002	2204
216290-7				18.698	20.00000	93.5	68-118		12/08/2002	2242
216290-8				19.076	20.00000	95.4	68-118		12/08/2002	2321
216290-9				18.859	20.00000	94.3	68-118		12/08/2002	2359
216290-10			2	18.463	20.00000	92.3	68-118		12/09/2002	0037
216290-11			2	18.634	20.00000	93.2	68-118		12/09/2002	0115

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/30/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/30/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx
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EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



Laboratory Task Order No./P.O. No. 60212 Page of

CHAIN-OF-CUSTODY RECORD

Project Number/Name	NT000700.0004
Project Location	Chevron/Texaco N. Eunice
Laboratory	STL-CC
Project Manager	Hank McConnell
Sampler(s)/Affiliation	LM/RM/ARCADIS

Sample ID/Location	Matrix	Date/ Time	Time
		Sampled	Lab #

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>12/01/02</u>	Time <u>1830</u>	Seal Intact?
Received by: <u>Feder</u>	Organization: <u>Feder</u>	Date <u>1</u>	Time <u>1</u>	Yes No N/A

Relinquished by: <u>Pedex</u>	Organization: <u>8371 6283 2810</u>	Date: <u>12/5/02</u>	Time: <u>1040</u>	Seal Intact? <u>Yes</u>
Received by: <u>Paul Jambur</u>	Organization: <u>8371 6283 2810</u>	Date: <u>12/5/02</u>	Time: <u>1040</u>	Seal Intact? <u>N/A</u>

Special Instructions/Remarks:

Hex Cr was field filtered

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other _____
SPECIFY _____

RECEIVED
JAN 02 2003
ARCADIS Geraghty & Miller

ANALYTICAL REPORT

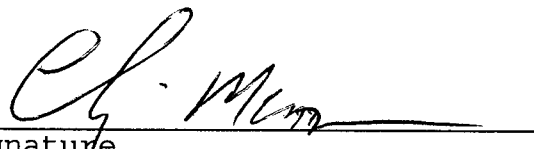
JOB NUMBER: 216277

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/30/2002


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/30/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

Date: 12/30/2002

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Page 1

LABORATORY TEST RESULTS

Job Number: 216277

Date: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW049SA
Date Sampled.....: 12/04/2002
Time Sampled.....: 14:55
Sample Matrix.....: Water

Laboratory Sample ID: 216277-1
Date Received.....: 12/05/2002
Time Received.....: 10:40

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.049	0.005	mg/L	12/05/02	edr
EPA 300.0	Chloride	3300	200	mg/L	12/11/02	cnw
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	12/08/02	rec
	Ethylbenzene	ND	0.002	mg/L	12/08/02	rec
	Toluene	ND	0.002	mg/L	12/08/02	rec
	Xylenes (total)	ND	0.002	mg/L	12/08/02	rec
SW-846 3510C	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			12/09/02	*he
SW-846 8015B	Total Extractable Petroleum Hydrocarbons	ND	0.05	mg/L	12/10/02	*he
	TVPH - Gasoline Range Organics		0.50	mg/L	12/11/02	*he
	TEPH - Diesel Range Organics	0.63				

LABORATORY TEST RESULTS

Job Number: 216277

Date: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: TRIP BLANK
Date Sampled.....: 12/04/2002
Time Sampled.....: 00:00
Sample Matrix.....: Water

Laboratory Sample ID: 216277-2
Date Received.....: 12/05/2002
Time Received.....: 10:40

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	12/08/02	rec
	Ethylbenzene	ND	0.002	mg/L	12/08/02	rec
	Toluene	ND	0.002	mg/L	12/08/02	rec
	Xylenes (total)	ND	0.002	mg/L	12/08/02	rec

QUALITY CONTROL RESULTS

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 7197

Method Description.: Chromium, Hexavalent

Parameter.....: Hexavalent Chromium

Batch.....: 75509

Units.....: mg/L

Analyst....: edr

Test Code.: CR6

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M120502C	0.0246		0.02500		98.4	%	90-110	12/05/2002	1337
ICB			0.0009							12/05/2002	1338
LCS		M120502R	0.0509		0.05000		101.8	%	75-125	12/05/2002	1340
MB			0.0012							12/05/2002	1342
CCV		M120502C	0.0238		0.02500		95.2	%	80-120	12/05/2002	1353
CCB			0.0017							12/05/2002	1354
MS 216274-1		M120502R	0.0546		0.05000	0.0063	96.6	%	75-125	12/05/2002	1359
MSD 216274-1		M120502R	0.0520	0.0546	0.05000	0.0063	91.4	%	75-125	12/05/2002	1401
							4.9	R 20			
CCV		M120502C	0.0263		0.02500		105.2	%	80-120	12/05/2002	1409
CCB			0.0029							12/05/2002	1410

Test Method.....: EPA 300.0

Method Description.: Ion Chromatography Analysis

Parameter.....: Chloride

Batch.....: 75691

Units.....: mg/L

Analyst....: cnw

Test Code.: CHL

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCB		121102	0.0000							12/11/2002	0830
CCV		IC21210F	9.7892		10.00		97.9	%	90-110	12/11/2002	0839
MB		121102	0.0000							12/11/2002	0848
LCS		IC21210D	9.9118		10.00		99.1	%	90-110	12/11/2002	0857
MS 216322-3		IC21210E	18.6347		10.00	9.2852	93.5	%	75-125	12/11/2002	0932
MSD 216322-3		IC21210E	18.3850	18.6347	10.00	9.2852	91.0	%	75-125	12/11/2002	0941
							1.3	R 20			
CCB		121102	0.0000							12/11/2002	1051
CCV		IC21210F	9.8279		10.00		98.3	%	90-110	12/11/2002	1100
MS 216325-2		IC21210E	16.1616		10.00	6.5833	95.8	%	75-125	12/11/2002	1118
MSD 216325-2		IC21210E	15.5933	16.1616	10.00	6.5833	90.1	%	75-125	12/11/2002	1127
							3.6	R 20			
CCB		121102	0.0000							12/11/2002	1220
CCV		IC21210F	9.7696		10.00		97.7	%	90-110	12/11/2002	1229
MB		121102	0.0000							12/11/2002	1237
LCS		IC21210D	9.8273		10.00		98.3	%	90-110	12/11/2002	1246
MS 216359-1		IC21210E	21.0326		10.00	12.2424	87.9	%	75-125	12/11/2002	1330
MSD 216359-1		IC21210E	20.9451	21.0326	10.00	12.2424	87.0	%	75-125	12/11/2002	1339
							0.4	R 20			
CCB		121102	0.1975							12/11/2002	1441
CCV		IC21210F	9.8325		10.00		98.3	%	90-110	12/11/2002	1450

QUALITY CONTROL RESULTS

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B

Units.....: ug/L

Analyst....: rec

Method Description.: Volatile Organics - Aromatics

Batch.....: 75558

CCV	Continuing Calibration Verification	V120102CCV			12/07/2002	1620
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.131		20.000000		95.7	% 85-115
Ethylbenzene	19.061		20.000000		95.3	% 85-115
tert-Butyl Methyl Ether (MTBE)	100.118		100.000000		100.1	% 85-115
Toluene	18.680		20.000000		93.4	% 85-115
Xylenes (total)	56.938		60.000000		94.9	% 85-115
m&p-Xylenes	37.799		40.000000		94.5	% 85-115
o-Xylene	19.139		20.000000		95.7	% 85-115

MB	Method Blank	12072002			12/07/2002	1733
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	ND					
Ethylbenzene	ND					
tert-Butyl Methyl Ether (MTBE)	ND					
Toluene	ND					
Xylenes (total)	ND					
m&p-Xylenes	ND					
o-Xylene	ND					

MS	Matrix Spike	V120102CCV	216239-8	20	12/07/2002	1924
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	9.888		10.000000	ND	98.9	% 79-115
Ethylbenzene	9.794		10.000000	ND	97.9	% 83-115
tert-Butyl Methyl Ether (MTBE)	295.657		50.000000	247.797	95.7	% 85-115
Toluene	9.666		10.000000	ND	96.7	% 85-115
Xylenes (total)	29.128		30.000000	ND	97.1	% 85-117
m&p-Xylenes	19.279		20.000000	ND	96.4	% 82-116
o-Xylene	9.849		10.000000	ND	98.5	% 85-119

MSD	Matrix Spike Duplicate	V120102CCV	216239-8	20	12/07/2002	2000
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	9.955	9.888	10.000000	ND	99.5 0.7	% 79-115 R 20
Ethylbenzene	9.883	9.794	10.000000	ND	98.8 0.9	% 83-115 R 20
tert-Butyl Methyl Ether (MTBE)	296.038	295.657	50.000000	247.797	96.5 0.1	% 85-115 R 20
Toluene	9.760	9.666	10.000000	ND	97.6 1.0	% 85-115 R 20
Xylenes (total)	29.426	29.128	30.000000	ND	98.1 1.0	% 85-117 R 20
m&p-Xylenes	19.461	19.279	20.000000	ND	97.3 0.9	% 82-116 R 20

Page 5 * % = % REC, R = RPD, A = ABS Diff., D = % Diff.

QUALITY CONTROL RESULTS

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	V120102CCV	216239-8	20	12/07/2002	2000

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
o-Xylene	9.965	9.849	10.000000	ND	99.7 1.2	% 85-119 R 20

SB	Spiked Blank	V120102SBW			12/07/2002	1657
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	17.484		20.000000		87.4	% 79-115
Ethylbenzene	17.286		20.000000		86.4	% 83-115
tert-Butyl Methyl Ether (MTBE)	102.191		100.000000		102.2	% 85-115
Toluene	17.492		20.000000		87.5	% 85-115
Xylenes (total)	36.442		40.000000		91.1	% 85-117
m&p-Xylenes	17.544		20.000000		87.7	% 82-116
o-Xylene	18.898		20.000000		94.5	% 85-119

Test Method.....: SW-846 8021B

Units.....: ug/L

Analyst....: rec

Method Description.: Volatile Organics - Aromatics

Batch.....: 75591

CCV	Continuing Calibration Verification	V120102CCV			12/08/2002	1038
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	20.652		20.000000		103.3	% 85-115
Ethylbenzene	20.447		20.000000		102.2	% 85-115
tert-Butyl Methyl Ether (MTBE)	103.870		100.000000		103.9	% 85-115
Toluene	20.659		20.000000		103.3	% 85-115
Xylenes (total)	61.161		60.000000		101.9	% 85-115
m&p-Xylenes	40.827		40.000000		102.1	% 85-115
o-Xylene	20.334		20.000000		101.7	% 85-115

MB	Method Blank	12082002			12/08/2002	1154
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	ND					
Ethylbenzene	ND					
tert-Butyl Methyl Ether (MTBE)	ND					
Toluene	ND					
Xylenes (total)	ND					
m&p-Xylenes	ND					
o-Xylene	ND					

QUALITY CONTROL RESULTS

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	V120102CCV	216279-1		12/08/2002	1543

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	10.380		10.000000	ND	103.8	% 79-115
Ethylbenzene	10.080		10.000000	ND	100.8	% 83-115
tert-Butyl Methyl Ether (MTBE)	83.391		50.000000	29.761	107.3	% 85-115
Toluene	10.199		10.000000	ND	102.0	% 85-115
Xylenes (total)	29.742		30.000000	ND	99.1	% 85-117
m&p-Xylenes	19.819		20.000000	ND	99.1	% 82-116
o-Xylene	9.923		10.000000	ND	99.2	% 85-119

MSD	Matrix Spike Duplicate	V120102CCV	216279-1		12/08/2002	1621
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	10.331	10.380	10.000000	ND	103.3	% 79-115
					0.5	R 20
Ethylbenzene	9.848	10.080	10.000000	ND	98.5	% 83-115
					2.3	R 20
-Butyl Methyl Ether (MTBE)	80.795	83.391	50.000000	29.761	102.1	% 85-115
					3.2	R 20
Toluene	10.119	10.199	10.000000	ND	101.2	% 85-115
					0.8	R 20
Xylenes (total)	28.986	29.742	30.000000	ND	96.6	% 85-117
					2.6	R 20
m&p-Xylenes	19.324	19.819	20.000000	ND	96.6	% 82-116
					2.5	R 20
o-Xylene	9.662	9.923	10.000000	ND	96.6	% 85-119
					2.7	R 20

SB	Spiked Blank	V120102SBW			12/08/2002	1116
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	19.511		20.000000		97.6	% 79-115
Ethylbenzene	19.572		20.000000		97.9	% 83-115
tert-Butyl Methyl Ether (MTBE)	105.697		100.000000		105.7	% 85-115
Toluene	20.113		20.000000		100.6	% 85-115
Xylenes (total)	40.691		40.000000		101.7	% 85-117
m&p-Xylenes	19.995		20.000000		100.0	% 82-116
o-Xylene	20.696		20.000000		103.5	% 85-119

Test Method.....: SW846 8015B

Units.....: mg/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 65049

LCS	Laboratory Control Sample	GC082802A	64586		12/10/2002	2113
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	1235.87		1000.000000		123.6	% 70-130

QUALITY CONTROL RESULTS

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MB	Method Blank	GC102202	64586		12/10/2002	2027
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	ND					

SB	Spiked Blank	GC100902	64586		12/10/2002	2159
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	825.40		1000.000000	ND	83	% 70.0-130.0

SBD	Spiked Blank Duplicate	GC100902	64586		12/10/2002	2245
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	883.51	825.40	1000.000000	ND	88.4 6.8	% 70-130 R 20

st Method.....: SW846 8015B

Units.....: mg/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 65151

CCV	Continuing Calibration Verification	BX102502B			12/10/2002	0939
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	250.060		0.000000		100.0	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/10/2002	1524
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	269.450		0.000000		107.8	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/10/2002	1807
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	240.831		0.000000		96.3	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/11/2002	0745
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	256.118		0.000000		102.4	% 85.0-115.0

QUALITY CONTROL RESULTS

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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CCV	Continuing Calibration Verification	BX102502B			12/11/2002	1522
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	256.419		0.000000		102.6	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/11/2002	1820
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	257.776		0.000000		103.1	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/12/2002	0815
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	270.144		0.000000		108.1	% 85.0-115.0

V	Continuing Calibration Verification	BX102502B			12/12/2002	1329
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	269.728		0.000000		107.9	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/12/2002	1559
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	252.116		0.000000		100.8	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/13/2002	0839
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	268.478		0.000000		107.4	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/13/2002	1409
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	276.059		0.000000		110.4	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B			12/13/2002	1912
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	226.856		0.000000		90.7	% 85.0-115.0

QUALITY CONTROL RESULTS

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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LCS	Laboratory Control Sample	BXS120502E	651511-1		12/10/2002	1038
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	238.484		0.000000		95.4	% 78-140

LCS	Laboratory Control Sample	BXS120502E	651512-2		12/11/2002	1547
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	248.081		0.000000		99.2	% 78-140

LCS	Laboratory Control Sample	BXS120502E	651513-3		12/13/2002	1457
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	215.865		0.000000		86.3	% 78-140

	Method Blank		651511-1		12/10/2002	1103
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	ND					

MB	Method Blank		651512-2		12/11/2002	1611
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	12.6552					

MB	Method Blank		651513-3		12/13/2002	1525
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	9.11715					

MS	Matrix Spike	BX102502B	245547-1		12/10/2002	1431
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	226.927		0.000000	ND	86.9	% 70-130

MS	Matrix Spike	BX102502B	245697-1		12/11/2002	1730
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	193.054		0.000000	9.49495	73.4	% 70-130

QUALITY CONTROL RESULTS

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MS	Matrix Spike	BX102502B	245835-1		12/13/2002	1808
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	216.325		0.000000	ND	80.9	% 70-130

MSD	Matrix Spike Duplicate	BX102502B	245547-1		12/10/2002	1457
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	235.422	226.927	0.000000	ND	90.3 3.7	% 70-130 R 20

MSD	Matrix Spike Duplicate	BX102502B	245697-1		12/11/2002	1754
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	220.767	193.054	0.000000	9.49495	84.5 13.4	% 70-130 R 20

MSD	Matrix Spike Duplicate	BX102502B	245835-1		12/13/2002	1841
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TVPH - Gasoline Range Organics	212.355	216.325	0.000000	ND	79.3 1.9	% 70-130 R 20

SURROGATE RECOVERIES REPORT

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 65049

Analyst.....: *he

Equipment Code: EXTGC01

Surrogate	Units
	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
64586--21		MB	1.000000	31.17	50.000	62.3	60-140		12/10/2002	2027
64586--21		LCS	1.000000	43.29	50.000	86.6	60-140		12/10/2002	2113
64586--21		SB	1.000000	33.74	50.000	67.5	60-140		12/10/2002	2159
64586--21		SBD	1.000000	36.64	50.000	73.3	60-140		12/10/2002	2245
245547-1			1.000000	44.82	50.000	89.6	60-140		12/11/2002	0615
245547-2			1.000000	45.92	50.000	91.8	60-140		12/11/2002	0700
245547-3			1.000000	40.96	50.000	81.9	60-140		12/11/2002	0745
245547-4			1.000000	37.60	50.000	75.2	60-140		12/11/2002	0830

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 65151

Analyst.....: *he

Equipment Code: BTEX04

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
651511-1		CCV	1	46.6935	50.00	93.4	70-139		12/10/2002	0939
651511-1		LCS	1	47.3732	50.00	94.7	70-139		12/10/2002	1038
651511-1		MB	1	46.4499	50.00	92.9	70-139		12/10/2002	1103
245547-1			1	47.8735	50.00	95.7	70-139		12/10/2002	1407
245547-1		MS	1	47.7479	50.00	95.5	70-139		12/10/2002	1431
245547-1		MSD	1	48.0155	50.00	96.0	70-139		12/10/2002	1457
		CCV	1	48.4634	50.00	96.9	70-139		12/10/2002	1524
245547-2			1	49.6470	50.00	99.3	70-139		12/10/2002	1651
245547-3			1	49.4449	50.00	98.9	70-139		12/10/2002	1716
245547-4			1	48.3255	50.00	96.7	70-139		12/10/2002	1742
		CCV	1	47.7576	50.00	95.5	70-139		12/10/2002	1807
		CCV	1	47.4036	50.00	94.8	70-139		12/11/2002	0745
		CCV	1	50.9057	50.00	101.8	70-139		12/11/2002	1522
651512-2		LCS	1	48.0209	50.00	96.0	70-139		12/11/2002	1547
651512-2		MB	1	48.7526	50.00	97.5	70-139		12/11/2002	1611
245697-1		MS	1	47.9571	50.00	95.9	70-139		12/11/2002	1730
245697-1		MSD	1	49.3520	50.00	98.7	70-139		12/11/2002	1754
		CCV	1	46.9014	50.00	93.8	70-139		12/11/2002	1820
		CCV	1	49.0484	50.00	98.1	70-139		12/12/2002	0815
		CCV	1	48.9969	50.00	98.0	70-139		12/12/2002	1329
		CCV	1	48.6071	50.00	97.2	70-139		12/12/2002	1559
		CCV	1	50.5458	50.00	101.1	70-139		12/13/2002	0839
		CCV	1	51.3114	50.00	102.6	70-139		12/13/2002	1409
651513-3		LCS	1	50.4318	50.00	100.9	70-139		12/13/2002	1457
651513-3		MB	1	49.9415	50.00	99.9	70-139		12/13/2002	1525
35-1			1	51.9297	50.00	103.9	70-139		12/13/2002	1553
835-2			1	50.6451	50.00	101.3	70-139		12/13/2002	1631

