Wattenberg Disposal, LLC

July 12, 2012

RECEIVED
JUL 16 2012
Office of Enforcement
Compliance & Evironmental Justice

Mr. Nathan Wiser
United States EPA Region 8
8OC-EISC
1595 Wynkoop Street
Denver, CO 80202-1129

RE: Wattenberg Disposal, LLC
Quarterly Report for Suckla Farms Injection Well #1
Semi-Annual Groundwater Monitoring Report CO10938-02115

Dear Mr. Wiser,

Enclosed please find the Quarterly Injection Report for the period of April 1, 2012 through June 30, 2012 for the above referenced facility, including water analyses for all three months. Additionally, the Semi-Annual Groundwater Monitoring Report by Apex Consulting Services is attached.

If you have any questions or need additional information, please do not hesitate contacting me at 303-825-4822 or slaramesa@kpk.com

Sincerely,

Susana Lara-Mesa
Engineering Project Manager

	GREEN	BLUE	CBI
TAB		2	

Cc: Caren Johannes, HMWMD
Troy Swain, Weld County Dept. of Public Health and Environment

KPK files

U2 Entered
Date 7/22/12
Initial DB

OMB No. 2040-0042 Approval Expires 12/31/2011

EPA

United States Environmental Protection Agency
Washington, DC 20460

Injection Well Monitoring Report

Year 2012	Month April	Month May	Month June
Injection Pressure (PSI)			
1. Minimum	500	500	280
2. Average	480	481	451
3. Maximum	500	500	500
Injection Rate (Gal/Min)			
1. Minimum	55	55	55
2. Average	55	55	55
3. Maximum	55	55	55
Annular Pressure (PSI)			
1. Minimum	130	130	130
2. Average	130	130	130
3. Maximum	130	130	130
Injection Volume (Gal)			
1. Monthly Total	915,180	723,828	614,544
2. Yearly Cumulative	2,482,578	3,206,406	3,820,950
Temperature (F °)			
1. Minimum			
2. Average			
3. Maximum			
pH			
1. Minimum			
2. Average			
3. Maximum			
Other			
Class I - Non-Hazardous	0	0	0
Class I - Non-Haz. Cumulative	60	60	60

Name and Address of Permittee		Permit Number
Wattenberg Disposal LLC,10137 WCR 19,Fort Lupton, CO 80621		CO-10938-2115
Name and Official Title *(Please type or print)*	**Signature**	**Date Signed**
Renae Patterson, Admin. Asst.	Renae Patterson	7/10/12

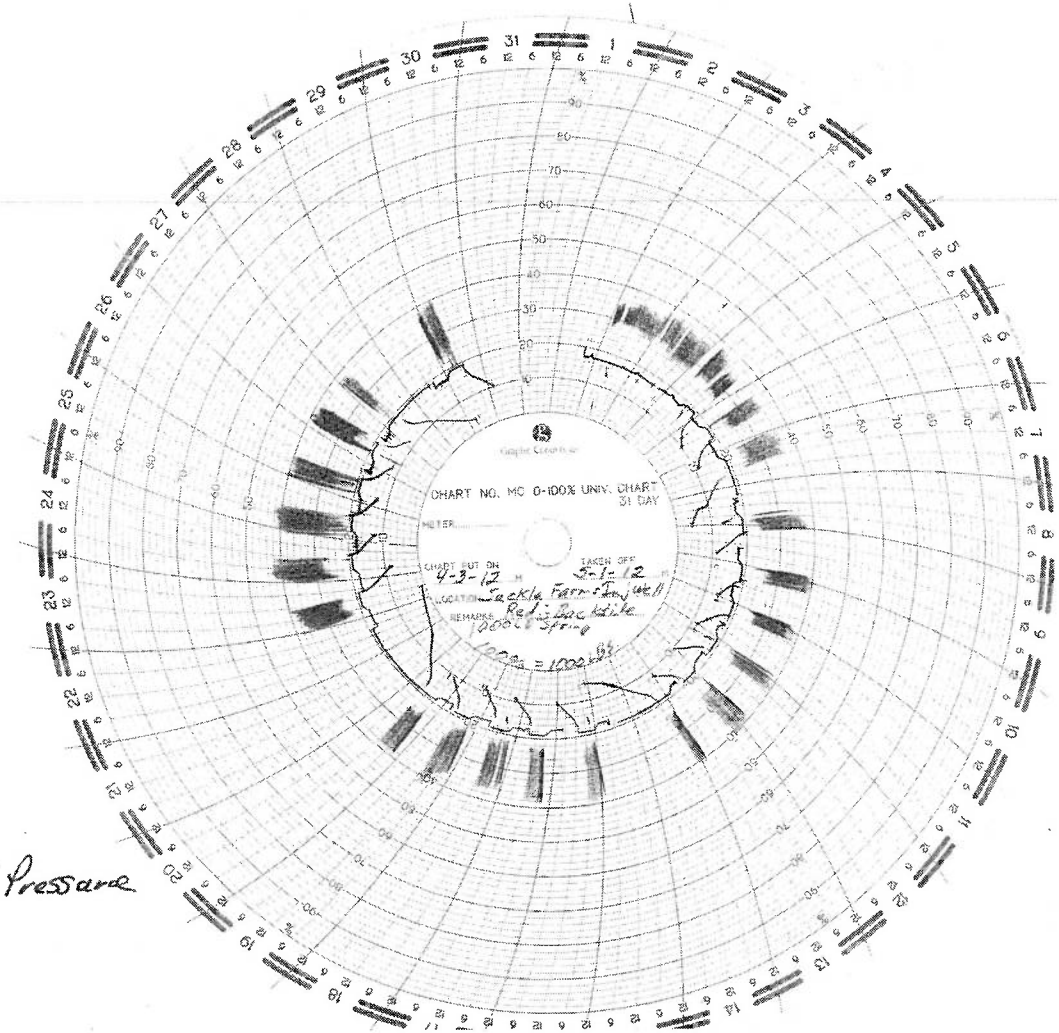
EPA Form 7520-8 (Rev. 12-08)

LEASE #	LEASE NAME	DATE 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	LEASE TOTALS
60003	1415 CORPORATION C						20																								20		40
61864	AMOCO-CHARTER-SCHNEI			43																							130						173
61883	AMOCO CHART SCHNEIDER A			44																													44
61902	AMOCO CHART SCHNEIDER B			43																													43
58365	AMOCO-ENERGY-BMTS U		30														20									35							85
67529	ANDERSON #1					12																			35								47
17450	ANDERSON				25															22													47
23789	ANDERSON 13-32					13																											13
23790	ANDERSON 12-32					12																											12
23792	ANDERSON 14-32					13																											13
16158	ANDERSON 22-32																	70															70
58425	BELL UNIT, *CHARLES													38																			38
58406	BELL, *CHARLES C													37																			37
41346	BOXER										20										75												95
61186	BURKHARDT SELTZER					20																											20
24571	CAMENISCH 2-32																											11					11
24591	CAMENISCH 8-32																											12					12
24589	CAMENISCH 41-32																											11					11
24704	CAMENISCH 50-32																											11					11
60113	CAMENISCH 1																			9													9
23577	CAMENISCH 32-10																			9													9
23578	CAMENISCH 32-16																			9													9
23576	CAMENISCH 22-9																			9													9
28440	CAMENISCH 20-32																			9													9
17451	CARTER 21-33				50		130										150									130							480
58444	CHRISTENSEN, *NELS																25																25
09153	COBURN CLEMENTINE 1									22																		20					42
09593	COBURN CLEMENTINE B1									23																		20					43
56482	DAMIANA, *JAMES A					60																											60
60040	DEEPE C, *CARL R													50																			50
07895	DEVORE 1, 2																				10												10
07896	DEVORE 2																				10												10
09272	DEVORE 3, 4																				10												10
09271	DEVORE 4																				10												10
07886	DUTCHER B 1			7		20																											27
08945	DUTCHER B 2			8		20																											28
08884	DUTCHER C 1			7		20																											27
08889	DUTCHER C 2			8		20																											28
67144	ED KAM 4-33		25	190			35												40														300
08391	ELKHORN CO B3												6														6				6		18
08894	ELKHORN CO B5												6														5				7		18
09488	ELKHORN CO B6												6														6				7		19
09489	ELKHORN CO B7												6														6				7		19
09490	ELKHORN CO B8												6														6				7		19
08491	ELKHORN CO B9												5														6				6		17
59268	ENERGY MINERALS A 1																11											6					17
18081	EWING 23-30																40	16								35							93
00001	FACILITY 1												130	55							70			80	70		70						475
00002	FACILITY 2			80	135		65						70	210			260	130	20	25	150			35	40		150	50					1460
00003	FACILITY 3			40																						40							80
00004	FACILITY 4		280	130								150		130			130	130			250							100					1280
00005	FACILITY 5			175														110						80	70								435
00006	FACILITY 6			100									60	45			80		90					55	35								475
00007	FACILITY 7			130							80										130			70			70	70					550
00008	FACILITY 8			130														130									130						390
0004WA	FACILITY 4WA												70		80												70						220
0004WB	FACILITY 4WB						65							60										70									195
60095	FINDLAY, *RICHARD R				65									80			70																219
58269	FIRECRACKER					60													60									35					155
62016	FRIGBEE																										30						30
52751	FRONT RANGE 11-17-5																			70													70
52763	FRONT RANGE 11-17-10									130			50		65				130						65	75					80		575
62608	GENESIS 1		20									25								20											20		85
62603	GENESIS 3										40																						40
07887	GERHARDT GEORGE H 1					6																											6
08124	GERHARDT GEORGE H 2					6																											6
08948	GERHARDT GEORGE H 3					6																											6
13677	GERHARDT GEORGE H 4					6																											6
58839	GRANT #'S 1,2,3,4						45																										45
60173	GREELEY NATIONAL BAN												45					80						25									130
5869	GUTHRIE 1 & 2			50							40								40						45						45		220
60211	HANKS																									70							70
60249	HART UNIT B, MARTIN					40																											40
60266	HART UNIT D																										35						35
60270	HART UNIT F, MARTIN																12											7					19
60230	HART, MARTIN T 1,2,3																12											7					19
59033	HAUDRICH #1 & 2						20																			30							50
62020	HEIN 1-2																			40													40
25314	HEPP 31-32																			50													50
60290	HERMAN UNIT B, *ALFR		25														13														12		50
58505	HERMAN UNIT, *ALFRED		25														12														13		50
56134	HILL 3-10											20																					20
58501	HLADKY-O'GORMAN					18													15														33

60310	HORST B, JOHN 1 & 2					17																				15					32
04200	HORTH R1-R2																			20				20							40
59582	JOHNSON #S 1 & 2					20																		20							40
06580	JOHNSON ROLAND 1												18					25													43
06696	JOHNSON ROLAND 5-1												17					25													42
29642	KOESTER 18-33																	12													12
29643	KOESTER 18-33-6																	11													11
29605	KOESTER 18-33-4																	12													12
29606	KOESTER 3-33-3									30																					30
6080	KORTUM 2 A																									35					35
18116	KUNZMAN 43-6											9														30					39
07666	KUNZMAN JOHN A #1											8																			8
09296	KUNZMAN 2											9																			9
09710	KUNZMAN 4											9																			9
09653	LANSDOWN 1										80															35					95
15437	LANSDOWN WM D UNIT D1					30														27						15					72
59831	LANSON'S FARM 1-18				60								40											50		30					180
15883	LEGG 14-22					30														28						15					73
67150	LOEFFLER 2-24	25	45			15										30													20		135
51668	MARCUS 1		30															40													70
58144	MATSUSHIMA 1-5			90																		760	320	185					15		1390
58141	MATSUSHIMA 3-14																						30								30
62564	MCCARTY 2				20																										20
26729	MCCARTY 10-21				20																										20
07881	MCCOY PHILLIP #1																	30													30
59071	MCCRUMB #S 1 & 2										25																20				45
56003	MILES, JOSEPHINE B 4	105		10																											115
08544	MILLARD 1								17											17											34
10946	MILLARD 2								18											18											36
58709	MILLER 13-5											27																			27
58278	MILLER B #14, *CARL											27													65						92
60659	MILLER E #1 *CARL A											28																			28
6440	MITCHELL 32-7																	40													40
6442	MITCHELL 32-8	25									40					25															90
62298	MONFORT 2-30										35																		45		80
60848	MONTOYA 1, 2																	35													35
81697	MOSER #1-A																	45													45
6352	MURPHY 5-2										20																				20
07112	MURPHY 11-5																												40		40
590759	MUSICK 3-5											40															20				60
32872	NRC 9-9-15H			35		130				60	60		70			70	70			60	80		90	40	50			85		80	990
6119	NEWLANDER				40																		70								110
65003	OWEN															45															45
06985	PREM TURKEY FARMS B2																12														12
07676	PREM TURKEY FARMS C1																11														11
06943	PREM TURKEY FARMS C2																12														12
259619	ROCKY MOUNTAIN FUEL 9-8															130	80					40									230
259204	ROCKY MOUNTAIN FUEL 15-9								80							70															150
6381	ROSENFIELD 6-9								40		20							40													100
62769	RUMSEY MONFORT 1-29																			20											20
62770	RUMSEY MONFORT 2-4																			20											20
60760	SCHUTT, MARVIN E 1					18																				15					33
61188	SELTZER 1A		20																												20
15987	SHANNON 24-30															40	17								35						92
60800	SICKLER, SHELDON 1 T																										60				60
12602	SPRAGUE A M A 1			25																23											48
6515	STATE 14-32	43				33						18	12				27			27									30		190
6741	STATE 14	44				34						19	11				28			28									30		190
6748	STATE 14-31	43				33						18	12				27			27									30		190
60818A	STREAR, *SIDNEY																			32											32
60820	STREAR																			33											33
66643	STROH #2				5																										5
24147	STROH 28-16				5																										5
26308	STROH 15-28				5																										5
24238	STROH 28-9				5																										5
24237	STROH 28-10				5																										5
60838	SUCKLA A UNIT 1&2																	12													12
60895	SUCKLA D UNIT 1&2																	11													11
60952	SUCKLA FARMS C 2&3																	12													12
60990	SUCKLA E																							70							70
60933	SUCKLA BROWN 17											45																			45
35079	SUNMARKE 19-28-12	250	280	130																											840
35060	SUNMARKE 19-28-11		130	130																											260
35061	SUNMARKE 19-28-14				15	230	730		280	130	35	620	230	155		130	260	100													2695
35062	SUNMARKE 19-28-13			520	780	390	390		260	130		260	260	110			130	130													3380
56553	TWOMBLEY B, *MARGARE										40																				40
020908	UPRR 23 D 2																	25													25
020918	UPRR 23 D4																							40							40
61070	UPRR 42 PAN AM AF 1,																										40				40
61008	UPRR 42 D									75															80			100			255
58891	UPRR 42 PAN AM K					25												30													55
61067	UPRR 43 PAN AM I				60								30											50				30			170
62130	WAGNER #1				13															35											48
61719	WAGNER #1B				13																										13
62131	WAGNER #'S 1A & 2A				14																										14
61095	WALKING, *CARY				17													15													32
15926	WOOLEY 15-14																			30											30

TOTALS	0	930	1870	1215	1440	1385	1120	0	850	825	530	1815	1405	410	0	1350	1300	780	915	915	0	0	1385	1000	830	880	765	0	0	500	0	
																																23795
																																23795

LEASE #	LEASE NAME	DATE 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	LEASE TOTALS
																																	0
	ANGI ALLES RECEIVER																																0
G016	BERTHOUD BOOSTER																																0
	COP 7 RECEIVER																																0
G012	EATON PLANT																																0
G033	ENTERPRISE BOOSTER																																0
G009	GREELEY OFFICE																																0
G011	GREELEY PLANT																																0
	JODY BOOSTER																																0
G018	JOHNSTOWN BOOSTER																																0
G034	KRAUTHEAD																																0
G013	LUCERNE PLANT																																0
	MARIA BOOSTER																																0
G016	MARILYN BOOSTER																																0
G018	MARTHA BOOSTER																																0
G014	MEWBOURN PLANT																																0
	MID POINT BOOSTER																																0
	PARKER PARSLEY BOOSTER																																0
G882	PLATTEVILLE PLANT																																0
	REINICK RECEIVER																																0
G035	RIVERSIDE BOOSTER																																0
G032	ROGGEN FIELD																																0
G031	ROGGEN PLANT				210														220							220							650
G016	SINGLETREE BOOSTER																																0
	SOUTHFIELD BOOSTER																																0
G010	SPINDLE PLANT																																0
G018	SURREY BOOSTER																																0
G036	TAMPA																																0
G023	WELD BOOSTERS																																0
G017	WELD FIELD																																0
L095	WELD MEASUREMENT																																0
G018	WEST SPINDLE BOOSTER																																0
																																	0
	TOTAL	0	0	0	210	0	0	0	0	0	0	0	0	0	0	0	0	0	220	0	0	0	0	0	0	220	0	0	0	0	0	0	650
																																	650

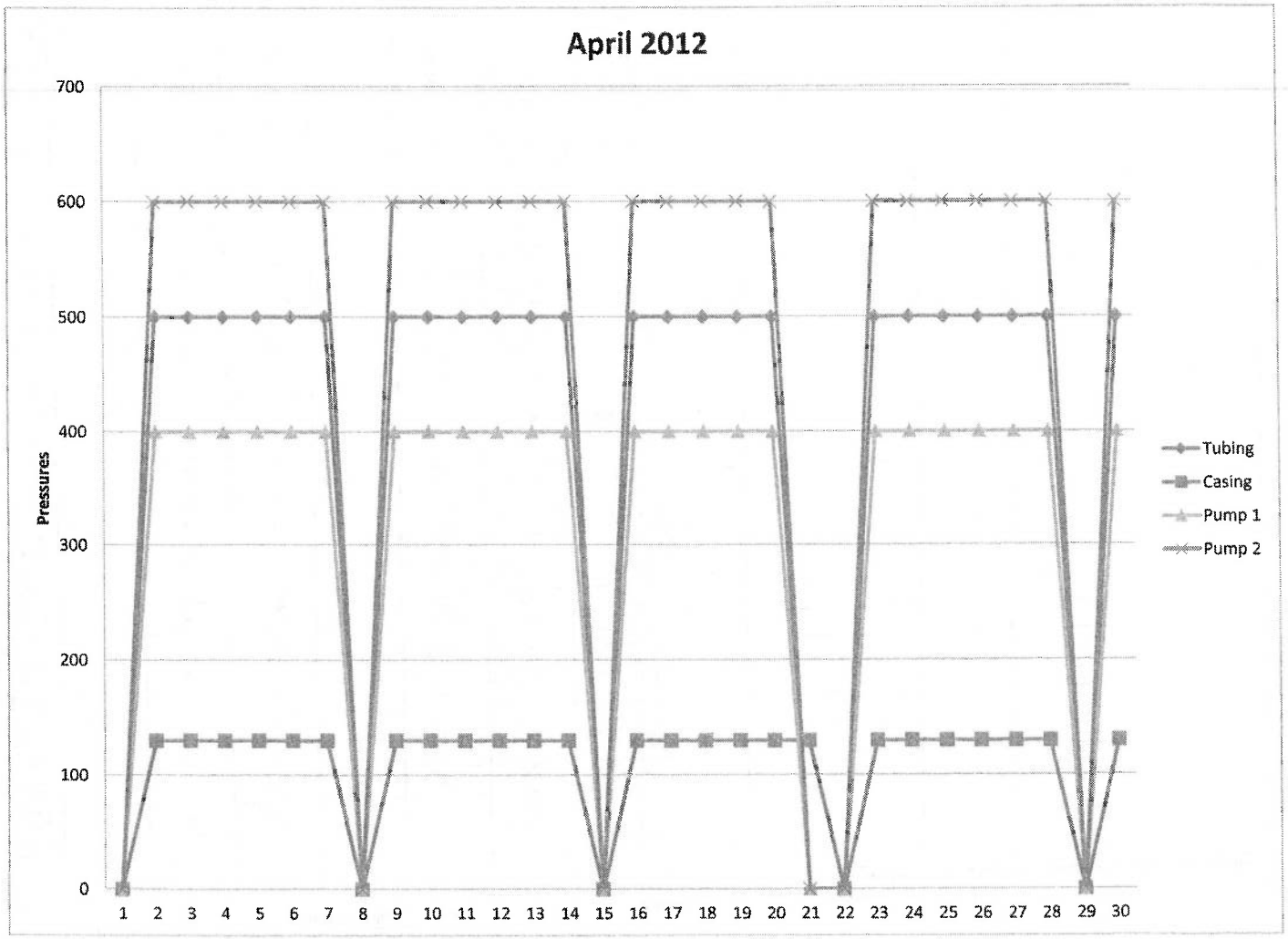


Suckla Farms
Injection Well #1
4-3-12 to 5-1-12
1000 LB Spring Back Side Pressure
@ 10 Z equals 100 P.S.I.

April 2012

WATTENBERG DAILY EVALUATION SHEET

Date	Time	Injecting Fluid Yes	Injecting Fluid No	Pressured Annulus Yes	Pressured Annulus No	Tubing Pressure	Annulus Pressure	Estimated Barrels Injected (prior 24 hrs)	Ambient Air Temperature (est)	Weather Conditions	Remarks/Summary Prior 24 Hrs.
1	Closed										
2	7:00A		X	X		Ø	130	539			
3	6:30A		X	X		Ø	130	Ø			
4	6:30A		X	X		Ø	130	849			
5	6:30A		X	X		Ø	130	1192			
6	6:30A		X	X		Ø	130	1887			
7	6:30A		X	X		Ø	130	1411			
8	Closed		X	X		Ø	130	1179			
9	6:30A		X	X		Ø	130	989			
10	6:30A		X	X		Ø	130	Ø			
11	6:30A		X	X		Ø	130	730			
12	6:30A		X	X		Ø	130	849			
13	6:30A		X	X		Ø	130	712			
14	6:15A		X	X		Ø	130	627			
15	Closed		X	X		Ø	130	824			
16	6:30A		X	X		Ø	130	605			
17	6:30A		X	X		Ø	130	Ø			
18	6:30A		X	X		Ø	130	712			
19	6:30A		X	X		Ø	130	843			
20	6:30A		X	X		Ø	130	757			
21	Closed		X	X		Ø	130	879			
22	Closed		X	X		Ø	130	789			
23	6:30A		X	X		Ø	130	Ø			
24	6:15A		X	X		Ø	130	Ø			
25	6:15A		X	X		Ø	130	881			
26	6:15A		X	X		Ø	130	835			
27	6:15A		X	X		Ø	130	897			
28	5:15A		X	X		Ø	130	796			
29	Closed		X	X		Ø	130	902			
30	5:15A		X	X		Ø	130	728			
31											


April 2012
Pressures
700
600
500
400
300
200
100
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Tubing
Casing
Pump 1
Pump 2

LEASE #	LEASE NAME	DATE 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	LEASE TOTALS
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61864	AMOCO-CHARTER-SCHNEI										28				6																33		66
61883	AMOCO CHART SCHNEIDER A										29				9																34		72
61902	AMOCO CHART SCHNEIDER B										28				8																33		66
58388	AMOCO-ENERGY-SMITS U		40						30																								70
67529	ANDERSON #1																						10										10
61450	ANDERSON 1, 2																	40															40
17450	ANDERSON	22															18															27	67
23786	ANDERSON 13-32																						10										10
23790	ANDERSON 12-32																						10										10
23792	ANDERSON 14-32																						10										10
56425	BELL UNIT, *CHARLES		33																				40										73
56406	BELL, *CHARLES C		32																				40										72
58650B	BERGER, *JACK & BERG																	25						55									80
61164	BURKHARDT 1																								15							20	35
61166	BURKHARDT BELTZER																								15							20	35
24571	CAMENISCH 2-32															6																	6
24591	CAMENISCH 8-32															6																	6
24569	CAMENISCH 41-32															6																	6
24704	CAMENISCH 50-32															7																	7
60113	CAMENISCH 1																						8										8
23577	CAMENISCH 32-10																						8										8
23578	CAMENISCH 32-16																						8										8
23579	CAMENISCH 32-9																						8										8
26440	CAMENISCH 29-32																						8										8
17451	CARTER 21-33																130	100															230
58463	CHRISTENSEN UNIT, *N			10																													10
56444	CHRISTENSEN, *NELS			10																													10
6825	CHURCH 7-A 31-2									65																							65
09153	COBURN CLEMENTINE 1								20									13														18	51
09593	COBURN CLEMENTINE B1								20									12														17	49
56462	DAMANA, *JAMES A								40																								40
60040	DEEPE C, *CARL R		40																					50									90
07895	DEVORE 1, 2										10																						10
07896	DEVORE 2										10																						10
09272	DEVORE 3, 4										10																						10
09271	DEVORE 4										10																						10
87144	ED KAM 4-33			35																			40										75
23829	ELAINE																		20				25				17			22			84
08391	ELKHORN CO B3										5							7												6			18
08694	ELKHORN CO B5										5							8												5			18
09488	ELKHORN CO B6										5							7												6			18
09489	ELKHORN CO B7										5							8												6			19
09490	ELKHORN CO B8										5							7												6			18
09491	ELKHORN CO B9										5							8												6			19
59258	ENERGY MINERALS A 1																							12									12
16081	EWING 23-30	20						40																									60
00001	FACILITY 1		60						130						60								80							40			370
00002	FACILITY 2	55	35												160									210	130	60				190			830
00003	FACILITY 3	40																							50								90
00004	FACILITY 4								500						140		130	120						220								200	1310
00005	FACILITY 5			35				30			50							30												50			205
00006	FACILITY 6																	25												20			45
00007	FACILITY 7				65						130				55									115		205							570
00008	FACILITY 8	35			80										45										130						115		405
0004WB	FACILITY 4WB		90												50				80				50										270
60095	FINDLAY, *RICHARD R																									100							100
59269	FIRECRACKER											40														55							95
32793	FRONT RANGE 11-17-10				45																												45
25792	FRONT RANGE 11-17-11										90								50							50							190
60100	FUNAKOSHI A 1, 2									15									35														50
62608	GENESIS 1																40														50		90
62603	GENESIS 3															35																	35
07867	GERHARDT GEORGE H 1				10											12																	22
08124	GERHARDT GEORGE H 2				10											13																	23
08846	GERHARDT GEORGE H 3				10											12																	22
13577	GERHARDT GEORGE H 4				10											13																	23
58639	GRANT #S 1,2,3,4	45																						40									85
67532	GRAY																														10		10
60173	GREELEY NATIONAL BAN		30																														30
61484	GUILDNER		25																30												25		80
5889	GUTHRIE 1 & 2			35					40			20					40					45				30						40	250
60192	HALEY TRUSTEE, *JAME																							10									10
60240	HART UNIT B, MARTIN							25																									25
60270	HART UNIT F, MARTIN																							12									12
60230	HART, MARTIN T 1,2,3																							11									11
59033	HAUDRICH #1 & 2														20																		20
62020	HEIN 1-2								40	30														10									80
23535	HEPP 32-4																														10		10
23534	HEPP 32-5																														10		10
23536	HEPP 32-8																														10		10
60290	HERMAN UNIT B, *ALFR														13											13							26
58505	HERMAN UNIT, *ALFRED														12											12							24