SURROGATE RECOVERIES REPORT

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
245835-1		MS	1	49.9462	50.00	99.9	70-139		12/13/2002	1808
245835-1		MSD	1	49.9875	50.00	100.0	70-139		12/13/2002	1841
		CCV	1	49.1270	50.00	98.3	70-139		12/13/2002	1912

Surrogate	Units
Trifluorotoluene	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV	1	46.8369		93.7	68-143		12/10/2002	0939
651511-1		LCS	1	39.6217		79.2	68-143		12/10/2002	1038
651511-1		MB	1	49.9643		99.9	68-143		12/10/2002	1103
245547-1			1	50.6182		101.2	68-143		12/10/2002	1407
245547-1		MS	1	49.7650		99.5	68-143		12/10/2002	1431
245547-1		MSD	1	50.0965		100.2	68-143		12/10/2002	1457
		CCV	1	54.8892		109.8	68-143		12/10/2002	1524
245547-2			1	50.4277		100.9	68-143		12/10/2002	1651
245547-3			1	50.2350		100.5	68-143		12/10/2002	1716
245547-4			1	41.3574		82.7	68-143		12/10/2002	1742
		CCV	1	39.3963		78.8	68-143		12/10/2002	1807
		CCV	1	45.2374		90.5	68-143		12/11/2002	0745
		CCV	1	53.3912		106.8	68-143		12/11/2002	1522
651512-2		LCS	1	54.1209		108.2	68-143		12/11/2002	1547
651512-2		MB	1	51.1051		102.2	68-143		12/11/2002	1611
245697-1		MS	1	43.2237		86.4	68-143		12/11/2002	1730
245697-1		MSD	1	50.2589		100.5	68-143		12/11/2002	1754
		CCV	1	54.5310		109.1	68-143		12/11/2002	1820
		CCV	1	53.3579		106.7	68-143		12/12/2002	0815
		CCV	1	52.9805		106.0	68-143		12/12/2002	1329
		CCV	1	45.7319		91.5	68-143		12/12/2002	1559
		CCV	1	52.1117		104.2	68-143		12/13/2002	0839
		CCV	1	56.4666		112.9	68-143		12/13/2002	1409
651513-3		LCS	1	45.5668		91.1	68-143		12/13/2002	1457
651513-3		MB	1	41.4269		82.9	68-143		12/13/2002	1525
245835-1			1	51.8751		103.8	68-143		12/13/2002	1553
245835-2			1	50.7725		101.5	68-143		12/13/2002	1631
245835-1		MS	1	51.1920		102.4	68-143		12/13/2002	1808
245835-1		MSD	1	52.7894		105.6	68-143		12/13/2002	1841
		CCV	1	53.0907		106.2	68-143		12/13/2002	1912

SURROGATE RECOVERIES REPORT

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Volatile Organics - Aromatics
Batch.....: 75558Method Code.....: 8020
Analyst.....: rec

Equipment Code:

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		20.162	20.00000	100.8	77-115		12/07/2002	1620
		SB		20.243	20.00000	101.2	77-115		12/07/2002	1657
		MB		20.002	20.00000	100.0	77-115		12/07/2002	1733
216239-12				20.203	20.00000	101.0	77-115		12/07/2002	1810
216239-8			20	20.139	20.00000	100.7	77-115		12/07/2002	1847
216239-8		MS	20	20.087	20.00000	100.4	77-115		12/07/2002	1924
216239-8		MSD	20	20.169	20.00000	100.8	77-115		12/07/2002	2000
216233-1			100	19.758	20.00000	98.8	77-115		12/07/2002	2037
216233-3				19.702	20.00000	98.5	77-115		12/07/2002	2114
216233-4			40	19.682	20.00000	98.4	77-115		12/07/2002	2150
216233-5			10	19.620	20.00000	98.1	77-115		12/07/2002	2227
216233-6			100	19.642	20.00000	98.2	77-115		12/07/2002	2304
216233-7			20	19.600	20.00000	98.0	77-115		12/07/2002	2341
216239-1			200	19.599	20.00000	98.0	77-115		12/08/2002	0017
216239-2			2	19.343	20.00000	96.7	77-115		12/08/2002	0054
216239-4				20.186	20.00000	100.9	77-115		12/08/2002	0208
216239-6				19.925	20.00000	99.6	77-115		12/08/2002	0244
216239-7				20.038	20.00000	100.2	77-115		12/08/2002	0321
216239-9			2	19.863	20.00000	99.3	77-115		12/08/2002	0434
216239-10				20.122	20.00000	100.6	77-115		12/08/2002	0511
216239-11				20.065	20.00000	100.3	77-115		12/08/2002	0548
216261-1				18.882	20.00000	94.4	77-115		12/08/2002	0625
216277-1				19.014	20.00000	95.1	77-115		12/08/2002	0701
216275-1				20.028	20.00000	100.1	77-115		12/08/2002	0738

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		19.354	20.00000	96.8	68-118		12/07/2002	1620
		SB		19.540	20.00000	97.7	68-118		12/07/2002	1657
		MB		19.326	20.00000	96.6	68-118		12/07/2002	1733
216239-12				19.402	20.00000	97.0	68-118		12/07/2002	1810
216239-8			20	19.442	20.00000	97.2	68-118		12/07/2002	1847
216239-8		MS	20	19.380	20.00000	96.9	68-118		12/07/2002	1924
216239-8		MSD	20	19.418	20.00000	97.1	68-118		12/07/2002	2000
216233-1			100	19.063	20.00000	95.3	68-118		12/07/2002	2037
216233-3				19.263	20.00000	96.3	68-118		12/07/2002	2114
216233-4			40	19.091	20.00000	95.5	68-118		12/07/2002	2150
216233-5			10	19.445	20.00000	97.2	68-118		12/07/2002	2227
216233-6			100	19.024	20.00000	95.1	68-118		12/07/2002	2304
216233-7			20	19.220	20.00000	96.1	68-118		12/07/2002	2341
216239-1			200	18.840	20.00000	94.2	68-118		12/08/2002	0017
216239-2			2	19.763	20.00000	98.8	68-118		12/08/2002	0054

SURROGATE RECOVERIES REPORT

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
216239-4				19.186	20.00000	95.9	68-118		12/08/2002	0208
216239-6				18.844	20.00000	94.2	68-118		12/08/2002	0244
216239-7				18.945	20.00000	94.7	68-118		12/08/2002	0321
216239-9			2	19.452	20.00000	97.3	68-118		12/08/2002	0434
216239-10				19.019	20.00000	95.1	68-118		12/08/2002	0511
216239-11				19.080	20.00000	95.4	68-118		12/08/2002	0548
216261-1				17.076	20.00000	85.4	68-118		12/08/2002	0625
216277-1				17.874	20.00000	89.4	68-118		12/08/2002	0701
216275-1				19.064	20.00000	95.3	68-118		12/08/2002	0738

Method.....: Volatile Organics - Aromatics
 Batch.....: 75591

Method Code.....: 8020
 Analyst.....: rec

Equipment Code:

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		19.950	20.00000	99.8	77-115		12/08/2002	1038
		SB		19.809	20.00000	99.0	77-115		12/08/2002	1116
		MB		19.474	20.00000	97.4	77-115		12/08/2002	1154
216261-2				19.400	20.00000	97.0	77-115		12/08/2002	1232
216275-2				19.528	20.00000	97.6	77-115		12/08/2002	1311
216277-2				19.421	20.00000	97.1	77-115		12/08/2002	1349
216289-8				19.352	20.00000	96.8	77-115		12/08/2002	1427
216279-1				19.548	20.00000	97.7	77-115		12/08/2002	1505
216279-1		MS		19.656	20.00000	98.3	77-115		12/08/2002	1543
216279-1		MSD		19.681	20.00000	98.4	77-115		12/08/2002	1621
216289-2			200	19.685	20.00000	98.4	77-115		12/08/2002	1659
216289-3			100	19.796	20.00000	99.0	77-115		12/08/2002	1737
216289-6			50	19.736	20.00000	98.7	77-115		12/08/2002	1816
216290-1				19.301	20.00000	96.5	77-115		12/08/2002	1854
216290-2				19.508	20.00000	97.5	77-115		12/08/2002	1932
216290-3				19.283	20.00000	96.4	77-115		12/08/2002	2010
216290-4				19.161	20.00000	95.8	77-115		12/08/2002	2048
216290-5				19.329	20.00000	96.6	77-115		12/08/2002	2126
216290-6				19.207	20.00000	96.0	77-115		12/08/2002	2204
216290-7				19.342	20.00000	96.7	77-115		12/08/2002	2242
216290-8				19.414	20.00000	97.1	77-115		12/08/2002	2321
216290-9				19.392	20.00000	97.0	77-115		12/08/2002	2359
216290-10			2	19.311	20.00000	96.6	77-115		12/09/2002	0037
216290-11			2	19.532	20.00000	97.7	77-115		12/09/2002	0115

SURROGATE RECOVERIES REPORT

Job Number.: 216277

Report Date.: 12/30/2002

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		19.438	20.00000	97.2	68-118		12/08/2002	1038
		SB		19.194	20.00000	96.0	68-118		12/08/2002	1116
		MB		18.647	20.00000	93.2	68-118		12/08/2002	1154
216261-2				18.560	20.00000	92.8	68-118		12/08/2002	1232
216275-2				18.714	20.00000	93.6	68-118		12/08/2002	1311
216277-2				18.697	20.00000	93.5	68-118		12/08/2002	1349
216289-8				18.744	20.00000	93.7	68-118		12/08/2002	1427
216279-1				20.057	20.00000	100.3	68-118		12/08/2002	1505
216279-1		MS		19.799	20.00000	99.0	68-118		12/08/2002	1543
216279-1		MSD		20.488	20.00000	102.4	68-118		12/08/2002	1621
216289-2			200	19.095	20.00000	95.5	68-118		12/08/2002	1659
216289-3			100	19.605	20.00000	98.0	68-118		12/08/2002	1737
216289-6			50	20.149	20.00000	100.7	68-118		12/08/2002	1816
216290-1				18.153	20.00000	90.8	68-118		12/08/2002	1854
216290-2				18.703	20.00000	93.5	68-118		12/08/2002	1932
216290-3				18.260	20.00000	91.3	68-118		12/08/2002	2010
216290-4				18.452	20.00000	92.3	68-118		12/08/2002	2048
216290-5				18.609	20.00000	93.0	68-118		12/08/2002	2126
216290-6				18.721	20.00000	93.6	68-118		12/08/2002	2204
216290-7				18.698	20.00000	93.5	68-118		12/08/2002	2242
216290-8				19.076	20.00000	95.4	68-118		12/08/2002	2321
216290-9				18.859	20.00000	94.3	68-118		12/08/2002	2359
216290-10			2	18.463	20.00000	92.3	68-118		12/09/2002	0037
216290-11			2	18.634	20.00000	93.2	68-118		12/09/2002	0115

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/30/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "--00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/30/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data *cp Non-STL Subcontract Lab *xx

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



Project Number/Name	MT000700.0004
Project Location	Chevron/Texaco N. Eunice
Laboratory	STL-CC
Project Manager	Hank McConnell
Sampler(s)/Affiliation	LM/RM/ARCADIS

ANALYSIS / METHOD / SIZE
Hex Cr, Dissolved
MEAT
(1) 1-liter plastic
BTEX
(3) 40-ml vial
HCl
TPH (GRO)
(3) 40-ml vial
HCl
TPH (DRO)
(2) amber liter
MEAT
(1) 1-liter plastic
Chlorides
MEAT

Sample ID/Location	Matrix	Date/ Time	Time
	Sampled	XXXX	XXXX
	Sampled	1886-19	1886-19

[illegible]

Sample Matrix:	L = Liquid;	S = Solid;	A = Air
----------------	-------------	------------	---------

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>12/04/02</u>	Time <u>1830</u>	Seal Intact? <u>Yes</u>
Received by: <u>FedEx</u>	Organization: <u></u>	Date <u>1</u>	Time <u></u>	Seal Intact? <u>N/A</u>

Relinquished by: <u>FedEx</u>	Organization: <u>8371 6283 2800</u>	Date <u>12/5/02</u>	Time <u>1040</u>	Seal Intact?
Received by: <u>Donna Jankuski</u>	Organization: <u>SN-CV</u>	Date <u>12/5/02</u>	Time <u>1040</u>	Yes No N/A

Special Instructions/Remarks:

~~*Hex Cr was field filtered*~~

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other _____
SPECIFY SPECIFY

jsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216277	Location.: 57203	Check List Number.: 1	Description.:	
Customer Job ID.....:	Job Check List Date.:		Date of the Report...: 12/05/2002	
Project Number.: 98000024	Project Description.: MT000700 Texaco-Report in ppm		Project Manager.....: crs	
Customer.....: ARCADIS / G&M	Contact.: Steve Tischer			
Questions ?		(Y/N) Comments		
How did samples arrive?.....		Y	FED EX	
Chain-of-Custody Present?.....		Y		
Custody seal on shipping container?.....		Y		
...If "yes", custody seal intact?.....		Y		
Custody seals on sample containers?.....		N		
...If "yes", custody seal intact?.....				
Samples chilled?.....		Y		
Temperature blank in cooler?.....		Y	0.2 DEGREES C	
Temp of cooler acceptable? (0.05 to 6.00 deg C)		Y		
Samples received intact (good condition)?.....		Y		
Volatile samples acceptable? (no headspace).....		Y		
Correct containers used?.....		Y		
Adequate sample volume provided?.....		Y		
Samples preserved correctly?.....		Y		
Samples received within holding-time?.....		Y		
Agreement between COC and sample labels?.....		Y		
Additional.....				
Comments.....				
Sample Custodian Signature.....				

 12-5-02

RECEIVED

DEC 20 2002

ARCADIS / G&M

ANALYTICAL REPORT

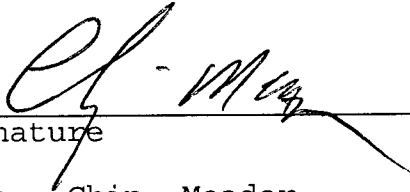
JOB NUMBER: 216335

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/16/2002


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/16/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/16/2002

Job Number.: 216335
Customer....: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216335-1	MW050SA	Water	12/05/2002	10:55	12/06/2002	09:30

LABORATORY TEST RESULTS

Job Number: 216335

Date: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW050SA
Date Sampled.....: 12/05/2002
Time Sampled.....: 10:55
Sample Matrix.....: Water

Laboratory Sample ID: 216335-1
Date Received.....: 12/06/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	0.07	0.05	mg/L	12/10/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			12/09/02	crw

Job Number.: 216335

QUALITY CONTROL RESULTS

Report Date.: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Batch.....: 75704

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CR

Parameter.....: Chromium (Cr)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	2.02795948		2.00		101.4	%	90-110	12/10/2002	1445
ICV		M0346	1.05012556		1.00		105.0	%	90-110	12/10/2002	1452
ICV		M0337	1.03152926		1.00		103.2	%	90-110	12/10/2002	1500
ICB			0.00006628							12/10/2002	1507
LSC		M0341	0.00487762		1.00					12/10/2002	1511
CCV		M0341	0.97238134		1.00		97.2	%	90-110	12/10/2002	1539
CCB			0.00018237							12/10/2002	1546
CCV		M0341	0.97511300		1.00		97.5	%	90-110	12/10/2002	1719
CCB			-0.0001331							12/10/2002	1726
CCV		M0341	0.98266574		1.00		98.3	%	90-110	12/10/2002	1810
CCB			0.00012076							12/10/2002	1818
MB		3010	0.00069358							12/10/2002	1821
LCS		M345	0.50503687		0.500		101.0	%	90-110	12/10/2002	1825
MS	216313-3	M345	0.55371881		0.500	0.06505153	97.7	%	75-125	12/10/2002	1848
MSD	216313-3	M345	0.55758819	0.55371881	0.500	0.06505153	98.5	%	75-125	12/10/2002	1852
							0.7	R 20			
CCV		M0341	0.97031441		1.00		97.0	%	90-110	12/10/2002	1905
			0.00010283							12/10/2002	1912
CCV		M0341	0.98848068		1.00		98.8	%	90-110	12/10/2002	1943
CCB			-0.0003559							12/10/2002	1950

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/16/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/16/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data *cp Non-STL Subcontract Lab *xx

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- ^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



Laboratory Task Order No./P.O. No.

Page ____ of ____

Project Number/Name MT000700.0004

Project Location Chevron/Texaco N. Eunice

Laboratory STL-CC

Project Manager Hank McConnell

Sampler(s)/Affiliation LM/RM/ARCADIS

ANALYSIS / METHOD / SIZE

Total Cr, Dissolved
(1) 500 ml
HNO₃ plastic

[illegible]

Remarks	Total
---------	-------

[illegible]

Sample Matrix:

L = Liquid; S = Solid; A = Air

Total No. of Bottles/
Containers

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>12/5/02</u>	Time <u></u>	Seal Intact? <u>Yes</u>
Received by: <u>FedEx</u>	Organization: <u></u>	Date <u>1/1</u>	Time <u></u>	Seal Intact? <u>No</u>
Relinquished by: <u>FedEx</u>	Organization: <u>STL-CC</u>	Date <u>1/1</u>	Time <u></u>	Seal Intact? <u>Yes</u>
Received by: <u>[Signature]</u>	Organization: <u></u>	Date <u>12/16/02</u>	Time <u></u>	Seal Intact? <u>No</u>

Special Instructions/Remarks:

Total Cr was field filtered

TX#837162832773

Delivery Method: ☐ In Person

☒ Common Carrier Fed Ex

☐ Lab Courier

☐ Other

SPECIFY

AG 05-12/01

pjsckl

Job Sample Receipt Checklist Report

V2

Job Number.: 216335 Location.: 57203 Check List Number.: 1 Description.:
Customer Job ID..... Job Check List Date.: 12/06/2002 Date of the Report...: 12/06/2002
Project Number.: 98000024 Project Description.: MT000700 Texaco-Report in ppm Project Manager.....: crs
Customer.....: ARCADIS / G&M Contact.: Steve Tischer

Questions ?

(Y/N) Comments

How did samples arrive?..... Y FED EX DELIVERED

Chain-of-Custody Present?..... Y

Custody seal on shipping container?..... Y

...If "yes", custody seal intact?..... Y

Custody seals on sample containers?..... N

...If "yes", custody seal intact?.....

Samples chilled?..... N

Temperature blank in cooler?..... N

Temp of cooler acceptable? (0.05 to 6.00 deg C) N METALS ONLY

Samples received intact (good condition)?..... Y

Volatile samples acceptable? (no headspace)..... N/A

Correct containers used?..... Y

.Jequate sample volume provided?..... Y

Samples preserved correctly?..... Y

Samples received within holding-time?..... Y

Agreement between COC and sample labels?..... Y

Additional.....

Comments.....

Sample Custodian Signature.....

COW 12/6/02

MW050SA

12-5-02

TraceAnalysis, Inc.

6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: December 18, 2002

MT000700.0004

N/A

Page Number: 1 of 1

Chevron/Texaco N. Eunice

Summary Report

Hank McConnell
Arcadis Geraghty & Miller
1004 N Big Spring St. Suite 300
Midland, TX 79701

Report Date: December 18, 2002

Order ID Number: A02120625

Project Number: MT000700.0004
Project Name: N/A
Project Location: Chevron/Texaco N. Eunice

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215303	MW050SA	Water	12/5/02	10:55	12/6/02

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.

Sample: 215303 - MW050SA

Param	Flag	Result	Units
Dissolved Chromium		0.0692	mg/L

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

TraceAnalysis, Inc.

6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: December 18, 2002 Order Number: A02120625
MT000700.0004 N/A

Page Number: 1 of 1
Chevron/Texaco N. Eunice

Summary Report

Hank McConnell
Arcadis Geraghty & Miller
1004 N Big Spring St. Suite 300
Midland, TX 79701

Report Date: December 18, 2002

Order ID Number: A02120625

Project Number: MT000700.0004
Project Name: N/A
Project Location: Chevron/Texaco N. Eunice

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215303	MW050SA	Water	12/5/02	10:55	12/6/02

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.

Sample: 215303 - MW050SA

Param	Flag	Result	Units
Hexavalent Chromium	1	0.073	mg/L
Chloride		797	mg/L

¹ Dissolved.

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

TraceAnalysis, Inc.

6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: December 18, 2002
Order Number: A02120625
MT000700.0004 N/A

Page Number: 1 of 1
Chevron/Texaco N. Eunice

Summary Report

Hank McConnell
Arcadis Geraghty & Miller
1004 N Big Spring St. Suite 300
Midland, TX 79701

Report Date: December 18, 2002

Order ID Number: A02120625

Project Number: MT000700.0004
Project Name: N/A
Project Location: Chevron/Texaco N. Eunice

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215303	MW050SA	Water	12/5/02	10:55	12/6/02

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.

Sample: 215303 - MW050SA

Param	Flag	Result	Units
Dissolved Chromium		0.0692	mg/L

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

TraceAnalysis, Inc.

6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: December 18, 2002 Order Number: A02120625

MT000700.0004

N/A

Page Number: 1 of 1

Chevron/Texaco N. Eunice

Summary Report

Hank McConnell
Arcadis Geraghty & Miller
1004 N Big Spring St. Suite 300
Midland, TX 79701

Report Date: December 18, 2002

Order ID Number: A02120625

Project Number: MT000700.0004
Project Name: N/A
Project Location: Chevron/Texaco N. Eunice

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215303	MW050SA	Water	12/5/02	10:55	12/6/02

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.

Sample: 215303 - MW050SA

Param	Flag	Result	Units
Hexavalent Chromium	1	0.073	mg/L
Chloride		797	mg/L

¹Dissolved.

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

6701 Aberdeen Avenue, Suite 9
155 McCutcheon, Suite H

Lubbock, Texas 79424 800•378•1296
El Paso, Texas 79932 888•588•3443
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298
915•585•3443 FAX 915•585•4944

Analytical and Quality Control Report

Hank McConnell
Arcadis Geraghty & Miller
1004 N Big Spring St. Suite 300
Midland, TX 79701

Report Date: December 18, 2002

Order ID Number: A02120625

Project Number: MT000700.0004
Project Name: N/A
Project Location: Chevron/Texaco N. Eunice

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

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215303	MW050SA	Water	12/5/02	10:55	12/6/02

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.

This report consists of a total of 4 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

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

Report Date: December 18, 2002
MT000700.0004

Order Number: A02120625
N/A

Page Number: 2 of 4
Chevron/Texaco N. Eunice

Analytical Report

Sample: 215303 - MW050SA

Analysis: Dissolved Metals Analytical Method: S 6010B QC Batch: QC25500 Date Analyzed: 12/10/02
Analyst: RR Preparation Method: E 3005A Prep Batch: PB23571 Date Prepared: 12/6/02

Param	Flag	Result	Units	Dilution	RDL
Dissolved Chromium		0.0692	mg/L	1.10	0.01

Quality Control Report Method Blank

Method Blank QCBatch: QC25500

Param	Flag	Results	Units	Reporting Limit
Dissolved Chromium		<0.011	mg/L	0.01

Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC25500

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Chromium	0.102	0.102	mg/L	1.20	0.10	<0.011	102	0	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: QC25500

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Dissolved Chromium	0.256	0.257	mg/L	1.20	0.10	0.157	99	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

CCV (1) QCBatch: QC25500

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Chromium		mg/L	0.20	0.206	103	90 - 110	12/10/02

ICV (1) QCBatch: QC25500

Report Date: December 18, 2002
MT000700.0004

Order Number: A02120625
N/A

Page Number: 4 of 4
Chevron/Texaco N. Eunice

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Chromium		mg/L	0.20	0.201	100	90 - 110	12/10/02

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
155 McCutcheon, Suite H

Lubbock, Texas 79424 800•378•1296
El Paso, Texas 79932 888•588•3443
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298
915•585•3443 FAX 915•585•4944

Analytical and Quality Control Report

Hank McConnell
Arcadis Geraghty & Miller
1004 N Big Spring St. Suite 300
Midland, TX 79701

Report Date: December 18, 2002

Order ID Number: A02120625

Project Number: MT000700.0004
Project Name: N/A
Project Location: Chevron/Texaco N. Eunice

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

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
215303	MW050SA	Water	12/5/02	10:55	12/6/02

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.

This report consists of a total of 4 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

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: 215303 - MW050SA

Analysis: CR6 Analytical Method: SM 3500-Cr D QC Batch: QC25427 Date Analyzed: 12/6/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23585 Date Prepared: 12/6/02

Param	Flag	Result	Units	Dilution	RDL
Hexavalent Chromium	1	0.073	mg/L	1	0.01

Sample: 215303 - MW050SA

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25488 Date Analyzed: 12/6/02
Analyst: JSW Preparation Method: N/A Prep Batch: PB23634 Date Prepared: 12/6/02

Param	Flag	Result	Units	Dilution	RDL
Chloride		797	mg/L	50	1

¹Dissolved.

Quality Control Report Method Blank

Method Blank QCBatch: QC25427

Param	Flag	Results	Units	Reporting Limit
Hexavalent Chromium		<0.01	mg/L	0.01

Method Blank QCBatch: QC25488

Param	Flag	Results	Units	Reporting Limit
Chloride		<1.0	mg/L	1

Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes QCBatch: QC25427

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Hexavalent Chromium	0.499	0.502	mg/L	1	0.50	<0.01	99	0	83 - 116	20

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

Laboratory Control Spikes QCBatch: QC25488

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	11.48	11.46	mg/L	1	12.50	<1.0	91	0	90 - 110	20
Nitrate-N	2.39	2.39	mg/L	1	2.50	<0.2	95	0	90 - 110	20
Sulfate	11.90	11.80	mg/L	1	12.50	<1.0	95	0	90 - 110	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: QC25427

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Hexavalent Chromium	0.557	0.552	mg/L	1	0.50	0.073	96	1	83 - 116	20

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

Matrix Spikes QCBatch: QC25488

Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
Chloride	3750	3730	mg/L	1	1250	2670	86	1	48 - 127	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: QC25427

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hexavalent Chromium		mg/L	0.50	0.507	101	85 - 115	12/6/02

ICV (1) QCBatch: QC25427

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hexavalent Chromium		mg/L	0.50	0.505	101	85 - 115	12/6/02

CCV (1) QCBatch: QC25488

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.44	91	90 - 110	12/6/02
Nitrate-N		mg/L	2.50	2.39	95	90 - 110	12/6/02
Sulfate		mg/L	12.50	11.81	94	90 - 110	12/6/02

ICV (1) QCBatch: QC25488

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.50	11.40	91	90 - 110	12/6/02
Nitrate-N		mg/L	2.50	2.38	95	90 - 110	12/6/02
Sulfate		mg/L	12.50	11.64	93	90 - 110	12/6/02

Project Number/Name MT000700.0004

Project Location Chevron/Texaco N. Eunice

~~SECRET~~ TRACE Laboratory

Project Manager Hank McConnell

Sampler(s)/Affiliation	LM/RM/ARCADIS
...	...

Sample ID/Location	Matrix	Date/ Time	Sampled	Time
--------------------	--------	-----------------------	---------	------

MW 050A	L	5.0 Dec 2002	1055
---------	---	--------------	------

Temp Bank

[illegible]

--	--	--	--	--

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--	--	--	--	--

--	--	--	--	--

--	--	--	--	--

[illegible][illegible][illegible][illegible]

--	--	--	--

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: [Signature]

received by: H. S. G. R. V. R. V. R. V.

Received by: 16th March
Acquired by: 16th March
Organized by: 16th March
Organized by: 16th March

Special Instructions/Remarks:

Hex Cr was field filtered

Delivery Method: ☐ In Person☒ Common Carrier.

☒ Lab Courier ☐ Other

SPECIFY

AG 05-12/01

AG 05-12/01

ANALYTICAL REPORT

JOB NUMBER: 216309

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/16/2002

RECEIVED

DEC 20 2002

ARCADIS Geraghty & Miller


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/16/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX..: 361/289-2471

SAMPLE INFORMATION

Date: 12/16/2002

Job Number.: 216309
Customer....: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216309-1	MW050SA	Water	12/05/2002	10:55	12/06/2002	09:30

LABORATORY TEST RESULTS

Job Number: 216309

Date: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW050SA
Date Sampled.....: 12/05/2002
Time Sampled.....: 10:55
Sample Matrix.....: Water

Laboratory Sample ID: 216309-1
Date Received.....: 12/06/2002
Time Received.....: 09:30

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.048	0.005	mg/L	12/06/02	edr
EPA 300.0	Chloride	850	50	mg/L	12/10/02	cnw

QUALITY CONTROL RESULTS

Job Number.: 216309

Report Date.: 12/16/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 7197

Method Description.: Chromium, Hexavalent

Parameter.....: Hexavalent Chromium

Batch.....: 75541

Units.....: mg/L

Analyst....: edr

Test Code.: CR6

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M120602C	0.0250		0.02500		100.0	%	90-110	12/06/2002	1127
ICB			0.0009							12/06/2002	1128
LCS		M120602R	0.0487		0.05000		97.4	%	75-125	12/06/2002	1129
MB			0.0026							12/06/2002	1131
CCV		M120602C	0.0251		0.02500		100.4	%	80-120	12/06/2002	1140
CCB			0.0034							12/06/2002	1141
MS 216313-2		M120602R	0.0553		0.05000	0.0026	105.4	%	75-125	12/06/2002	1144
MSD 216313-2		M120602R	0.0543	0.0553	0.05000	0.0026	103.4	%	75-125	12/06/2002	1145
							1.8	R 20			
CCV		M120602C	0.0256		0.02500		102.4	%	80-120	12/06/2002	1147
CCB			0.0035							12/06/2002	1148

Test Method.....: EPA 300.0

Method Description.: Ion Chromatography Analysis

Parameter.....: Chloride

Batch.....: 75681

Units.....: mg/L

Analyst....: cnw

Test Code.: CHL

	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		121002	0.1008							12/10/2002	1510
ICV		IC21210F	9.8263		10.00		98.3	%	90-110	12/10/2002	1519
MB		121002	0.0904							12/10/2002	1527
LCS		IC21210D	9.9427		10.00		99.4	%	90-110	12/10/2002	1536
MS 216355-3		IC21210E	28.4888		10.00	33.4373	-49.5	%	75-125	12/10/2002	1610
MSD 216355-3		IC21210E	28.5612	28.4888	10.00	33.4373	-48.8	%	75-125	12/10/2002	1619
							0.3	R 20			
CCB		121002	0.1064							12/10/2002	1711
CCV		IC21210F	9.8461		10.00		98.5	%	90-110	12/10/2002	1720
MS 216312-1		IC21210E	18.8762		10.00	9.9862	88.9	%	75-125	12/10/2002	1837
MSD 216312-1		IC21210E	18.7034	18.8762	10.00	9.9862	87.2	%	75-125	12/10/2002	1846
							0.9	R 20			
CCB		121002	0.0713							12/10/2002	1912
CCV		IC21210F	9.7408		10.00		97.4	%	90-110	12/10/2002	1920
MB		121002	0.1066							12/10/2002	1929
LCS		IC21210D	9.8237		10.00		98.2	%	90-110	12/10/2002	1938
MS 216325-2		IC21210E	12.7477		10.00	3.4269	93.2	%	75-125	12/10/2002	2113
MSD 216325-2		IC21210E	12.8260	12.7477	10.00	3.4269	94.0	%	75-125	12/10/2002	2121
							0.6	R 20			
CCB		121002	0.0000							12/10/2002	2130
CCV		IC21210F	9.7704		10.00		97.7	%	90-110	12/10/2002	2139
MS 216338-2		IC21210E	24.4610		10.00	15.6835	87.8	%	75-125	12/10/2002	2239
MSD 216338-2		IC21210E	24.3275	24.4610	10.00	15.6835	86.4	%	75-125	12/10/2002	2248
							0.5	R 20			
CCB		121002	0.1001							12/10/2002	2256
CCV		IC21210F	9.7946		10.00		97.9	%	90-110	12/10/2002	2305

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/16/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/16/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx
----------------------	-----	-------------------------	-----

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- ^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.

jsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216309 Location.: 57203 Check List Number.: 1 Description.: Customer Job ID.....: Job Check List Date.: Project Number.: 98000024 Project Description.: MT000700 Texaco-Report in ppm Customer.....: ARCADIS / G&M Contact.: Steve Tischer Date of the Report...: 12/06/2002 Project Manager.....: crs				
Questions ?		(Y/N)	Comments	
How did samples arrive?.....	Y		FED EX	
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	Y			
Temperature blank in cooler?.....	Y		0.0 DEGREES C	
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....			NA	
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....				

JS 12-6-02



STL Corpus Christi

MW0525A

MW051SA

12-3-02

ANALYTICAL REPORT

JOB NUMBER: 216241

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

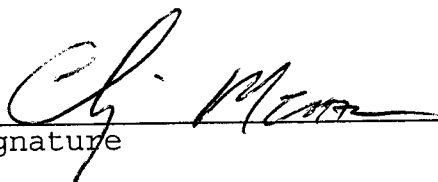
Attention: Steve Tischer

Date: 12/10/2002

RECEIVED

DEC 16 2002

ARCADIS Geraghty & Miller


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/11/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/10/2002

Job Number.: 216241
Customer....: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216241-1	MW052SA	Water	12/03/2002	12:30	12/04/2002	09:50
216241-2	MW051SA	Water	12/03/2002	14:30	12/04/2002	09:50



STL Corpus Christi

LABORATORY TEST RESULTS

Job Number: 216241

Date: 12/10/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW052SA
Date Sampled.....: 12/03/2002
Time Sampled.....: 12:30
Sample Matrix.....: Water

Laboratory Sample ID: 216241-1
Date Received.....: 12/04/2002
Time Received.....: 09:50

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.25	0.05	mg/L	12/04/02	edr
EPA 300.0	Chloride	1200	100	mg/L	12/06/02	cnw



STL Corpus Christi

LABORATORY TEST RESULTS

Job Number: 216241

Date: 12/10/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW051SA
Date Sampled.....: 12/03/2002
Time Sampled.....: 14:30
Sample Matrix.....: Water

Laboratory Sample ID: 216241-2
Date Received.....: 12/04/2002
Time Received.....: 09:50

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.44	0.05	mg/L	12/04/02	edr
EPA 300.0	Chloride	1500	100	mg/L	12/06/02	cnw



STL Corpus Christi

QUALITY CONTROL RESULTS

Job Number.: 216241

Report Date.: 12/10/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Fischer

Test Method.....: SW-846 7197
Method Description.: Chromium, Hexavalent
Parameter.....: Hexavalent Chromium

Batch.....: 75443
Units.....: mg/L

Analyst....: edr
Test Code.: CR6

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M120402C	0.0227		0.02500		90.8	%	90-110	12/04/2002	1205
ICB			0.0003							12/04/2002	1206
LCS		M120402R	0.0495		0.05000		99.0	%	75-125	12/04/2002	1208
LCD		M120402R	0.0500		0.05000		100.0	%	75-125	12/04/2002	1209
							1.2	R	20		
MB			0.0005							12/04/2002	1210
CCV		M120402C	0.0240		0.02500		96.0	%	80-120	12/04/2002	1217
CCB			0.0018							12/04/2002	1218

Test Method.....: EPA 300.0
Method Description.: Ion Chromatography Analysis
Parameter.....: Chloride

Batch.....: 75590
Units.....: mg/L

Analyst....: cnw
Test Code.: CHL

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		120602	0.0808							12/06/2002	1400
		IC21206F	9.8745		10.00		98.7	%	90-110	12/06/2002	1411
MB		120602	0.0652							12/06/2002	1421
LCS		IC21206D	9.9712		10.00		99.7	%	90-110	12/06/2002	1432
MS 216241-2		IC21206E	24.2305		10.00	15.2835	89.5	%	75-125	12/06/2002	1535
MSD 216241-2		IC21206E	23.9704	24.2305	10.00	15.2835	86.9	%	75-125	12/06/2002	1546
							1.1	R	20		
MS 216267-4		IC21206E	22.7451		10.00	14.2633	84.8	%	75-125	12/06/2002	1618
MSD 216267-4		IC21206E	22.9737	22.7451	10.00	14.2633	87.1	%	75-125	12/06/2002	1628
							1.0	R	20		
CCB		120602	0.0560							12/06/2002	1649
CCV		IC21206F	9.8166		10.00		98.2	%	90-110	12/06/2002	1700

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/10/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
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Comments:

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CCB Continuing Calibration Blank

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MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

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LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/10/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

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SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data	*cp	Non-STL Subcontract Lab	*xx
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EXPLANATION OF DATA FLAGS

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- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
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- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



ARCADIA J&M

Laboratory Task Order No./P.O. No.:

16241

CHAIN-OF-CUSTODY RECORD

Page — of —

Project Number/Name MT000700.0004

Project Location Chevron/Texaco N. Eunice

Laboratory STL-CC

Project Manager Hank McConnell

Sampler(s)/Affiliation	LM/RM/ARCADIS
...	...