56134	HILL 3-10										10																						10
56176	HILL 4-10										10																						10
58501	HLADKY-O'GORMAN		13												10															15		38
60310	HORST B, JOHN 1 & 2																	18															18
04200	HORTH R1-R2	25														25									20								70
60324	HUNZIKER																															65	65
58520	IONE LAND & CATTLE		27																														27
60320	IONE UNIT B 1		26																														26
19238	JOHNSON 32-30										80																						80
59592	JOHNSON #8 1 & 2	15																												35		50
08660	JOHNSON ROLAND 1			25																													25
08896	JOHNSON ROLAND B-1			25																													25
68431	JORDAN 34-4										130	520				130	180					130			390					65			1545
62592	KAMMERZELL 1-9															10																	10
62596	KAMMERZELL 2-16			35																													35
22643	KAMMERZELL 7-4															10																	10
18057	KOCH 41-6		17														20																37
09204	KOCH, KEN		16														20																36
29642	KOESTER 18-33															40														30		70
29608	KOESTER 3-33-3																													30		30
6080	KORTUM 2 A																									30							30
09853	LANSDOWN 1																							25									25
07348	LANSDOWN WM D 1																							25									25
10437	LANSDOWN WM D UNIT D1																18															33	51
59631	LANSON'S FARM 1-16								100								80									75						50	305
16683	LEGG 14-22																17															32	49
56138	LOEFFLER 1-18										20												20										40
67150	LOEFFLER 2-24										20												20										40
61885	MARCUS 1																								25								25
58144	MATSUSHIMA 1-5							340											25														365
23517	MATSUSHIMA 2-8X																		25														25
68429	MAUL 20-2										15				25				630			260	260	150	20							130	1490
59071	MCCRUMB #9 1 & 2										25													30									55
23687	MCQUEARY 1																		20				25			18				23			86
61487	MEREDITH		40																														40
08644	MILLARD 1	15									15													25									55
10548	MILLARD 2	15									15													25									55
56709	MILLER 13-5							20														20											40
60572	MILLER A, *CARL A																							10									10
68278	MILLER B #14, *CARL							20														20											40
60559	MILLER E #1, *CARL A							20														20											40
6440	MITCHELL 32-7																	15															15
6442	MITCHELL 32-8															30																35	65
62295	MONFORT 1-29										45																						45
62296	MONFORT 2-30															35																	35
61697	MOSER #1-A									30																				35		65
6352	MURPHY 5-2				35											30										20							85
07112	MURPHY 11-5																									20						20	40
6336	MURPHY 31-3									25								15								20							60
69075A	MUSICK 2-4-7																							30		20					30		80
69075B	MUSICK 3-5										15															40							55
32672	NRC 9-9-15H	80	45		75			80		80		80			70		80		50			80		50		65				80			915
6119	NEWLANDER			35																					30								65
08965	PREM TURKEY FARMS B2																	15														12	27
07676	PREM TURKEY FARMS C1																	15														11	26
08643	PREM TURKEY FARMS C2																	15														12	27
259819	ROCKY MOUNTAIN FUEL 9-8																30																30
60762	ROCKY MTN FUEL CO C 7&8																30																30
68126	ROCKY MTN FUEL CO C 4, 10																60																60
6377	ROSENFIELD 6-1									40						50										20							110
6381	ROSENFIELD 6-5			45																													45
5791	RUEBEL 1-4											20				20																	40
58596	SAKATA 1		27																														27
60790	SCHUTT, MARVIN E 1																	17															17
61188	SELTZER 1A								20																								20
15997	SHANNON 24-30							40																									40
20008	SHAW 15-20	45																															45
20133	SHAW 16-20	45																															45
12802	SPRAGUE A M A 1	23															17															28	68
7884	STATE 1-26																					35											35
6515	STATE 14-32				28				20			18					43	8							18	43				13			191
6741	STATE 14				29				20			19					44	9							19	44				14			198
6746	STATE 14-31				28				20			18					43	8							18	43				13			191
7601	STATE 16-22																													65			65
7604	STATE 32-16																					35	60										95
60819A	STREAR, *SIDNEY							15			15															33							63
60820	STREAR							15			15															32							62
60122	STROH #1										8																						8
66543	STROH #2										8																				8		16
26390	STROH 7-33										8																						8
24147	STROH 28-16										8																				8		16
26308	STROH 15-28										8																				8		16
24238	STROH 28-9										8																				8		16
24237	STROH 28-10										8																				8		16
24142	STROH 33-1										8																						8
24146	STROH 33-2										8																						8
24143	STROH 33-4										8																						8

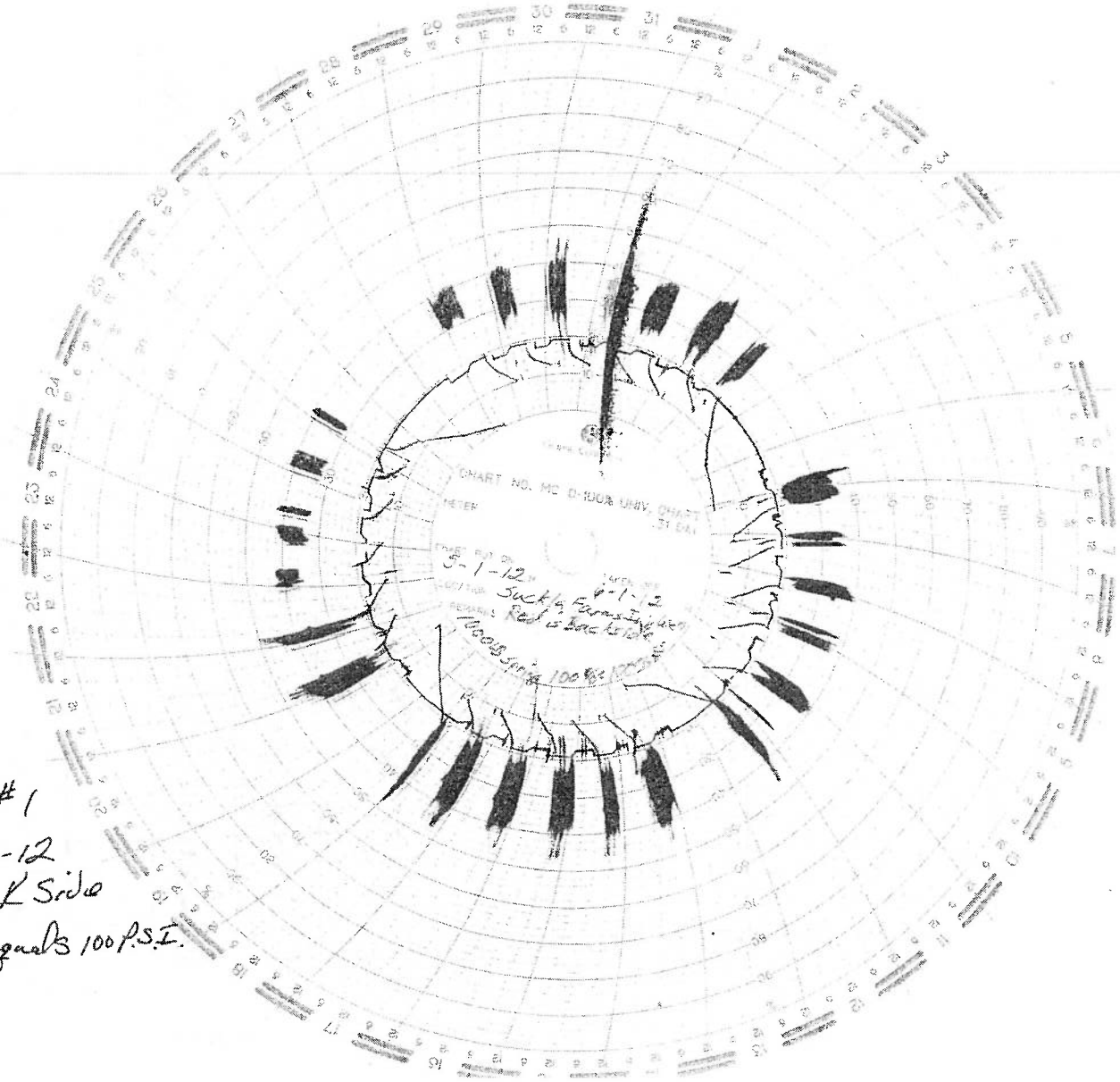
60838	SUCKLA A UNIT 1&2								10																								10
60886	SUCKLA D UNIT 1&2								10																								10
60952	SUCKLA FARMS C 2&3								10																								10
60933	SUCKLA BROWN 17											30																					30
24646	SUNMARKE																130																130
35091	SUNMARKE 19-28-14										130											60	65										255
35082	SUNMARKE 19-28-13																								25								25
5799	TIPPETT 8-4															25																	25
58853	TWOMBLEY B. *MARGARE		60												30																		90
020909	UPRR 23 D 2											20												20									40
02091B	UPRR 23 D4	55										25												30									110
61008	UPRR 42 D		50													120															100		270
61047	UPRR 42 PAN AM G				40																												40
58691	UPRR 42 PAN AM K																35																35
61067	UPRR 43 PAN AM I											60																					60
61078	VINCENT UNIT. R S 1&	20																															20
62130	WAGNER #1			7															10														17
61719	WAGNER #1B			8															10														18
62131	WAGNER #S 1A & 2A			15															10				15										40
61095	WALKING, *CARY		12												10																15		37
61104	WELD COUNTY B				40																												40
56995	WUERTZ 12-3																		20														20
	TOTALS	555	720	320	505	0	0	645	1030	285	1075	870	0	0	725	635	1205	545	1015	0	0	645	800	1175	930	1110	0	0	0	800	550	790	
																																	16840
																																	16540

LEASE #	LEASE NAME	DATE 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	LEASE TOTALS
																																	0
	ANGI ALLES RECEIVER																																0
G018	BERTHOUD BOOSTER																																0
	CDP 7 RECEIVER																																0
G012	EATON PLANT																																0
G033	ENTERPRISE BOOSTER																																0
G009	GREELEY OFFICE																																0
G011	GREELEY PLANT																																0
	JODY BOOSTER																																0
G016	JOHNSTOWN BOOSTER																																0
G034	KRAUTHEAD																																0
G013	LUCERNE PLANT																																0
	MARIA BOOSTER																																0
G018	MARILYN BOOSTER																																0
G018	MARTHA BOOSTER																																0
G014	MEWBOURN PLANT																																0
	MIC POINT BOOSTER																																0
	PARKER PARSLEY BOOSTER																																0
G682	PLATTEVILLE PLANT																																0
	REINICK RECEIVER																																0
G035	RIVERSIDE BOOSTER																																0
G032	ROGGEN FIELD																																0
G031	ROGGEN PLANT		120							120								220						120							240		820
G018	SINGLETREE BOOSTER																																0
	SOUTHFIELD BOOSTER																																0
G010	SPINDLE PLANT																																0
G018	SURREY BOOSTER																																0
G036	TAMPA																																0
G023	WELD BOOSTERS																																0
G017	WELD FIELD																																0
L095	WELD MEASUREMENT																																0
G018	WEST SPINDLE BOOSTER																																
																																	0
	TOTAL	0	120	0	0	0	0	0	0	120	0	0	0	0	0	0	0	220	0	0	0	0	0	120	0	0	0	0	0	0	240	0	820
																																	820

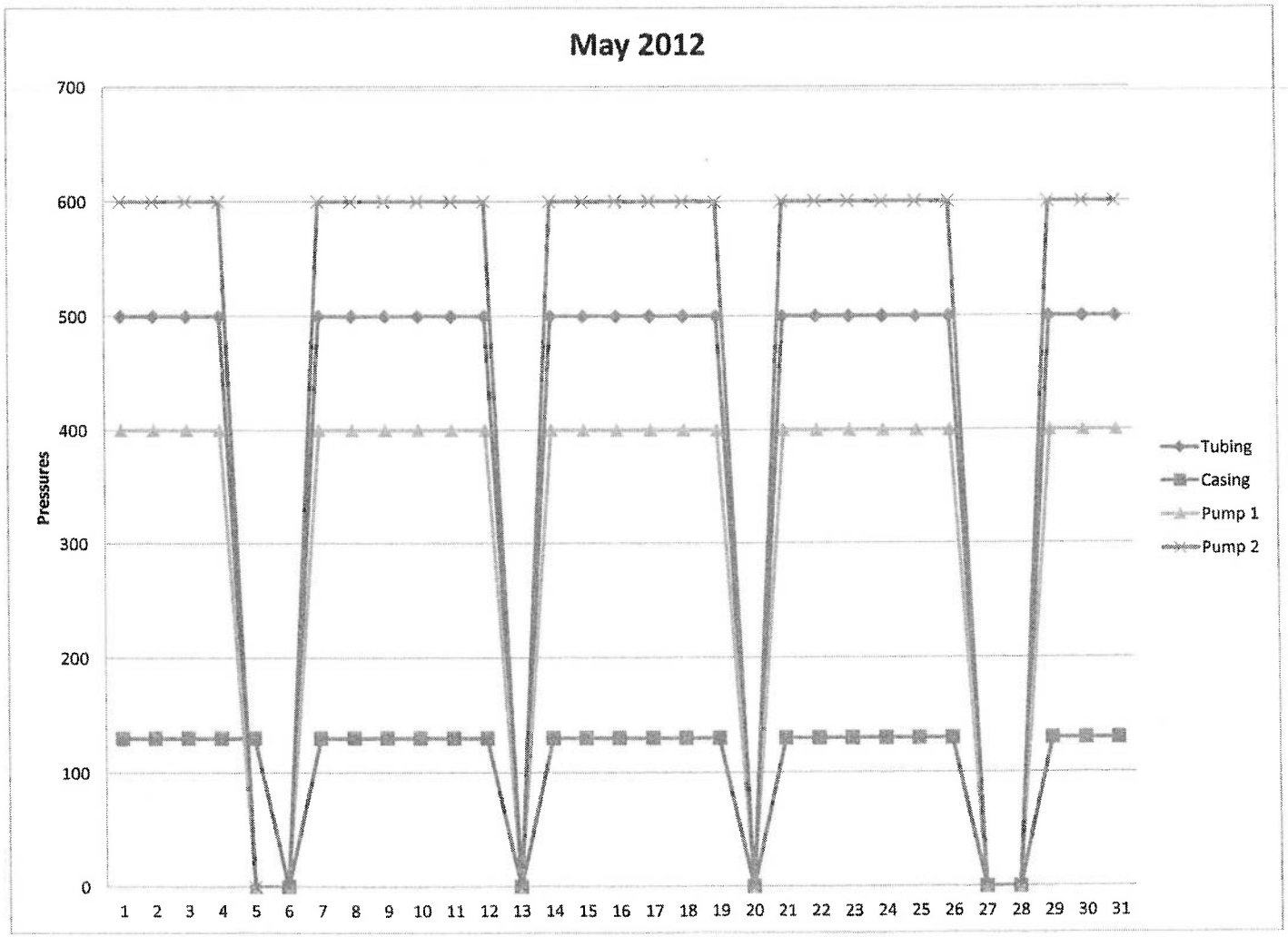
May 2012

WATTENBERG DAILY EVALUATION SHEET

Date	Time	Injecting Fluid Yes	Injecting Fluid No	Pressured Annulus Yes	Pressured Annulus No	Tubing Pressure	Annulus Pressure	Estimated Barrels Injected (prior 24 hrs)	Ambient Air Temperature (est)	Weather Conditions	Remarks/Summary Prior 24 Hrs.
1	6:15A		X	X		Ø	130	917			
2	6:30A		X	X		Ø	130	659			
3	6:30A		X	X		Ø	130	852			
4	6:15A		X	X		Ø	130	716			
5	Closed		X	X		Ø	130	369			
6	Closed		X	X		Ø	130	Ø			
7	6:15A		X	X		Ø	130	Ø			
8	6:30A		X	X		Ø	130	568			
9	6:30A		X	X		Ø	130	408			
10	6:15A		X	X		Ø	130	533			
11	6:15A		X	X		Ø	130	573			
12	6:15A		X	X		Ø	130	688			
13	Closed		X	X		Ø	130	403			
14	6:15A		X	X		Ø	130	Ø			
15	6:30		X	X		Ø	130	730			
16	6:30		X	X		Ø	130	671			
17	6:30A		X	X		Ø	130	694			
18	6:15A		X	X		Ø	130	768			
19	5:15A		X	X		Ø	130	785			
20	Closed		X	X		Ø	130	325			
21	6:30A		X	X		Ø	130	Ø			
22	6:30A		X	X		Ø	130	706			
23	6:30A		X	X		Ø	130	586			
24	6:15A		X	X		Ø	130	599			
25	6:15A		X	X		Ø	130	938			
26	6:15A		X	X		Ø	130	969			
27	Closed		X	X		Ø	130	525			
28	Closed		X	X		Ø	130	Ø			
29	6:30A		X	X		Ø	130	Ø			
30	6:30A		X	X		Ø	130	1003			
31	6:15A		X	X		Ø	130	1078			



Suckla Farms
Injection Well #1
5-1-12 to 6-1-12
1000LB Spring Back Side
Pressure @ 10 equals 100 P.S.I.


May 2012
Pressures
700
600
500
400
300
200
100
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Tubing
Casing
Pump 1
Pump 2

LEASE #	LEASE NAME	DATE 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	LEASE TOTALS
61864	AMOCO-CHARTER SCHNEI																												43				43
61883	AMOCO CHART SCHNEIDER A																												44				44
61902	AMOCO CHART SCHNEIDER B																												43				43
58368	AMOCO-ENERGY-SMITS U	25					30														20	20											95
61450	ANDERSON 1, 2																													30			30
17450	ANDERSON																			22						20							42
16155	ANDERSON 22-32														60																		60
58425	BELL UNIT, *CHARLES								33																								33
58406	BELL *CHARLES C								32																								32
590508	BERGER, *JACK & BERG	20														35																	55
22655	BERNHARDT 7-14	15																															15
22698	BERNHARDT 7-16	15																															15
61188	BURKHARDT SELTZER												40																				40
60113	CAMENISCH 1																												10				10
23577	CAMENISCH 32-10																												10				10
23578	CAMENISCH 32-16																												10				10
23579	CAMENISCH 32-9																												10				10
26440	CAMENISCH 20-32																												10				10
17451	CARTER 21-33						70								70											80	80						300
58483	CHRISTENSEN UNIT, *N	13							10																			10					33
58444	CHRISTENSEN, *NELS	12							10																			10					32
8625	CHURCH 7-A 31-2																					35											35
09183	COBURN CLEMENTINE 1											10																17					27
09593	COBURN CLEMENTINE B1											10																15					25
23744	COLCLASURE 42-21																				30	30											60
60040	DEERE C, *CARL R																						45										45
07895	DEVORE 1, 2																													10			10
07896	DEVORE 2																													10			10
09272	DEVORE 3, 4																													10			10
09271	DEVORE 4																													10			10
07886	DUTCHER B 1																		21														21
08845	DUTCHER B 2																		22														22
08884	DUTCHER C 1																		21														21
08899	DUTCHER C 2																		21														21
67144	ED KAM 4-33					40																									40		80
23829	ELAINE				25				23					26							25		23					25		15			161
08391	ELKHORN CO B3								7													4											11
08894	ELKHORN CO B5								6													5											11
09488	ELKHORN CO B6								7													4											11
09489	ELKHORN CO B7								7													4											11
09490	ELKHORN CO B8								6													4											10
09491	ELKHORN CO B9								7													4											11
59288	ENERGY MINERALS A 1												10																				10
16081	EWING 23-30							15	35																						40		90
00001	FACILITY 1	130											130										110				40						410
00002	FACILITY 2							130											130			80				20	300						670
00003	FACILITY 3																					80											80
00004	FACILITY 4						85	130				50				110						130						260					765
00005	FACILITY 5	70				40		20						130					35										130				425
00006	FACILITY 6	30				50													30							15							135
00007	FACILITY 7	120										130																					250
00008	FACILITY 8															130										80				100			310
0004WA	FACILITY 4WA														70																		70
0004WB	FACILITY 4WB	70					45								60								85										240
59289	FIRECRACKER						80									70												50					180
32751	FRONT RANGE 11-17-5											35																					35
32754	FRONT RANGE 11-17-6																			100			90				110						300
25792	FRONT RANGE 11-17-11																						40	45						60			145
52608	GENESIS 1													30																			30
62603	GENESIS 3																			30													30
07867	GERHARDT GEORGE H 1	9																												10			19
08124	GERHARDT GEORGE H 2	8																												10			18
08946	GERHARDT GEORGE H 3	9																												10			19
13577	GERHARDT GEORGE H 4	9																												10			19
60135	GERHARDT MARIE 8							30																									30
59039	GRANT #S 1,2,3,4																									45							45
61484	GUILDNER																					30											30
5869	GUTHRIE 1 & 2						40						40						45				30					40					195
60249	HART UNIT B, MARTIN												40																				40
60268	HART UNIT D											60																					60
60270	HART UNIT F, MARTIN												10																				10
60230	HART, MARTIN T 1,2,3												10																				10
60271	HART UNIT G																		10														10
59033	HAUDRICH #1 & 2																									30							30
62020	HEIN 1-2											40										40											80
60290	HERMAN UNIT B, *ALFR	40					15					18									15								30				118
58505	HERMAN UNIT, *ALFRED	40					15					17									15								30				117
58134	HILL 3-10				15																												15
56176	HILL 4-10				15																												15
58501	HLADKY-O'GORMAN													15												25							40
60310	HORST B, JOHN 1 & 2															25							15										40
04200	HORTH R1-R2	40					30						20																				90
60324	HUNZIKER											35																					35

58592	JOHNSON #S 1 & 2	15																						20									35
08660	JOHNSON ROLAND 1				30																		25										55
38696	JOHNSON ROLAND B-1				30																		25										55
58431	JORDAN 34-4	130						80										40															250
16057	KOCH 41-6	17																		20													37
09204	KOCH, KEN	18																		20													38
30275	KOESTER 3-33-21																							210			650	390					1250
16118	KUNZMAN 43-5												6																				6
07666	KUNZMAN JOHN A #1												7																				7
09296	KUNZMAN 2												6																				6
09719	KUNZMAN 4												6																				6
09663	LANSDOWN 1							23																									23
07348	LANSDOWN WM D 1							22											25														47
10437	LANSDOWN WM D UNIT D1	38																															38
58631	LANSON'S FARM 1-16							90				65						85									60						280
16883	LEGG 14-22	37																	25														62
56138	LOEFFLER 1-18				25		20														25												70
57150	LOEFFLER 2-24				25																20												45
56144	MATSUSHIMA 1-5						65																										65
58141	MATSUSHIMA 3-14										18																						18
23516	MATSUSHIMA 4-19X										17																						17
58429	MAUL 20-2			80							25													50									155
62564	MCCARTY 2																												20				20
28729	MCCARTY 10-21																												20				20
07891	MCCOY PHILLIP #1																										15						15
59071	MCCRUMB #S 1 & 2							25		15																45							85
60553	MCHALE				75																												75
23887	MCQUEARY 1			25				22				25							25		22			25			15						159
51487	MEREDITH	35																															35
08644	MILLARD 1			30									20											20									70
10548	MILLARD 2			30									20											20									70
58709	MILLER 13-5			24				13				22							27							13							99
68278	MILLER B #14, *CARL			23				14				22							26							14							99
60559	MILLER E #1, *CARL A			23				13				21							27							13							97
8436	MITCHELL 32-3				60							20								45						20							135
8442	MITCHELL 32-8																				40												40
62296	MONFORT 2-30											20									20						20						60
60548	MONTOYA 1, 2									30																							30
61897	MOSER #1-A																	40															40
8352	MURPHY 5-2							40				40														20							100
07112	MURPHY 11-5							35																									35
8338	MURPHY 31-3												45														40						85
89075A	MUSICK 2-4-7					15										20										20							55
89075B	MUSICK 3-5					35										20										20							75
32872	NRC 9-9-15H	80		70		80		35		60		100		85		80					80			65			100						815
8119	NEWLANDER																											40					40
08965	PREM TURKEY FARMS B2															13																	13
07876	PREM TURKEY FARMS C1															14																	14
08943	PREM TURKEY FARMS C2															13																	13
8377	ROSENFIELD 6-1					30				40																							70
8361	ROSENFIELD 6-5					30				20		40								20													110
62769	RUMSEY MONFORT 1-29											30																					30
60790	SCHUTT, MARVIN E 1													25							15												40
61186	SELTZER 1A																										15						15
15987	SHANNON 24-30							35																					40				75
60600	SICKLER, SHELDON 1 T									30																							30
12602	SPRAGUE A M A 1																	23						20									43
6515	STATE 14-32	20		43	8						43	10				43					30					13	30						240
6741	STATE 14	20		44	9						44	10				44					30					14	30						245
6746	STATE 14-31	20		43	8						43	10				43					30					13	30						240
60819A	STREAR, *SIDNEY															23																	23
60820	STREAR															22																	22
60836	SUCKLA A UNIT 1&2	12									12										10												34
60835	SUCKLA D UNIT 1&2	11									11										10												32
60852	SUCKLA FARMS C 2&3	12									12										10												34
60833	SUCKLA BROWN 17											30																					30
35080	SUNMARKE 19-26-11				40																												40
35081	SUNMARKE 19-26-14																										60						60
5797	TIPPETT 8-2					25																											25
5799	TIPPETT 8-4					25																											25
56653	TWOMBLEY B, *MARGARE			20												20				5								20					65
02090B	UPRR 23 D 2					30					30																						60
02091B	UPRR 23 D4					30														25													55
04250A	UPRR 23 M 1 & 2										30																						30
61070	UPRR 42 PAN AM AF 1					50															40							20					110
61008	UPRR 42 D					60														20													80
58891	UPRR 42 PAN AM K										19																						19
61067	UPRR 43 PAN AM I																										55						55
61066	UPRR 42 PAN AM N																		20														20
61078	VINCENT UNIT, R S 1&						15																										15
62130	WAGNER #1					7																				13							20
61719	WAGNER #1B					8																				14							22
62131	WAGNER #S 1A & 2A					15																				13							28
61095	WALKING, *CARY											15												25									40
15925	WOOLEY 13-14																											15					15
68995	WUERTZ 12-3	100						80										65	520	260				435									1440
61142	YURK										45																						45

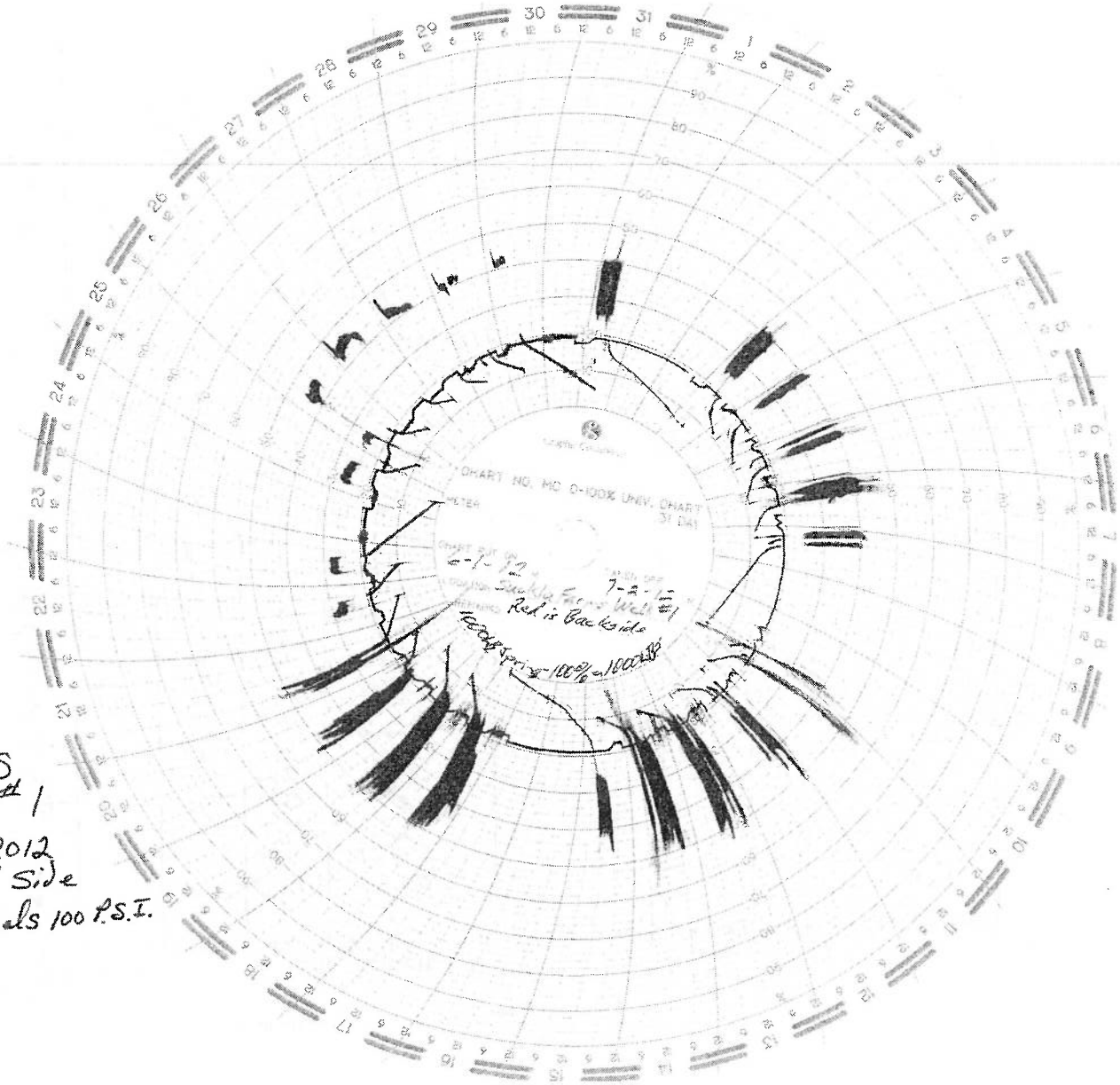
TOTALS	1240	0	0	510	440	830	425	690	0	0	620	645	880	400	460	0	0	890	385	600	675	780	95	0	860	880	650	660	1210	550	0	15395
																																15395