[illegible][illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Red SS
Received by: FedEx

Organization: ARCADIS
Organization: _____

Time	1800	Seal Intact?	Yes
Time		Seal Intact?	No N/A

Relinquished by: FedEx
Received by: Joe Jenkins

Organization: _____
Organization: SNCC

Time	0950	Seal Intact?	Yes
Time	0950	Seal Intact?	No N/A

Special Instructions/Remarks:

Hex Cr was field filtered

837142832832

Delivery Method: ☐ In Person☒ Common Carrier Fed Ex☐ Lab Courier☐ Other

SPECIFY

SPECIFY

AG 05-0597

.pjssckl		Job Sample Receipt Checklist Report	V2
Job Number.: 216241	Location.: 57203	Check List Number.: 1	Description.:
Customer Job ID.....:	Job Check List Date.:		Date of the Report...: 12/04/2002
Project Number.: 98000024	Project Description.: MT000700 Texaco-Report in ppm		Project Manager.....: crs
Customer.....: ARCADIS / G&M	Contact.: Steve Tischer		
Questions ?	(Y/N) Comments		
How did samples arrive?.....	Y	CLIENT DELIVERED	
Chain-of-Custody Present?.....	Y		
Custody seal on shipping container?.....	Y		
...If "yes", custody seal intact?.....	Y		
Custody seals on sample containers?.....	N		
...If "yes", custody seal intact?.....			
Samples chilled?.....	Y		
Temperature blank in cooler?.....	Y	TEMP BLANK FROZEN SAMPLES ON ICE	
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y		
Samples received intact (good condition)?.....	Y		
Volatile samples acceptable? (no headspace).....		NA	
Correct containers used?.....	Y		
Adequate sample volume provided?.....	Y		
Samples preserved correctly?.....	Y		
Samples received within holding-time?.....	Y		
Agreement between COC and sample labels?.....	Y		
Additional.....			
Comments.....			
Sample Custodian Signature.....	 12-4-02		



STL

MW052SA
MW051SA

12-3-02

RECEIVED
DEC 25 2002
ARCADIS / G&M

ANALYTICAL REPORT

JOB NUMBER: 216248

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/23/2002

Signature

Name: Charles Sassine

Title: Laboratory Supervisor

E-Mail: csassine@stl-inc.com

12/23/2002

Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673
FAX...: 361/289-2471

SAMPLE INFORMATION

Date: 12/23/2002

Job Number.: 216248
Customer...: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216248-1	MW052SA	Water	12/03/2002	12:30	12/04/2002	09:50
216248-2	MW051SA	Water	12/03/2002	14:30	12/04/2002	09:50

LABORATORY TEST RESULTS

Job Number: 216248

Date: 12/23/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW052SA
Date Sampled.....: 12/03/2002
Time Sampled.....: 12:30
Sample Matrix.....: Water

Laboratory Sample ID: 216248-1
Date Received.....: 12/04/2002
Time Received.....: 09:50

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	0.33	0.05	mg/L	12/19/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			12/05/02	crw

LABORATORY TEST RESULTS

Job Number: 216248

Date: 12/23/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW051SA
Date Sampled.....: 12/03/2002
Time Sampled.....: 14:30
Sample Matrix.....: Water

Laboratory Sample ID: 216248-2
Date Received.....: 12/04/2002
Time Received.....: 09:50

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	0.53	0.05	mg/L	12/19/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			12/05/02	crw

QUALITY CONTROL RESULTS

Job Number.: 216248

Report Date.: 12/23/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Fischer

Test Method.....: SW-846 6010B

Batch.....: 76011

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CR

Parameter.....: Chromium (Cr)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0344	9.9834		10.0		99.8	%	90-110	12/19/2002	1036
ICV		M0346	1.0400		1.00		104.0	%	90-110	12/19/2002	1054
ICV		M0337	1.0468		1.00		104.7	%	90-110	12/19/2002	1108
ICB			-0.0064							12/19/2002	1126
CCV		M0342	5.0652		5.00		101.3	%	90-110	12/19/2002	1140
CCB			-0.0021							12/19/2002	1141
MB		3010	0.0026							12/19/2002	1229
LCS		M345	0.5323		0.500		106.5	%	90-110	12/19/2002	1232
MB		3010	0.0037							12/19/2002	1239
LCS		M345	0.5358		0.500		107.2	%	90-110	12/19/2002	1242
CCV		M0342	5.1113		5.00		102.2	%	90-110	12/19/2002	1254
CCB			0.0019							12/19/2002	1256
MB		3010	0.0014							12/19/2002	1409
LCS		M345	0.5256		0.500		105.1	%	90-110	12/19/2002	1412
MB		3010	0.0026							12/19/2002	1419
LCS		M345	0.5290		0.500		105.8	%	90-110	12/19/2002	1432
		3010	0.0014							12/19/2002	1438
		M345	0.5202		0.500		104.0	%	90-110	12/19/2002	1440
CCV		M0342	5.0075		5.00		100.2	%	90-110	12/19/2002	1509
CCB			0.0023							12/19/2002	1511
MB		3010	0.0037							12/19/2002	1543
LCS		M345	0.5097		0.500		101.9	%	90-110	12/19/2002	1548
MB		3010	0.0040							12/19/2002	1602
LCS		M345	0.5121		0.500		102.4	%	90-110	12/19/2002	1605
PDS 216419-1		M345D	2.0201		2.00	0.0026	100.9	%	75-125	12/19/2002	1614
PSD 216419-1		M345D	2.0182	2.0201	2.00	0.0026	100.8	%	75-125	12/19/2002	1615
							0.1	R 20			
CCV		M0342	5.1761		5.00		103.5	%	90-110	12/19/2002	1632
CCB			0.0037							12/19/2002	1633
CCV		M0342	5.0070		5.00		100.1	%	90-110	12/19/2002	1714
CCB			0.0037							12/19/2002	1716

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/23/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/23/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data *cp Non-STL Subcontract Lab *xx

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- ^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



Project Number/Name	MT000700.0004
Project Location	Chevron/Texaco N. Eunice
Laboratory	STL-CC
Project Manager	Hank McConnell
Sampler(s)/Affiliation	LM/RM/ARCADIS

Total Cr, Dissolved (1) 500 ml HNO₃ plastic

אמצעים / אמצעים / אמצעים

cool seal
not chilled
w/ff-me
over

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>12/03/02</u>	Time <u>1:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>[Signature]</u>	Organization: <u>[Signature]</u>	Date <u>1/1</u>	Time <u> </u>	Seal Intact? <u>No</u>

Relinquished by: <u>Feeder</u>	Organization: _____	Date <u>12/4/02</u>	Time <u>0950</u>	Seal Intact? _____
Received by: <u>Paul Burkholder</u>	Organization: <u>SMC</u>	Date <u>12/4/02</u>	Time <u>0950</u>	Yes No N/A

Special Instructions/Remarks:

Total Cr was field filtered

8371 6283 7843

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other _____
SPECIFY

ipjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216248 Location.: 57203 Check List Number.: 1 Description.: Customer Job ID.....: Job Check List Date.: Project Number.: 98000024 Project Description.: MT000700 Texaco-Report in ppm Customer.....: ARCADIS / G&M Contact.: Steve Tischer Date of the Report...: 12/04/2002 Project Manager.....: crs				
Questions ?	(Y/N) Comments			
How did samples arrive?.....	Y FED EX			
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	N			
Temperature blank in cooler?.....	N			
Temp of cooler acceptable? (0.05 to 6.00 deg C)	NA METALS ONLY			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....	NA			
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....				

D 12-482

ANALYTICAL REPORT

JOB NUMBER: 216212

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/13/2002

REVISED REPORT

RECEIVED

DEC 19 2002

ARCADIS / G&M



Signature

Name: Charles Sassine

Title: Laboratory Supervisor

E-Mail: csassine@stl-inc.com

12/13/2002

Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

REVISED REPORT CASE NARRATIVE

Job Number 216212

December 13, 2002

Sample IDs

The sample ID for sample 1 has been changed from MW535A to MW53SA.

Please call if you have any questions regarding this report or if we can be of further assistance.



Charlie Sassine
Laboratory Supervisor

SAMPLE INFORMATION

Date: 12/13/2002

Job Number.: 216212
Customer....: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216212-1	MW053SA	Water	12/02/2002	15:45	12/03/2002	09:25

LABORATORY TEST RESULTS

Job Number: 216212

Date: 12/13/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW053SA
Date Sampled.....: 12/02/2002
Time Sampled.....: 15:45
Sample Matrix.....: Water

Laboratory Sample ID: 216212-1
Date Received.....: 12/03/2002
Time Received.....: 09:25

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 6010B	Chromium (Cr), Dissolved	<0.05	0.05	mg/L	12/04/02	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			12/03/02	crw

QUALITY CONTROL RESULTS

Job Number.: 216212

Report Date.: 12/13/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Method Description.: Metals Analysis (ICAP)

Parameter.....: Chromium (Cr)

Batch.....: 75478

Units.....: mg/L

Analyst....: jem

Test Code.: CR

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	1.98331565		2.00		99.2	%	90-110	12/04/2002	1118
ICV		M0346	0.99287485		1.00		99.3	%	90-110	12/04/2002	1124
ICV		M0337	1.03237400		1.00		103.2	%	90-110	12/04/2002	1130
ICB			0.00056189							12/04/2002	1135
LSC		M0341	0.00540923		1.00					12/04/2002	1138
CCV		M0341	0.99798671		1.00		99.8	%	90-110	12/04/2002	1153
CCB			0.00053783							12/04/2002	1159
MB		3010	0.00062988							12/04/2002	1222
LCS		M345	0.50570219		0.500		101.1	%	90-110	12/04/2002	1228
CCV		M0341	1.00220929		1.00		100.2	%	90-110	12/04/2002	1231
CCB			0.00053867							12/04/2002	1237
CCV		M0341	0.99314688		1.00		99.3	%	90-110	12/04/2002	1316
CCB			-0.0009597							12/04/2002	1322
CCV		M0341	0.99983733		1.00		100.0	%	90-110	12/04/2002	1400
CCB			0.00004827							12/04/2002	1405
MB		3010	-0.0000769							12/04/2002	1424
LCS		M345	0.51226572		0.500		102.5	%	90-110	12/04/2002	1427
CCV		M0341	1.00887111		1.00		100.9	%	90-110	12/04/2002	1440
CCB			-0.0002871							12/04/2002	1445
MS	216165-1	M345	0.48175742		0.500	0.00293500	95.8	%	75-125	12/04/2002	1452
MSD	216165-1	M345	0.48219961	0.48175742	0.500	0.00293500	95.9	%	75-125	12/04/2002	1456
							0.1	R	20		
MB		3050	0.00078961							12/04/2002	1507
LCS		M345	0.49722215		0.500		99.4	%	90-110	12/04/2002	1510
MS	216139-2	M345	0.55751647		0.500	0.07416402	96.7	%	75-125	12/04/2002	1520
CCV		M0341	1.00660488		1.00		100.7	%	90-110	12/04/2002	1524
CCB			0.00024889							12/04/2002	1530
MSD	216139-2	M345	0.55727528	0.55751647	0.500	0.07416402	96.6	%	75-125	12/04/2002	1533
							0.0	R	20		
MB		3051	0.00083501							12/04/2002	1536
LCS		M345	0.50931581		0.500		101.9	%	90-110	12/04/2002	1542
MS	216127-1	M345	0.51897622		0.500	0.00083200	103.6	%	75-125	12/04/2002	1548
MSD	216127-1	M345	0.51003810	0.51897622	0.500	0.00083200	101.8	%	75-125	12/04/2002	1551
							1.7	R	20		
MB		3010	0.00027208							12/04/2002	1557
LCS		M345	0.50244852		0.500		100.5	%	90-110	12/04/2002	1600
CCV		M0341	1.00548965		1.00		100.5	%	90-110	12/04/2002	1603
CCB			0.00089300							12/04/2002	1608
MS	216167-1	M345	0.51101685		0.500	-0.0003842	102.3	%	75-125	12/04/2002	1621
MSD	216167-1	M345	0.49654599	0.51101685	0.500	-0.0003842	99.4	%	75-125	12/04/2002	1639
							2.9	R	20		
CCV		M0341	1.00655340		1.00		100.7	%	90-110	12/04/2002	1700
CCB			0.00066356							12/04/2002	1706

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/13/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/13/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data *cp Non-STL Subcontract Lab *xx

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.

Laboratory Task Order No./P.O. No. 216212

CHAIN-OF-CUSTODY RECORD

Page 1 of 1Project Number/Name MT000700.0004Project Location Chevron/Texaco N. EuniceLaboratory STL-CCProject Manager Hank McConnellSampler(s)/Affiliation LM/RM/ARCADIS

ANALYSIS / METHOD / SIZE

Total Cr, Dissolved
(1) 500 ml plastic
HNH

Sample ID/Location MWD535A Matrix L Date/Time Sampled 12-2-02 1545

Remarks

Total

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/
Containers 1Relinquished by: [Signature]
Received by: FederOrganization: ARCADIS
Organization: FederDate 12/2/02 Time 1830
Date 1/1/02 Time 1830Seal Intact?
Yes No N/ARelinquished by: [Signature]
Received by: [Signature]Organization: ARCADIS
Organization: ARCADISDate 12/3/02 Time 0925
Date 12/3/02 Time 0925Seal Intact?
Yes No N/A

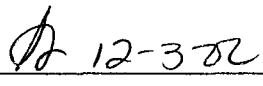
Special Instructions/Remarks:

Total Cr was field filtered

Delivery Method: ☐ In Person☒ Common Carrier☐ Lab Courier☐ Other

SPECIFY

SPECIFY

pjsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216212	Location.: 57203	Check List Number.: 1	Description.:	
Customer Job ID.....:	Job Check List Date.:		Date of the Report...: 12/03/2002	
Project Number.: 98000024	Project Description.: MT000700 Texaco-Report in ppm		Project Manager.....: crs	
Customer.....: ARCADIS / G&M	Contact.: Steve Tischer			
Questions ?	(Y/N) Comments			
How did samples arrive?.....	Y	FED EX		
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	N			
Temperature blank in cooler?.....	N			
Temp of cooler acceptable? (0.05 to 6.00 deg C)		NA METALS ONLY		
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....		NA		
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....	 12-382			



STL Corpus Christi

MW053SA

12-2-02

ANALYTICAL REPORT

JOB NUMBER: 216209

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tischer

Date: 12/10/2002

RECEIVED

DEC 13 2002

ARCADIS Geraghty & Miller


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

12/10/02
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471



STL Corpus Christi

SAMPLE INFORMATION

Date: 12/10/2002

Job Number.: 216209
Customer....: ARCADIS / G&M
Attn.....: Steve Tischer

Project Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216209-1	MW053SA	Water	12/02/2002	15:45	12/03/2002	09:25



STL Corpus Christi

LABORATORY TEST RESULTS

Job Number: 216209

Date: 12/10/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW053SA
Date Sampled.....: 12/02/2002
Time Sampled.....: 15:45
Sample Matrix.....: Water

Laboratory Sample ID: 216209-1
Date Received.....: 12/03/2002
Time Received.....: 09:25

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.017	0.005	mg/L	12/03/02	edr
EPA 300.0	Chloride	380	50	mg/L	12/05/02	cnw

QUALITY CONTROL RESULTS

Job Number.: 216209

Report Date.: 12/10/2002

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 7197
Method Description.: Chromium, Hexavalent
Parameter.....: Hexavalent Chromium

Batch.....: 75400
Units.....: mg/L

Analyst....: edr
Test Code.: CR6

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M120302C	0.0257				102.8	%	90-110	12/03/2002	1222
ICB			0.0033							12/03/2002	1223
LCS		M120302R	0.0429				85.8	%	75-125	12/03/2002	1224
MB			0.0020							12/03/2002	1228
MS	216208-1	M120302R	0.0544			0.0132	82.4	%	75-125	12/03/2002	1231
MSD	216208-1	M120302R	0.0584	0.0544		0.0132	90.4	%	75-125	12/03/2002	1234
							7.1	R	20		
CCV		M120302C	0.0232				92.8	%	80-120	12/03/2002	1236
CCB			0.0023							12/03/2002	1237

Test Method.....: EPA 300.0
Method Description.: Ion Chromatography Analysis
Parameter.....: Chloride

Batch.....: 75528
Units.....: mg/L

Analyst....: cnw
Test Code.: CHL

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
		1205002	0.4421							12/05/2002	0945
ICV		IC21205F	9.8091		10.00		98.1	%	90-110	12/05/2002	0954
MB		120502	0.4356							12/05/2002	1003
LCS		IC21205D	9.8139		10.00		98.1	%	90-110	12/05/2002	1012
MS	216254-1	IC21205E	40.5293		10.00	34.4690	60.6	%	75-125	12/05/2002	1038
MSD	216254-1	IC21205E	40.8071	40.5293	10.00	34.4690	63.4	%	75-125	12/05/2002	1047
							0.7	R	20		
MS	216219-2	IC21205E	9.9079		10.00	0.7507	91.6	%	75-125	12/05/2002	1140
MSD	216219-2	IC21205E	9.9652	9.9079	10.00	0.7507	92.1	%	75-125	12/05/2002	1149
							0.6	R	20		
CCB		120502	0.5925							12/05/2002	1206
CCV		IC21205F	9.8850		10.00		98.8	%	90-110	12/05/2002	1215
CCB		1200502	0.3708							12/05/2002	1326
CCV		IC21205F	9.8155		10.00		98.2	%	90-110	12/05/2002	1335
MS	216186-3	IC21205E	20.7321		10.00	11.6406	90.9	%	75-125	12/05/2002	1512
MSD	216186-3	IC21205E	21.3661	20.7321	10.00	11.6406	97.3	%	75-125	12/05/2002	1521
							3.0	R	20		
CCB		120502	0.3830							12/05/2002	1530
CCV		IC21205F	9.7655		10.00		97.7	%	90-110	12/05/2002	1538
MB		120502	0.3744							12/05/2002	1547
LCS		IC21205D	9.9444		10.00		99.4	%	90-110	12/05/2002	1556
MS	216241-2	IC21205E	37.5574		10.00	30.6490	69.1	%	75-125	12/05/2002	1640
MSD	216241-2	IC21205E	37.5729	37.5574	10.00	30.6490	69.2	%	75-125	12/05/2002	1649
							0.0	R	20		
CCB		120502	0.3577							12/05/2002	1751
CCV		IC21205F	9.8357		10.00		98.4	%	90-110	12/05/2002	1800
MS	216254-1	IC21205E	18.0418		10.00	12.6451	54.0	%	75-125	12/05/2002	1902
MSD	216254-1	IC21205E	18.9978	18.0418	10.00	12.6451	63.5	%	75-125	12/05/2002	1910
							5.2	R	20		
MS	216267-4	IC21205E	36.5275		10.00	28.8148	77.1	%	75-125	12/05/2002	2003
MSD	216267-4	IC21205E	36.4260	36.5275	10.00	28.8148	76.1	%	75-125	12/05/2002	2012
							0.3	R	20		
CCB		120502	0.5831							12/05/2002	2021
CCV		IC21205F	10.1434		10.00		101.4	%	90-110	12/05/2002	2030

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/10/2002

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/10/2002

DUPLICATE QC SAMPLE IDENTIFICATION

MD Method (Matrix) Duplicate
ED Extraction Duplicate
DD Digestion Duplicate
PDD Post Digestion Duplicate
PSD Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

Client provided data *cp Non-STL Subcontract Lab *xx

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



ACADIS

Laboratory Task Order No./P.O. No. 0209

CHAIN-OF-CUSTODY RECORD

Page — of — 7

Project Number/Name MT000700.0004

Project Location Chevron/Texaco N. Eunice

Laboratory STL-CC

Project Manager Hank McConnell

Sampler(s)/Affiliation LM/RM/ARCADIS

Code 0172 Sec 40

ANALYSIS / METHOD / SIZE

Hex Cr, Dissolved #	(1) 1-liter plastic
NEAT	(1) 1-liter plastic
Chlorides	(1) 1-liter plastic
NEAT	(1) 1-liter plastic

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>12 / 2 / 02</u> Time <u>1830</u>	Seal Intact? Yes No N/A
Received by: <u>FedEx</u>	Organization: _____	Date <u>1 / 1</u> Time _____	
Relinquished by: <u>FedEx</u>	Organization: <u>8371 6283 2821</u>	Date <u>12 / 3 / 02</u> Time <u>0925</u>	Seal Intact? Yes No N/A
Received by: <u>Pro. Ambushley</u>	Organization: <u>30-00</u>	Date <u>12 / 3 / 02</u> Time <u>0925</u>	

Special Instructions/Remarks:

Hex Cr was field filtered

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other _____

SPECIFY

AC OF 1304

jsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216209	Location.: 57203	Check List Number.: 1	Description.:	
Customer Job ID.....		Job Check List Date.:		Date of the Report...: 12/03/2002
Project Number.: 98000024	Project Description.: MT000700	Texaco-Report in ppm		Project Manager.....: crs
Customer.....: ARCADIS / G&M		Contact.: Steve Tischer		
Questions ?	(Y/N) Comments			
How did samples arrive?.....	Y	FED EX		
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	Y			
Temperature blank in cooler?.....	Y	0.7 DEGREES C		
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....		NA		
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....				

12-3-02

ANALYTICAL REPORT

JOB NUMBER: 216728

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

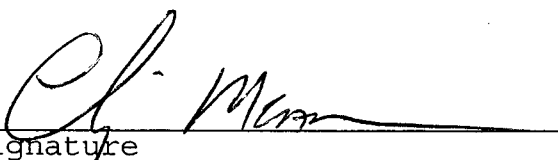
Attention: Steve Tischer

Date: 01/21/2003

RECEIVED

JAN 27 2003

ARCADIS Geraghty & Miller


Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

1/21/03
Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

ANION-CATION BALANCES

216728-1	
Calcium, mg/L	191
Magnesium, mg/L	96.1
Sodium, mg/L	222
Potassium, mg/L	10.2
CATION SUM, meq/L	27.4

Silicon, mg/L	
SiO ₃ , mg/L	0.0
Chloride, mg/L	610
Sulfate, mg/L	380
Carbonate, mg/L	0
Bicarbonate, mg/L	251.1
Fluoride, mg/L	
Nitrate, mg/L	
ANION SUM, meq/L	29.2

measured TDS, mg/L	4320
Calc. TDS, mg/L	1680
Alkalinity, mg/L	251.1
Conductivity, mg/L	2860

TDS ratio ($1.0 < x < 1.2$) 2.57

Meas. EC/Ion Sums (0.9-1.1)

Anions 1.0

Cations 1.0

Calc. TDS/EC Ratio (0.55-0.7) 0.59

Meas. TDS/EC Ratio (0.55-0.7) 1.51

Anion-Cation Balance

% Diff. 3.3

Acceptance Criteria for A-C Balance:

Anion Sum (meq/L)	Acceptable % Diff.
0-3.0	+/- 0.2 meq/L
3.0-10.0	+/- 2%
10.0-800	+/- 2-5%

LABORATORY TEST RESULTS

Job Number: 216728

Date: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW055SA
 Date Sampled.....: 01/06/2003
 Time Sampled.....: 16:00
 Sample Matrix.....: Water

Laboratory Sample ID: 216728-1
 Date Received.....: 01/07/2003
 Time Received.....: 09:15

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.15	0.05	mg/L	01/07/02	edr
SW-846 7470A	Mercury (Hg)	<0.0002	0.0002	mg/L	01/13/03	edr
EPA 160.1	Solids, Total Dissolved (TDS)	1680	10	mg/L	01/13/03	dml
SM 2320 B	Alkalinity, Total as CaCO ₃	206	5.0	mg/L CaCO ₃	01/08/03	hmz
SM 2320 B	Bicarbonate (HCO ₃)	206	5.0	mg/L CaCO ₃	01/08/03	hmz
SM 2320 B	Carbonate (CO ₃)	<5.0	5.0	mg/L CaCO ₃	01/08/03	hmz
EPA 300.0	Chloride	610	50	mg/L	01/08/03	cnw
EPA 300.0	Sulfate (SO ₄)	380	20	mg/L	01/08/03	cnw
SW-846 6010B	Arsenic (As), Total	<0.05	0.05	mg/L	01/09/03	jem
SW-846 6010B	Barium (Ba), Total	0.18	0.05	mg/L	01/09/03	jem
SW-846 6010B	Cadmium (Cd), Total	<0.05	0.05	mg/L	01/09/03	jem
SW-846 6010B	Calcium (Ca), Total	191	10	mg/L	01/09/03	jem
SW-846 6010B	Chromium (Cr), Dissolved	0.17	0.05	mg/L	01/09/03	jem
SW-846 6010B	Lead (Pb), Total	<0.05	0.05	mg/L	01/09/03	jem
SW-846 6010B	Magnesium (Mg), Total	96.1	0.05	mg/L	01/09/03	jem
SW-846 6010B	Potassium (K), Total	10.2	1.0	mg/L	01/09/03	jem
SW-846 6010B	Selenium (Se), Total	<0.05	0.05	mg/L	01/09/03	jem
SW-846 6010B	Silver (Ag), Total	<0.05	0.05	mg/L	01/09/03	jem
SW-846 6010B	Sodium (Na), Total	222	1.0	mg/L	01/09/03	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			01/08/03	crw
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			01/08/03	crw
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	01/08/03	rh
	Ethylbenzene	ND	0.002	mg/L	01/08/03	rh
	Toluene	0.003	0.002	mg/L	01/08/03	rh
	Xylenes (total)	ND	0.002	mg/L	01/08/03	rh

LABORATORY TEST RESULTS

Job Number: 216728

Date: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: MW055SA
Date Sampled.....: 01/06/2003
Time Sampled.....: 16:00
Sample Matrix.....: Water

Laboratory Sample ID: 216728-1
Date Received.....: 01/07/2003
Time Received.....: 09:15

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			01/08/03	*he
SW846 8015B	Total Extractable Petroleum Hydrocarbons	ND	0.25	mg/L	01/13/03	*he
	TEPH - Diesel Range Organics	ND	0.05	mg/L	01/08/03	*he
	TEPH - Gasoline Range Organics					

LABORATORY TEST RESULTS

Job Number: 216728

Date: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Customer Sample ID: TRIP BLANK

Date Sampled.....: 01/06/2003

Time Sampled.....: 00:00

Sample Matrix.....: Water

Laboratory Sample ID: 216728-2

Date Received.....: 01/07/2003

Time Received.....: 09:15

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	01/08/03	rh
	Ethylbenzene	ND	0.002	mg/L	01/08/03	rh
	Toluene	ND	0.002	mg/L	01/08/03	rh
	Xylenes (total)	ND	0.002	mg/L	01/08/03	rh

QUALITY CONTROL RESULTS

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 7197
Method Description.: Chromium, Hexavalent
Parameter.....: Hexavalent ChromiumBatch.....: 76360
Units.....: mg/LAnalyst....: edr
Test Code.: CR6

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M010703C	0.0225		0.02500		90.0	%	90-110	01/07/2002	1111
ICB			-0.0011							01/07/2002	1113
LCS		M010703R	0.0458		0.05000		91.6	%	75-125	01/07/2002	1115
MB			-0.0017							01/07/2002	1119
MS	216726-3	M010703R	0.0607		0.05000	0.0043	112.8	%	75-125	01/07/2002	1132
MSD	216726-3	M010703R	0.0583	0.0607	0.05000	0.0043	108.0	%	75-125	01/07/2002	1134
							4.0	R 20			
CCV		M010703C	0.0255		0.02500		102.0	%	80-120	01/07/2002	1137
CCB			0.0010							01/07/2002	1139
CCV		M010703C	0.0292		0.02500		116.8	%	80-120	01/07/2002	1200
CCB			0.0040							01/07/2002	1202
CCV		M010703C	0.0276		0.02500		110.4	%	80-120	01/07/2002	1213
CCB			0.0036							01/07/2002	1215

Test Method.....: SW-846 7470A
Method Description.: Mercury (CVAA)
Parameter.....: Mercury (Hg)Batch.....: 76513
Units.....: mg/LAnalyst....: edr
Test Code.: HGL

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICV		M011303HG	0.00506		0.005000		101.2	%	90-110	01/13/2003	1421
ICB			-0.000038							01/13/2003	1423
LCS		M011303LG	0.00514		0.005000		102.8	%	85-115	01/13/2003	1424
MB			-0.000075							01/13/2003	1426
MS	216771-2	M011303HG	0.00464		0.005000	-0.000035	93.5	%	85-115	01/13/2003	1435
MSD	216771-2	M011303HG	0.00470	0.00464	0.005000	-0.000035	94.7	%	85-115	01/13/2003	1437
							1.3	R 20			
CCV		M011303HG	0.00506		0.005000		101.2	%	80-120	01/13/2003	1442
CCB			-0.000112							01/13/2003	1444
CCV		M011303HG	0.00508		0.005000		101.6	%	80-120	01/13/2003	1452
CCB			-0.000083							01/13/2003	1454

Test Method.....: SM 2320 B
Method Description.: Carbonate/Bicarbonate/Hydroxide
Parameter.....: Alkalinity, Total as CaCO3Batch.....: 76383
Units.....: mg/L CaCO3Analyst....: hnz
Test Code.: ALK

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
LCS		A30108AK	98.3		100.0		98.3	%	90-110	01/08/2003	1210
MS	216728-1	A30108BK	302.7		100.0	205.6	97.1	%	75-125	01/08/2003	1218
MSD	216728-1	A30108BK	301.9	302.7	100.0	205.6	96.3	%	75-125	01/08/2003	1223
							0.3	R 20			
LCS		A30108AK	99.5		100.0		99.5	%	90-110	01/08/2003	1227
LCS		A30108AK	99.1		100.0		99.1	%	90-110	01/08/2003	1235

QUALITY CONTROL RESULTS

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: EPA 300.0

Method Description.: Ion Chromatography Analysis

Parameter.....: Chloride

Batch.....: 76385

Units.....: mg/L

Analyst....: cnw

Test Code.: CHL

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		010803	0.0000							01/08/2003	0900
ICV		IC30108F	9.9260		10.00		99.3	%	90-110	01/08/2003	0907
MB		010803	0.0000							01/08/2003	0915
LCS		IC30108D	10.1487		10.00		101.5	%	90-110	01/08/2003	0922
MS 216661-2		IC30108E	22.4291		10.00	11.5289	109.0	%	75-125	01/08/2003	0958
MSD 216661-2		IC30108E	22.5382	22.4291	10.00	11.5289	110.1	%	75-125	01/08/2003	1005
							0.5	R	20		
CCB		010803	0.0000							01/08/2003	1056
CCV		IC30108F	9.7833		10.00		97.8	%	90-110	01/08/2003	1104
MS 216692-3		IC30108E	34.4084		10.00	27.7025	67.1	%	75-125	01/08/2003	1140
MSD 216692-3		IC30108E	34.4195	34.4084	10.00	27.7025	67.2	%	75-125	01/08/2003	1147
							0.0	R	20		
CCB		010803	0.0011							01/08/2003	1253
CCV		IC30108F	9.9941		10.00		99.9	%	90-110	01/08/2003	1300
MB		010803	0.0000							01/08/2003	1307
LCS		IC30108D	9.9243		10.00		99.2	%	90-110	01/08/2003	1315
216728-1		IC30108E	21.4776		10.00	12.1522	93.3	%	75-125	01/08/2003	1344
216728-1		IC30108E	21.4687	21.4776	10.00	12.1522	93.2	%	75-125	01/08/2003	1351
							0.0	R	20		
CCB		010803	0.0165							01/08/2003	1449
CCV		IC30108F	9.9040		10.00		99.0	%	90-110	01/08/2003	1456
MS 216750-2		IC30108E	13.1305		10.00	3.0127	101.2	%	75-125	01/08/2003	1511
MSD 216750-2		IC30108E	13.0604	13.1305	10.00	3.0127	100.5	%	75-125	01/08/2003	1518
							0.5	R	20		
MS 216686-1		IC30108E	10.1123		10.00	0.0000	101.1	%	75-125	01/08/2003	1525
MSD 216686-1		IC30108E	10.1784	10.1123	10.00	0.0000	101.8	%	75-125	01/08/2003	1533
							0.7	R	20		
MS 216692-3		IC30108E	17.4556		10.00	6.9062	105.5	%	75-125	01/08/2003	1547
MSD 216692-3		IC30108E	17.0324	17.4556	10.00	6.9062	101.3	%	75-125	01/08/2003	1555
							2.5	R	20		
CCB		010803	0.0000							01/08/2003	1653
CCV		IC30108F	9.7999		10.00		98.0	%	90-110	01/08/2003	1700

Test Method.....: EPA 160.1

Method Description.: Solids, Total Dissolved (TDS)

Parameter.....: Solids, Total Dissolved (TDS)

Batch.....: 76656

Units.....: mg/L

Analyst....: dml

Test Code.: TDS

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MB		011302	-4.0000							01/13/2003	1015
LCS		D21230A	2496		2250		110.9	%	90-113	01/13/2003	1026
LCD		D21230A	2492	2496	2250		110.8	%	90-113	01/13/2003	1038
							0.2	R	20		
MS 216746-1		D21230B	5875		2250	3495	105.8	%	75-125	01/13/2003	1112
MSD 216746-1		D21230B	5940	5875	2250	3495	108.7	%	75-125	01/13/2003	1124
							1.1	R	20		

QUALITY CONTROL RESULTS

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: EPA 300.0

Batch.....: 76385

Analyst....: cnw

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Test Code.: S04

Parameter.....: Sulfate (S04)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
ICB		010803	0.2830							01/08/2003	0900
ICV		IC30108F	40.3560		40.0032		100.9	%	90-110	01/08/2003	0907
MB		010803	0.2791							01/08/2003	0915
LCS		IC30108D	37.9771		40.0032		94.9	%	90-110	01/08/2003	0922
CCB		010803	0.4491							01/08/2003	1056
CCV		IC30108F	39.8277		40.0032		99.6	%	90-110	01/08/2003	1104
MS	216692-3	IC30108E	76.6938		40.0032	39.1941	93.7	%	75-125	01/08/2003	1140
MSD	216692-3	IC30108E	77.3401	76.6938	40.0032	39.1941	95.4	%	75-125	01/08/2003	1147
							0.8	R	20		
CCB		010803	0.2106							01/08/2003	1253
CCV		IC30108F	40.2085		40.0032		100.5	%	90-110	01/08/2003	1300
MB		010803	0.2507							01/08/2003	1307
LCS		IC30108D	39.6345		40.0032		99.1	%	90-110	01/08/2003	1315
MS	216728-1	IC30108E	46.9845		40.0032	6.7851	100.5	%	75-125	01/08/2003	1344
MSD	216728-1	IC30108E	46.7781	46.9845	40.0032	6.7851	100.0	%	75-125	01/08/2003	1351
							0.4	R	20		
		010803	0.1993							01/08/2003	1449
		IC30108F	40.2259		40.0032		100.6	%	90-110	01/08/2003	1456
MS	216750-2	IC30108E	40.7863		40.0032	0.6836	100.2	%	75-125	01/08/2003	1511
MSD	216750-2	IC30108E	40.7793	40.7863	40.0032	0.6836	100.2	%	75-125	01/08/2003	1518
							0.0	R	20		
MS	216686-1	IC30108E	41.0787		40.0032	0.9821	100.2	%	75-125	01/08/2003	1525
MSD	216686-1	IC30108E	41.3279	41.0787	40.0032	0.9821	100.9	%	75-125	01/08/2003	1533
							0.6	R	20		
MS	216692-3	IC30108E	50.9160		40.0032	9.1258	104.5	%	75-125	01/08/2003	1547
MSD	216692-3	IC30108E	50.8171	50.9160	40.0032	9.1258	104.2	%	75-125	01/08/2003	1555
							0.2	R	20		
CCB		010803	0.2071							01/08/2003	1653
CCV		IC30108F	39.9144		40.0032		99.8	%	90-110	01/08/2003	1700

Test Method.....: SW-846 6010B

Batch.....: 76439

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: AS

Parameter.....: Arsenic (As)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	2.02816640		2.00		101.4	%	90-110	01/09/2003	1055
ICV		M0346	1.01370208		1.00		101.4	%	90-110	01/09/2003	1102
ICV		M0337	1.03220398		1.00		103.2	%	90-110	01/09/2003	1110
ICB			0.00034598							01/09/2003	1118
CCV		M0341	0.98338206		1.00		98.3	%	90-110	01/09/2003	1135
CCB			-0.0011049							01/09/2003	1143
MB		3010	-0.0007456							01/09/2003	1149
LCS		M345	0.48486313		0.500		97.0	%	85-110	01/09/2003	1153
CCV		M0341	0.92661247		1.00		92.7	%	90-110	01/09/2003	1233
CCB			-0.0035422							01/09/2003	1241
MS	216728-1	M345	0.49004010		0.500	0.00947173	96.1	%	75-125	01/09/2003	1304
MSD	216728-1	M345	0.49803408	0.49004010	0.500	0.00947173	97.7	%	75-125	01/09/2003	1308
							1.6	R	20		
		M0341	0.93470479		1.00		93.5	%	90-110	01/09/2003	1329
			-0.0067248							01/09/2003	1336
MB		3010	-0.0005267							01/09/2003	1359

QUALITY CONTROL RESULTS

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Fischer

Test Method.....: SW-846 6010B

Batch.....: 76439

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: AS

Parameter.....: Arsenic (As)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
LCS		M345	0.45608207		0.500		91.2	%	85-110	01/09/2003	1403
MS	216746-1	M345	0.48456761		0.500	0.01492373	93.9	%	75-125	01/09/2003	1411
MSD	216746-1	M345	0.51906169	0.48456761	0.500	0.01492373	100.8	%	75-125	01/09/2003	1415
							6.9	R 20			
CCV		M0341	0.91298100		1.00		91.3	%	90-110	01/09/2003	1425
CCB			-0.0013064							01/09/2003	1432
PDS	216728-1	M345B	0.96493725		1.00	0.00947173	95.5	%	75-125	01/09/2003	1508
PSD	216728-1	M345B	0.95598590	0.96493725	1.00	0.00947173	94.7	%	75-125	01/09/2003	1513
							0.9	R 20			
CCV		M0341	0.91062034		1.00		91.1	%	90-110	01/09/2003	1517
CCB			-0.0069881							01/09/2003	1521