LEASE #	LEASE NAME	DATE 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	LEASE TOTALS
	ANGI ALLES RECEIVER																																0
G010	BERTHOUD BOOSTER																																0
	CDP 7 RECEIVER																																0
G012	EATON PLANT																																0
G033	ENTERPRISE BOOSTER																																0
G009	GREELEY OFFICE																																0
G011	GREELEY PLANT																																0
	JODY BOOSTER																																0
G018	JOHNSTOWN BOOSTER																																0
G034	KRAUTHEAD																																0
G013	LUCERNE PLANT																																0
	MARIA BOOSTER																																0
G015	MARILYN BOOSTER																																0
G019	MARTHA BOOSTER																																0
G014	MEWBOURN PLANT																																0
	MID POINT BOOSTER																																0
	PARKER PARSLEY BOOSTER																																0
G662	PLATTEVILLE PLANT																																0
	REINICK RECEIVER																																0
G035	RIVERSIDE BOOSTER																																0
G032	ROGGEN FIELD																																0
G031	ROGGEN PLANT							200								220												120	220				760
G018	SINGLETREE BOOSTER																																0
	SOUTHFIELD BOOSTER																																0
G010	SPINDLE PLANT																																0
G016	SURREY BOOSTER																																0
G036	TAMPA																																0
G023	WELD BOOSTERS																																0
G017	WELD FIELD																																0
L095	WELD MEASUREMENT																																0
G016	WEST SPINDLE BOOSTER																																0
																																	0
	TOTAL	0	0	0	0	0	0	200	0	0	0	0	0	0	0	220	0	0	0	0	0	0	0	0	0	0	0	120	220	0	0	0	760
																																	760

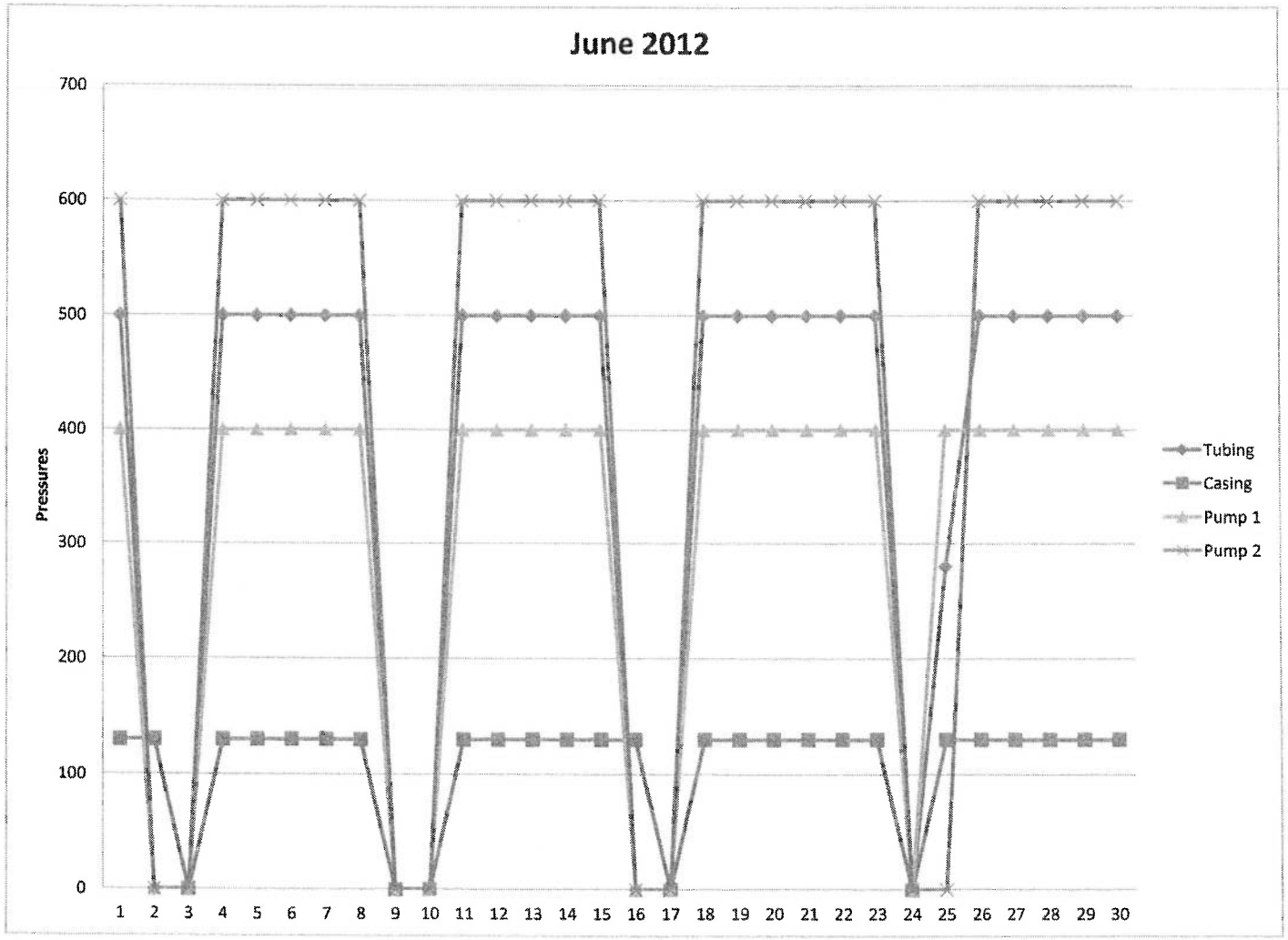
June 2012

WATTENBERG DAILY EVALUATION SHEET

Date	Time	Injecting Fluid Yes	Injecting Fluid No	Pressured Annulus Yes	Pressured Annulus No	Tubing Pressure	Annulus Pressure	Estimated Barrels Injected (prior 24 hrs)	Ambient Air Temperature (est)	Weather Conditions	Remarks/Summary Prior 24 Hrs.
1	6:30A		X	X		Ø	130	1148			
2	Closed		X	X		Ø	130	1168			
3	Closed		X	X		Ø	130	Ø			
4	6:15A		X	X		Ø	130	Ø			
5	6:15A		X	X		Ø	130	970			
6	6:15A		X	X		Ø	130	616			
7	6:15A		X	X		Ø	130	579			
8	6:15A		X	X		Ø	130	921			
9	Closed		X	X		Ø	130	517			
10	Closed		X	X		Ø	130	Ø			
11	6:30 Am		X	X		Ø	130	Ø 620			
12	6:30A		X	X		Ø	130	225			
13	6:30A		X	X		Ø	130	516			
14	6:30A		X	X		Ø	130	662			
15	6:30A		X	X		Ø	130	547			
16	Closed		X	X		Ø	130	513			
17	Closed		X	X		Ø	130	Ø			
18	6:15A		X	X		Ø	130	Ø			
19	6:30 Am		X	X		Ø	130	843			
20	6:30 Am		X	X		Ø	130	611			
21	6:30 Am		X	X		Ø	130	525			
22	6:30 Am		X	X		Ø	130	342			
23	Closed 6:30 AM		X	X		Ø	130	286			
24	Closed		X	X		Ø	130	361			
25	6:15		X	X		Ø	130	Ø			
26	6:30A		X	X		Ø	130	522			
27	6:30A		X	X		Ø	130	807			
28	7:00 AM		X	X		Ø	130	1027			
29	7:00 Am		X	X		Ø	130	1022			
30	7:00 Am		X	X		Ø	130	657			
31								297			



Suckla Farms
Injection Well #1
6-1-2012 to 7-2-2012
1000 LB Spring Back Side
Pressure @ 10 % equals 100 P.S.I.


June 2012
Pressures
700
600
500
400
300
200
100
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Tubing
Casing
Pump 1
Pump 2

Mountain States ACCUTEST LABORATORIES

05/04/12

Technical Report for

K.P. Kauffmann Company, Inc.

Wattenberg Tank

PO# 7591

Accutest Job Number: D33950

Sampling Date: 04/26/12

Report to:

Apex Consulting Services
PO Box 369
Louisville, CO 80027-0369
mhattel@msn.com; slaramesa@kpk.com

ATTN: Mike Hattel

Total number of pages in report: 23

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Brad Madadian
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW), UT (NELAP CO00049), TX (T104704511-12-1)

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Test results relate only to samples analyzed.

Accutest Laboratories is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

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Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D33950

Wattenberg Tank
Project No: PO# 7591

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
D33950-1	04/26/12	09:00 MH	04/26/12	AQ	Water	TANK-1
D33950-1F	04/26/12	09:00 MH	04/26/12	AQ	Water Filtered	TANK-1

ACCUTEST LABORATORIES

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffmann Company, Inc.	Job No	D33950
Site:	Wattenberg Tank	Report Date	5/4/2012 11:18:55 AM

On 04/26/2012, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 16.3 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D33950 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010C

Matrix AQ	Batch ID: MP7370

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D33862-21MS, D33862-21MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method ASTM D287

Matrix ALL	Batch ID: GN14757

- The data for ASTM D287 meets quality control requirements.

Wet Chemistry By Method EPA 1664A

Matrix AQ	Batch ID: GP7082

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix AQ	Batch ID: GP7065

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D33772-17DUP, D33952-2MS, D33952-2MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate, Chloride analysis.
- D33950-1 for Nitrogen, Nitrate/Nitrite: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2540C

Matrix AQ	Batch ID: GN14780

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D33966-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 5310B

Matrix AQ	Batch ID: GP7066

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D33968-1DUP, D33968-1MS, D33968-1MSD were used as the QC samples for the Total Organic Carbon analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	TANK-1		
Lab Sample ID:	D33950-1	**Date Sampled:**	04/26/12
Matrix:	AQ - Water	**Date Received:**	04/26/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	7310	250	mg/l	500	04/26/12 12:46	JML	EPA 300/SW846 9056
HEM Oil and Grease	266	4.9	mg/l	1	05/01/12	SWT	EPA 1664A
Nitrogen, Nitrate [a]	< 0.90	0.90	mg/l	20	04/26/12 11:31	JML	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 5.0	5.0	mg/l	500	04/26/12 12:46	JML	EPA 300/SW846 9056
Solids, Total Dissolved	13200	10	mg/l	1	05/02/12	JD	SM20 2540C
Specific Gravity by Hydromete	1.0100			1	04/30/12	CJ	ASTM D287
Sulfate	38.1	10	mg/l	20	04/26/12 11:31	JML	EPA 300/SW846 9056
Total Organic Carbon	< 40000	40000	mg/l	200	04/27/12 13:15	GH	SM20 5310B
pH	6.79		su	1	04/26/12 10:55	CJ	SM20 4500H

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TANK-1		
Lab Sample ID:	D33950-1F	**Date Sampled:**	04/26/12
Matrix:	AQ - Water Filtered	**Date Received:**	04/26/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	188000	20000	ug/l	50	04/30/12	04/30/12	JB	SW846 6010C [1]	SW846 3010A [2]
Magnesium	20700	10000	ug/l	50	04/30/12	04/30/12	JB	SW846 6010C [1]	SW846 3010A [2]
Potassium	123000	50000	ug/l	50	04/30/12	04/30/12	JB	SW846 6010C [1]	SW846 3010A [2]
Sodium	4240000	20000	ug/l	50	04/30/12	04/30/12	JB	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA2377
(2) Prep QC Batch: MP7370

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: D33950

Client / Reporting Information

Company Name: K.P. Kauffman Company, Inc.
Address: 1675 Broadway, Suite 2800
City: Denver State: CO Zip: 80202-4628
Project Contact: [redacted] Susana Lara-Mesa
Phone #: 303-825-4822
Samplers's Name: MICHAEL HATTEL (303-665-1400)

Project Information

Project Name: WATTENBERG TANK
Street:
City: Fort Lupton State: CO
Project #:
Fax #:
Client Purchase Order #: 7591

Requested Analysis

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	Na2S2O3	MEOH	NONE	OIL & GREASE 1664	ANIONS (NITRATE, NITRITE, SULFATE, CHLORIDE)	pH	CATIONS (Ca, K, Mg, NA)	SPECIFIC GRAVITY	TDS	TOC					LAB USE ONLY
	TANK - I		4/26/11	0900	MDH	LIQ	7	X			X					X	X	X	X	X	X	X					01

Matrix Codes: DW- Drinking Water; GW- Ground Water; WW- Water; SW- Surface Water; SO- Soil; SL-Sludge; OI-Oil; LIQ- Other Liquid; AIR- Air; SOL-Other Solid; WP-Wipe

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- Approved By:/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] NJ Reduced
- [ ] NJ Full
- [x] Hard Copy
- [ ] FULL CLP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] PDF

Comments / Remarks

NO Hard Copy

PDF copy to Mike Hattel with APEX at mhattel@msn.com

PDF copy to Susana Lara-Mesa w KPK at SLaraMesa@kpk.com

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	4/26/2011	1	2		2
Relinquished By: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # HD	Preserved where applicable ☐	On Ice ☐ Cooler Temp. 4.-3

Received in two boxes

D33950: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D33950 **Client:** K.P KAUFFMAN COMPANY INC. **Immediate Client Services Action Required:** No

Date / Time Received: 4/26/2012 10:15:00 AM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: WATTENBERG TANK **Airbill #'s:** HD

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	Infared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservation	Y	or N	N/A
1. Trip Blank present / cooler:	☐	☐	
2. Trip Blank listed on COC:	☐	☐	
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021
4036 Youngfield Street
F: (303) 425-6854
Wheat Ridge, CO
www/accutest.com

4.1

D33950: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D33950
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7370
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 04/30/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	5.9	21		
Antimony	30	3.1	3.2		
Arsenic	25	5.9	7.6		
Barium	10	1.1	.5		
Beryllium	10	.44	3.1		
Boron	50	4.8	2.6		
Cadmium	10	.27	.59		
Calcium	400	9.6	7.3	8.9	<400
Chromium	10	.18	.39		
Cobalt	5.0	.35	.4		
Copper	10	.85	3		
Iron	70	3.4	19		
Lead	50	1.6	2.9		
Magnesium	200	5.8	11	3.9	<200
Manganese	5.0	.053	1.8		
Molybdenum	10	.45	2.1		
Nickel	30	.43	.53		
Phosphorus	100	11	59		
Potassium	1000	55	61	96.0	<1000
Selenium	50	3.8	5.7		
Silicon	50	3.8	2.1		
Silver	30	.18	.65		
Sodium	400	110	98	5.7	<400
Strontium	5.0		1.5		
Thallium	10	2.9	3		
Tin	50	5.5	24		
Titanium	10	.11	1.2		
Uranium	50	1.5	2.2		
Vanadium	10	.16	.39		
Zinc	30	.28	1.5		

Associated samples MP7370: D33950-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D33950
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7370
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 04/30/12

Metal	D33862-21 Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	anr				
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron	anr				
Cadmium	anr				
Calcium	31600	59700	25000	112.4	75-125
Chromium	anr				
Cobalt	anr				
Copper	anr				
Iron	anr				
Lead	anr				
Magnesium	9390	35500	25000	104.4	75-125
Manganese	anr				
Molybdenum	anr				
Nickel	anr				
Phosphorus	anr				
Potassium	11900	40200	25000	113.2	75-125
Selenium	anr				
Silicon					
Silver	anr				
Sodium	278000	307000	25000	116.0	75-125
Strontium	anr				
Thallium	anr				
Tin					
Titanium	anr				
Uranium					
Vanadium	anr				
Zinc	anr				

Associated samples MP7370: D33950-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D33950
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7370
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 04/30/12

Metal	D33862-21 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron	anr					
Cadmium	anr					
Calcium	31600	59900	25000	113.2	0.3	20
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	9390	35900	25000	106.0	1.1	20
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Phosphorus	anr					
Potassium	11900	40700	25000	115.2	1.2	20
Selenium	anr					
Silicon						
Silver	anr					
Sodium	278000	311000	25000	132.0(a)	1.3	20
Strontium	anr					
Thallium	anr					
Tin						
Titanium	anr					
Uranium						
Vanadium	anr					
Zinc	anr					

Associated samples MP7370: D33950-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D33950
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7370
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

5.1.2

5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D33950
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7370
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 04/30/12

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	anr			
Calcium	27300	25000	109.2	80-120
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	26200	25000	104.8	80-120
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Phosphorus	anr			
Potassium	27500	25000	110.0	80-120
Selenium	anr			
Silicon				
Silver	anr			
Sodium	26300	25000	105.2	80-120
Strontium	anr			
Thallium	anr			
Tin				
Titanium	anr			
Uranium				
Vanadium	anr			
Zinc	anr			

Associated samples MP7370: D33950-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D33950
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP7065/GN14723	0.20	0.0	mg/l	20	20.0	100.0	90-110%
Chloride	GP7065/GN14723	0.50	0.0	mg/l	20	19.2	96.0	90-110%
Fluoride	GP7065/GN14723	0.10	0.0	mg/l	10	9.59	95.9	90-110%
HEM Oil and Grease	GP7082/GN14754	5.0	0.0	mg/l	40	35.2	88.0	78-114%
Nitrogen, Nitrate	GP7065/GN14723	0.045	0.0	mg/l	4.52	4.22	93.4	90-110%
Nitrogen, Nitrite	GP7065/GN14723	0.010	0.0	mg/l	6.09	5.81	95.4	90-110%
Solids, Total Dissolved	GN14780	10	0.0	mg/l	400	401	100.3	90-110%
Sulfate	GP7065/GN14723	0.50	0.0	mg/l	30	28.4	94.7	90-110%
Total Organic Carbon	GP7066/GN14725	1.0	0.0	mg/l	7.2	7.41	102.9	90-110%
pH	GN14707			su	8.00	7.96	99.5	99.3-100

Associated Samples:
Batch GN14707: D33950-1
Batch GN14780: D33950-1
Batch GP7065: D33950-1
Batch GP7066: D33950-1
Batch GP7082: D33950-1
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D33950
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP7082/GN14754	mg/l	40	33.1	6.1	20%

Associated Samples:
Batch GP7082: D33950-1
(*) Outside of QC limits

6.2
6

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D33950
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Bromide	GP7065/GN14723	D33772-17	mg/l	0.0	0.0	0.0	0-20%
Bromide	GP7065/GN14723	D33772-17	mg/l	0.0	0.0	0.0	0-20%
Chloride	GP7065/GN14723	D33772-17	mg/l	51.4	51.7	0.6	0-20%
Fluoride	GP7065/GN14723	D33772-17	mg/l	3.65	3.6	0.0	0-20%
Nitrogen, Nitrate	GP7065/GN14723	D33772-17	mg/l	0.0	0.0	0.0	0-20%
Nitrogen, Nitrate	GP7065/GN14723	D33772-17	mg/l	0.0	0.0	0.0	0-20%
Nitrogen, Nitrite	GP7065/GN14723	D33772-17	mg/l	0.0	0.0	0.0	0-20%
Nitrogen, Nitrite	GP7065/GN14723	D33772-17	mg/l	0.0	0.0	0.0	0-20%
Solids, Total Dissolved	GN14780	D33966-1	mg/l	14300	14400	0.7	0-25%
Sulfate	GP7065/GN14723	D33772-17	mg/l	21.0	21.0	0.0	0-20%
Total Organic Carbon	GP7066/GN14725	D33968-1	mg/l	2.6	2.6	0.0	0-20%

Associated Samples:
Batch GN14780: D33950-1
Batch GP7065: D33950-1
Batch GP7066: D33950-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D33950
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP7065/GN14723	D33952-2	mg/l	0.37	2.5	2.9	101.2	80-120%
Chloride	GP7065/GN14723	D33952-2	mg/l	68.9	100	169	100.1	80-120%
Fluoride	GP7065/GN14723	D33952-2	mg/l	0.53	2.5	3.0	98.8	80-120%
Nitrogen, Nitrate	GP7065/GN14723	D33952-2	mg/l	1.8	5.65	7.2	95.6	80-120%
Nitrogen, Nitrite	GP7065/GN14723	D33952-2	mg/l	0.0	3.05	2.9	95.1	80-120%
Sulfate	GP7065/GN14723	D33952-2	mg/l	130	100	228	98.0	80-120%
Total Organic Carbon	GP7066/GN14725	D33968-1	mg/l	2.6	10	12.7	101.0	80-120%

Associated Samples:
Batch GP7065: D33950-1
Batch GP7066: D33950-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D33950
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP7065/GN14723	D33952-2	mg/l	0.37	2.5	2.9	0.0	20%
Chloride	GP7065/GN14723	D33952-2	mg/l	68.9	100	172	1.8	20%
Fluoride	GP7065/GN14723	D33952-2	mg/l	0.53	2.5	2.9	3.4	20%
Nitrogen, Nitrate	GP7065/GN14723	D33952-2	mg/l	1.8	5.65	7.5	4.1	20%
Nitrogen, Nitrite	GP7065/GN14723	D33952-2	mg/l	0.0	3.05	3.0	3.4	20%
Sulfate	GP7065/GN14723	D33952-2	mg/l	130	100	231	1.3	20%
Total Organic Carbon	GP7066/GN14725	D33968-1	mg/l	2.6	10	12.7	0.0	20%

Associated Samples:
Batch GP7065: D33950-1
Batch GP7066: D33950-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Mountain States ACCUTEST LABORATORIES

06/11/12

Technical Report for

K.P. Kauffmann Company, Inc.

Wattenberg Tank

PO# 7591

Accutest Job Number: D34840

Sampling Date: 05/25/12

Report to:

Apex Consulting Services
PO Box 369
Louisville, CO 80027-0369
mhattel@msn.com; slaramesa@kpk.com

ATTN: Mike Hattel

Total number of pages in report: 26

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Brad Madadian
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW), UT (NELAP CO00049), TX (T104704511-12-1)

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Test results relate only to samples analyzed.

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Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D34840

Wattenberg Tank
Project No: PO# 7591

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D34840-1	05/25/12	08:00 MH	05/25/12	AQ	Water	TANK-1
D34840-1F	05/25/12	08:00 MH	05/25/12	AQ	Water Filtered	TANK-1

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffmann Company, Inc.	Job No	D34840
Site:	Wattenberg Tank	Report Date	6/11/2012 1:49:58 PM

On 05/25/2012, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4.0 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D34840 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010C

Matrix	AQ	Batch ID:	MP7537

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D34794-1MS, D34794-1MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method ASTM D287

Matrix	ALL	Batch ID:	GN15272

- The data for ASTM D287 meets quality control requirements.

Wet Chemistry By Method EPA 1664A

Matrix	AQ	Batch ID:	GP7435

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix	AQ	Batch ID:	GP7307

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D34815-1MS, D34815-1MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate, Chloride analysis.
- D34840-1 for Nitrogen, Nitrate/Nitrite: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2540C

Matrix	AQ	Batch ID:	GN15175

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D34826-1ADUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 5310B

Matrix AQ	Batch ID: GP7310

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D34682-1DUP, D34682-1MS, D34682-1MSD were used as the QC samples for the Total Organic Carbon analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	TANK-1		
Lab Sample ID:	D34840-1	**Date Sampled:**	05/25/12
Matrix:	AQ - Water	**Date Received:**	05/25/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	10500	500	mg/l	1000	05/25/12 16:12	GH	EPA 300/SW846 9056
HEM Oil and Grease	152	5.0	mg/l	.990099	06/11/12	SWT	EPA 1664A
Nitrogen, Nitrate [a]	<1.1	1.1	mg/l	25	05/25/12 13:31	GH	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	<2.0	2.0	mg/l	200	05/25/12 16:00	GH	EPA 300/SW846 9056
Solids, Total Dissolved	19400	10	mg/l	1	05/30/12	CT	SM20 2540C
Specific Gravity by Hydromete	1.0151			1	06/05/12	CJ	ASTM D287
Sulfate	87.2	13	mg/l	25	05/25/12 13:31	GH	EPA 300/SW846 9056
Total Organic Carbon	1260	100	mg/l	100	05/29/12 14:17	GH	SM20 5310B
pH	6.87		su	1	05/25/12 13:35	CJ	SM20 4500H B+

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TANK-1		
Lab Sample ID:	D34840-1F	**Date Sampled:**	05/25/12
Matrix:	AQ - Water Filtered	**Date Received:**	05/25/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	319000	20000	ug/l	50	05/29/12	05/29/12	JB	SW846 6010C [1]	SW846 3010A [2]
Magnesium	45300	10000	ug/l	50	05/29/12	05/29/12	JB	SW846 6010C [1]	SW846 3010A [2]
Potassium	119000	50000	ug/l	50	05/29/12	05/29/12	JB	SW846 6010C [1]	SW846 3010A [2]
Sodium	6290000	20000	ug/l	50	05/29/12	05/29/12	JB	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA2465
(2) Prep QC Batch: MP7537

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: D34840

Client / Reporting Information

Company Name: K.P. Kauffman Company, Inc.
Address: 1675 Broadway, Suite 2800
City: Denver State: CO Zip: 80202-4628
Project Contact: Susan Lara-Mesa SLaraMesa@kpk.com
Phone #: 303-825-4822
Samplers's Name: MICHAEL HATTEL (303-665-1400)

Project Information

Project Name: WATTENBERG TANK
Street:
City: Fort Lupton State: CO
Project #:
Fax #:
Client Purchase Order #: 7591

Requested Analysis

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	MEOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	OIL & GREASE 1664	ANIONS (NITRATE, NITRITE, SULFATE, CHLORIDE)	pH	CATIONS (Ca, K, Mg, NA)	SPECIFIC GRAVITY	TDS	TOC					LAB USE ONLY
	TANK - I		5/25/12	0800	MDH	LIQ	7	X			X					X	X	X	X	X	X	X					01

Matrix Codes: DW- Drinking Water; GW- Ground Water; WW- Water; SW- Surface Water; SO- Soil; SL-Sludge; OI-Oil; LIQ- Other Liquid; AIR- Air; SOL-Other Solid; WP-Wipe

Turnaround Time (Business days)
- [X] Std. 10 Business Days
- Approved By:/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information
- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] NJ Reduced
- [ ] NJ Full
- [X] Hard Copy
- [ ] FULL CLP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] PDF

Comments / Remarks
- NO Hard Copy
- PDF copy to Mike Hattel with APEX at mhattel@msn.com
- PDF copy to Susana Lara-Mesa w KPK at SLaraMesa@kpk.com

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	5/25/12 1000	1 5/25 1005			2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal # HD	Preserved where applicable X	On Ice X Cooler Temp. 4.0

4.1 4

D34840: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D34840 **Client:** KP KAUFMANN **Immediate Client Services Action Required:** No

Date / Time Received: 5/25/2012 10:05:00 AM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: WATTENBERG **Airbill #'s:** CO

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	Infared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservation	Y	or N	N/A
1. Trip Blank present / cooler:	☐	☐	
2. Trip Blank listed on COC:	☐	☐	
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021
4036 Youngfield Street
F: (303) 425-6854
Wheat Ridge, CO
www/accutest.com

4.1.4

D34840: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7537
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/29/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	9.6	21		
Antimony	30	1.7	3.2		
Arsenic	25	4.4	7.6		
Barium	10	.1	.5		
Beryllium	10	1.3	3.1		
Boron	50	1	2.6		
Cadmium	10	.6	.59		
Calcium	400	5.4	7.3	21.1	<400
Chromium	10	.3	.39		
Cobalt	5.0	.4	.4		
Copper	10	1.2	3		
Iron	70	1.2	19		
Lead	50	1.9	2.9		
Lithium	2.0	.5	.65		
Magnesium	200	6.5	11	6.6	<200
Manganese	5.0	1.2	1.8		
Molybdenum	10	2.1	2.1		
Nickel	30	.5	.53		
Phosphorus	100	14	59		
Potassium	1000	61	61	45.6	<1000
Selenium	50	4.8	5.7		
Silicon	50	2.9	2.1		
Silver	30	.4	.65		
Sodium	400	5.9	98	1.3	<400
Strontium	5.0	.04	1.5		
Thallium	10	2.9	3		
Tin	50	12	24		
Titanium	10	.1	1.2		
Uranium	50	2.2	2.2		
Vanadium	10	.2	.39		
Zinc	30	.5	1.5		