Test Method.....: SW-846 6010B

Batch.....: 76439

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: BA

Parameter.....: Barium (Ba)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	2.04182783		2.00		102.1	%	90-110	01/09/2003	1055
ICV		M0348	1.03812323		1.00		103.8	%	90-110	01/09/2003	1106
ICV		M0337	1.04261653		1.00		104.3	%	90-110	01/09/2003	1110
ICB			-0.0003951							01/09/2003	1118
CCV		M0341	1.00374366		1.00		100.4	%	90-110	01/09/2003	1135
CCB			-0.0004036							01/09/2003	1143
MB		3010	-0.0003711							01/09/2003	1149
LCS		M345	0.49383235		0.500		98.8	%	90-110	01/09/2003	1153
CCV		M0341	0.99642996		1.00		99.6	%	90-110	01/09/2003	1233
CCB			-0.0002807							01/09/2003	1241
MS	216728-1	M345	0.51385486		0.500	0.03429139	95.9	%	75-125	01/09/2003	1304
MSD	216728-1	M345	0.51453989	0.51385486	0.500	0.03429139	96.0	%	75-125	01/09/2003	1308
							0.1	R 20			
CCV		M0341	0.98198262		1.00		98.2	%	90-110	01/09/2003	1329
CCB			-0.0002669							01/09/2003	1336
MB		3010	0.00095442							01/09/2003	1359
LCS		M345	0.48579946		0.500		97.2	%	90-110	01/09/2003	1403
MS	216746-1	M345	0.50922281		0.500	0.06431028	89.0	%	75-125	01/09/2003	1411
MSD	216746-1	M345	0.54161552	0.50922281	0.500	0.06431028	95.5	%	75-125	01/09/2003	1415
							6.2	R 20			
CCV		M0341	0.97250761		1.00		97.3	%	90-110	01/09/2003	1425
CCB			-0.0002776							01/09/2003	1432
PDS	216728-1	M345B	0.99110286		1.00	0.03429139	95.7	%	75-125	01/09/2003	1508
PSD	216728-1	M345B	0.96097745	0.99110286	1.00	0.03429139	92.7	%	75-125	01/09/2003	1513
							3.1	R 20			
CCV		M0341	0.96549432		1.00		96.5	%	90-110	01/09/2003	1517
CCB			-0.0002632							01/09/2003	1521

QUALITY CONTROL RESULTS

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Batch.....: 76439

Analyst...: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CD

Parameter.....: Cadmium (Cd)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	2.04029424		2.00		102.0	%	90-110	01/09/2003	1055
ICV		M0346	1.03156458		1.00		103.2	%	90-110	01/09/2003	1102
ICV		M0337	1.04269832		1.00		104.3	%	90-110	01/09/2003	1110
ICB			-0.0000381							01/09/2003	1118
CCV		M0341	0.99573796		1.00		99.6	%	90-110	01/09/2003	1135
CCB			0.00008914							01/09/2003	1143
MB		3010	0.00004766							01/09/2003	1149
LCS		M345	0.48543674		0.500		97.1	%	87-110	01/09/2003	1153
CCV		M0341	0.98133196		1.00		98.1	%	90-110	01/09/2003	1233
CCB			0.00069352							01/09/2003	1241
MS	216728-1	M345	0.46237681		0.500	0.00092228	92.3	%	75-125	01/09/2003	1304
MSD	216728-1	M345	0.46015915	0.46237681	0.500	0.00092228	91.8	%	75-125	01/09/2003	1308
							0.5	R 20			
CCV		M0341	0.95251979		1.00		95.3	%	90-110	01/09/2003	1329
CCB			0.00185940							01/09/2003	1336
MB		3010	0.00108985							01/09/2003	1359
		M345	0.46352354		0.500		92.7	%	87-110	01/09/2003	1403
	216746-1	M345	0.42582417		0.500	0.00141147	84.9	%	75-125	01/09/2003	1411
MSD	216746-1	M345	0.45411620	0.42582417	0.500	0.00141147	90.5	%	75-125	01/09/2003	1415
							6.4	R 20			
CCV		M0341	0.93476755		1.00		93.5	%	90-110	01/09/2003	1425
CCB			0.00119516							01/09/2003	1432
PDS	216728-1	M345B	0.90847463		1.00	0.00092228	90.8	%	75-125	01/09/2003	1508
PSD	216728-1	M345B	0.88113382	0.90847463	1.00	0.00092228	88.0	%	75-125	01/09/2003	1513
							3.1	R 20			
CCV		M0341	0.93576572		1.00		93.6	%	90-110	01/09/2003	1517
CCB			0.00136375							01/09/2003	1521

Test Method.....: SW-846 6010B

Batch.....: 76498

Analyst...: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CA

Parameter.....: Calcium (Ca)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0344	50.5952		50.0		101.2	%	90-110	01/09/2003	1415
ICV		M0346	1.0036		1.00		100.4	%	90-110	01/09/2003	1419
ICV		M0337	1.0202		1.00		102.0	%	90-110	01/09/2003	1428
ICB			-0.0266							01/09/2003	1439
CCV		M0342	24.8478		25.0		99.4	%	90-110	01/09/2003	1449
CCB			-0.0175							01/09/2003	1451
MB		3010	-0.0081							01/09/2003	1519
LCS		M345	2.4790		2.50		99.2	%	90-110	01/09/2003	1533
PDS	216728-1	M345D	27.9403		10.0	19.0577	88.8	%	75-125	01/09/2003	1638
PSD	216728-1	M345D	27.6714	27.9403	10.0	19.0577	86.1	%	75-125	01/09/2003	1640
							1.0	R 20			
MB		3010	0.0054							01/09/2003	1644
LCS		M345	2.4547		2.50		98.2	%	90-110	01/09/2003	1647
CCV		M0342	24.4305		25.0		97.7	%	90-110	01/09/2003	1655
CCB			0.0132							01/09/2003	1658

QUALITY CONTROL RESULTS

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Batch.....: 76439

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: CR

Parameter.....: Chromium (Cr)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	2.04426070		2.00		102.2	%	90-110	01/09/2003	1055
ICV		M0346	1.04833422		1.00		104.8	%	90-110	01/09/2003	1102
ICV		M0337	1.05936383		1.00		105.9	%	90-110	01/09/2003	1110
ICB			-0.0004671							01/09/2003	1118
CCV		M0341	1.00214473		1.00		100.2	%	90-110	01/09/2003	1135
CCB			-0.0006057							01/09/2003	1143
MB		3010	-0.0002772							01/09/2003	1149
LCS		M345	0.49465369		0.500		98.9	%	90-110	01/09/2003	1153
CCV		M0341	1.00569864		1.00		100.6	%	90-110	01/09/2003	1233
CCB			0.00024192							01/09/2003	1241
MS	216728-1	M345	0.65903704		0.500	0.17438835	96.9	%	75-125	01/09/2003	1304
MSD	216728-1	M345	0.65875484	0.65903704	0.500	0.17438835	96.9	%	75-125	01/09/2003	1308
							0.0	R 20			
CCV		M0341	0.99838601		1.00		99.8	%	90-110	01/09/2003	1329
CCB			-0.0000192							01/09/2003	1336
MB		3010	0.00034568							01/09/2003	1359
		M345	0.49523918		0.500		99.0	%	90-110	01/09/2003	1403
216746-1		M345	0.75568047		0.500	0.32092220	87.0	%	75-125	01/09/2003	1411
MSD	216746-1	M345	0.80605170	0.75568047	0.500	0.32092220	97.0	%	75-125	01/09/2003	1415
							6.5	R 20			
CCV		M0341	0.99231581		1.00		99.2	%	90-110	01/09/2003	1425
CCB			-0.0000718							01/09/2003	1432
PDS	216728-1	M345B	1.15880136		1.00	0.17438835	98.4	%	75-125	01/09/2003	1508
PSD	216728-1	M345B	1.12588532	1.15880136	1.00	0.17438835	95.1	%	75-125	01/09/2003	1513
							2.9	R 20			
CCV		M0341	0.99043479		1.00		99.0	%	90-110	01/09/2003	1517
CCB			0.00008797							01/09/2003	1521

Test Method.....: SW-846 6010B

Batch.....: 76439

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: PB

Parameter.....: Lead (Pb)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	2.03743768		2.00		101.9	%	90-110	01/09/2003	1055
ICV		M0346	1.05322888		1.00		105.3	%	90-110	01/09/2003	1102
ICV		M0337	1.05995847		1.00		106.0	%	90-110	01/09/2003	1110
ICB			-0.0003424							01/09/2003	1118
CCV		M0341	1.01506964		1.00		101.5	%	90-110	01/09/2003	1135
CCB			-0.0011050							01/09/2003	1143
MB		3010	-0.0014723							01/09/2003	1149
LCS		M345	0.49590339		0.500		99.2	%	87-112	01/09/2003	1153
CCV		M0341	0.98489647		1.00		98.5	%	90-110	01/09/2003	1233
CCB			-0.0007911							01/09/2003	1241
MS	216728-1	M345	0.46435688		0.500	0.00636434	91.6	%	75-125	01/09/2003	1304
MSD	216728-1	M345	0.46816221	0.46435688	0.500	0.00636434	92.4	%	75-125	01/09/2003	1308
							0.8	R 20			
CCV		M0341	0.97058023		1.00		97.1	%	90-110	01/09/2003	1329
CCB			-0.0004839							01/09/2003	1336
		3010	0.00365947							01/09/2003	1359
		M345	0.47543710		0.500		95.1	%	87-112	01/09/2003	1403
MS	216746-1	M345	0.43437986		0.500	0.00808273	85.3	%	75-125	01/09/2003	1411

Job Number.: 216728

QUALITY CONTROL RESULTS

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Batch.....: 76439

Analyst...: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: PB

Parameter.....: Lead (Pb)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MSD	216746-1	M345	0.45994338	0.43437986	0.500	0.00808273	90.4	%	75-125	01/09/2003	1415
							5.7	R 20			
CCV		M0341	0.95397376		1.00		95.4	%	90-110	01/09/2003	1425
CCB			-0.0009672							01/09/2003	1432
PDS	216728-1	M345B	0.90743156		1.00	0.00636434	90.1	%	75-125	01/09/2003	1508
PSD	216728-1	M345B	0.89515251	0.90743156	1.00	0.00636434	88.9	%	75-125	01/09/2003	1513
							1.4	R 20			
CCV		M0341	0.95427000		1.00		95.4	%	90-110	01/09/2003	1517
CCB			-0.0012837							01/09/2003	1521

Test Method.....: SW-846 6010B

Batch.....: 76498

Analyst...: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: MG

Parameter.....: Magnesium (Mg)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
		M0344	50.6510		50.0		101.3	%	90-110	01/09/2003	1415
ICV		M0346	0.9855		1.00		98.5	%	90-110	01/09/2003	1419
ICV		M0337	0.9879		1.00		98.8	%	90-110	01/09/2003	1428
ICB			0.0111							01/09/2003	1439
CCV		M0342	24.9511		25.0		99.8	%	90-110	01/09/2003	1449
CCB			-0.0153							01/09/2003	1451
MB		3010	-0.0358							01/09/2003	1519
LCS		M345	2.4298		2.50		97.2	%	88-110	01/09/2003	1533
PDS	216728-1	M345D	19.8562		10.0	10.7010	91.6	%	75-125	01/09/2003	1638
PSD	216728-1	M345D	19.6487	19.8562	10.0	10.7010	89.5	%	75-125	01/09/2003	1640
							1.1	R 20			
MB		3010	-0.0387							01/09/2003	1644
LCS		M345	2.3998		2.50		96.0	%	88-110	01/09/2003	1647
CCV		M0342	24.1625		25.0		96.7	%	90-110	01/09/2003	1655
CCB			0.0115							01/09/2003	1658

Test Method.....: SW-846 6010B

Batch.....: 76498

Analyst...: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: K

Parameter.....: Potassium (K)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0344	50.8002		50.0		101.6	%	90-110	01/09/2003	1415
ICV		M0348	9.7274		10.00		97.3	%	90-110	01/09/2003	1426
ICB			0.1829							01/09/2003	1439
CCV		M0342	25.6402		25.0		102.6	%	90-110	01/09/2003	1449
CCB			0.4323							01/09/2003	1451
MB		3010	0.4157							01/09/2003	1519
LCS		M345	2.7618		2.50		110.5	%	45-142	01/09/2003	1533
PDS	216728-1	M345D	9.8296		10.0	0.4426	93.9	%	75-125	01/09/2003	1638
PSD	216728-1	M345D	9.8295	9.8296	10.0	0.4426	93.9	%	75-125	01/09/2003	1640
							0.0	R 20			
		3010	-0.2042							01/09/2003	1644
		M345	1.4657		2.50		58.6	%	45-142	01/09/2003	1647
CCV		M0342	23.5782		25.0		94.3	%	90-110	01/09/2003	1655

QUALITY CONTROL RESULTS

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Batch.....: 76498

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: K

Parameter.....: Potassium (K)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
CCB			-0.4142							01/09/2003	1658

Test Method.....: SW-846 6010B

Batch.....: 76439

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: SE

Parameter.....: Selenium (Se)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	2.02604263		2.00		101.3	%	90-110	01/09/2003	1055
ICV		M0346	1.01297069		1.00		101.3	%	90-110	01/09/2003	1102
ICV		M0337	1.00786806		1.00		100.8	%	90-110	01/09/2003	1110
ICB			0.00455218							01/09/2003	1118
CCV		M0341	0.98016248		1.00		98.0	%	90-110	01/09/2003	1135
CCB			-0.0013330							01/09/2003	1143
MB		3010	0.00264035							01/09/2003	1149
		M345	0.47011078		0.500		94.0	%	82-111	01/09/2003	1153
		M0341	0.92631058		1.00		92.6	%	90-110	01/09/2003	1233
CCB			0.00702572							01/09/2003	1241
MS 216728-1		M345	0.53459109		0.500	0.07308650	92.3	%	75-125	01/09/2003	1304
MSD 216728-1		M345	0.53665866	0.53459109	0.500	0.07308650	92.7	%	75-125	01/09/2003	1308
							0.4	R 20			
CCV		M0341	0.91778617		1.00		91.8	%	90-110	01/09/2003	1329
CCB			0.00183198							01/09/2003	1336
MB		3010	-0.0015801							01/09/2003	1359
LCS		M345	0.43853132		0.500		87.7	%	82-111	01/09/2003	1403
MS 216746-1		M345	0.52011981		0.500	0.08908487	86.2	%	75-125	01/09/2003	1411
MSD 216746-1		M345	0.54773483	0.52011981	0.500	0.08908487	91.7	%	75-125	01/09/2003	1415
							5.2	R 20			
CCV		M0341	0.90357415		1.00		90.4	%	90-110	01/09/2003	1425
CCB			-0.0000142							01/09/2003	1432

Test Method.....: SW-846 6010B

Batch.....: 76439

Analyst....: jem

Method Description.: Metals Analysis (ICAP)

Units.....: mg/L

Test Code.: AG

Parameter.....: Silver (Ag)

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
RS		M0343	1.01714861		1.0		101.7	%	90-110	01/09/2003	1055
ICV		M0337	0.12580132		0.125		100.6	%	90-110	01/09/2003	1110
ICB			-0.0000780							01/09/2003	1118
CCV		M0341	0.50381820		0.50		100.8	%	90-110	01/09/2003	1135
CCB			-0.0000801							01/09/2003	1143
MB		3010	0.00007860							01/09/2003	1149
LCS		M345	0.24668620		0.25		98.7	%	87-110	01/09/2003	1153
CCV		M0341	0.50409968		0.50		100.8	%	90-110	01/09/2003	1233
CCB			-0.0004452							01/09/2003	1241
CCV		M0341	0.50029619		0.50		100.1	%	90-110	01/09/2003	1329
CCB			0.00011418							01/09/2003	1336
		3010	-0.0008732							01/09/2003	1359
		M345	0.24491120		0.25		98.0	%	87-110	01/09/2003	1403
MS 216746-1		M345	0.19913109		0.25	-0.0020813	80.5	%	75-125	01/09/2003	1411

QUALITY CONTROL RESULTS

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Test Method.....: SW-846 6010B

Method Description.: Metals Analysis (ICAP)

Parameter.....: Silver (Ag)

Batch.....: 76439

Units.....: mg/L

Analyst...: jem

Test Code.: AG

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
MSD	216746-1	M345	0.18899877	0.19913109	0.25	-0.0020813	76.4	%	75-125	01/09/2003	1415
							5.2	R 20			
CCV		M0341	0.50084764		0.50		100.2	%	90-110	01/09/2003	1425
CCB			-0.0002995							01/09/2003	1432
PDS	216728-1	M345B	0.48068489		0.50	-0.0027597	96.7	%	75-125	01/09/2003	1508
PSD	216728-1	M345B	0.46184441	0.48068489	0.50	-0.0027597	92.9	%	75-125	01/09/2003	1513
							4.0	R 20			
CCV		M0341	0.50069244		0.50		100.1	%	90-110	01/09/2003	1517
CCB			0.00042998							01/09/2003	1521

Test Method.....: SW-846 6010B

Method Description.: Metals Analysis (ICAP)

Parameter.....: Sodium (Na)

Batch.....: 76498

Units.....: mg/L

Analyst...: jem

Test Code.: NA

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	Date	Time
		M0344	50.7589		50.0		101.5	%	90-110	01/09/2003	1415
ICB			-0.1463							01/09/2003	1439
CCV		M0342	24.7647		25.0		99.1	%	90-110	01/09/2003	1449
CCB			-0.1590							01/09/2003	1451
MB		3010	-0.1380							01/09/2003	1519
LCS		M345	2.2696		2.50		90.8	%	82-110	01/09/2003	1533
ICV		M0348	0.9215		1.00		92.2	%	90-110	01/09/2003	1622
ICB			0.0099							01/09/2003	1629
PDS	216728-1	M345D	32.0852		10.0	23.4949	85.9	%	75-125	01/09/2003	1638
PSD	216728-1	M345D	31.7325	32.0852	10.0	23.4949	82.4	%	75-125	01/09/2003	1640
							1.1	R 20			
MB		3010	0.0055							01/09/2003	1644
LCS		M345	2.3754		2.50		95.0	%	82-110	01/09/2003	1647
CCV		M0342	23.7647		25.0		95.1	%	90-110	01/09/2003	1655
CCB			0.0849							01/09/2003	1658

QUALITY CONTROL RESULTS

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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Test Method.....: SW-846 8021B

Method Description.: Volatile Organics - Aromatics

Units.....: ug/L

Batch.....: 76408

Analyst....: rh

CCV	Continuing Calibration Verification	V010203CCV			01/08/2003	1220
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	21.138		20.000000		105.7	%	85-115
Ethylbenzene	21.293		20.000000		106.5	%	85-115
tert-Butyl Methyl Ether (MTBE)	100.994		100.000000		101.0	%	85-115
Toluene	20.897		20.000000		104.5	%	85-115
Xylenes (total)	64.831		60.000000		108.1	%	85-115
m&p-Xylenes	43.538		40.000000		108.8	%	85-115
o-Xylene	21.293		20.000000		106.5	%	85-115

MB	Method Blank	D10803			01/08/2003	1342
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Petroleum	ND						
Ethylbenzene	ND						
tert-Butyl Methyl Ether (MTBE)	ND						
Toluene	ND						
Xylenes (total)	ND						
m&p-Xylenes	ND						
o-Xylene	ND						

MS	Matrix Spike	V010203CCV	216738-1	20	01/09/2003	0200
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	26.842		20.000000	8.219	93.1	%	79-115
Ethylbenzene	19.985		20.000000	0.978	95.0	%	83-115
tert-Butyl Methyl Ether (MTBE)	320.381		100.000000	246.068	74.3	%	85-115
Toluene	33.302		20.000000	14.871	92.2	%	85-115
Xylenes (total)	72.002		60.000000	15.372	94.4	%	85-117
m&p-Xylenes	43.615		40.000000	5.743	94.7	%	82-116
o-Xylene	28.387		20.000000	9.629	93.8	%	85-119

MSD	Matrix Spike Duplicate	V010203CCV	216738-1	20	01/09/2003	0241
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Benzene	27.397	26.842	20.000000	8.219	95.9	%	79-115
					2.0	R	20
Ethylbenzene	20.768	19.985	20.000000	0.978	99.0	%	83-115
					3.8	R	20
tert-Butyl Methyl Ether (MTBE)	328.462	320.381	100.000000	246.068	82.4	%	85-115
					2.5	R	20
Toluene	34.014	33.302	20.000000	14.871	95.7	%	85-115
					2.1	R	20
Xylenes (total)	74.526	72.002	60.000000	15.372	98.6	%	85-117
					3.4	R	20
m&p-Xylenes	45.250	43.615	40.000000	5.743	98.8	%	82-116
					3.7	R	20

QUALITY CONTROL RESULTS

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MSD	Matrix Spike Duplicate	V010203CCV	216738-1	20	01/09/2003	0241

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
o-Xylene	29.276	28.387	20.000000	9.629	98.2 3.1	% 85-119 R 20

SB	Spiked Blank	V010203SBW				01/08/2003 1301
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
Benzene	21.343		20.000000		106.7	% 79-115
Ethylbenzene	21.463		20.000000		107.3	% 83-115
tert-Butyl Methyl Ether (MTBE)	104.587		100.000000		104.6	% 85-115
Toluene	21.564		20.000000		107.8	% 85-115
Xylenes (total)	45.226		40.000000		113.1	% 85-117
m&p-Xylenes	22.284		20.000000		111.4	% 82-116
o-Xylene	22.942		20.000000		114.7	% 85-119

st Method.....: SW846 8015B

Units.....: ug/L

Analyst....: *he

thod Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 66360

CCV	Continuing Calibration Verification	BX102502B				01/08/2003 1510
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	224.009		250.000000		89.6	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B				01/08/2003 1841
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	214.224		250.000000		85.7	% 85.0-115.0

CCV	Continuing Calibration Verification	BX102502B				01/08/2003 1907
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	219.082		250.000000		87.6	% 85.0-115.0

LCS	Laboratory Control Sample	BXS010803C	66360-1			01/08/2003 1544
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	250.139		250.000000		100.1	% 78-140

QUALITY CONTROL RESULTS

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
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MB	Method Blank		66360-1		01/08/2003	1610
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	8.31919					

MS	Matrix Spike	BX102502B	247075-1		01/08/2003	1751
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	203.778		250.000000	ND	80.2	% 70-130

MSD	Matrix Spike Duplicate	BX102502B	247075-1		01/08/2003	1816
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Gasoline Range Organics	209.798	203.778	250.000000	ND	82.6 2.9	% 70-130 R 20

Test Method.....: SW846 8015B

Units.....: mg/L

Analyst....: *he

Method Description.: Total Extractable Petroleum Hydrocarbons Batch.....: 66706

LCS	Laboratory Control Sample	GC121702A	66321		01/13/2003	1655
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	1050.12		1000.000000		105.0	% 69-118

MB	Method Blank	GC121702	66321		01/13/2003	1611
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	ND					

SB	Spiked Blank	GC121702B	66321		01/13/2003	1739
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	1101.21		1000.000000	ND	110	% 70.0-130.0

SBD	Spiked Blank Duplicate	GC121702B	66321		01/13/2003	1824
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Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits
TEPH - Diesel Range Organics	932.00	1101.21	1000.000000	ND	93.2 16.6	% 70-130 R 20

SURROGATE RECOVERIES REPORT

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: ARCADIS / G&M

PROJECT: MT000700.0004

ATTN: Steve Tischer

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 66360

Analyst.....: *he

Equipment Code: BTEX07

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV	1	46.6851	50.00	93.4	70-139		01/08/2003	1510
66360-1		LCS	1	48.4624	50.00	96.9	70-139		01/08/2003	1544
66360-1		MB	1	49.1648	50.00	98.3	70-139		01/08/2003	1610
247075-1			1	49.3170	50.00	98.6	70-139		01/08/2003	1635
247075-2			1	50.4266	50.00	100.9	70-139		01/08/2003	1700
247140-1			1	49.0256	50.00	98.1	70-139		01/08/2003	1725
247075-1		MS	1	48.3408	50.00	96.7	70-139		01/08/2003	1751
247075-1		MSD	1	47.7826	50.00	95.6	70-139		01/08/2003	1816
		CCV	1	48.8907	50.00	97.8	70-139		01/08/2003	1841
		CCV	1	49.3711	50.00	98.7	70-139		01/08/2003	1907

Surrogate	Units
Trifluorotoluene	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV	1	48.9108		97.8	68-143		01/08/2003	1510
66360-1		LCS	1	44.5097		89.0	68-143		01/08/2003	1544
66360-1		MB	1	44.6101		89.2	68-143		01/08/2003	1610
247075-1			1	43.6201		87.2	68-143		01/08/2003	1635
247075-2			1	44.4050		88.8	68-143		01/08/2003	1700
247140-1			1	40.6403		81.3	68-143		01/08/2003	1725
247075-1		MS	1	42.5123		85.0	68-143		01/08/2003	1751
247075-1		MSD	1	40.5947		81.2	68-143		01/08/2003	1816
		CCV	1	45.5106		91.0	68-143		01/08/2003	1841
		CCV	1	46.3953		92.8	68-143		01/08/2003	1907

Method.....: Total Extractable Petroleum Hydrocarbons Method Code.....: 8015

Batch.....: 66706

Analyst.....: *he

Equipment Code: EXTGC01

Surrogate	Units
	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
66321--21		MB	1.000000	52.14	50.000	104.3	60-140		01/13/2003	1611
66321--21		LCS	1.000000	54.45	50.000	108.9	60-140		01/13/2003	1655
66321--21		SB	1.000000	58.60	50.000	117.2	60-140		01/13/2003	1739
66321--21		SBD	1.000000	49.10	50.000	98.2	60-140		01/13/2003	1824
247075-1			1.000000	50.46	50.000	100.9	60-140		01/13/2003	1910
247140-1			1.000000	48.83	50.000	97.7	60-140		01/13/2003	1955

SURROGATE RECOVERIES REPORT

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
	mg/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
247075-2			1.000000	55.80	50.000	111.6	60-140		01/13/2003	1955

Method.....: Volatile Organics - Aromatics
Batch.....: 76408

Method Code.....: 8020
Analyst.....: rh

Equipment Code:

Surrogate	Units
BFB (Surrogate)	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		20.330	20.00000	101.7	77-115		01/08/2003	1220
		SB		20.370	20.00000	101.8	77-115		01/08/2003	1301
		MB		20.230	20.00000	101.2	77-115		01/08/2003	1342
216756-1			100	16.444	20.00000	82.2	77-115		01/08/2003	1423
216756-2				20.008	20.00000	100.0	77-115		01/08/2003	1504
216718-1				17.767	20.00000	88.8	77-115		01/08/2003	1545
216702-4			400	20.051	20.00000	100.3	77-115		01/08/2003	1626
216688-2				18.105	20.00000	90.5	77-115		01/08/2003	1707
216720-1			10	17.998	20.00000	90.0	77-115		01/08/2003	1748
216720-2				18.514	20.00000	92.6	77-115		01/08/2003	1829
216713-1				20.040	20.00000	100.2	77-115		01/08/2003	1910
216713-2				20.091	20.00000	100.5	77-115		01/08/2003	1951
216713-3				20.171	20.00000	100.9	77-115		01/08/2003	2032
216713-4				20.178	20.00000	100.9	77-115		01/08/2003	2113
216714-10				20.233	20.00000	101.2	77-115		01/08/2003	2154
216728-1				20.233	20.00000	101.2	77-115		01/08/2003	2235
216728-2				20.216	20.00000	101.1	77-115		01/08/2003	2316
216730-1				17.888	20.00000	89.4	77-115		01/08/2003	2357
216737-1			50	18.118	20.00000	90.6	77-115		01/09/2003	0038
216738-1			20	19.158	20.00000	95.8	77-115		01/09/2003	0119
216738-1		MS	20	19.019	20.00000	95.1	77-115		01/09/2003	0200
216738-1		MSD	20	18.975	20.00000	94.9	77-115		01/09/2003	0241
216739-1				19.765	20.00000	98.8	77-115		01/09/2003	0322
216739-2				19.918	20.00000	99.6	77-115		01/09/2003	0403

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
		CCV		20.188	20.00000	100.9	68-118		01/08/2003	1220
		SB		20.062	20.00000	100.3	68-118		01/08/2003	1301
		MB		19.573	20.00000	97.9	68-118		01/08/2003	1342
756-1			100	17.468	20.00000	87.3	68-118		01/08/2003	1423
216756-2				19.149	20.00000	95.7	68-118		01/08/2003	1504

SURROGATE RECOVERIES REPORT

Job Number.: 216728

Report Date.: 01/21/2003

CUSTOMER: 483648

PROJECT: MT000700.0004

ATTN: Steve Tischer

Surrogate	Units
Trifluorotoluene	ug/L

Lab ID	Matrix	QC Type	Dilution	Result	True Value	Percent Recovery	Limits	Flag	Date	Time
216718-1				34.536	20.00000	172.7	68-118	X	01/08/2003	1545
216702-4			400	19.245	20.00000	96.2	68-118		01/08/2003	1626
216688-2				20.745	20.00000	103.7	68-118		01/08/2003	1707
216720-1			10	17.678	20.00000	88.4	68-118		01/08/2003	1748
216720-2				18.030	20.00000	90.2	68-118		01/08/2003	1829
216713-1				19.024	20.00000	95.1	68-118		01/08/2003	1910
216713-2				19.398	20.00000	97.0	68-118		01/08/2003	1951
216713-3				19.750	20.00000	98.8	68-118		01/08/2003	2032
216713-4				19.521	20.00000	97.6	68-118		01/08/2003	2113
216714-10				19.804	20.00000	99.0	68-118		01/08/2003	2154
216728-1				19.628	20.00000	98.1	68-118		01/08/2003	2235
216728-2				19.727	20.00000	98.6	68-118		01/08/2003	2316
216730-1				17.623	20.00000	88.1	68-118		01/08/2003	2357
216737-1			50	17.688	20.00000	88.4	68-118		01/09/2003	0038
216738-1			20	19.790	20.00000	99.0	68-118		01/09/2003	0119
216738-1		MS	20	19.832	20.00000	99.2	68-118		01/09/2003	0200
216738-1		MSD	20	19.563	20.00000	97.8	68-118		01/09/2003	0241
216739-1				18.417	20.00000	92.1	68-118		01/09/2003	0322
216739-2				18.381	20.00000	91.9	68-118		01/09/2003	0403

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 01/21/2003

- (1) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, March 1983
- (2) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
- (3) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
- (4) Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater, Federal Register, Vol. 49, No. 209, October 1984 and 40 CFR Part 136 amendments
- (5) EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils
- (6) Methods of Soil Analysis, American Society of Agronomy, Agronomy No. 9, 1965
- (7) ASTM, Section 11 Water and Environmental Technology, Volume 11.01 Water (1), 1991
- (8) American Society for Testing and Materials, Petroleum Products, Lubricants, and Fossil Fuels, Section 5, Volumes 05.01 - 05.05
- (9) Hach Handbook of Water Analysis, 1979

Comments:

Data in the QC report may differ from final results due to digestion and/or dilution of sample into analytical ranges. The "Time Analyzed" may not be the actual time of analysis. The "Date Analyzed" is the actual date of analysis. Sludge samples are reported on a wet weight basis (i.e., not corrected for percent moisture) unless otherwise indicated.

Quality Control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance.

All data is reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

SAMPLE RESULT IDENTIFICATION

ND = Not detected at a value greater than the reporting limit
TNTC = Too numerous to count

BLANK QC SAMPLE IDENTIFICATION

MB Method Blank
ICB Initial Calibration Blank
CCB Continuing Calibration Blank

SPIKE QC SAMPLE IDENTIFICATION

MS Method (Matrix) Spike
MSD Method (Matrix) Spike Duplicate
PDS Post Digestion/Distillation Spike
SB Spiked Blank
SBD Spiked Blank Duplicate

REFERENCE STANDARD QC SAMPLE IDENTIFICATION

LCS Laboratory Control Standard
RS Reference Standard
ICV Initial Calibration Verification Standard
CCV Continuing Calibration Verification Standard
ISA/ISB ICP Interference Check Sample
DSC Distilled Standard Check

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 01/21/2003

DUPLICATE QC SAMPLE IDENTIFICATION

MD	Method (Matrix) Duplicate
ED	Extraction Duplicate
DD	Digestion Duplicate
PDD	Post Digestion Duplicate
PSD	Post Digestion/Distillation Spike Duplicate

Analyses performed by a subcontract laboratory are indicated on the analytical and/or quality control reports under "technician" using the following codes:

SUBCONTRACT LABORATORIES

Severn Trent Laboratories:

Los Angeles, CA	*la	Houston, TX	*he
Aurora, CO	*au	North Canton, OH	*nc
Tampa, FL	*ta	Valparaiso, IN	*vp
Sacramento, CA	*sa	Chicago, IL	*ch
Pensacola, FL	*pe		

Other:

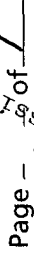
Client provided data	*cp	Non-STL Subcontract Lab	*xx
----------------------	-----	-------------------------	-----

EXPLANATION OF DATA FLAGS

- B - This flag is used to indicate that an analyte is present the method blank as well as in the sample. It indicates that the client should consider this when evaluating the results.
- D - This flag indicates that surrogates were diluted out of calibration range and cannot be quantified.
- E - Indicates that a sample result is an estimate because the concentration exceeded the calibration range of the instrument.
- I - Used to indicate matrix interference.
- X - Indicates that a surrogate recovery is outside the specified quality control limits.
- Y - Used to identify a spike or spike duplicate recovery is outside the specified quality control limits.
- * - Indicates a relative percent difference for a duplicate analysis is outside the specified quality control limits.
- ^ - Used to indicate that a standard is outside specified quality control limits.

EXPLANATION OF DATA QUALIFIERS

- B - Indicates that a value for an inorganic analysis is an estimate. It is used when a compound is determined to be present but at a concentration less than the quantitation limit of the method.
- J - Indicates that a value for an organic analysis is an estimate. It is used when a compound is determined to be present based on chromatographic pattern or mass spectral data, but at a concentration less than the quantitation limit of the method. This flag is also used when estimating the concentration of a tentatively identified compound.
- U - Indicates that a value is less than the MDL or was not detected.



Project Number/Name MT000700.0001

Project Location Chevron/Texaco N. Eunice

Laboratory STL-CC

Project Manager Hank McConnell

Sampler(s)/Affiliation LM/RM/ARCADIS

Sample ID/Location	Matrix	Date/Time	Sampled	Time
--------------------	--------	-----------	---------	------

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

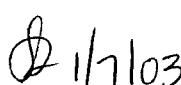
Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS G&M</u>	Date: <u>1/16/02</u>	Time: <u>1745</u>	Seal Intact? <u>(Yes)</u>
Received by: <u>[Signature]</u>	Organization: <u>FedEx</u>	Date: <u>1/1/03</u>	Time: <u>1</u>	Seal Intact? <u>(Yes)</u>
Relinquished by: <u>[Signature]</u>	Organization: <u>FedEx</u>	Date: <u>1/17/03</u>	Time: <u>0915</u>	Seal Intact? <u>(Yes)</u>
Received by: <u>[Signature]</u>	Organization: <u>STC-CC</u>	Date: <u>1/17/03</u>	Time: <u>0915</u>	Seal Intact? <u>(Yes)</u>

Special Instructions/Remarks:

Hex Cr and Total Cr were field filtered

CDW seal 7371 6283 2431

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other _____
SPECIFY SPECIFY SPECIFY

jsckl		Job Sample Receipt Checklist Report		V2
Job Number.: 216728		Location.: 57203	Check List Number.: 1	Description.:
Customer Job ID.....:		Job Check List Date.:		Date of the Report...: 01/07/2003
Project Number.: 98000024		Project Description.: MT000700 Texaco-Report in ppm		Project Manager.....: crs
Customer.....: ARCADIS / G&M		Contact.: Steve Tischer		
Questions ?	(Y/N) Comments			
How did samples arrive?.....	Y	CLIENT DELIVERED		
Chain-of-Custody Present?.....	Y			
Custody seal on shipping container?.....	Y			
...If "yes", custody seal intact?.....	Y			
Custody seals on sample containers?.....	N			
...If "yes", custody seal intact?.....				
Samples chilled?.....	Y			
Temperature blank in cooler?.....	N	ON ICE		
Temp of cooler acceptable? (0.05 to 6.00 deg C)	Y			
Samples received intact (good condition)?.....	Y			
Volatile samples acceptable? (no headspace).....	N	TRIP BLANK HAS HEADSPACE		
Correct containers used?.....	Y			
Adequate sample volume provided?.....	Y			
Samples preserved correctly?.....	Y			
Samples received within holding-time?.....	Y			
Agreement between COC and sample labels?.....	Y			
Additional.....				
Comments.....				
Sample Custodian Signature.....				



Infrastructure, buildings, environment, communications

ARCADIS G&M, Inc
1004 N. Big Spring
Suite 300
Midland Texas 79701
Tel 915-687-5400
Fax 915-687-5401

TELEFAX

To:
Randy Bayliss

ENVIRONMENTAL

Fax:
505-476-3462

Total pages:
20

Date
February 28, 2003

Subject:
Copies of Analytical Data

Project Number:
MT000700.0002.00006

From:
Luke Markham

If you do not receive all pages, please call to let us know as soon as possible.