Associated samples MP7537: D34840-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7537
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

5.1.1
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7537
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/29/12

Metal	D34794-1 Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium	anr				
Calcium	5270	31000	25000	102.9	75-125
Chromium					
Cobalt					
Copper	anr				
Iron	anr				
Lead	anr				
Lithium					
Magnesium	760	26100	25000	101.4	75-125
Manganese	anr				
Molybdenum					
Nickel					
Phosphorus					
Potassium	760	27000	25000	105.0	75-125
Selenium					
Silicon					
Silver					
Sodium	2090	27800	25000	102.8	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	anr				

Associated samples MP7537: D34840-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

5.1.2
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7537
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.1.2

5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7537
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/29/12

Metal	D34794-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium	anr					
Calcium	5270	31000	25000	102.9	0.0	20
Chromium						
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Lithium						
Magnesium	760	26100	25000	101.4	0.0	20
Manganese	anr					
Molybdenum						
Nickel						
Phosphorus						
Potassium	760	27200	25000	105.8	0.7	20
Selenium						
Silicon						
Silver						
Sodium	2090	27900	25000	103.2	0.4	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	anr					

Associated samples MP7537: D34840-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7537
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.1.2

5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7537
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/29/12

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium	anr			
Calcium	26000	25000	104.0	80-120
Chromium				
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	25300	25000	101.2	80-120
Manganese	anr			
Molybdenum				
Nickel				
Phosphorus				
Potassium	26200	25000	104.8	80-120
Selenium				
Silicon				
Silver				
Sodium	25900	25000	103.6	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP7537: D34840-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7537
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

5.1.3
5

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP7307/GN15137	0.20	0.0	mg/l	20	20.1	100.5	90-110%
Chloride	GP7307/GN15137	0.50	0.0	mg/l	20	19.8	99.0	90-110%
HEM Oil and Grease	GP7435/GN15346	5.0	0.0	mg/l	40	33.4	83.5	78-114%
Nitrogen, Nitrate	GP7307/GN15137	0.045	0.0	mg/l	4.52	4.35	96.3	90-110%
Nitrogen, Nitrite	GP7307/GN15137	0.010	0.0	mg/l	6.09	6.10	100.2	90-110%
Solids, Total Dissolved	GN15175	10	0.0	mg/l	400	399	99.8	90-110%
Sulfate	GP7307/GN15137	0.50	0.0	mg/l	30	29.4	98.0	90-110%
Total Organic Carbon	GP7310/GN15151	1.0	0.0	mg/l	7.2	7.12	98.9	90-110%
pH	GN15147			su	8.00	7.98	99.8	99.3-100

Associated Samples:
Batch GN15147: D34840-1
Batch GN15175: D34840-1
Batch GP7307: D34840-1
Batch GP7310: D34840-1
Batch GP7435: D34840-1
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP7435/GN15346	mg/l	40	32.7	2.1	20%

Associated Samples:
Batch GP7435: D34840-1
(*) Outside of QC limits

6.2
6

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN15175	D34826-1A	mg/l	810	806	0.5	0-25%
Total Organic Carbon	GP7310/GN15151	D34682-1	mg/l	13.6	13.8	1.5	0-20%

Associated Samples:
Batch GN15175: D34840-1
Batch GP7310: D34840-1
(*) Outside of QC limits

6.3
6

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP7307/GN15137	D34815-1	mg/l	0.0	2.5	2.5	100.0	80-120%
Chloride	GP7307/GN15137	D34815-1	mg/l	10.5	10	20.8	103.0	80-120%
Nitrogen, Nitrate	GP7307/GN15137	D34815-1	mg/l	0.30	0.565	0.86	99.1	80-120%
Nitrogen, Nitrite	GP7307/GN15137	D34815-1	mg/l	0.059	0.305	0.36	98.9	80-120%
Sulfate	GP7307/GN15137	D34815-1	mg/l	10.3	10	20.3	100.0	80-120%
Total Organic Carbon	GP7310/GN15151	D34682-1	mg/l	13.6	10	25.2	116.0	80-120%

Associated Samples:
Batch GP7307: D34840-1
Batch GP7310: D34840-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

6.4

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D34840
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP7307/GN15137	D34815-1	mg/l	0.0	2.5	2.5	0.0	20%
Chloride	GP7307/GN15137	D34815-1	mg/l	10.5	10	20.8	0.0	20%
Nitrogen, Nitrate	GP7307/GN15137	D34815-1	mg/l	0.30	0.565	0.86	0.0	20%
Nitrogen, Nitrite	GP7307/GN15137	D34815-1	mg/l	0.059	0.305	0.35	2.8	20%
Sulfate	GP7307/GN15137	D34815-1	mg/l	10.3	10	20.3	0.0	20%
Total Organic Carbon	GP7310/GN15151	D34682-1	mg/l	13.6	10	25.1	0.4	20%

Associated Samples:
Batch GP7307: D34840-1
Batch GP7310: D34840-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Mountain States ACCUTEST LABORATORIES

07/03/12

Technical Report for

K.P. Kauffmann Company, Inc.

Wattenberg Tank

Accutest Job Number: D35613

Sampling Date: 06/19/12

Report to:

Apex Consulting Services
PO Box 369
Louisville, CO 80027-0369
mhattel@msn.com; slaramesa@kpk.com

ATTN: Mike Hattel

Total number of pages in report: 28

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Brad Madadian
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW), UT (NELAP CO00049), TX (T104704511-12-1)

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Test results relate only to samples analyzed.

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Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D35613

Wattenberg Tank

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D35613-1	06/19/12	10:15 MH	06/19/12	AQ	Water	TANK-1
D35613-1F	06/19/12	10:15 MH	06/19/12	AQ	Water Filtered	TANK-1

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffmann Company, Inc.	Job No	D35613
Site:	Wattenberg Tank	Report Date	7/3/2012 1:55:31 PM

On 06/19/2012, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4.0 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D35613 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010C

Matrix AQ	Batch ID: MP7763

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35556-1MS, D35556-1MSD, D35556-1SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Magnesium are outside control limits for sample MP7763-SD1. Probable cause due to sample homogeneity.
- MP7763-SD1 for Magnesium: Serial dilution indicates possible matrix interference.

Wet Chemistry By Method ASTM D287

Matrix ALL	Batch ID: GN15638

- The data for ASTM D287 meets quality control requirements.

Wet Chemistry By Method EPA 1664A

Matrix AQ	Batch ID: GP7619

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35613-1MS were used as the QC samples for the HEM Oil and Grease analysis.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix AQ	Batch ID: GP7531

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35605-2MS, D35605-2MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate, Chloride analysis.
- D35613-1 for Nitrogen, Nitrate/Nitrite: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2540C

Matrix AQ	Batch ID: GN15581

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35590-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 4500H B+

Matrix AQ	Batch ID: GN15529

- The following samples were run outside of holding time for method SM20 4500H B+: D35613-1

Wet Chemistry By Method SM20 5310B

Matrix AQ	Batch ID: GP7527

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35259-1MS, D35259-1MSD, D35259-2DUP were used as the QC samples for the Total Organic Carbon analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	TANK-1		
Lab Sample ID:	D35613-1	**Date Sampled:**	06/19/12
Matrix:	AQ - Water	**Date Received:**	06/19/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	10500	250	mg/l	500	06/19/12 17:23	JML	EPA 300/SW846 9056
HEM Oil and Grease	69.9	4.8	mg/l	1	07/03/12	SWT	EPA 1664A
Nitrogen, Nitrate [a]	< 1.1	1.1	mg/l	25	06/19/12 14:30	JML	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 5.0	5.0	mg/l	500	06/19/12 17:23	JML	EPA 300/SW846 9056
Solids, Total Dissolved	17600	10	mg/l	1	06/26/12	JD	SM20 2540C
Specific Gravity by Hydromete	1.0100			1	06/29/12	MM	ASTM D287
Sulfate	142	13	mg/l	25	06/19/12 14:30	JML	EPA 300/SW846 9056
Total Organic Carbon	1000	100	mg/l	100	06/20/12 15:07	NS	SM20 5310B
pH	6.95		su	1	06/21/12 07:30	CT	SM20 4500H B+

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TANK-1		
Lab Sample ID:	D35613-1F	**Date Sampled:**	06/19/12
Matrix:	AQ - Water Filtered	**Date Received:**	06/19/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	145000	4000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Magnesium	25300	2000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Potassium	64600	10000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Sodium	4490000	4000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA2553
(2) Prep QC Batch: MP7763

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: D35613

Client / Reporting Information

Company Name: K.P. Kauffman Company, Inc.
Address: 1675 Broadway, Suite 2800
City: Denver State: CO Zip: 80202-4628
Project Contact: Susan Lara-Mesa SLaraMesa@kpk.com
Phone #: 303-825-4822
Samplers's Name: MICHAEL HATTEL (303-665-1400)

Project Information

Project Name: WATTENBERG TANK
Street:
City: Fort Lupton State: CO
Project #:
Fax #:
Client Purchase Order #: 7591

Requested Analysis

Matrix Codes: DW- Drinking Water; GW- Ground Water; WW- Water; SW- Surface Water; SO- Soil; SL-Sludge; OI-Oil; LIQ- Other Liquid; AIR- Air; SOL-Other Solid; WP-Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	OIL & GREASE 1664	ANIONS (NITRATE, NITRITE, SULFATE, CHLORIDE)	pH	CATIONS (Ca, K, Mg, NA)	SPECIFIC GRAVITY	TDS	TOC					LAB USE ONLY
	TANK - I		6/19/12	1215	MDH	LIQ	7	X			X					X	X	X	X	X	X	X					01
																											1061912

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- Approved By/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] NJ Reduced
- [ ] NJ Full
- [X] Hard Copy
- [ ] FULL CLP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [X] PDF

Comments / Remarks

NO Hard Copy

PDF copy to Mike Hattel with APEX at mhattel@msn.com

PDF copy to Susana Lara-Mesa w KPK at SLaraMesa@kpk.com

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6/19/12 1215	1 6/19 1215	2		2
Relinquished By: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished By: 5	Date Time:	Received By: 5	Custody Seal # HO	Preserved where applicable ☒	On Ice ☒ Cooler Temp. 4.0

D35613: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D35613 **Client:** WATTENBERG **Immediate Client Services Action Required:** No

Date / Time Received: 6/19/2012 12:15:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: WATTENBERG **Airbill #'s:** HD

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	Infared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservation	Y	or N	N/A
1. Trip Blank present / cooler:	☐	☐	
2. Trip Blank listed on COC:	☐	☐	
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021
4036 Youngfield Street
F: (303) 425-6854
Wheat Ridge, CO
www/accutest.com

4.1

4

D35613: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/27/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	9.6	21		
Antimony	30	1.7	3.2		
Arsenic	25	4.4	7.6		
Barium	10	.1	.5		
Beryllium	10	1.3	3.1		
Boron	50	1	2.6		
Cadmium	10	.6	.59		
Calcium	400	5.4	7.3	18.8	<400
Chromium	10	.3	.39		
Cobalt	5.0	.4	.4		
Copper	10	1.2	3		
Iron	70	1.2	19		
Lead	50	1.9	2.9		
Lithium	2.0	.5	.65		
Magnesium	200	6.5	11	5.6	<200
Manganese	5.0	1.2	1.8		
Molybdenum	10	2.1	2.1		
Nickel	30	.5	.53		
Phosphorus	100	14	59		
Potassium	1000	61	61	62.1	<1000
Selenium	50	4.8	5.7		
Silicon	50	2.9	2.1		
Silver	30	.4	.65		
Sodium	400	5.9	98	-57	<400
Strontium	5.0	.04	1.5		
Thallium	10	2.9	3		
Tin	50	12	24		
Titanium	10	.1	1.2		
Uranium	50	2.2	2.2		
Vanadium	10	.2	.39		
Zinc	30	.5	1.5		

Associated samples MP7763: D35613-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

5.1.1 5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/27/12

Metal	D35556-1 Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	anr				
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron	anr				
Cadmium	anr				
Calcium	15100	39700	25000	98.4	75-125
Chromium	anr				
Cobalt	anr				
Copper	anr				
Iron	anr				
Lead	anr				
Lithium					
Magnesium	1620	25000	25000	93.5	75-125
Manganese	anr				
Molybdenum	anr				
Nickel	anr				
Phosphorus					
Potassium	7140	33500	25000	105.4	75-125
Selenium	anr				
Silicon					
Silver	anr				
Sodium	10000000002060000		25000	120.0	75-125
Strontium					
Thallium	anr				
Tin					
Titanium	anr				
Uranium					
Vanadium	anr				
Zinc	anr				

Associated samples MP7763: D35613-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.1.2

5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/27/12

Metal	D35556-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron	anr					
Cadmium	anr					
Calcium	15100	39300	25000	96.8	1.0	20
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Lithium						
Magnesium	1620	25100	25000	93.9	0.4	20
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium	7140	33600	25000	105.8	0.3	20
Selenium	anr					
Silicon						
Silver	anr					
Sodium	10000000001820000		25000	-840.0	(a 12.4	20
Strontium						
Thallium	anr					
Tin						
Titanium	anr					
Uranium						
Vanadium	anr					
Zinc	anr					

Associated samples MP7763: D35613-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

5.1.2

5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/27/12

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	anr			
Calcium	25500	25000	102.0	80-120
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	25700	25000	102.8	80-120
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium	26200	25000	104.8	80-120
Selenium	anr			
Silicon				
Silver	anr			
Sodium	26300	25000	105.2	80-120
Strontium				
Thallium	anr			
Tin				
Titanium	anr			
Uranium				
Vanadium	anr			
Zinc	anr			

Associated samples MP7763: D35613-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

5.1.3

5

SERIAL DILUTION RESULTS SUMMARY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/27/12

Metal	D35556-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	anr			
Calcium	15100	16500	9.4	0-10
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	1620	1780	10.2*(a)	0-10
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium	7140	7070	1.0	0-10
Selenium	anr			
Silicon				
Silver	anr			
Sodium	10000000002080000		2.2	0-10
Strontium				
Thallium	anr			
Tin				
Titanium	anr			
Uranium				
Vanadium	anr			
Zinc	anr			

Associated samples MP7763: D35613-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

5.1.4 5

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP7531/GN15513	0.20	0.0	mg/l	20	19.8	99.0	90-110%
Chloride	GP7531/GN15513	0.50	0.28	mg/l	20	19.7	98.5	90-110%
HEM Oil and Grease	GP7619/GN15658	5.0	0.0	mg/l	40	36.9	92.3	78-114%
Nitrogen, Nitrate	GP7531/GN15513	0.045	0.0	mg/l	4.52	4.31	95.4	90-110%
Nitrogen, Nitrite	GP7531/GN15513	0.010	0.0	mg/l	6.09	6.25	102.6	90-110%
Solids, Total Dissolved	GN15581	10	0.0	mg/l	400	402	100.5	90-110%
Sulfate	GP7531/GN15513	0.50	0.0	mg/l	30	29.5	98.3	90-110%
Total Organic Carbon	GP7527/GN15510	1.0	0.0	mg/l	7.2	7.19	99.9	90-110%
pH	GN15529			su	8.00	7.99	99.9	99.3-100

Associated Samples:
Batch GN15529: D35613-1
Batch GN15581: D35613-1
Batch GP7527: D35613-1
Batch GP7531: D35613-1
Batch GP7619: D35613-1
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP7619/GN15658	mg/l	40	33.3	10.3	20%

Associated Samples:
Batch GP7619: D35613-1
(*) Outside of QC limits

6.2
6

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN15581	D35590-1	mg/l	668	668	0.0	0-25%
Total Organic Carbon	GP7527/GN15510	D35259-2	mg/l	0.98	0.89	9.6	0-20%

Associated Samples:
Batch GN15581: D35613-1
Batch GP7527: D35613-1
(*) Outside of QC limits

6.3
6

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP7531/GN15513	D35605-2	mg/l	0.0	2.5	2.5	100.0	80-120%
Bromide	GP7531/GN15513	D35605-2	mg/l	0.0	2.5	2.5	100.0	80-120%
Chloride	GP7531/GN15513	D35605-2	mg/l	36.5	100	136	99.2	80-120%
Chloride	GP7531/GN15513	D35605-2	mg/l	36.8	100	136	99.2	80-120%
HEM Oil and Grease	GP7619/GN15658	D35613-1	mg/l	69.9	40	109	97.8	78-114%
Nitrogen, Nitrate	GP7531/GN15513	D35605-2	mg/l	2.9	5.65	8.5	99.1	80-120%
Nitrogen, Nitrite	GP7531/GN15513	D35605-2	mg/l	0.23	0.305	0.53	98.5	80-120%
Sulfate	GP7531/GN15513	D35605-2	mg/l	14.5	10	24.1	93.0	80-120%
Sulfate	GP7531/GN15513	D35605-2	mg/l	14.8	10	24.1	93.0	80-120%
Total Organic Carbon	GP7527/GN15510	D35259-1	mg/l	2.3	10	12.1	98.0	80-120%

Associated Samples:
Batch GP7527: D35613-1
Batch GP7531: D35613-1
Batch GP7619: D35613-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D35613
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP7531/GN15513	D35605-2	mg/l	0.0	2.5	2.5	0.0	20%
Bromide	GP7531/GN15513	D35605-2	mg/l	0.0	2.5	2.5	0.0	20%
Chloride	GP7531/GN15513	D35605-2	mg/l	36.5	100	134	1.5	20%
Chloride	GP7531/GN15513	D35605-2	mg/l	36.8	100	134	1.5	20%
Nitrogen, Nitrate	GP7531/GN15513	D35605-2	mg/l	2.9	5.65	8.4	1.2	20%
Nitrogen, Nitrite	GP7531/GN15513	D35605-2	mg/l	0.23	0.305	0.54	1.9	20%
Sulfate	GP7531/GN15513	D35605-2	mg/l	14.5	10	24.1	0.0	20%
Sulfate	GP7531/GN15513	D35605-2	mg/l	14.8	10	24.1	0.0	20%
Total Organic Carbon	GP7527/GN15510	D35259-1	mg/l	2.3	10	12.0	0.8	20%

Associated Samples:
Batch GP7527: D35613-1
Batch GP7531: D35613-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

APEX CONSULTING SERVICES, INC.

APEX

566 West Willow Court
Reply to: P.O. Box 369
Louisville, CO 80027-0369
Phone: 303-665-1400
Fax: 303-665-0620
email: apexcsi@comcast.net

July 12, 2012

Ms. Susana Lara-Mesa
K.P. Kauffman Company, Inc.
World Trade Center
1675 Broadway, Suite 2800
Denver, CO 80202-4825

Re: June 2012, Groundwater Monitoring, Wattenberg Disposal Facility, Weld County, Colorado

Dear Ms. Lara-Mesa:

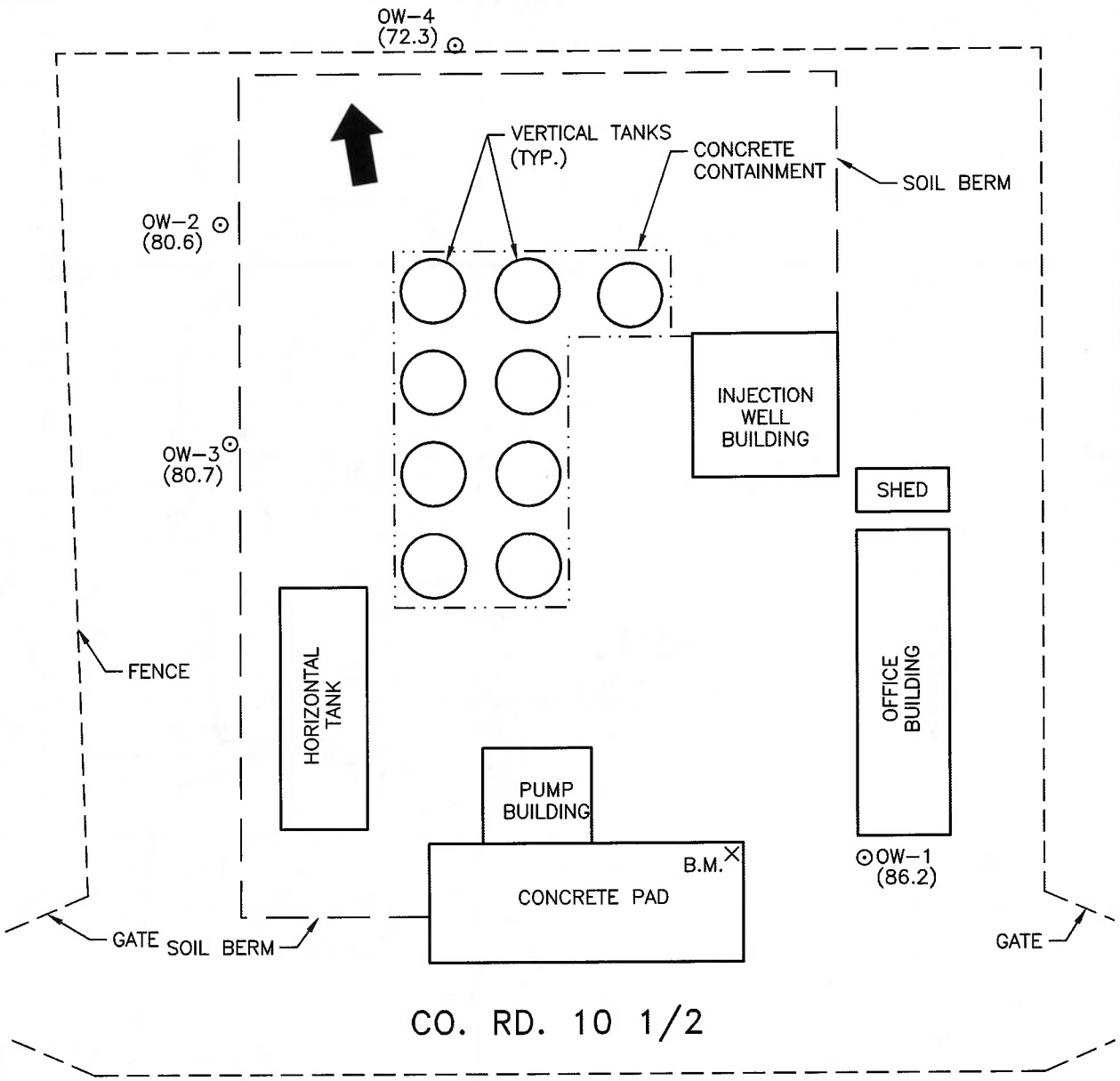
Apex Consulting Services, Inc. (APEX) has completed the June 2012 (semi-annual) groundwater monitoring at the Wattenberg Disposal Facility (Facility) in Weld County, Colorado (Figure 1). This letter report presents a summary of the work performed, the results of the groundwater analysis, and our conclusions.

BACKGROUND

The Facility was originally constructed in 1972 by the Amoco Production Company to dispose of production water from oil and gas wells in the D-J Basin. Wright's Disposal, Inc. purchased the Facility from Amoco in June 1989 and K.P. Kaufman Company, Inc. (KPK) purchased the Facility in June 1998. KPK currently operates the Facility for deep injection disposal of non-hazardous Class I and Class II liquid waste as defined in 40 CFR 144.6. The Facility is operated under the U.S. EPA Underground Injection Control Program, Final Permit No. CO 1516-2115. Three groundwater observation wells (OW-1, OW-2, and OW-3) are located around the periphery of the Facility to monitor groundwater flow direction, gradient, and quality. A groundwater monitoring plan was prepared by Nationwide Environmental Services, Inc. on January 3, 2002. The monitoring plan was subsequently approved by the Solid Waste Unit of the Colorado Department of Public Health and Environment. The monitoring plan included semi-annual groundwater monitoring (OW-1, OW-2, and OW-3) for major cations (calcium, magnesium, potassium, and sodium), major anions (bicarbonate, carbonate, chloride, nitrate, nitrite, and sulfate), Total Organic Carbon (TOC), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and Total Petroleum Hydrocarbons (TPH). During the January 2007 sampling event, product was encountered on the groundwater in observation well OW-3. Contaminated soils in the vicinity of observation well OW-3 were excavated and replaced with clean fill. Observation well OW-3 was removed during the excavation of the contaminated soils. Following the removal of the contaminated soil, a new observation well (OW-3) was installed at the previous location. At the request of the Colorado Department of Public Health and Environment, an additional observation well (OW-4) was installed to the north of the Facility in June 2009.

GROUNDWATER SAMPLING

Groundwater samples were collected for laboratory analyses from observation wells OW-1, OW-2, OW-3 and OW-4 on June 19, 2012. Prior to groundwater sampling, groundwater elevations were measured and recorded in each of the aforementioned observation wells located at the Property. The locations of the observation wells are illustrated on Figure 2. Each of the wells was surveyed to a local datum. Shallow groundwater was present in the wells at depths ranging from approximately 12.5 (OW-1) to 22.6 (OW-4) feet below the ground surface (bgs). Relative groundwater elevations are shown on Figure 2. Groundwater flow direction was determined to be to the north-northwest for this monitoring period. Free product was not present on the groundwater in any of the wells. The observation wells were prepared for sampling by purging three wet well volumes of groundwater from each well with a dedicated bailer. During purging of each observation well, pH, specific conductance, and temperature



NOTE: DATA COLLECTED ON JUNE 19, 2012.