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the above address via the U.S. postal service.

Part of a bigger picture

MW054SA 1-27-03

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ANALYTICAL REPORT

JOB NUMBER: 217034

Prepared For:

ARCADIS / GEM
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Fischer

Date: 02/18/2003

RECEIVED

FEB 14 2003

ARCADIS Geraghty & Miller

Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

Date

2/10/03
Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

**STL****CASE NARRATIVE****Job Number 217034****February 10, 2003****Mercury analysis**

Sample 217034-1 was analyzed for mercury using EPA Method 7470A. The requested reporting limit for mercury is at our method detection limit (MDL). Results reported at or near the MDL should be flagged accordingly and used at the client's discretion.

Please call if you have any questions regarding this report or if we can be of further assistance.

A handwritten signature in cursive script, appearing to read "Anh Tran".

Anh Tran
QA Assistant

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SAMPLE INFORMATION

Date: 02/10/2003

Job Number.: 217034
Customer....: ARCADIS / G&M
Attn.....: Steve TischerProject Number.....: 98000024
Customer Project ID....: MT000700.0006.00002
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
217034-1	MW054SA ✓	Water ✓	01/27/2003 ✓	14:15 ✓	01/28/2003	09:20
217034-2	TRIP BLANK ✓	Water	01/27/2003	00:00	01/28/2003	09:20

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ANION-CATION BALANCES

217034-1	
Calcium, mg/L	303 ✓
Magnesium, mg/L	155 ✓
Sodium, mg/L	420 ✓
Potassium, mg/L	13 ✓
CATION SUM, meq/L	46.5

Silicon, mg/L	
SiO ₃ , mg/L	0.0
Chloride, mg/L	1030 ✓
Sulfate, mg/L	660 ✓
Carbonate, mg/L	0 ✓
Bicarbonate, mg/L	263.34 ✓
Fluoride, mg/L	
Nitrate, mg/L	
ANION SUM, meq/L	47.1

measured TDS, mg/L	2750 ✓
Calc. TDS, mg/L	2739
Alkalinity, mg/L	263.34 ✓
Conductivity, mg/L	4250

TDS ratio (1.0<x<1.2) 1.00

Meas. EC/Ion Sums (0.9-1.1)

Anions	1.1
Cations	1.1

Calc. TDS/EC Ratio (0.55-0.7) 0.64

Meas. TDS/EC Ratio (0.55-0.7) 0.65

Anion-Cation Balance

% Diff. 0.7

Acceptance Criteria for A-C Balance:

Anion Sum (meq/L)	Acceptable % Diff.
0-3.0	+/- 0.2 meq/L
3.0-10.0	+/- 2%
10.0-800	+/- 2-5%

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Job Number: 217034		LABORATORY TEST RESULTS		Date: 02/10/2003		
CUSTOMER: ARCADIS / G&M		PROJECT: MT000700.0006.00002		ATTN: Steve Tischer		
Customer Sample ID: MW054SA ✓ Date Sampled.....: 01/27/2003 ✓ Time Sampled.....: 14:15 ✓ Sample Matrix.....: Water ✓		Laboratory Sample ID: 217034-1 Date Received.....: 01/28/2003 Time Received.....: 09:20				
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved ✓	0.19	0.05	mg/L	01/28/03	edr
SW-846 7470A	Mercury (Hg) ✓	<0.0002	0.0002	mg/L	01/31/03	edr
EPA 160.1	Solids, Total Dissolved (TDS) ✓	2750	10	mg/L	02/03/03	dml
SM 2320 B	Alkalinity, Total as CaCO3 ✓	216	5.0	mg/L CaCO3	01/30/03	jrd
SM 2320 B	Bicarbonate (HCO3) ✓	216	5.0	mg/L CaCO3	01/30/03	jrd
SM 2320 B	Carbonate (CO3) ✓	<5.0	5.0	mg/L CaCO3	01/30/03	jrd
EPA 300.0	Chloride ✓	1030	50	mg/L	01/31/03	cnw
EPA 300.0	Sulfate (SO4) ✓	660	40	mg/L	01/31/03	cnw
SW-846 6010B	Arsenic (As), Total ✓	<0.05	0.05	mg/L	01/29/03	jem
SW-846 6010B	Barium (Ba), Total ✓	<0.05	0.05	mg/L	01/29/03	jem
SW-846 6010B	Cadmium (Cd), Total ✓	<0.05	0.05	mg/L	01/29/03	jem
SW-846 6010B	Calcium (Ca), Total ✓	303	10	mg/L	02/06/03	jem
SW-846 6010B	Chromium (Cr), Dissolved ✓	0.20	0.05	mg/L	01/29/03	jem
SW-846 6010B	Lead (Pb), Total ✓	<0.05	0.05	mg/L	01/29/03	jem
SW-846 6010B	Magnesium (Mg), Total ✓	155	0.5	mg/L	02/06/03	jem
SW-846 6010B	Potassium (K), Total ✓	13	10	mg/L	02/06/03	jem
SW-846 6010B	Selenium (Se), Total ✓	<0.05	0.05	mg/L	01/29/03	jem
SW-846 6010B	Silver (Ag), Total ✓	<0.05	0.05	mg/L	01/29/03	jem
SW-846 6010B	Sodium (Na), Total ✓	420	10	mg/L	02/06/03	jem
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			01/28/03	crw
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			01/28/03	crw
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	01/29/03	red
	Ethylbenzene	ND	0.002	mg/L	01/29/03	red
	Toluene	ND	0.002	mg/L	01/29/03	red
	Xylenes (total)	ND	0.002	mg/L	01/29/03	red

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LABORATORY TEST RESULTS						
Job Number: 217034		Date: 02/10/2003				
CUSTOMER: ARCADIS / G&M		PROJECT: MT000700.0006.00002		ATTN: Steve Tischer		
Customer Sample ID: M4054SA Date Sampled.....: 01/27/2003 Time Sampled.....: 14:15 Sample Matrix.....: Water		Laboratory Sample ID: 217034-1 Date Received.....: 01/28/2003 Time Received.....: 09:20				
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			02/03/03	*he
SW846 8015B	Total Extractable Petroleum Hydrocarbons	ND	0.25	mg/L	02/04/03	*he
	TEPH - Diesel Range Organics ✓	ND	0.05	mg/L	02/03/03	*hc
	TEPH - Gasoline Range Organics ✓					

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Job Number: 217034		LABORATORY TEST RESULTS			Date: 02/10/2003	
CUSTOMER: ARCADIS / G&M		PROJECT: MT000700.0006.00002			ATTN: Steve Tischer	
Customer Sample ID: TRIP BLANK ✓ Date Sampled.....: 01/27/2003 Time Sampled.....: 00:00 Sample Matrix.....: Water				Laboratory Sample ID: 217034-2 Date Received.....: 01/28/2003 Time Received.....: 09:20		
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8021B	Volatile Organics - Aromatics	ND	0.002	mg/L	01/29/03	rcd
	Benzene	ND	0.002	mg/L	01/29/03	rcd
	Ethylbenzene ✓	ND	0.002	mg/L	01/29/03	rcd
	Toluene	ND	0.002	mg/L	01/29/03	rcd
	Xylenes (total)	ND	0.002	mg/L	01/29/03	rcd

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Trip

1-6-03

COPY**ANALYTICAL REPORT**

JOB NUMBER: 216728

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 100
Midland, TX 79701

Attention: Steve Tischer

Date: 01/21/2003

RECEIVED

JAN 27 2003

ARCADIS Geraghty & Miller

Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

Date

1/21/03
Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408PHONE: 361/289-2673
FAX...: 361/289-2471

**SEVERN
TRENT****STL****SAMPLE INFORMATION**

Date: 01/21/2003

Job Number.: 216728
Customer....: ARCADIS / G&M
Attn.....: Steve FischerProject Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216728-1	MW055SA	Water	01/06/2003	16:00	01/07/2003	09:15
216728-2	TRIP BLANK	Water	01/06/2003	00:00	01/07/2003	09:15

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ANION-CATION BALANCES

216728-1	
Calcium, mg/L	191
Magnesium, mg/L	96.1
Sodium, mg/L	222
Potassium, mg/L	10.2
CATION SUM, meq/L	27.4

Silicon, mg/L	
SiO ₃ , mg/L	0.0
Chloride, mg/L	610
Sulfate, mg/L	380
Carbonate, mg/L	0
Bicarbonate, mg/L	251.1
Fluoride, mg/L	
Nitrate, mg/L	
ANION SUM, meq/L	29.2

measured TDS, mg/L	4320
Calc. TDS, mg/L	1680
Alkalinity, mg/L	251.1
Conductivity, mg/L	2860

TDS ratio (1.0<x<1.2) 2.57

Meas. EC/Ion Sums (0.9-1.1)

Anions	1.0
Cations	1.0

Calc. TDS/EC Ratio (0.55-0.7) 0.59

Meas. TDS/EC Ratio (0.55-0.7) 1.51

Anion-Cation Balance

% Diff.	3.3
---------	-----

Acceptance Criteria for A-C Balance:

Anion Sum (meq/L)	Acceptable % Diff.
0-3.0	+/- 0.2 meq/L
3.0-10.0	+/- 2%
10.0-800	+/- 2.5%

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LABORATORY TEST RESULTS						
Job Number: 216728	Date: 01/21/2003					
CUSTOMER: ARCADIS / G&M	PROJECT: MT000700.0004	ATTN: Steve Fischer				
Customer Sample ID: MW055SA Date Sampled.....: 01/06/2003 Time Sampled.....: 16:00 Sample Matrix.....: Water	Laboratory Sample ID: 216728-1 Date Received.....: 01/07/2003 Time Received.....: 09:15					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.15	0.05	mg/L	01/07/02	edr
SW-846 7470A	Mercury (Hg)	<0.0002	0.0002	mg/L	01/13/03	edr
EPA 160.1	Solids, Total Dissolved (TDS)	1680	10	mg/L	01/13/03	dml
SM 2320 B	Alkalinity, Total as CaCO3	206	5.0	mg/L CaCO3	01/08/03	hmz
SM 2320 B	Bicarbonate (HCO3)	206	5.0	mg/L CaCO3	01/08/03	hmz
SM 2320 B	Carbonate (CO3)	<5.0	5.0	mg/L CaCO3	01/08/03	hmz
EPA 300.0	Chloride	610	50	mg/L	01/08/03	cnw
EPA 300.0	Sulfate (SO4)	380	20	mg/L	01/08/03	cnw
SW-846 6010B	Arsenic (As), Total	<0.05	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Barium (Ba), Total	0.18	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Cadmium (Cd), Total	<0.05	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Calcium (Ca), Total	191	10	mg/L	01/09/03	jcm
SW-846 6010B	Chromium (Cr), Dissolved	0.17	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Lead (Pb), Total	<0.05	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Magnesium (Mg), Total	96.1	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Potassium (K), Total	10.2	1.0	mg/L	01/09/03	jcm
SW-846 6010B	Selenium (Se), Total	<0.05	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Silver (Ag), Total	<0.05	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Sodium (Na), Total	222	1.0	mg/L	01/09/03	jcm
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			01/08/03	crw
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			01/08/03	crw
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	01/08/03	rh
	Ethylbenzene	ND	0.002	mg/L	01/08/03	rh
	Toluene	0.003	0.002	mg/L	01/08/03	rh
	Xylenes (total)	ND	0.002	mg/L	01/08/03	rh

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LABORATORY TEST RESULTS						
Job Number: 216728		Date: 01/21/2003				
CUSTOMER: ARCADIS / G&M		PROJECT: MT000700.0004		ATTN: Steve Fischer		
Customer Sample ID: MW0559A Date Sampled.....: 01/06/2003 Time Sampled.....: 16:00 Sample Matrix.....: Water				Laboratory Sample ID: 216728-1 Date Received.....: 01/07/2003 Time Received.....: 09:15		
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			01/08/03	*he
SW846 8015B	Total Extractable Petroleum Hydrocarbons	ND	0.25	mg/L	01/13/03	*he
	TEPH - Diesel Range Organics	ND	0.05	mg/L	01/08/03	*he
	TEPH - Gasoline Range Organics					

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Job Number: 216728		LABORATORY TEST RESULTS			Date: 01/21/2003	
CUSTOMER: ARCADIS / G&M		PROJECT: MT000700:0004		ATTN: Steve Fischer		
Customer Sample ID: TRIP BLANK Date Sampled.....: 01/06/2003 Time Sampled.....: 00:00 Sample Matrix.....: Water		Laboratory Sample ID: 216728-2 Date Received.....: 01/07/2003 Time Received.....: 09:15				
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	01/08/03	rh
	Ethylbenzene	ND	0.002	mg/L	01/08/03	rh
	Toluene	ND	0.002	mg/L	01/08/03	rh
	Xylenes (total)	ND	0.002	mg/L	01/08/03	rh

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MW0565A

1-7-03

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ANALYTICAL REPORT

JOB NUMBER: 216746

Prepared For:

ARCADIS / G&M
1004 N. Big Spring Street
Suite 300
Midland, TX 79701

Attention: Steve Tiecher

Date: 01/27/2003

RECEIVED

JAN 31 2003

ARCADIS Geraghty & Miller

Signature

Name: Chip Meador

Title: Laboratory Director

E-Mail: cmeador@stl-inc.com

Date

Severn Trent Laboratories
1733 N. Padre Island Drive
Corpus Christi, TX 78408

PHONE: 361/289-2673

FAX...: 361/289-2471

**SEVERN
TRENT****STL****CASE NARRATIVE****Job Number 216746****January 27, 2003****Mercury Analysis**

Sample 216746-1 was analyzed for mercury using EPA Method 7470A. The requested reporting limit for mercury is at our method detection limit. Results reported at or near the MDL should be flagged and used at the client's discretion.

Please call if you have any questions regarding this report or if we can be of further assistance.



Anh Tran
QA Assistant

SEVERN
TRENT

STL

SAMPLE INFORMATION

Date: 01/27/2003

Job Number.: 216746
Customer...: ARCADIS / G&M
Attn.....: Steve FischerProject Number.....: 98000024
Customer Project ID....: MT000700.0004
Project Description.....: MT000700 Texaco-Report in ppm

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
216746-1	MW056SA	Water	01/07/2003	13:05	01/08/2003	09:00

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ANION-CATION BALANCES

216746-1	
Calcium, mg/L	331
Magnesium, mg/L	120
Sodium, mg/L	745
Potassium, mg/L	15.4
CATION SUM, meq/L	59.2

Silicon, mg/L	
SiO ₃ , mg/L	0.0
Chloride, mg/L	1300
Sulfate, mg/L	700
Carbonate, mg/L	0
Bicarbonate, mg/L	580.3
Fluoride, mg/L	
Nitrate, mg/L	
ANION SUM, meq/L	60.8

measured TDS, mg/L	3500
Calc. TDS, mg/L	3560
Alkalinity, mg/L	580.3
Conductivity, mg/L	5440

TDS ratio (1.0<x<1.2) 0.98

Meas. EC/Ion Sums (0.9-1.1)

Anions	1.1
Cations	1.1

Calc. TDS/EC Ratio (0.55-0.7) 0.65

Meas. TDS/EC Ratio (0.55-0.7) 0.64

Anion-Cation Balance

% Diff. 1.3

Acceptance Criteria for A-C Balance:

Anion Sum (meq/L)	Acceptable % Diff.
0-3.0	+/- 0.2 meq/L
3.0-10.0	+/- 2%
10.0-800	+/- 2-5%

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LABORATORY TEST RESULTS						
Job Number: 216746	Date: 01/27/2003					
CUSTOMER: ARCADIS / G&M	PROJECT: NY000700-0004	ATTN: Steve Fischer				
Customer Sample ID: MW056SA Date Sampled.....: 01/07/2003 Time Sampled.....: 13:05 Sample Matrix.....: Water	Laboratory Sample ID: 216746-1 Date Received.....: 01/08/2003 Time Received.....: 09:00					
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 7197	Hexavalent Chromium, Dissolved	0.17	0.05	mg/L	01/08/03	edr
SW-846 7470A	Mercury (Hg)	<0.0002	0.0002	mg/L	01/13/03	edr
EPA 160.1	Solids, Total Dissolved (TDS)	3500	10	mg/L	01/13/03	dnl
SM 2320 B	Alkalinity, Total as CaCO3	476	5.0	mg/L CaCO3	01/08/03	hmz
SM 2320 B	Bicarbonate (HCO3)	476	5.0	mg/L CaCO3	01/08/03	hmz
SM 2320 B	Carbonate (CO3)	<5.0	5.0	mg/L CaCO3	01/08/03	hmz
EPA 300.0	Chloride	1300	100	mg/L	01/08/03	cnw
EPA 300.0	Sulfate (SO4)	700	100	mg/L	01/08/03	cnw
SW-846 6010B	Arsenic (As), Total	<0.05	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Barium (Ba), Total	0.30	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Cadmium (Cd), Total	<0.05	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Calcium (Ca), Total	331	10	mg/L	01/09/03	jcm
SW-846 6010B	Chromium (Cr), Dissolved	0.32	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Lead (Pb), Total	<0.05	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Magnesium (Mg), Total	120	0.1	mg/L	01/09/03	jcm
SW-846 6010B	Potassium (K), Total	15.4	1.0	mg/L	01/09/03	jcm
SW-846 6010B	Selenium (Se), Total	<0.05	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Silver (Ag), Total	<0.05	0.05	mg/L	01/09/03	jcm
SW-846 6010B	Sodium (Na), Total	745	10	mg/L	01/09/03	jcm
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate	Complete			01/08/03	crw
SW-846 3010A	Acid Dig., Total Metals, 2X Concentrate, Dissolved	Complete			01/08/03	crw
SW-846 8021B	Volatile Organics - Aromatics					
	Benzene	ND	0.002	mg/L	01/13/03	rec
	Ethylbenzene	ND	0.002	mg/L	01/13/03	rec
	Toluene	0.016	0.002	mg/L	01/13/03	rec
	Xylenes (total)	ND	0.002	mg/L	01/13/03	rec

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Job Number: 216746		LABORATORY TEST RESULTS		Date: 01/27/2003		
CUSTOMER: ARCADIS / G&M		PROJECT: MT000700.0004		ATTN: Steve Tischer		
Customer Sample ID: MW056SA Date Sampled.....: 01/07/2003 Time Sampled.....: 13:05 Sample Matrix.....: Water		Laboratory Sample ID: 216746-1 Date Received.....: 01/08/2003 Time Received.....: 09:00				
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
SW-846 3510C	Extraction (Sep. Funnel) SVOC Separatory Funnel Liq/Liq Extraction	Complete			01/10/03	*he
SW846 8015B	Total Extractable Petroleum Hydrocarbons	ND	0.25	mg/L	01/14/03	*he
	TEPH - Diesel Range Organics	ND	0.05	mg/L	01/16/03	*he
	TEPH - Gasoline Range Organics					

TRANSACTION REPORT

P. 01

FEB-28-2003 FRI 08:28 AM

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