LEGEND:

⊙ OW-2 (80.8)	OBSERVATION WELL, NUMBER, AND RELATIVE GROUNDWATER ELEVATION
➡	CURRENT GROUNDWATER FLOW DIRECTION
B.M.	BENCH MARK, ELEVATION 100.00 FEET
ND	NO DATA

NORTH

0 30 60

SCALE: 1" = 60'

APEX JOB: 1-0025.001.00

WATTENBERG DISPOSAL FACILITY
SITE MAP
JUNE 19, 2012

APEX

FIGURE:
2

C:\MDS WORK FILES\files\01-054\SITEMAP-WATTENBERG_06-12

TABLE 1

Summary of BTEX[1], TPH[2] and TOC[3] Analytical Results for Groundwater Samples Collected from Wattenberg Disposal Facility, Weld County, Colorado

Sample	Date	pH	Temperature (Celsius)	Specific Conductance[3]	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	TPH (mg/L)	TOC[4] (mg/L)
OW-1	9/18/02	6.46	17.5	>4000	<.15	<.18	<.24	<.63	<1.6	79.00
	12/16/02	6.54	14.9	>4000	<.15	<.18	<.24	<.63	<1.6	29
	6/30/03	6.64	13.2	>4000	<1.5	<.18	<.24	<.63	<1.6	250
	12/30/03	6.54	14.1	>4000	<.15	<.18	<.24	<.63	<1.6	86
	6/30/04	6.19	13.2	>4000	<.18	<.21	<.17	<.96	<1.5	28
	12/29/04	6.30	12.9	>4000	<.18	<.21	<.17	<.96	<1.6	33
	6/30/05	6.60	13.2	>4000	<.074	<.078	<.088	<.20	<1.5	27
	12/28/05	6.85	15.5	>4000	<.074	<.078	<.088	<.20	<1.5	27
	6/29/06	6.54	13.5	>4000	1.0	<.078	1.1	5.0	<1.5	140
	7/27/06[5]	6.51	13.6	>4000	<.074	<.078	<.088	<.20	NA	NA
	1/25/07	6.81	13.3	>4000	<1.0	<2.0	<2.0	<4.0	5.3	28.7
	7/2/07	6.59	12.9	>4000	<1.0	<2.0	<2.0	<4.0	15.0	30.0
	1/31/08	6.69	12.9	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	30.3
	6/24/08	6.52	12.3	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	31.4
	12/29/08	6.50	14.7	>4000	<1.0	<2.0	<2.0	<4.0	6.2	30.1
	6/29/09	6.52	14.9	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	30.8
	12/15/09	6.51	13.3	>4000	<1.0	<2.0	<2.0	<4.0	5.9	30.6
	6/23/10	6.61	12.4	>4000	<1.0	<2.0	<2.0	<4.0	5.0	31.8
	12/13/10	6.80	14.6	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	31.7
	6/21/11	6.62	12.3	>4000	0.28J	<1.0	<1.0	<2.0	7.1	29.2
	7/12/11	6.58	12.4	>400	<1.0	<2.0	<2.0	<2.0	NA	NA
OW-2	9/18/02	7.05	14.8	>4000	<.15	<.18	<.24	<.63	<1.6	230
	12/16/02	7.09	14.0	>4000	<.15	<.18	<.24	<.63	<1.6	60
	6/30/03	7.28	12.9	>4000	<.15	<.18	<.24	<.63	<1.7	150
	12/30/03	7.23	13.3	>4000	<.15	<.18	<.24	<.63	<1.7	58
	6/30/04	6.86	13.0	>4000	<.18	<.21	<.17	<.96	<1.5	37
	12/29/04	6.80	12.3	>4000	<.18	<.21	<.17	<.96	<1.4	54
	6/30/05	7.18	12.5	>4000	<.074	<.078	<.088	<.20	<1.5	48
	12/28/05	7.23	14.5	>4000	<.074	<.078	<.088	<.20	<1.5	48
	6/29/06	7.22	12.9	>4000	<.074	<.078	<.088	<.20	<1.5	59
	1/25/07	7.37	12.8	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	44.4
	7/2/07	7.18	13.3	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	36.7

TABLE 1 (continued)

Summary of BTEX[1], TPH[2] and TOC[3] Analytical Results for Groundwater Samples Collected from Wattenberg Disposal Facility, Weld County, Colorado

Sample	Date	pH	Temperature (Celsius)	Specific Conductance[3]	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	TPH (mg/L)	TOC[4] (mg/L)
OW-2	1/31/08	7.27	12.6	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	43
(Cont)	6/24/08	7.18	12.1	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	47.1
	12/29/08	7.13	14.0	>4000	<1.0	<2.0	<2.0	<4.0	<4.0	45.4
	6/29/09	7.15	14.2	>4000	<1.0	<2.0	<2.0	<4.0	5.7	43.9
	12/15/09	7.11	13.0	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	43.1
	6/23/10	7.30	12.4	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	43.5
	12/13/10	7.14	13.6	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	44.5
	6/21/11	7.19	12.5	>4000	<0.2	<1.0	<1.0	<2.0	4.9	37.2
OW-3	9/18/02	6.88	15.4	>4000	<.15	<.18	<.24	<.63	<5.1	95
	12/16/02	7.08	15.3	>4000	<.15	<.18	<.24	<.63	<1.6	63
	6/30/03	7.05	14.6	>4000	<.15	<.18	<.24	<.63	<1.6	200
	12/30/03	7.27	13.4	>4000	<.15	<.18	<.24	<.6 3	<1.8	85
	6/30/04	6.89	12.4	>4000	3.5	1.3	<.17	<.9 6	<2.0	68
	9/9/04[5]	6.86	13.5	>4000	<.18	<.17	<.17	<. 96	NA	NA
	12/29/04	6.65	12.3	>4000	<.18	<.21	<.17	<.9 6	<1.5	78
	6/30/05	6.90	12.5	>4000	<.074	<.078	<.088	<.2 0	<1.6	80
	12/28/05	7.12	15.2	>4000	<.074	<.078	<.088	<.2 0	<1.5	92
	6/29/06	7.59	15.8	>4000	<.074	<.078	<.088	<.2 0	<1.5	82
	1/25/07	7.47	12.7	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	62.9
	7/2/07	6.90	13.7	>4000	1500	71000	19000	178000	NA	NA
	1/31/08	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/24/08	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/05/09	7.05	14.0	>4000	<1.0	<2.0	<2.0	<4.0	<5.0	53
	6/29/09	7.15	14.1	>4000	1.0	<2.0	<2.0	<4.0	5.0	43.5
	7/27/09	7.11	14.2	>4000	NA	NA	NA	NA	NA	NA
	12/15/09	7.17	13.0	>4000	1.6	<2.0	<2.0	<4.0	<6.33	46.4
	1/04/10	7.15	13.2	>4000	<1.0	<2.0	<2.0	<4.0	NA	NA
	6/23/10	7.35	12.3	>4000	<1.0	<2.0	<2.0	<4.0	<13.0	44.8
	12/13/10	7.05	13.2	>4000	<1.0	<2.0	<2.0	<4.0	7.6	45.0
	6/21/11	7.19	12.3	>4000	1.4	<1.0	<1.0	<2.0	<6.2	40.1
	7/12/11	7.15	12.4	>4000	<1.0	<1.0	<1.0	<1.0	NA	NA

TABLE 1 (continued)

Summary of BTEX[1], TPH[2] and TOC[3] Analytical Results for Groundwater Samples Collected from Wattenberg Disposal Facility, Weld County, Colorado

Sample	Date	pH	Temperature (Celsius)	Specific Conductance[3]	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	TPH (mg/L)	TOC[4] (mg/L)
OW-4	12/15/09	7.14	12.9	>4000	<1.0	<2.0	<2.0	<4.0	NA	68.9
	6/23/10	7.17	13.5	>4000	<1.0	<2.0	<2.0	<4.0	<7.4	78.4
	12/13/10	7.18	13.1	>4000	<1.0	<2.0	<2.0	<4.0	<11	69.9
	6/21/11	7.23	12.2	>4000	<0.2	<1.0	<1.0	<2.0	<6.4	68.1

1 Benzene, toluene, ethylbenzene, and total xylenes by Method 8021B.
2 Total petroleum hydrocarbons by Method 1664.
3 Specific conductance in micro-siemens at 25 degrees Celsius.
4 Total organic carbon by Method 415.1.
5 Second sample collected in accordance with ground water monitoring plan.

J Estimated value.
mg/L milligrams per liter.
NA Not Analyzed
ug/L micrograms per liter.
NS No Sample

TABLE 2

Summary of Major Cation[1] Analytical Results for Groundwater Samples Collected from Wattenberg Disposal Facility, Weld County, Colorado

Sample	Date	pH	Temperature (Celsius)	Specific Conductance[2]	Calcium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)
OW-1	9/18/02	6.46	17.5	>4000	330	310	11	2300
	12/16/02	6.54	14.9	>4000	370	320	15	2500
	6/30/03	6.64	13.2	>4000	370	350	12	2600
	12/30/03	6.54	14.1	>4000	500	340	12	2600
	6/30/04	6.19	13.2	>4000	300	300	11	2000
	12/29/04	6.30	12.9	>4000	420	360	14	2600
	6/30/05	6.73	13.2	>4000	410	370	12	2500
	12/28/05	6.85	15.5	>4000	420	380	18	2700
	6/29/06	6.54	13.5	>4000	440	410	26	2700
	1/25/07	6.81	13.3	>4000	380	350	14	2300
	7/2/07	6.59	12.9	>4000	450	400	21	2700
	1/31/08	6.69	12.9	>4000	460	420	14	2900B
	6/24/08	6.52	12.3	>4000	410	380	11	2800
	12/29/08	6.50	14.7	>4000	460	420	12	2700
	6/29/09	6.52	14.9	>4000	440	410	11	2800
	12/15/09	6.51	13.3	>4000	470	470	15	2400
	6/23/10	6.61	12.4	>4000	554	501	<50	2810
	12/13/10	6.80	14.6	>4000	472	450	13	2540
	6/21/11	6.62	12.3	>4000	457	415	11.7	2400
OW-2	9/18/02	7.05	14.8	>4000	600	680	18	3800
	12/16/02	7.09	14.0	>4000	690	700	23	3700
	6/30/03	7.28	12.9	>4000	600	660	21	4200
	12/30/03	7.23	13.3	>4000	770	640	21	4300
	6/30/04	6.86	13.0	>4000	480	610	18	3500
	12/29/04	6.80	12.3	>4000	600	630	19	4000
	6/30/05	7.18	12.5	>4000	640	670	19	3800
	12/28/05	7.23	14.5	>4000	550	640	22	4000
	6/29/06	7.22	12.9	>4000	580	670	24	4700

TABLE 3

Summary of Major Anion Analytical Results for Groundwater Samples Collected from Wattenberg Disposal Facility, Weld County, Colorado

Sample	Date	pH	Temperature (Celsius)	Specific Conductance[1]	Bicarbonate (mg/L)	Carbonate (mg/L)	Nitrate as N[3] (mg/L)	Nitrite as N[3] (mg/L)	Sulfate[3] (mg/L)	Chloride[3] (mg/L)
OW-1	9/18/02	6.46	17.5	>4000	890	<1	<.36	<.34	2500	3300
	12/16/02	6.54	14.9	>4000	880	<1	<1.4	<1.3	2400	3800
	6/303/03	6.64	13.2	>4000	NS	NS	<1.8	<2.5	1900	3400
	12/30/03	6.54	14.1	>4000	880	<1.2	<0.01	<0.02	2300	1000
	6/30/04	6.19	13.2	>4000	780	<1.2	<0.02	<0.02	2100	3800
	12/29/04	6.30	12.9	>4000	840	<3.4	<0.07	<0.04	2100	3400
	6/30/05	6.73	13.2	>4000	850	<1.2	<0.02	<0.02	2400	3900
	12/28/05	6.85	15.5	>4000	860	<1.2	<0.02	<0.02	2600	4500
	6/29/06	6.54	13.5	>4000	850	<1.2	<0.02	<0.02	2700	4800
	1/25/07	6.81	13.3	>4000	1000	<5.0	<0.56	<0.76	2030	3880
	7/2/07	6.59	12.9	>4000	976	<5.0	<0.10	<0.40	1970	3940
	1/31/08	6.69	12.9	>4000	977	<5.0	<0.25	<0.40	1870	4210
	6/24/08	6.52	12.3	>4000	936	<5.0	<2.3	<6.1	1830	4400
	12/29/08	6.50	14.7	>4000	754	<5.0	<.45	<15	1730	9070
	6/29/09	6.52	14.9	>4000	763	<5.0	<.90	<3.1	1690	4690
	12/15/09	6.51	13.3	>4000	742	<5.0	<1.5	<1.5	1640	4880
	6/23/10	6.61	12.4	>4000	707	<5.0	<0.90	<6.1	1650	4780
	12/13/10	6.80	14.6	>4000	740	<5.0	<0.90	<15	1740	5080
	6/21/11	6.62	12.3	>4000	705	<5.0	<0.45	<15	1680	4650
OW-2	9/18/02	7.05	14.8	>4000	1100	<1	13	<.84	5200	5300
	12/16/02	7.09	14.0	>4000	1100	<1	5	<1.7	4700	5800
	6/30/03	7.28	12.9	>4000	NS	NS	16	<2.5	5300	4200
	12/30/03	7.23	13.3	>4000	1100	<1.2	16	<0.09	5200	4500
	6/30/04	6.86	13.0	>4000	960	<1.2	16	<0.25	5700	5000
	12/29/04	6.80	12.3	>4000	1000	<3.4	13	<0.04	5000	4300
	6/30/05	7.18	12.5	>4000	1100	<1.2	12	<0.25	5800	4500
	12/28/05	7.23	14.5	>4000	1000	<1.2	14	16	5600	5400
	6/29/06	7.22	12.9	>4000	970	<1.2	9	<0.25	5600	6100

TABLE 3 (continued)

Summary of Major Anion Analytical Results for Groundwater Samples Collected from Wattenberg Disposal Facility, Weld County, Colorado

Sample	Date	pH	Temperature (Celsius)	Specific Conductance[1]	Bicarbonate (mg/L)	Carbonate (mg/L)	Nitrate as N[3] (mg/L)	Nitrite as N[3] (mg/L)	Sulfate[3] (mg/L)	Chloride[3] (mg/L)
OW-2	1/25/07	7.37	12.8	>4000	1210	<5.0	7.1	<1.9	4930	5000
(cont)	7/2/07	7.18	13.3	>4000	1190	<5.0	9	<1.0	5270	4790
	1/31/08	7.27	12.6	>4000	1200	<5.0	6.6	<.40	4640	4500
	6/24/08	7.18	12.1	>4000	1170	<5.0	4.26	<6.1	4400	5200
	12/29/08	7.13	14.0	>4000	950	<5.0	7.8	<15	4830	4940
	6/29/09	7.15	14.2	>4000	931	<5.0	7.2	<6.1	4900	5070
	12/15/09	7.11	13.0	>4000	930	<5.0	12.2	<1.5	6240	4230
	6/23/10	7.30	12.4	>4000	904	<5.0	6.4	<15.0	4960	5160
	12/13/10	7.14	13.6	>4000	930	<5.0	7.9	<15.0	6160	5750
	6/21/11	7.19	12.5	>4000	948	<5.0	5.7	<15.0	4740	4870
OW-3	9/18/02	6.88	15.4	>4000	NS	NS	NS	NS	NS	NS
	12/16/02	7.08	15.3	>4000	1100	<1	<1.8	<1.7	8400	3800
	6/30/03	7.13	14.6	>4000	NS	NS	2.0J	<2.5	6100	3800
	12/30/03	7.27	13.4	>4000	1200	<1.2	0.24	<0.09	6300	1200
	6/30/04	6.89	12.4	>4000	920	<1.2	0.20	<0.02	5400	4900
	12/29/04	6.65	12.3	>4000	1100	<3.4	<0.07	<0.07	6700	3200
	6/30/05	6.90	12.5	>4000	1100	<1.2	<0.28	<0.25	8000	3800
	12/28/05	7.12	15.2	>4000	1100	<1.2	6.2	11	6800	3800
	6/29/06	6.54	13.5	>4000	1100	<1.2	2.7	<0.25	680	4800
	1/25/07	7.47	12.7	>4000	1100	<5.0	<1.4	<1.9	5900	4750
	7/2/07	6.9	13.7	>4000	NA	NA	NA	NA	NA	NA
	1/31/08	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/24/08	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/05/09	7.05	14.0	>4000	1200	<5.0	4.3	1.9	6100	4390
	6/29/09	7.15	14.1	>4000	919	<5.0	7.4	<6.1	5010	4970
	12/15/09	7.17	13.0	>4000	920	<5.0	6.2	<1.5	4740	5050
	6/23/10	7.35	12.3	>4000	960	<5.0	8.0	<6.1	5960	3920
	12/13/10	7.05	13.2	>4000	960	<5.0	9.5	<15.0	5960	4690
	6/21/11	7.19	12.3	>4000	973	<5.0	4.0	<15.0	5100	3490

TABLE 3 (continued)

Summary of Major Anion Analytical Results for Groundwater Samples Collected from Wattenberg Disposal Facility, Weld County, Colorado

Sample	Date	pH	Temperature (Celsius)	Specific Conductance[1]	Bicarbonate (mg/L)	Carbonate (mg/L)	Nitrate as N[3] (mg/L)	Nitrite as N[3] (mg/L)	Sulfate[3] (mg/L)	Chloride[3] (mg/L)
OW-4	12/15/09	7.14	12.9	>4000	276	<5.0	89.3	<1.5	6450	4350
	6/23/10	7.17	13.5	>4000	257	<5.0	80.2	<6.1	6650	3580
	12/13/10	7.18	13.1	>4000	300	<5.0	69.1	<15.0	7880	3840
	6/21/11	7.23	12.2	>4000	262	<5.0	71.0	<15.0	6880	3690

1 Specific conductance in micro-siemens at 25 degrees Celsius.
2 By Method 310.1.
3 By Method 300.
J Analyte was detected above the Reporting Limit but below the Quantitation Limit.

mg/L milligrams per liter.
NS No sample.

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Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D35614

Wattenberg Tank

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D35614-1	06/19/12	08:05 MH	06/19/12	AQ	Ground Water	OW-1
D35614-1F	06/19/12	08:05 MH	06/19/12	AQ	Groundwater Filtered	OW-1
D35614-2	06/19/12	09:00 MH	06/19/12	AQ	Ground Water	OW-2
D35614-2F	06/19/12	09:00 MH	06/19/12	AQ	Groundwater Filtered	OW-2
D35614-3	06/19/12	10:00 MH	06/19/12	AQ	Ground Water	OW-3
D35614-3F	06/19/12	10:00 MH	06/19/12	AQ	Groundwater Filtered	OW-3
D35614-4	06/19/12	07:00 MH	06/19/12	AQ	Ground Water	OW-4
D35614-4F	06/19/12	07:00 MH	06/19/12	AQ	Groundwater Filtered	OW-4

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffmann Company, Inc.	**Job No**	D35614
Site:	Wattenberg Tank	**Report Date**	7/3/2012 1:59:30 PM

On 06/19/2012, 4 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4.0 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D35614 was assigned to the project. The lab sample IDs, client sample IDs, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GC By Method SW846 8021B

Matrix AQ **Batch ID:** GTA937

- All samples were analyzed within the recommended method holding time.
- Sample(s) D35500-5MS, D35500-5MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010C

Matrix AQ **Batch ID:** MP7763

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35556-1MS, D35556-1MSD, D35556-1SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Magnesium are outside control limits for sample MP7763-SD1. Probable cause due to sample homogeneity.
- MP7763-SD1 for Magnesium: Serial dilution indicates possible matrix interference.

Wet Chemistry By Method EPA 1664A

Matrix AQ **Batch ID:** GP7619

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35613-1MS were used as the QC samples for the HEM Oil and Grease analysis.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix AQ **Batch ID:** GP7531

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35605-2MS, D35605-2MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate, Chloride analysis.
- D35614-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.
- All samples for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2320B

Matrix AQ	Batch ID: GN15605

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35590-1DUP, D35590-1MS, D35590-1MSD were used as the QC samples for the Alkalinity, Total as CaCO3 analysis.

Matrix AQ	Batch ID: GN15606

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix AQ	Batch ID: GN15607

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method SM20 2540C

Matrix AQ	Batch ID: GN15581

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35590-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 5310B

Matrix AQ	Batch ID: GP7527

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35259-1MS, D35259-1MSD, D35259-2DUP were used as the QC samples for the Total Organic Carbon analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Job Number: D35614
Account: K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank
Collected: 06/19/12

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D35614-1	**OW-1**					
Alkalinity, Bicarbonate as CaCO3		822	5.0		mg/l	SM20 2320B
Alkalinity, Total as CaCO3		822	5.0		mg/l	SM20 2320B
Chloride		4170	130		mg/l	EPA 300/SW846 9056
Solids, Total Dissolved		10100	10		mg/l	SM20 2540C
Sulfate		1790	50		mg/l	EPA 300/SW846 9056
Total Organic Carbon		33.3	2.0		mg/l	SM20 5310B
D35614-1F	**OW-1**					
Calcium		510000	4000		ug/l	SW846 6010C
Magnesium		463000	2000		ug/l	SW846 6010C
Potassium		12600	10000		ug/l	SW846 6010C
Sodium		2720000	4000		ug/l	SW846 6010C
D35614-2	**OW-2**					
Alkalinity, Bicarbonate as CaCO3		951	5.0		mg/l	SM20 2320B
Alkalinity, Total as CaCO3		951	5.0		mg/l	SM20 2320B
Chloride		4890	130		mg/l	EPA 300/SW846 9056
Nitrogen, Nitrate		4.3	0.90		mg/l	EPA 300/SW846 9056
Solids, Total Dissolved		15900	10		mg/l	SM20 2540C
Sulfate		4730	130		mg/l	EPA 300/SW846 9056
Total Organic Carbon		45.4	5.0		mg/l	SM20 5310B
D35614-2F	**OW-2**					
Calcium		405000	4000		ug/l	SW846 6010C
Magnesium		425000	2000		ug/l	SW846 6010C
Potassium		10400	10000		ug/l	SW846 6010C
Sodium		2400000	4000		ug/l	SW846 6010C
D35614-3	**OW-3**					
Alkalinity, Bicarbonate as CaCO3		959	5.0		mg/l	SM20 2320B
Alkalinity, Total as CaCO3		959	5.0		mg/l	SM20 2320B
Chloride		3560	130		mg/l	EPA 300/SW846 9056
Nitrogen, Nitrate		8.8	0.90		mg/l	EPA 300/SW846 9056
Solids, Total Dissolved		15500	10		mg/l	SM20 2540C
Sulfate		5690	130		mg/l	EPA 300/SW846 9056
Total Organic Carbon		40.5	5.0		mg/l	SM20 5310B

Summary of Hits

Job Number: D35614
Account: K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank
Collected: 06/19/12

3

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D35614-3F	**OW-3**					
Calcium		447000	4000		ug/l	SW846 6010C
Magnesium		528000	2000		ug/l	SW846 6010C
Potassium		16800	10000		ug/l	SW846 6010C
Sodium		3530000	4000		ug/l	SW846 6010C
D35614-4	**OW-4**					
Alkalinity, Bicarbonate as CaCO3		261	5.0		mg/l	SM20 2320B
Alkalinity, Total as CaCO3		261	5.0		mg/l	SM20 2320B
Chloride		3920	130		mg/l	EPA 300/SW846 9056
Nitrogen, Nitrate		87.5	4.5		mg/l	EPA 300/SW846 9056
Solids, Total Dissolved		17200	10		mg/l	SM20 2540C
Sulfate		6990	130		mg/l	EPA 300/SW846 9056
Total Organic Carbon		71.3	5.0		mg/l	SM20 5310B
D35614-4F	**OW-4**					
Calcium		504000	4000		ug/l	SW846 6010C
Magnesium		539000	2000		ug/l	SW846 6010C
Potassium		17900	10000		ug/l	SW846 6010C
Sodium		3740000	4000		ug/l	SW846 6010C

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	OW-1		
Lab Sample ID:	D35614-1	**Date Sampled:**	06/19/12
Matrix:	AQ - Ground Water	**Date Received:**	06/19/12
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Wattenberg Tank		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA16587.D	1	06/20/12	SK	n/a	n/a	GTA937
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	87%		60-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OW-1		
Lab Sample ID:	D35614-1	**Date Sampled:**	06/19/12
Matrix:	AQ - Ground Water	**Date Received:**	06/19/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	822	5.0	mg/l	1	06/27/12	CT	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	06/27/12	CT	SM20 2320B
Alkalinity, Total as CaCO3	822	5.0	mg/l	1	06/27/12	CT	SM20 2320B
Chloride	4170	130	mg/l	250	06/19/12 17:51	JML	EPA 300/SW846 9056
HEM Oil and Grease	< 4.9	4.9	mg/l	1	07/03/12	SWT	EPA 1664A
Nitrogen, Nitrate [a]	< 0.90	0.90	mg/l	20	06/19/12 14:44	JML	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 2.5	2.5	mg/l	250	06/19/12 17:51	JML	EPA 300/SW846 9056
Solids, Total Dissolved	10100	10	mg/l	1	06/26/12	JD	SM20 2540C
Sulfate	1790	50	mg/l	100	06/19/12 17:37	JML	EPA 300/SW846 9056
Total Organic Carbon	33.3	2.0	mg/l	2	06/20/12 15:18	NS	SM20 5310B

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	OW-1		
Lab Sample ID:	D35614-1F	**Date Sampled:**	06/19/12
Matrix:	AQ - Groundwater Filtered	**Date Received:**	06/19/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	510000	4000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Magnesium	463000	2000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Potassium	12600	10000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Sodium	2720000	4000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA2553
(2) Prep QC Batch: MP7763

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	OW-2		
Lab Sample ID:	D35614-2	**Date Sampled:**	06/19/12
Matrix:	AQ - Ground Water	**Date Received:**	06/19/12
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Wattenberg Tank		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA16588.D	1	06/20/12	SK	n/a	n/a	GTA937
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	84%		60-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OW-2		
Lab Sample ID:	D35614-2	**Date Sampled:**	06/19/12
Matrix:	AQ - Ground Water	**Date Received:**	06/19/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	951	5.0	mg/l	1	06/27/12	CT	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	06/27/12	CT	SM20 2320B
Alkalinity, Total as CaCO3	951	5.0	mg/l	1	06/27/12	CT	SM20 2320B
Chloride	4890	130	mg/l	250	06/19/12 18:06	JML	EPA 300/SW846 9056
HEM Oil and Grease	< 4.8	4.8	mg/l	1	07/03/12	SWT	EPA 1664A
Nitrogen, Nitrate	4.3	0.90	mg/l	20	06/19/12 14:58	JML	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 2.5	2.5	mg/l	250	06/19/12 18:06	JML	EPA 300/SW846 9056
Solids, Total Dissolved	15900	10	mg/l	1	06/26/12	JD	SM20 2540C
Sulfate	4730	130	mg/l	250	06/19/12 18:06	JML	EPA 300/SW846 9056
Total Organic Carbon	45.4	5.0	mg/l	5	06/20/12 15:29	NS	SM20 5310B

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	OW-2		
Lab Sample ID:	D35614-2F	**Date Sampled:**	06/19/12
Matrix:	AQ - Groundwater Filtered	**Date Received:**	06/19/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	405000	4000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Magnesium	425000	2000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Potassium	10400	10000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Sodium	2400000	4000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA2553
(2) Prep QC Batch: MP7763

RL = Reporting Limit

Report of Analysis

Client Sample ID:	OW-3		
Lab Sample ID:	D35614-3F	**Date Sampled:**	06/19/12
Matrix:	AQ - Groundwater Filtered	**Date Received:**	06/19/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	447000	4000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Magnesium	528000	2000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Potassium	16800	10000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Sodium	3530000	4000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA2553
(2) Prep QC Batch: MP7763

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	OW-4		
Lab Sample ID:	D35614-4	**Date Sampled:**	06/19/12
Matrix:	AQ - Ground Water	**Date Received:**	06/19/12
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Wattenberg Tank		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA16590.D	1	06/20/12	SK	n/a	n/a	GTA937
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	81%		60-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OW-4		
Lab Sample ID:	D35614-4	**Date Sampled:**	06/19/12
Matrix:	AQ - Ground Water	**Date Received:**	06/19/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	261	5.0	mg/l	1	06/27/12	CT	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	06/27/12	CT	SM20 2320B
Alkalinity, Total as CaCO3	261	5.0	mg/l	1	06/27/12	CT	SM20 2320B
Chloride	3920	130	mg/l	250	06/19/12 19:18	JML	EPA 300/SW846 9056
HEM Oil and Grease	< 5.2	5.2	mg/l	1	07/03/12	SWT	EPA 1664A
Nitrogen, Nitrate	87.5	4.5	mg/l	100	06/19/12 18:35	JML	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 2.5	2.5	mg/l	250	06/19/12 19:18	JML	EPA 300/SW846 9056
Solids, Total Dissolved	17200	10	mg/l	1	06/26/12	JD	SM20 2540C
Sulfate	6990	130	mg/l	250	06/19/12 19:18	JML	EPA 300/SW846 9056
Total Organic Carbon	71.3	5.0	mg/l	5	06/20/12 16:14	NS	SM20 5310B

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	OW-4		
Lab Sample ID:	D35614-4F	**Date Sampled:**	06/19/12
Matrix:	AQ - Groundwater Filtered	**Date Received:**	06/19/12
		Percent Solids:	n/a
Project:	Wattenberg Tank		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	504000	4000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Magnesium	539000	2000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Potassium	17900	10000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]
Sodium	3740000	4000	ug/l	1	06/27/12	06/28/12	JB	SW846 6010C [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA2553
(2) Prep QC Batch: MP7763

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #: D35614

Client / Reporting Information

Company Name: K.P. Kauffman Company, Inc.
Address: 1675 Broadway, Suite 2800
City: Denver State: CO Zip: 80202-4628
Project Contact: Susana Lara-Mesa SLaraMesa@kpk.com
Phone #: 303-665-1400
Samplers's Name: MICHAEL HATTEL (303-665-1400)

Project Information

Project Name: WATTENBERG GROUNDWATER
Street:
City: Fort Lupton State: CO
Project #:
Fax #:
Client Purchase Order #: 7591

Requested Analysis

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	OIL & GREASE 1664	ANIONS (NITRATE, NITRITE, SULFATE, CHLORIDE)	TOC	CATIONS (Ca, K, Mg, NA)	BTEX 8021	ALKALINITY (CARB/BICARB)	TDS				LAB USE ONLY
	OW-1		6/19/12	0805	MDH	GW	8	X			X					X	X	X	X	X	X	X				01
	OW-2			0900	MDH	GW	8	X			X					X	X	X	X	X	X	X				02
	OW-3			1000	MDH	GW	8	X			X					X	X	X	X	X	X	X				03
	OW-4			0700	MDH	GW	8	X			X					X	X	X	X	X	X	X				04

Matrix Codes: DW- Drinking Water; GW- Ground Water; WW- Water; SW- Surface Water; SO- Soil; SL-Sludge; OI-Oil; LIQ- Other Liquid; AIR- Air; SOL-Other Solid; WP-Wipe

DR 6/19

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]

Approved By:/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] NJ Reduced
- [ ] NJ Full
- [X] Hard Copy
- [ ] FULL CLP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] PDF

Comments / Remarks

PDF copy to Susana Lara-Mesa with KPK at SLaraMesa@kpk.com

PDF copy also to Mike Hattel with APEX at mhattel@msn.com

Hard copy ONLY to Mike Hattel with APEX, P.O. Box 369, Louisville, CO 80027-0369

NO TDS BOTTLE RECEIVED DR 6/19. ok to use Alk-Ap

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	[signature]	6/19/12 1215	[signature] 6/19 1215	2		2
3			3	4		4
5			5			

Custody Seal #: HD
Preserved where applicable: X
On Ice: X
Cooler Temp.: 4.0

5.1 5

D35614: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D35614 **Client:** KP KAUFFMAN **Immediate Client Services Action Required:** No

Date / Time Received: 6/19/2012 12:15:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: WATTENBERG **Airbill #'s:** HD

Cooler Security	Y	or N		Y	or N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	or N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	Infared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservation	Y	or N	N/A
1. Trip Blank present / cooler:	☐	☐	
2. Trip Blank listed on COC:	☐	☐	
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	or N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	or N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	or N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www/accutest.com

5.1

5

D35614: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D35614
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA937-MB	TA16580.D	1	06/20/12	SK	n/a	n/a	GTA937

The QC reported here applies to the following samples: **Method:** SW846 8021B

D35614-1, D35614-2, D35614-3, D35614-4

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	ug/l	
108-88-3	Toluene	ND	2.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	83%	60-140%

Blank Spike Summary

Job Number: D35614
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA937-BS	TA16581.D	1	06/20/12	SK	n/a	n/a	GTA937

The QC reported here applies to the following samples: **Method:** SW846 8021B

D35614-1, D35614-2, D35614-3, D35614-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	23.5	86	70-130
100-41-4	Ethylbenzene	45.6	39.8	87	70-130
108-88-3	Toluene	212	175	83	70-130
1330-20-7	Xylenes (total)	216	194	90	68-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	89%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D35614
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D35500-5MS	TA16583.D	20	06/20/12	SK	n/a	n/a	GTA937
D35500-5MSD	TA16584.D	20	06/20/12	SK	n/a	n/a	GTA937
D35500-5	TA16582.D	20	06/20/12	SK	n/a	n/a	GTA937

The QC reported here applies to the following samples: **Method:** SW846 8021B

D35614-1, D35614-2, D35614-3, D35614-4

CAS No.	Compound	D35500-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2330		544	2720	72	2740	75	1	67-130/30
100-41-4	Ethylbenzene	594		912	1360	84	1350	83	1	62-130/30
108-88-3	Toluene	101		4230	3520	81	3490	80	1	66-130/30
1330-20-7	Xylenes (total)	4670		4320	8160	81	8090	79	1	61-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D35500-5	Limits
120-82-1	1,2,4-Trichlorobenzene	90%	89%	86%	60-140%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

GC Volatiles

Raw Data

Manual Integrations
APPROVED
(compounds with "m" flag)
Judy Melson
06/21/12 09:26

Quantitation Report (QT Reviewed)

Signal #1 : Z:\062012\TA16587.D\FID1A.CH Vial: 18
Signal #2 : Z:\062012\TA16587.D\FID2B.CH
Acq On : 20 Jun 2012 7:27 pm Operator: StephK
Sample : D35614-1 Inst : BTEX2
Misc : GC2924,GTA937,,,,,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 21 08:46:38 2012 Quant Results File: TA904GA904WATER.RES

Quant Method : C:\MSDCHEM\1...\TA904GA904WATER.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Jun 21 08:46:16 2012
Response via : Initial Calibration
DataAcq Meth : TVB2.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
2)	S	1,2,4-Trichlorobenzene	14.70	3840982	100.910	%	
10)	S	1,2,4-Trichlorobenzene (P)	14.70	2332483	86.846	%	m
		Target Compounds					
1)	H	TVH-Gasoline	7.55	5609965	<MDL	mg/L	
4)	T	Methyl-t-butyl-ether	2.60	52646	1.560	ug/L	
5)	T	Benzene	4.91	50912	0.602	ug/L	m
6)	T	Toluene	0.00	0	N.D.	ug/L	d
7)	T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8)	T	m,p-Xylene	10.99	14028	0.183	ug/L	m
9)	T	o-Xylene	0.00	0	N.D.	ug/L	d
11)	T	Naphthalene	14.93	76175	1.700	ug/L	m

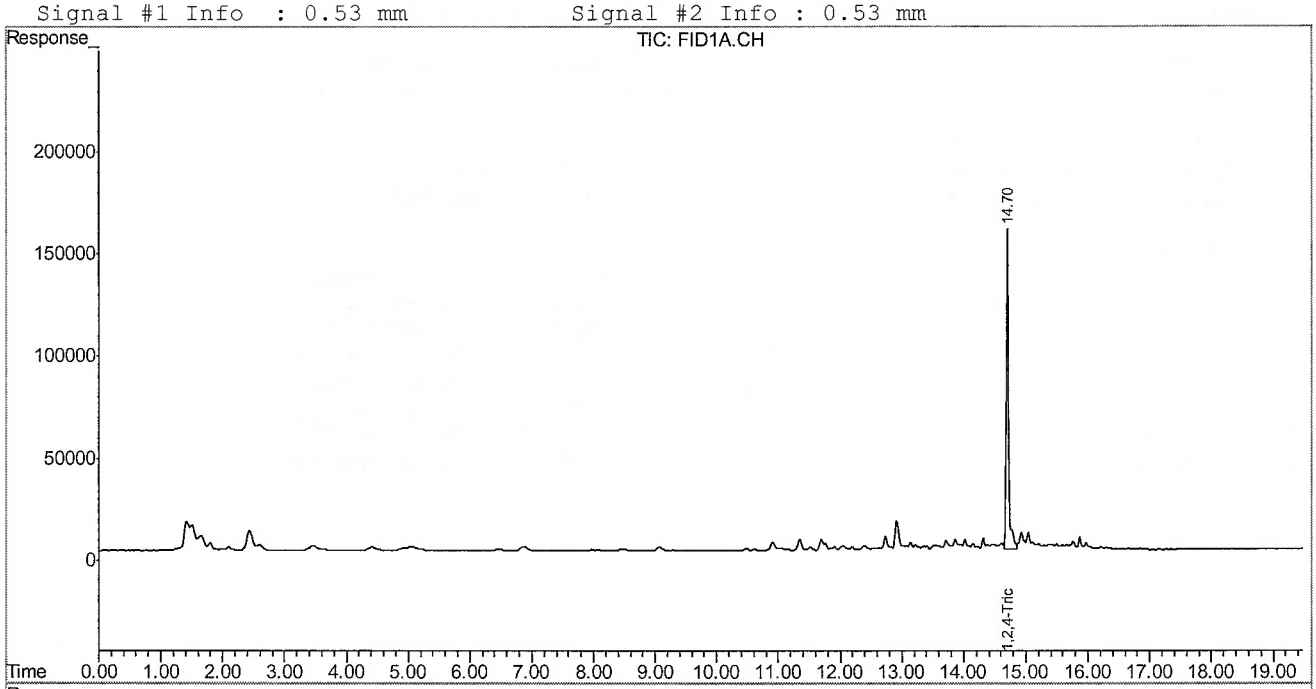
(f)=RT Delta > 1/2 Window (m)=manual int.
TA16587.D TA904GA904WATER.M Thu Jun 21 08:57:02 2012 GC

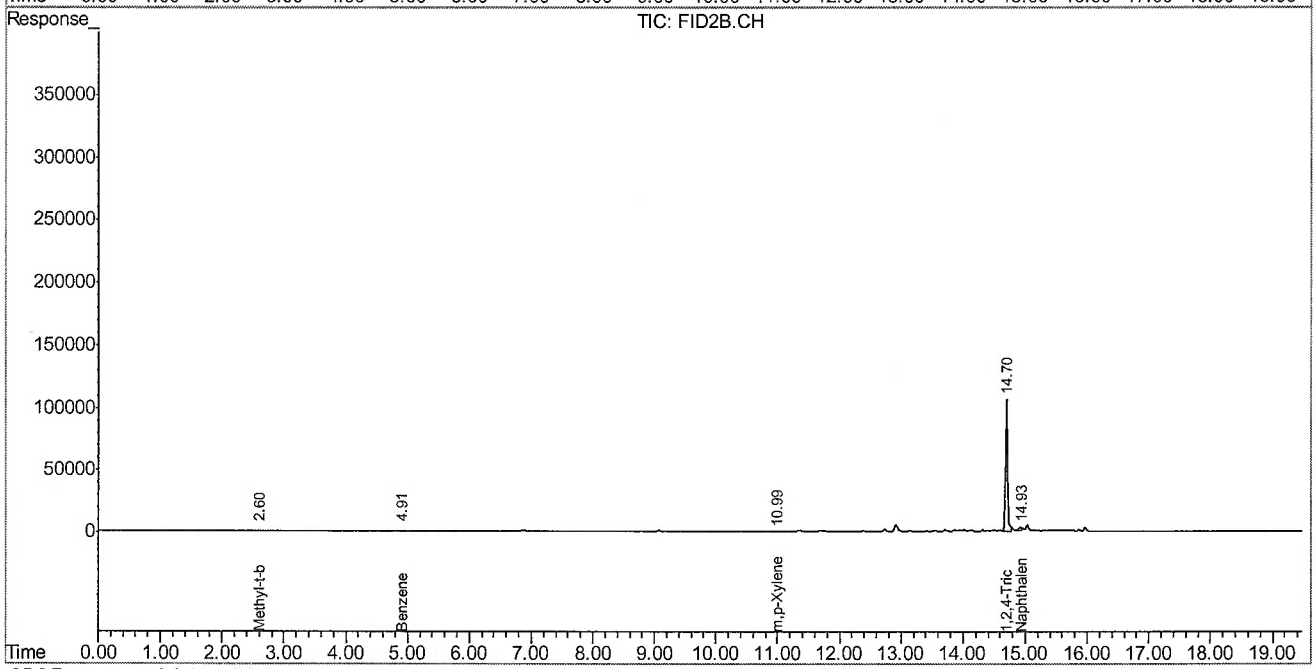
Quantitation Report (QT Reviewed)

Signal #1 : Z:\062012\TA16587.D\FID1A.CH Vial: 18
Signal #2 : Z:\062012\TA16587.D\FID2B.CH
Acq On : 20 Jun 2012 7:27 pm Operator: StephK
Sample : D35614-1 Inst : BTEX2
Misc : GC2924,GTA937,,,,,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 21 6:54 2012 Quant Results File: TA904GA904WATER.RES

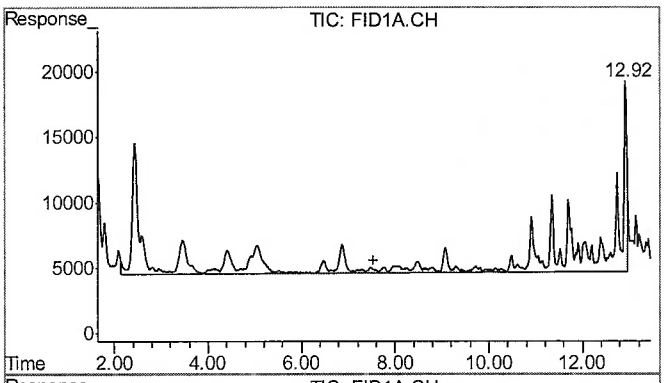
Quant Method : C:\MSDCHEM\1...\TA904GA904WATER.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Jun 21 08:46:16 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB2.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm



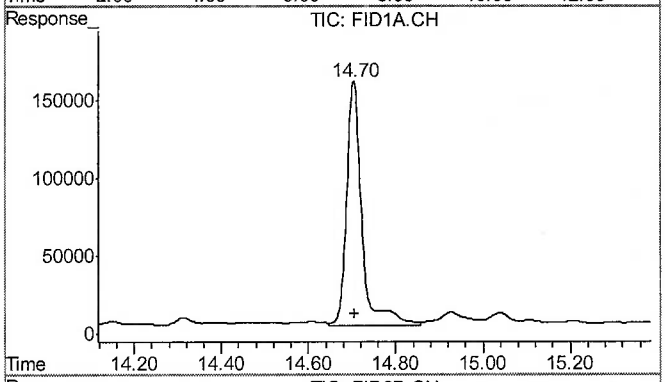


TA16587.D TA904GA904WATER.M Thu Jun 21 08:57:02 2012 GC Page 2



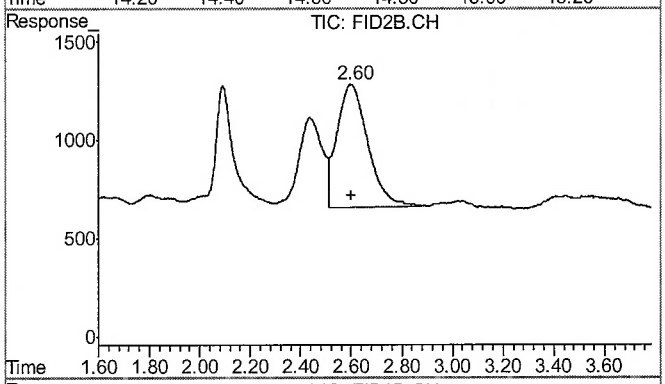
#1 TVH-Gasoline

R.T.: 7.550 min
Delta R.T.: 0.000 min
Response: 5609965
Conc: N.D.



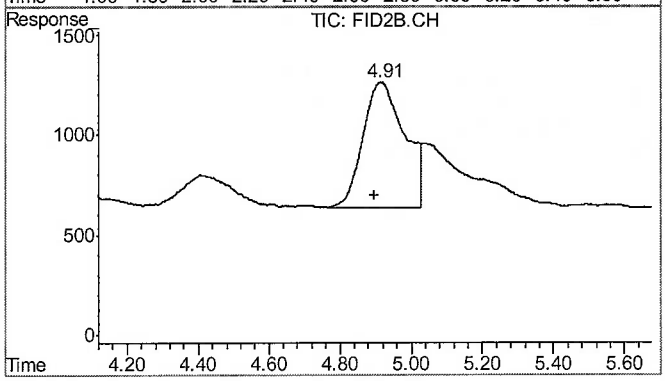
#2 1,2,4-Trichlorobenzene

R.T.: 14.705 min
Delta R.T.: 0.000 min
Response: 3840982
Conc: 100.91 %



#4 Methyl-t-butyl-ether

R.T.: 2.601 min
Delta R.T.: 0.003 min
Response: 52646
Conc: 1.56 ug/L

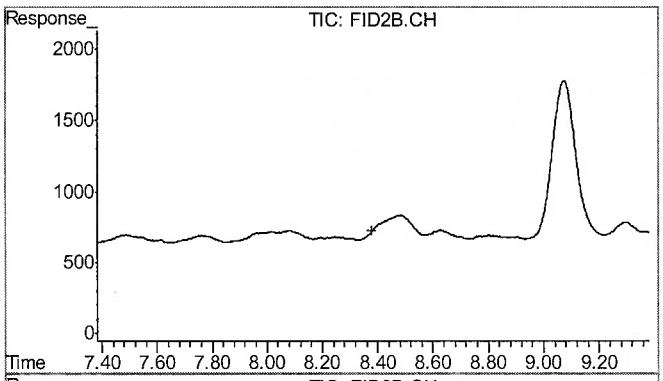


#5 Benzene

R.T.: 4.913 min
Delta R.T.: 0.017 min
Response: 50912
Conc: 0.60 ug/L m

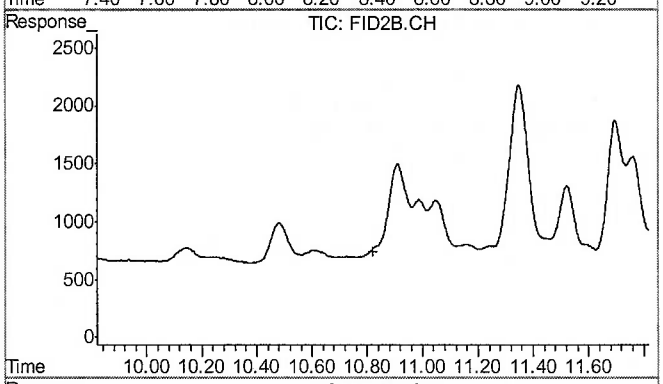
7.1.1

7



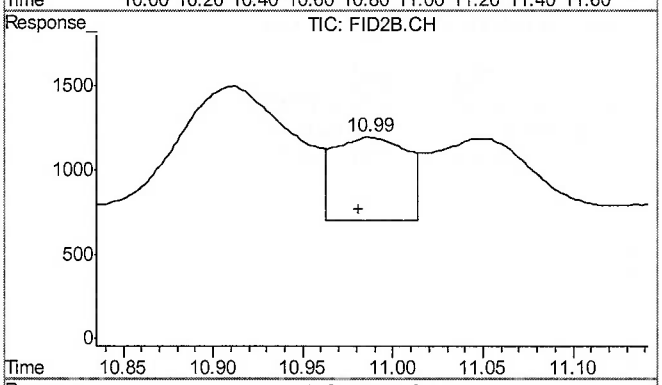
#6 Toluene

R.T.: 0.000 min
Exp R.T. : 8.382 min
Response: 0
Conc: N.D.



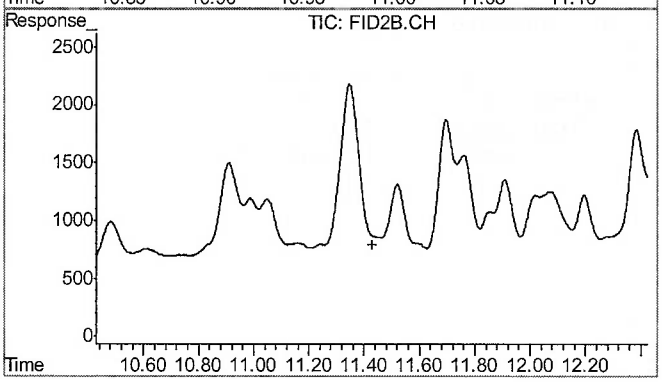
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.820 min
Response: 0
Conc: N.D.



#8 m,p-Xylene

R.T.: 10.986 min
Delta R.T.: 0.005 min
Response: 14028
Conc: 0.18 ug/L m

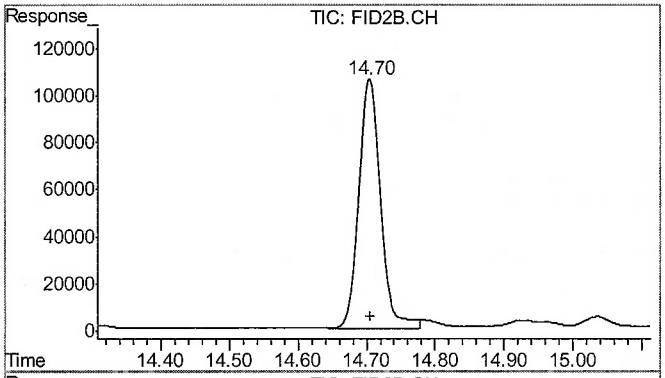


#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 11.428 min
Response: 0
Conc: N.D.

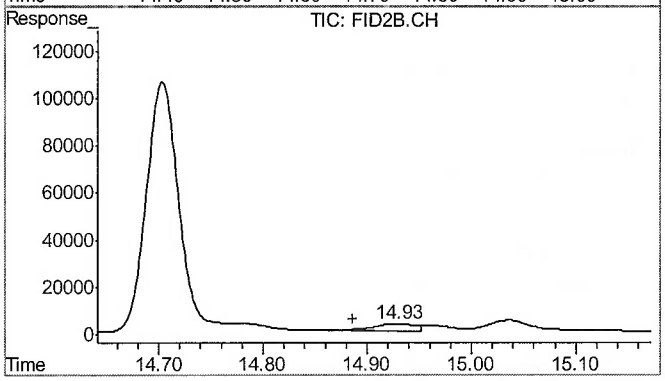
7.1.1

7



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.703 min
Delta R.T.: -0.002 min
Response: 2332483
Conc: 86.85 % m



#11 Naphthalene

R.T.: 14.928 min
Delta R.T.: 0.041 min
Response: 76175
Conc: 1.70 ug/L m

7.1.1

7

Quantitation Report (QT Reviewed)

Signal #1 : Z:\062012\TA16588.D\FID1A.CH Vial: 19
Signal #2 : Z:\062012\TA16588.D\FID2B.CH
Acq On : 20 Jun 2012 8:02 pm Operator: StephK
Sample : D35614-2 Inst : BTEX2
Misc : GC2924,GTA937,,,,,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 21 08:46:41 2012 Quant Results File: TA904GA904WATER.RES

Quant Method : C:\MSDCHEM\1...\TA904GA904WATER.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Jun 21 08:46:16 2012
Response via : Initial Calibration
DataAcq Meth : TVB2.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
2)	S	1,2,4-Trichlorobenzene	14.70	3307700	86.899	%	
10)	S	1,2,4-Trichlorobenzene (P)	14.70	2245736	83.617	%	
		Target Compounds					
1)	H	TVH-Gasoline	7.55	1566721	<MDL	mg/L	
4)	T	Methyl-t-butyl-ether	2.60	128726	3.815	ug/L	
5)	T	Benzene	0.00	0	N.D.	ug/L	d
6)	T	Toluene	0.00	0	N.D.	ug/L	d
7)	T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8)	T	m,p-Xylene	0.00	0	N.D.	ug/L	d
9)	T	o-Xylene	0.00	0	N.D.	ug/L	d
11)	T	Naphthalene	14.89	4142	<MDL	ug/L	m

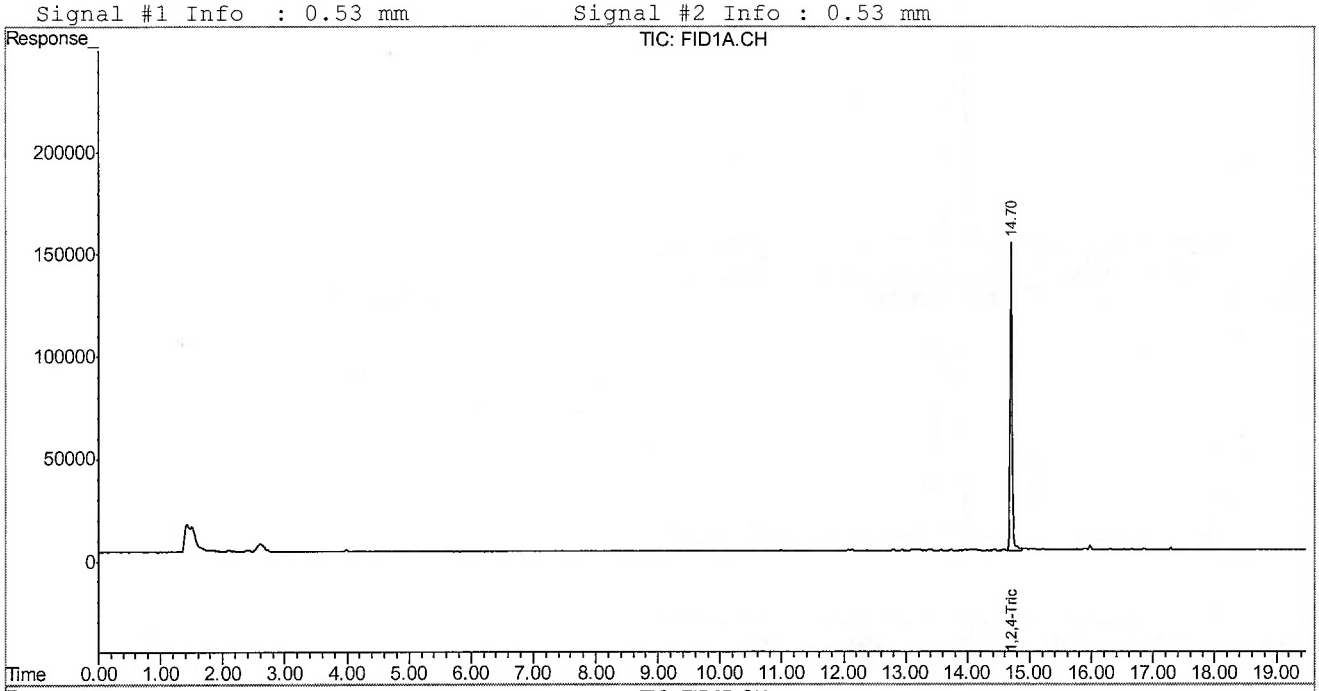
(f)=RT Delta > 1/2 Window (m)=manual int.
TA16588.D TA904GA904WATER.M Thu Jun 21 08:57:04 2012 GC

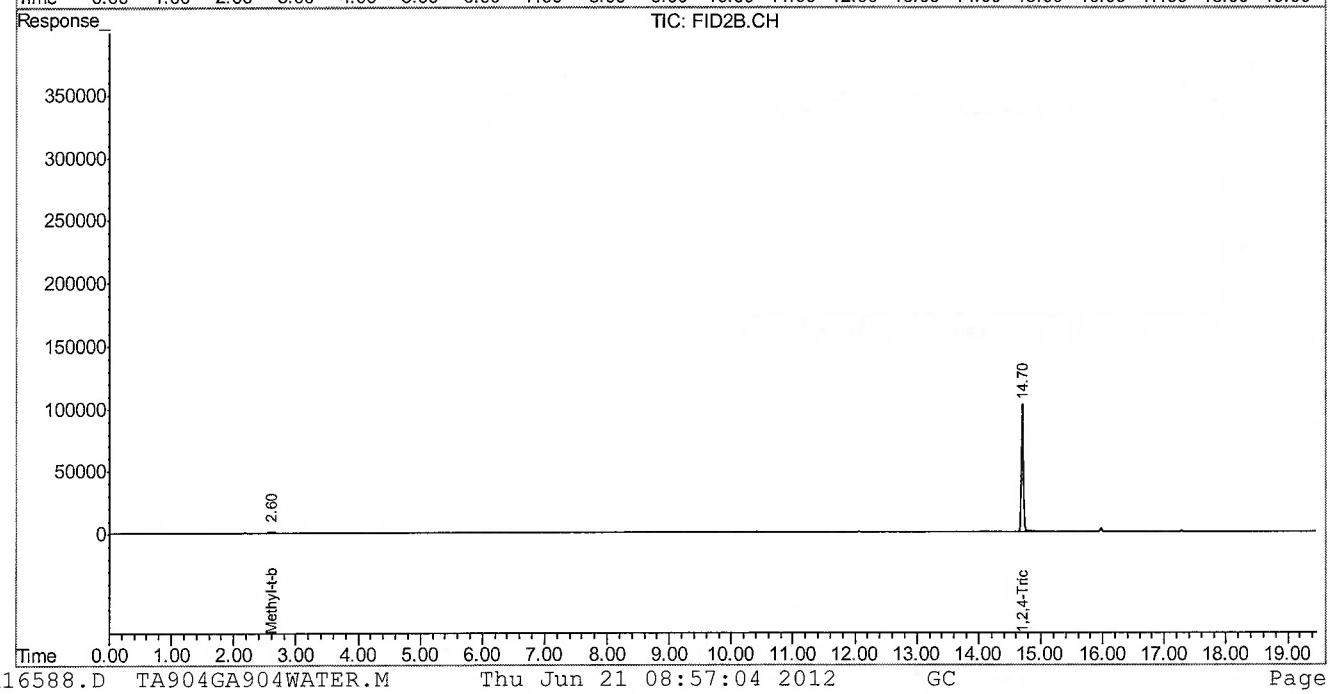
Quantitation Report (QT Reviewed)

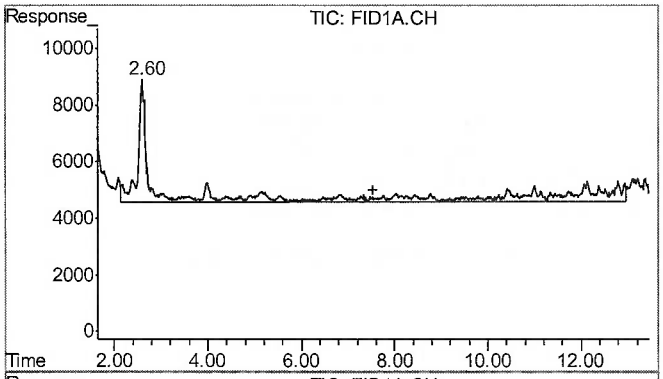
Signal #1 : Z:\062012\TA16588.D\FID1A.CH Vial: 19
Signal #2 : Z:\062012\TA16588.D\FID2B.CH
Acq On : 20 Jun 2012 8:02 pm Operator: StephK
Sample : D35614-2 Inst : BTEX2
Misc : GC2924,GTA937,,,,,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 21 6:55 2012 Quant Results File: TA904GA904WATER.RES

Quant Method : C:\MSDCHEM\1...\TA904GA904WATER.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Jun 21 08:46:16 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB2.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

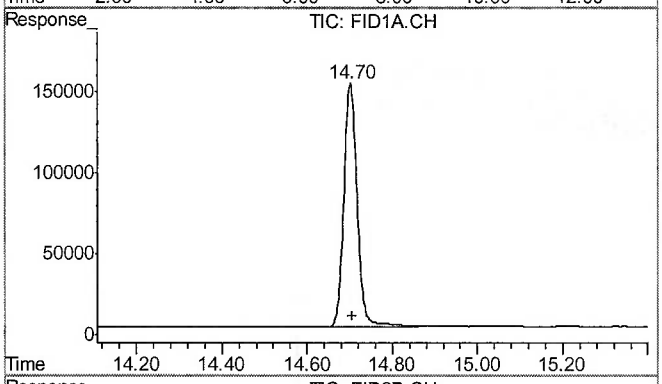






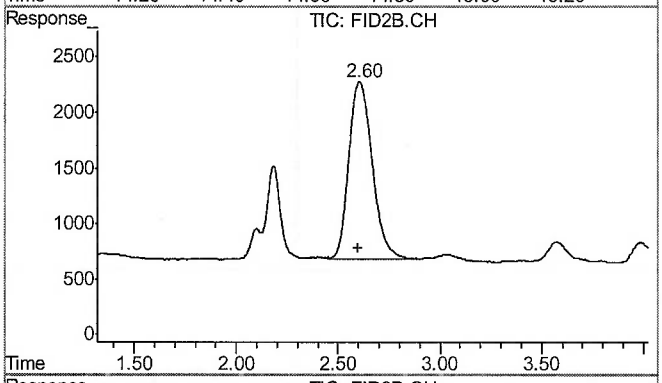
#1 TVH-Gasoline

R.T.: 7.550 min
Delta R.T.: 0.000 min
Response: 1566721
Conc: N.D.



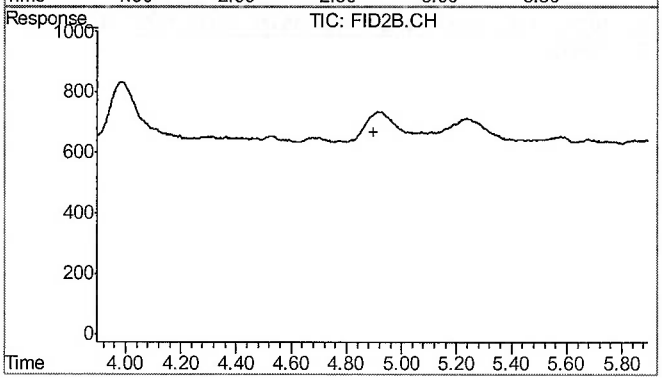
#2 1,2,4-Trichlorobenzene

R.T.: 14.702 min
Delta R.T.: -0.003 min
Response: 3307700
Conc: 86.90 %



#4 Methyl-t-butyl-ether

R.T.: 2.604 min
Delta R.T.: 0.005 min
Response: 128726
Conc: 3.81 ug/L

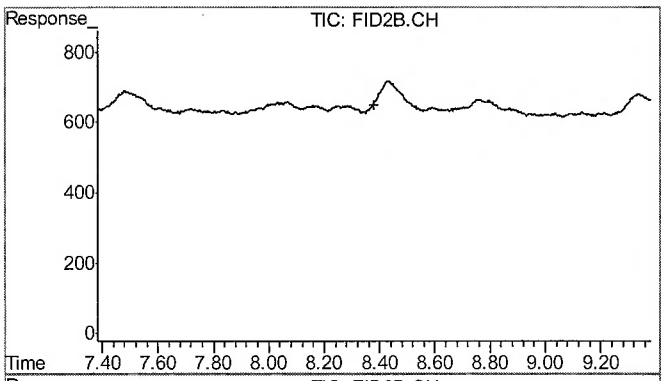


#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.896 min
Response: 0
Conc: N.D.

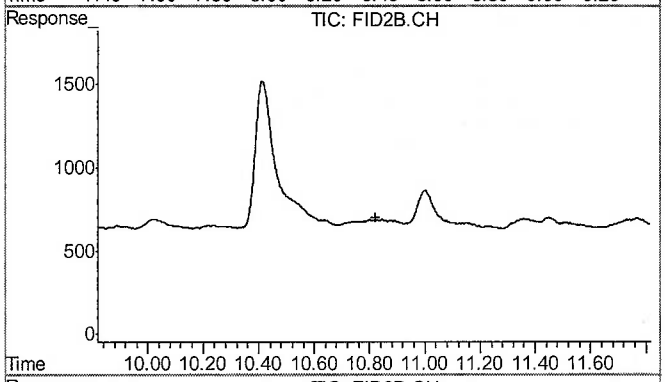
7.1.2

7



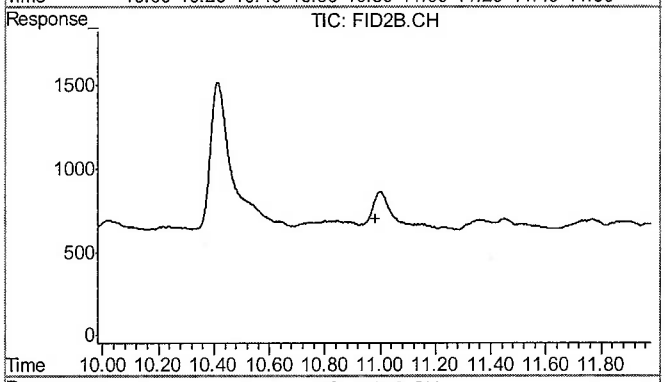
#6 Toluene

R.T.: 0.000 min
Exp R.T. : 8.382 min
Response: 0
Conc: N.D.



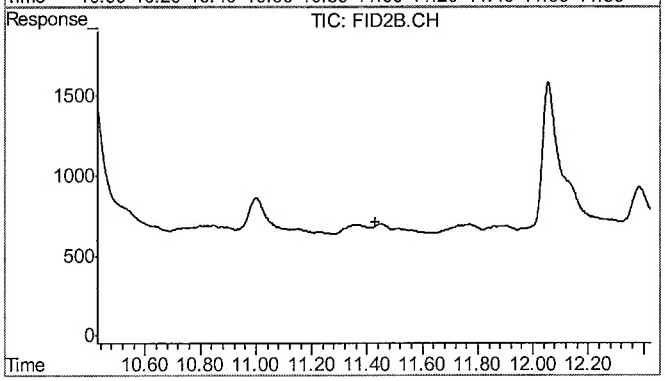
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.820 min
Response: 0
Conc: N.D.



#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.981 min
Response: 0
Conc: N.D.

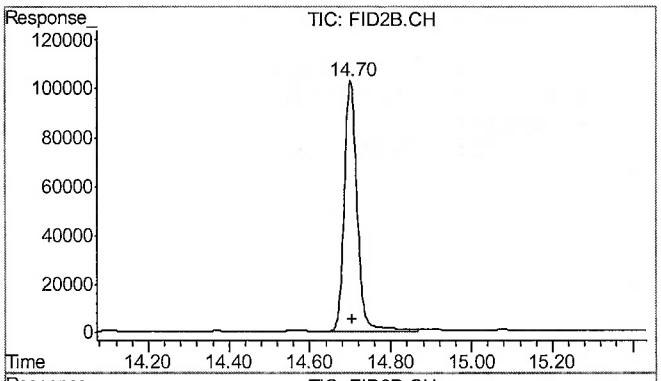


#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 11.428 min
Response: 0
Conc: N.D.

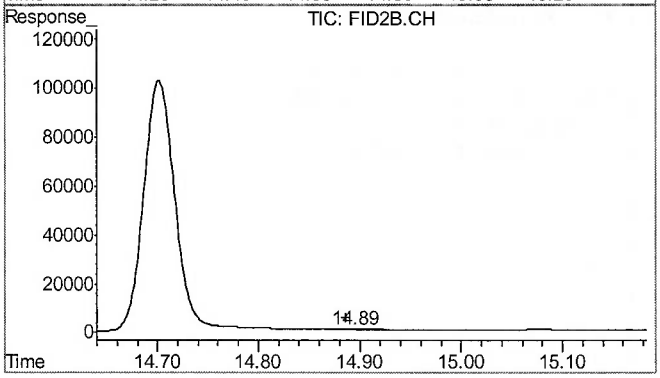
7.1.2

7



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.702 min
Delta R.T.: -0.003 min
Response: 2245736
Conc: 83.62 %



#11 Naphthalene

R.T.: 14.893 min
Delta R.T.: 0.007 min
Response: 4142
Conc: N.D.

7.1.2

7

Quantitation Report (QT Reviewed)

Signal #1 : Z:\062012\TA16589.D\FID1A.CH Vial: 20
Signal #2 : Z:\062012\TA16589.D\FID2B.CH
Acq On : 20 Jun 2012 8:36 pm Operator: StephK
Sample : D35614-3 Inst : BTEX2
Misc : GC2924,GTA937,,,,,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 21 08:46:44 2012 Quant Results File: TA904GA904WATER.RES

Quant Method : C:\MSDCHEM\1...\TA904GA904WATER.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Jun 21 08:46:16 2012
Response via : Initial Calibration
DataAcq Meth : TVB2.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
2)	S	1,2,4-Trichlorobenzene	14.70	3289077	86.410	%	
10)	S	1,2,4-Trichlorobenzene (P)	14.70	2238827	83.359	%	
Target Compounds							
1)	H	TVH-Gasoline	7.55	1086073	<MDL	mg/L	
4)	T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L	d
5)	T	Benzene	4.91	63463	0.751	ug/L	
6)	T	Toluene	0.00	0	N.D.	ug/L	d
7)	T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8)	T	m,p-Xylene	0.00	0	N.D.	ug/L	d
9)	T	o-Xylene	0.00	0	N.D.	ug/L	d
11)	T	Naphthalene	14.89	39765	0.887	ug/L	

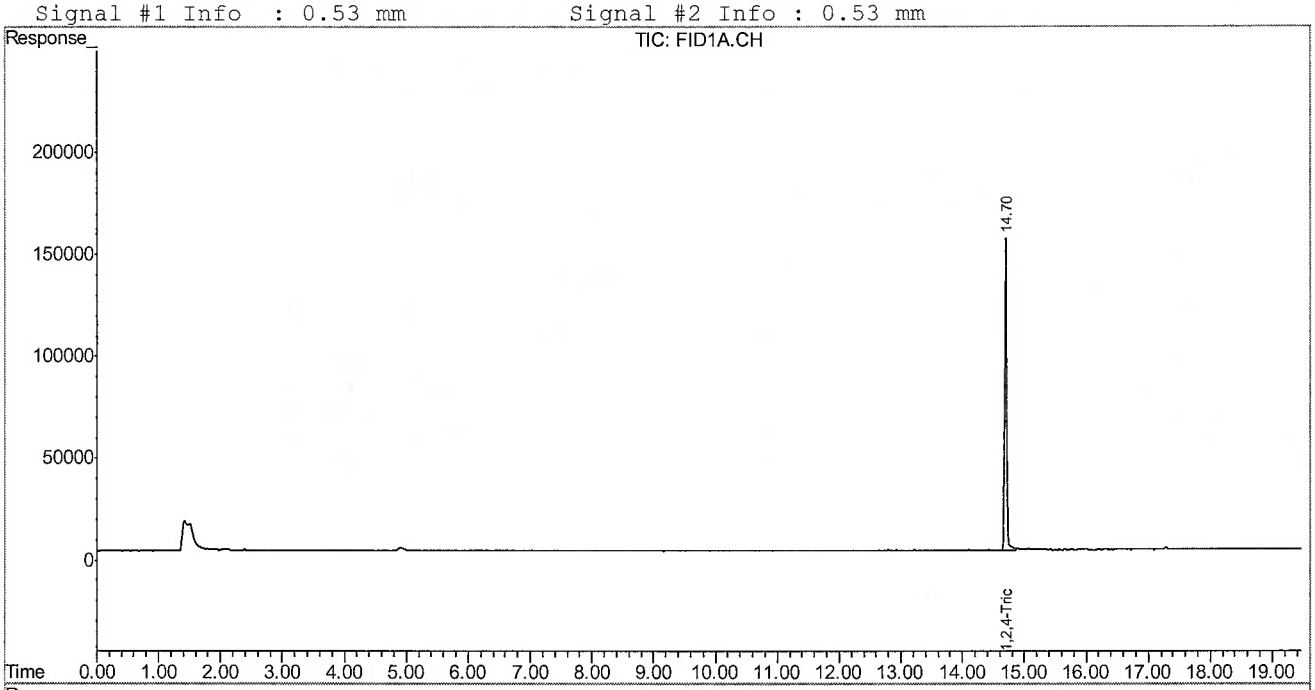
(f)=RT Delta > 1/2 Window (m)=manual int.

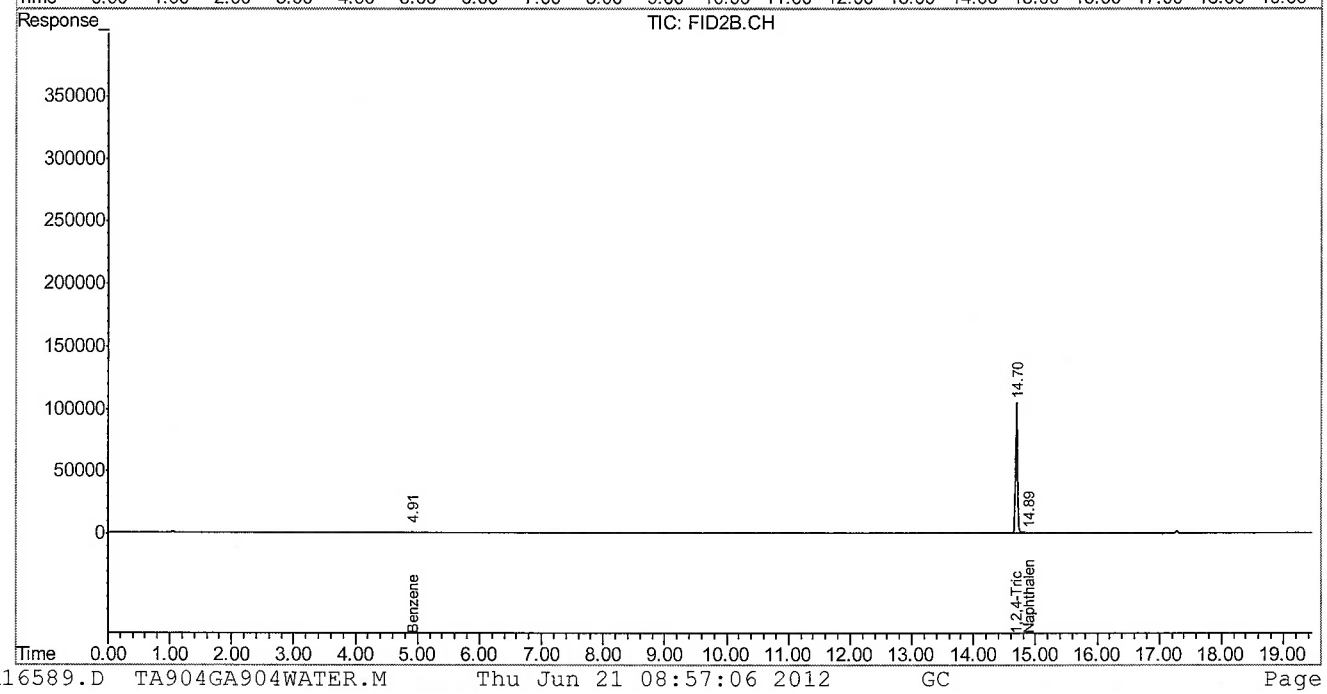
Quantitation Report (QT Reviewed)

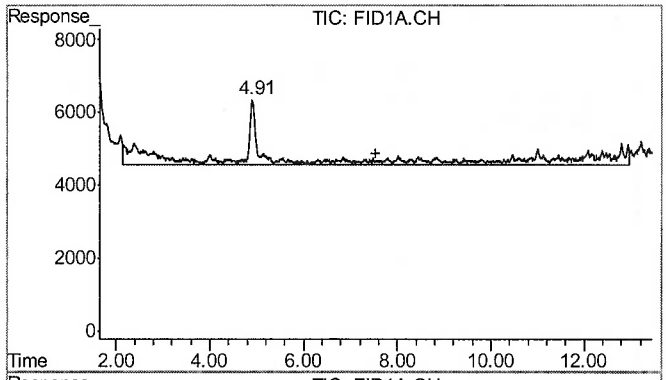
Signal #1 : Z:\062012\TA16589.D\FID1A.CH Vial: 20
Signal #2 : Z:\062012\TA16589.D\FID2B.CH
Acq On : 20 Jun 2012 8:36 pm Operator: StephK
Sample : D35614-3 Inst : BTEX2
Misc : GC2924,GTA937,,,,,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 21 6:55 2012 Quant Results File: TA904GA904WATER.RES

Quant Method : C:\MSDCHEM\1...\TA904GA904WATER.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Jun 21 08:46:16 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB2.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

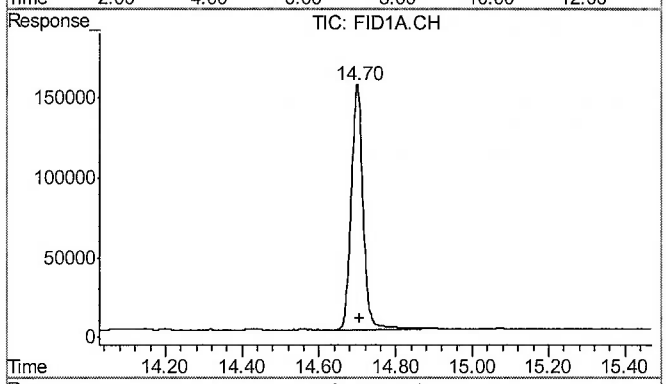






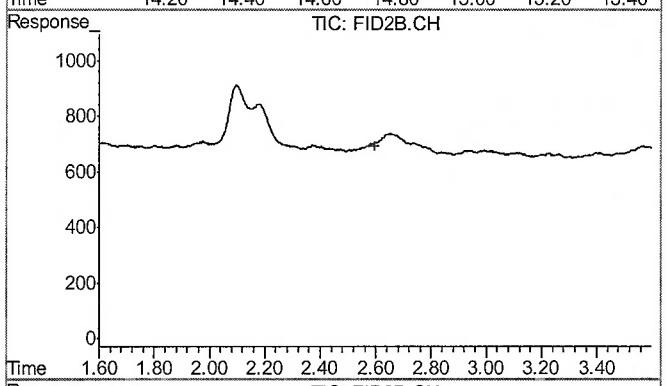
#1 TVH-Gasoline

R.T.: 7.550 min
Delta R.T.: 0.000 min
Response: 1086073
Conc: N.D.



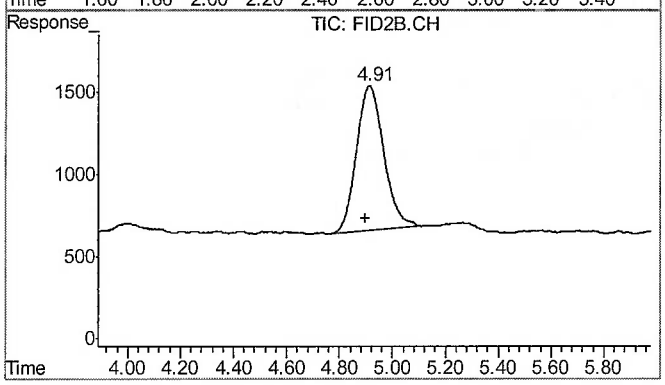
#2 1,2,4-Trichlorobenzene

R.T.: 14.700 min
Delta R.T.: -0.005 min
Response: 3289077
Conc: 86.41 %



#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.599 min
Response: 0
Conc: N.D.

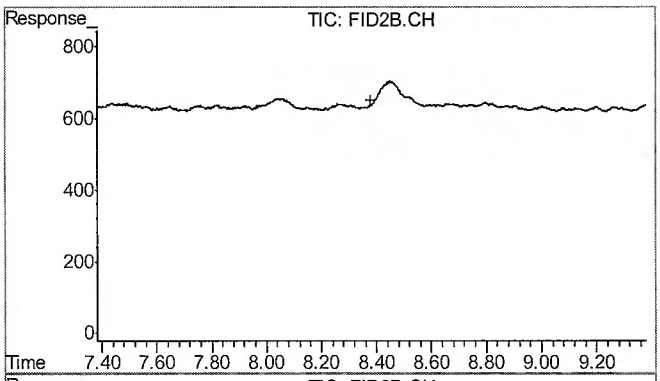


#5 Benzene

R.T.: 4.914 min
Delta R.T.: 0.017 min
Response: 63463
Conc: 0.75 ug/L

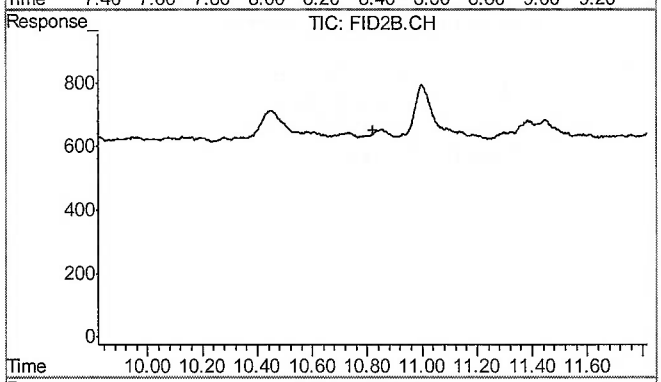
7.1.3

7



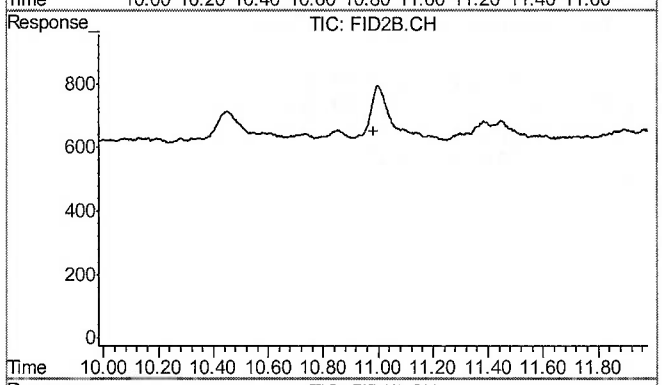
#6 Toluene

R.T.: 0.000 min
Exp R.T. : 8.382 min
Response: 0
Conc: N.D.



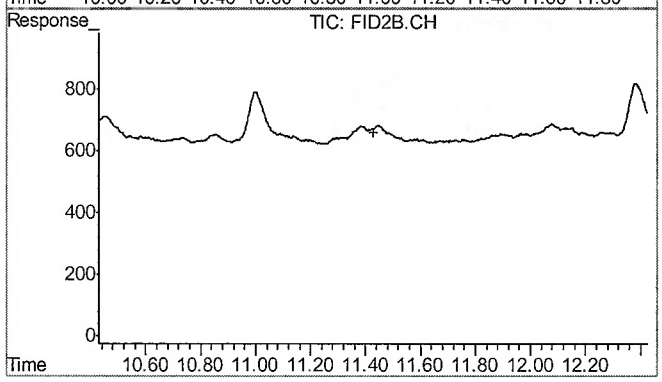
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.820 min
Response: 0
Conc: N.D.



#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.981 min
Response: 0
Conc: N.D.

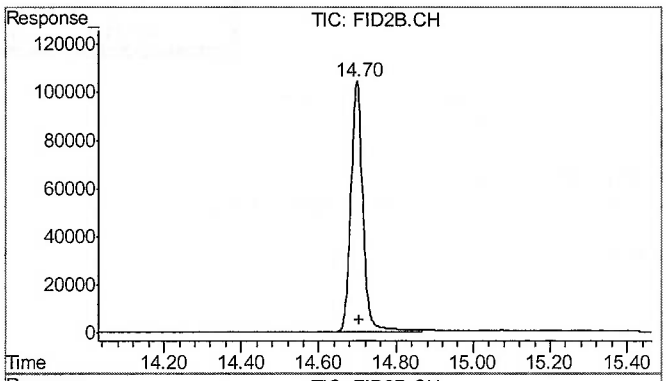


#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 11.428 min
Response: 0
Conc: N.D.

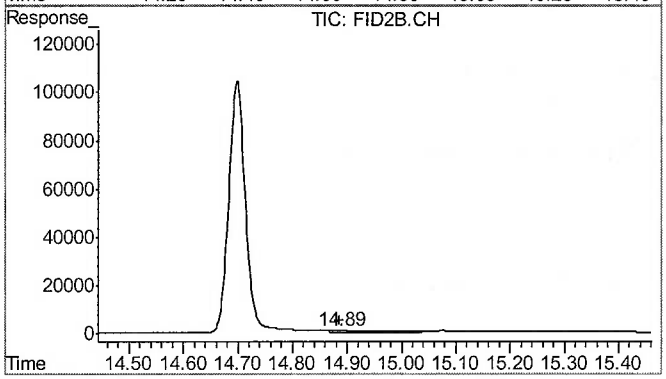
7.1.3

7



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.699 min
Delta R.T.: -0.006 min
Response: 2238827
Conc: 83.36 %



#11 Naphthalene

R.T.: 14.886 min
Delta R.T.: 0.000 min
Response: 39765
Conc: 0.89 ug/L

7.1.3

7

Manual Integrations
APPROVED
(compounds with "m" flag)
Judy Melson
06/21/12 09:26

Quantitation Report (QT Reviewed)

Signal #1 : Z:\062012\TA16590.D\FID1A.CH Vial: 21
Signal #2 : Z:\062012\TA16590.D\FID2B.CH
Acq On : 20 Jun 2012 9:11 pm Operator: StephK
Sample : D35614-4 Inst : BTEX2
Misc : GC2924,GTA937,,,,,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 21 08:46:47 2012 Quant Results File: TA904GA904WATER.RES

Quant Method : C:\MSDCHEM\1...\TA904GA904WATER.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Jun 21 08:46:16 2012
Response via : Initial Calibration
DataAcq Meth : TVB2.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

7.1.4

7

		Compound	R.T.	Response	Conc	Units	
		System Monitoring Compounds					
2)	S	1,2,4-Trichlorobenzene	14.70	3230234	84.864	%	
10)	S	1,2,4-Trichlorobenzene (P)	14.70	2180939	81.204	%	m
		Target Compounds					
1)	H	TVH-Gasoline	7.55	1042493	<MDL	mg/L	
4)	T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L	d
5)	T	Benzene	0.00	0	N.D.	ug/L	d
6)	T	Toluene	0.00	0	N.D.	ug/L	d
7)	T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8)	T	m,p-Xylene	0.00	0	N.D.	ug/L	d
9)	T	o-Xylene	0.00	0	N.D.	ug/L	d
11)	T	Naphthalene	0.00	0	N.D.	ug/L	d

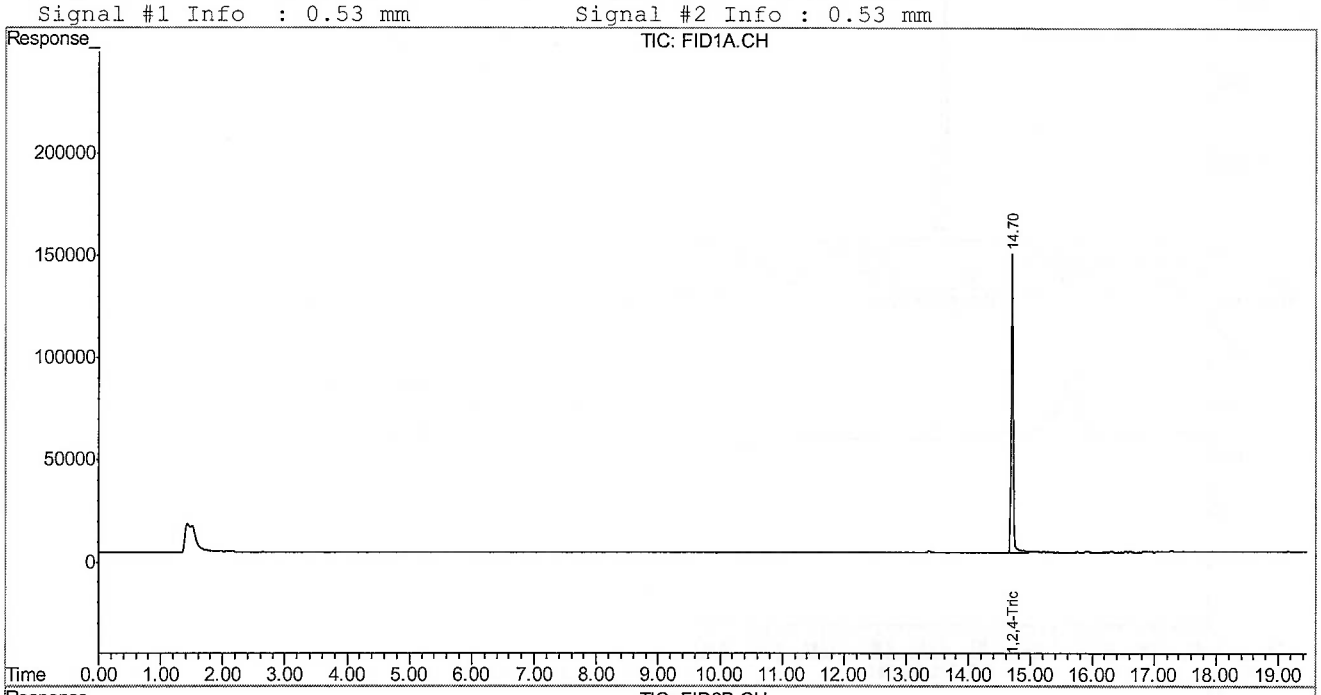
(f)=RT Delta > 1/2 Window (m)=manual int.

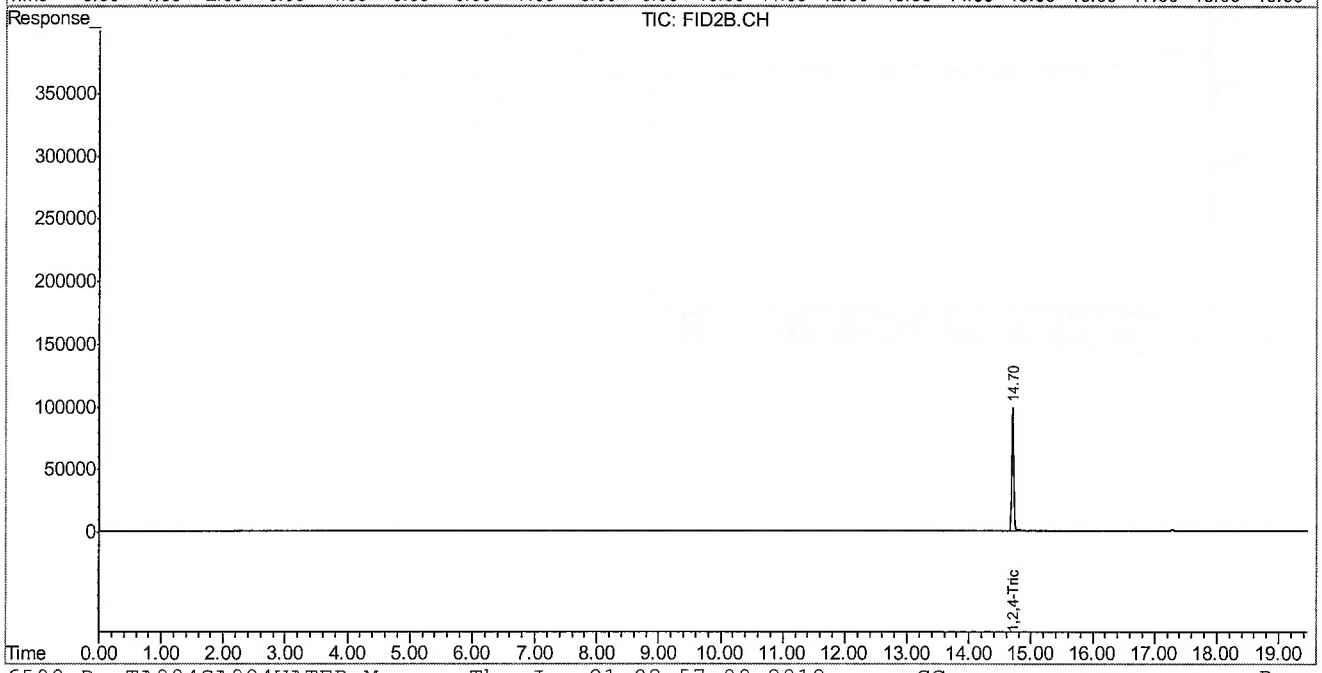
Quantitation Report (QT Reviewed)

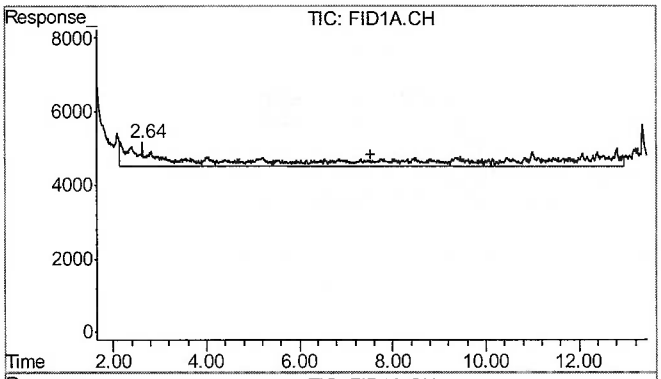
Signal #1 : Z:\062012\TA16590.D\FID1A.CH Vial: 21
Signal #2 : Z:\062012\TA16590.D\FID2B.CH
Acq On : 20 Jun 2012 9:11 pm Operator: StephK
Sample : D35614-4 Inst : BTEX2
Misc : GC2924,GTA937,,,,,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 21 6:55 2012 Quant Results File: TA904GA904WATER.RES

Quant Method : C:\MSDCHEM\1...\TA904GA904WATER.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Thu Jun 21 08:46:16 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB2.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

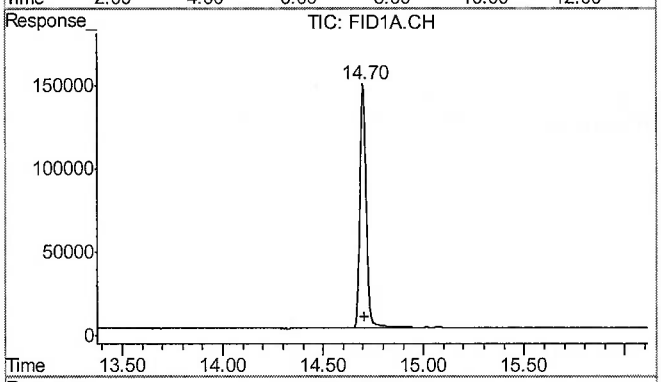






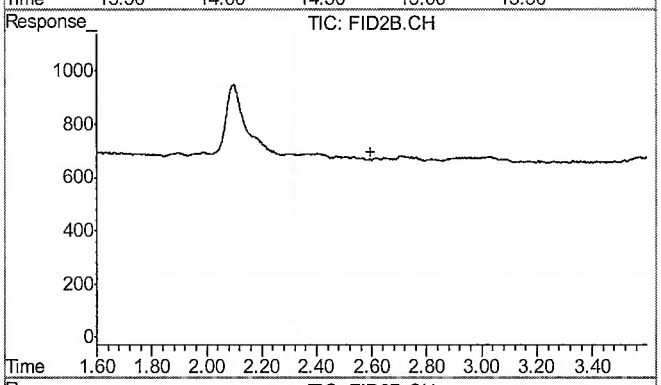
#1 TVH-Gasoline

R.T.: 7.550 min
Delta R.T.: 0.000 min
Response: 1042493
Conc: N.D.



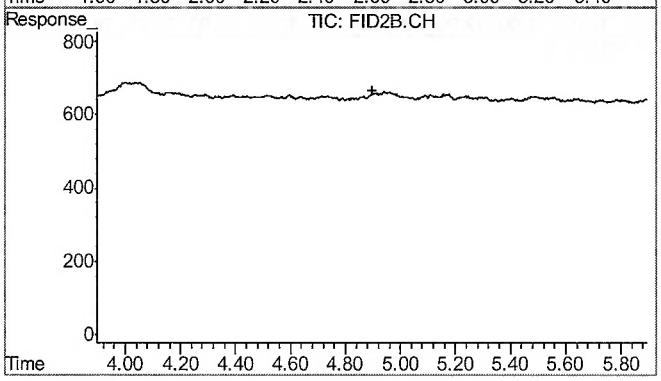
#2 1,2,4-Trichlorobenzene

R.T.: 14.701 min
Delta R.T.: -0.004 min
Response: 3230234
Conc: 84.86 %



#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.599 min
Response: 0
Conc: N.D.

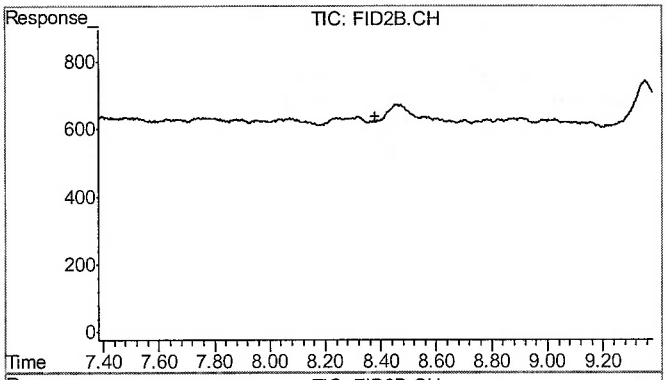


#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.896 min
Response: 0
Conc: N.D.

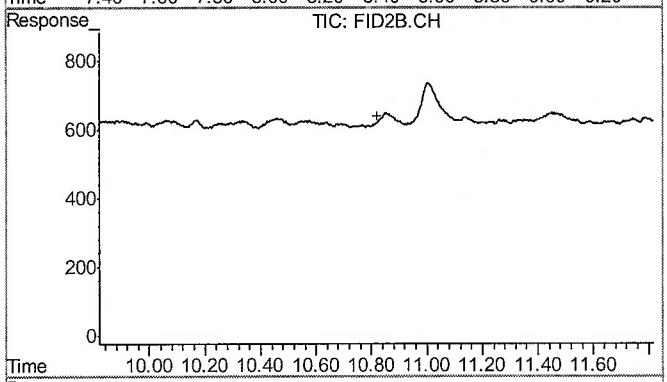
7.1.4

7



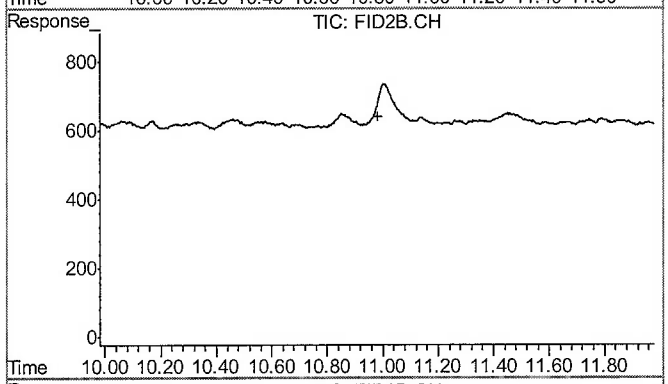
#6 Toluene

R.T.: 0.000 min
Exp R.T. : 8.382 min
Response: 0
Conc: N.D.



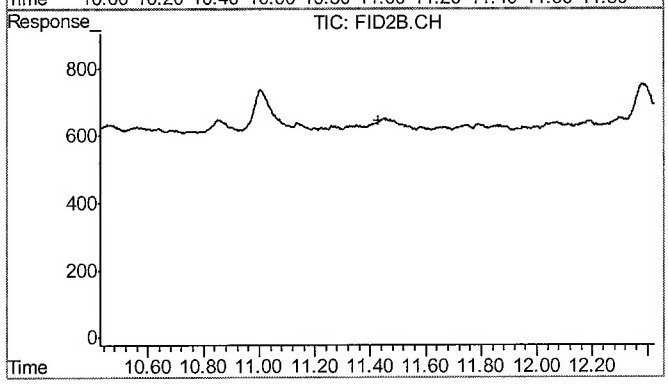
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.820 min
Response: 0
Conc: N.D.



#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.981 min
Response: 0
Conc: N.D.

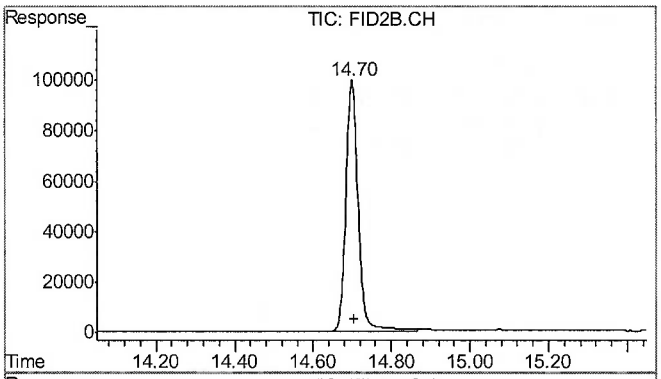


#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 11.428 min
Response: 0
Conc: N.D.

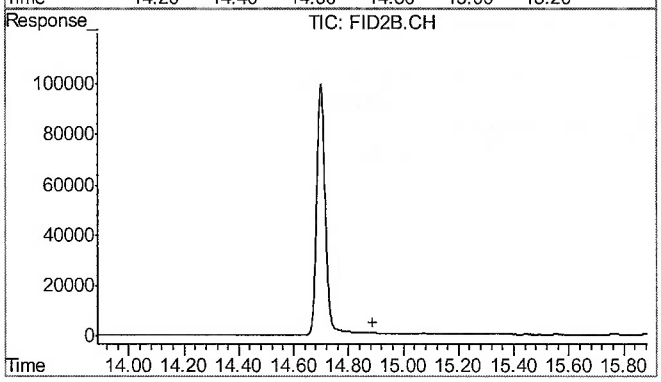
7.1.4

7



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.700 min
Delta R.T.: -0.006 min
Response: 2180939
Conc: 81.20 % m



#11 Naphthalene

R.T.: 0.000 min
Exp R.T. : 14.887 min
Response: 0
Conc: N.D.

7.1.4

7

Manual Integrations
APPROVED
(compounds with "m" flag)
Judy Melson
06/21/12 09:26

Quantitation Report (QT Reviewed)

Signal #1 : Z:\062012\TA16580.D\FID1A.CH Vial: 11
Signal #2 : Z:\062012\TA16580.D\FID2B.CH
Acq On : 20 Jun 2012 3:25 pm Operator: StephK
Sample : MB Inst : BTEX2
Misc : GC2924,GTA937,,,,,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 20 15:53:26 2012 Quant Results File: TA904GA904WATER.RES

Quant Method : C:\MSDCHEM\1...\TA904GA904WATER.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Jun 20 15:15:58 2012
Response via : Initial Calibration
DataAcq Meth : TVB2.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

7.2.1

7

		Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds							
2)	S	1,2,4-Trichlorobenzene	14.70	3270904	85.933	%	
10)	S	1,2,4-Trichlorobenzene (P)	14.70	2231162	83.074	%	m
Target Compounds							
1)	H	TVH-Gasoline	7.55	1233467	<MDL	mg/L	
4)	T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L	d
5)	T	Benzene	0.00	0	N.D.	ug/L	d
6)	T	Toluene	0.00	0	N.D.	ug/L	d
7)	T	Ethylbenzene	0.00	0	N.D.	ug/L	d
8)	T	m,p-Xylene	0.00	0	N.D.	ug/L	d
9)	T	o-Xylene	0.00	0	N.D.	ug/L	d
11)	T	Naphthalene	14.88	42272	0.943	ug/L	m

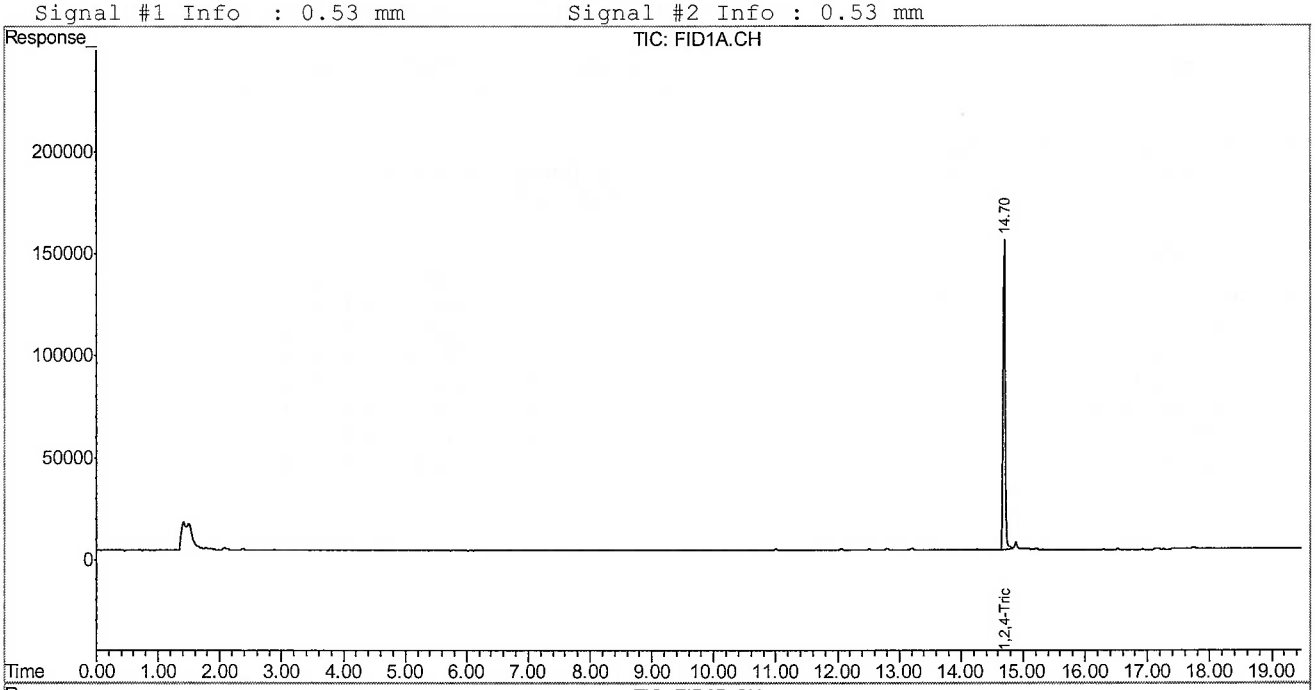
(f)=RT Delta > 1/2 Window (m)=manual int.

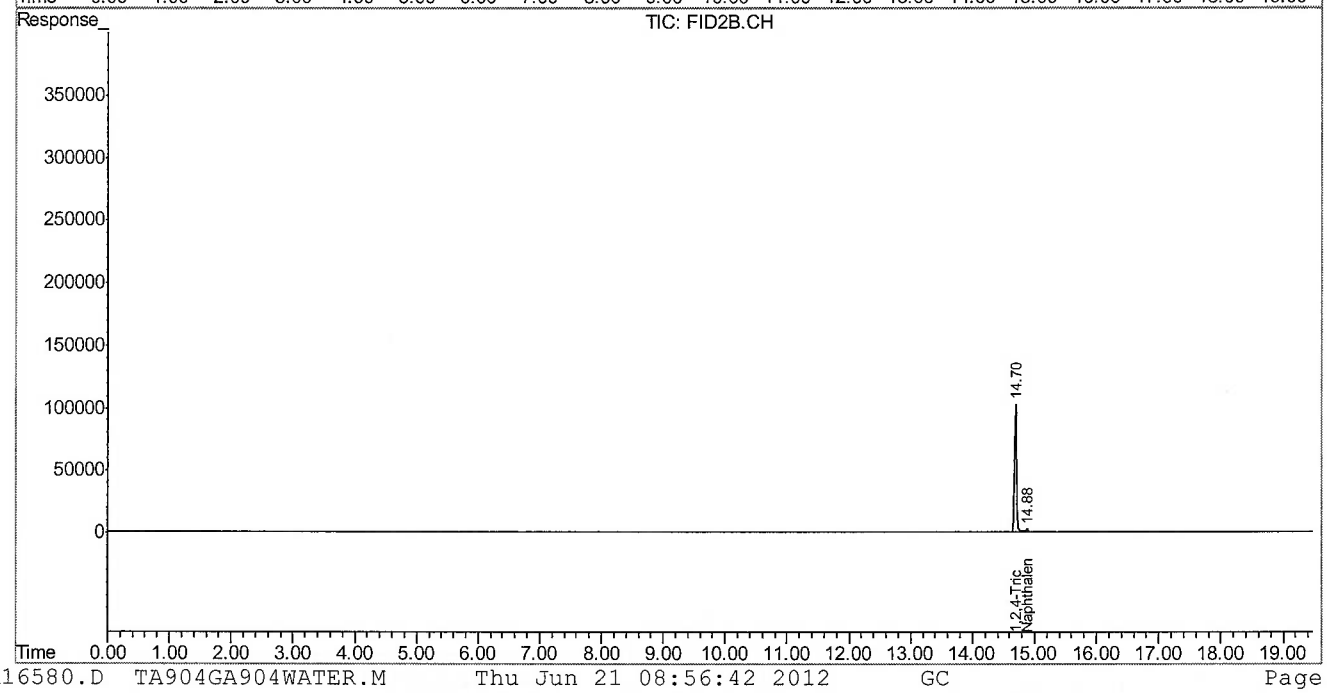
Quantitation Report (QT Reviewed)

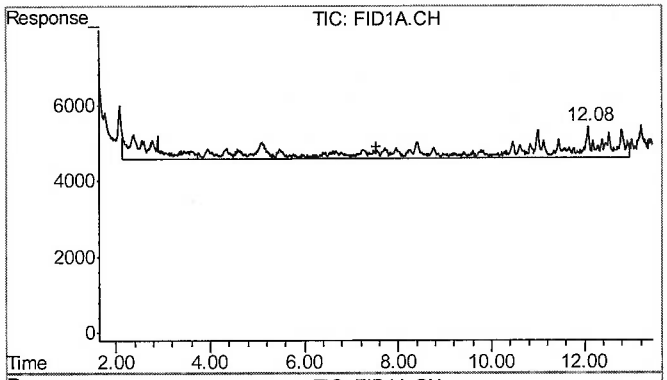
Signal #1 : Z:\062012\TA16580.D\FID1A.CH Vial: 11
Signal #2 : Z:\062012\TA16580.D\FID2B.CH
Acq On : 20 Jun 2012 3:25 pm Operator: StephK
Sample : MB Inst : BTEX2
Misc : GC2924,GTA937,,,,,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 20 13:54 2012 Quant Results File: TA904GA904WATER.RES

Quant Method : C:\MSDCHEM\1...\TA904GA904WATER.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Jun 20 15:15:58 2012
Response via : Multiple Level Calibration
DataAcq Meth : TVB2.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

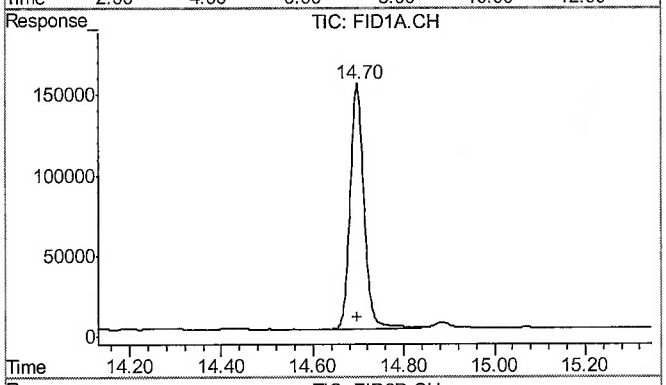






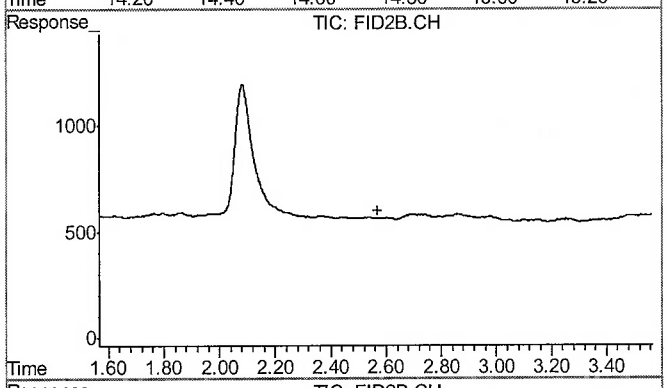
#1 TVH-Gasoline

R.T.: 7.550 min
Delta R.T.: 0.000 min
Response: 1233467
Conc: N.D.



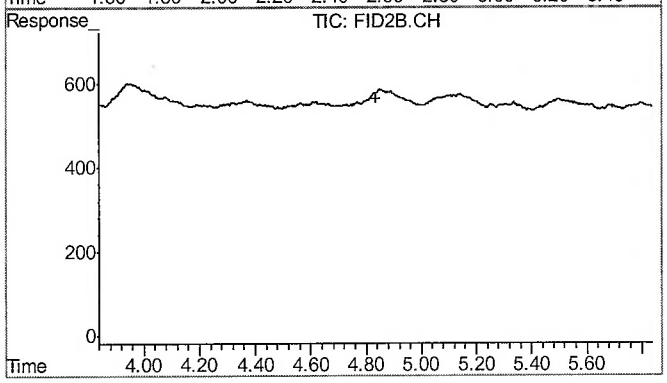
#2 1,2,4-Trichlorobenzene

R.T.: 14.698 min
Delta R.T.: 0.001 min
Response: 3270904
Conc: 85.93 %



#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.568 min
Response: 0
Conc: N.D.

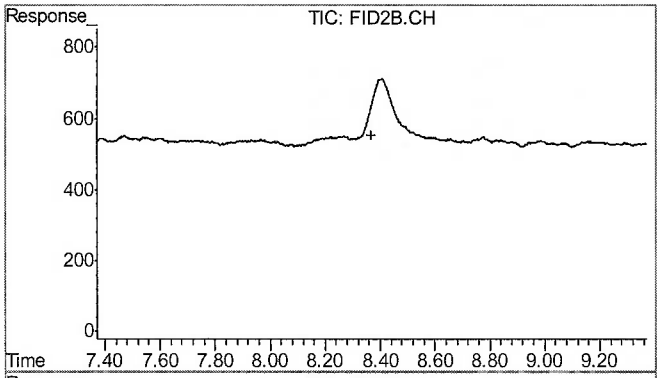


#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.839 min
Response: 0
Conc: N.D.

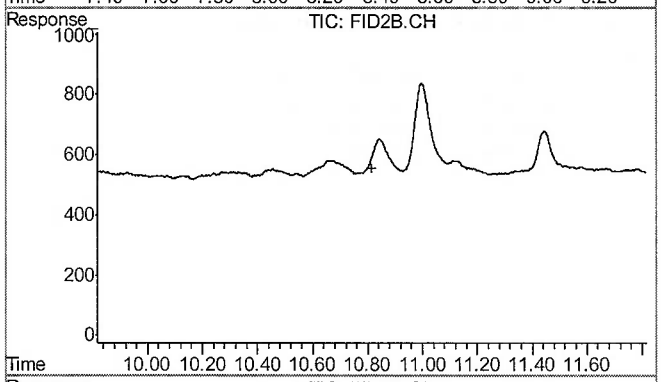
7.2.1

7



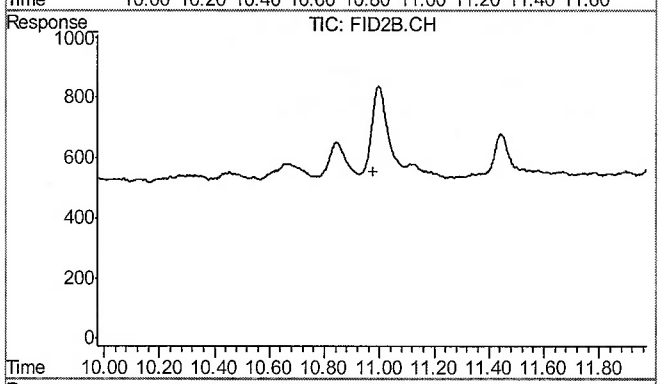
#6 Toluene

R.T.: 0.000 min
Exp R.T. : 8.370 min
Response: 0
Conc: N.D.



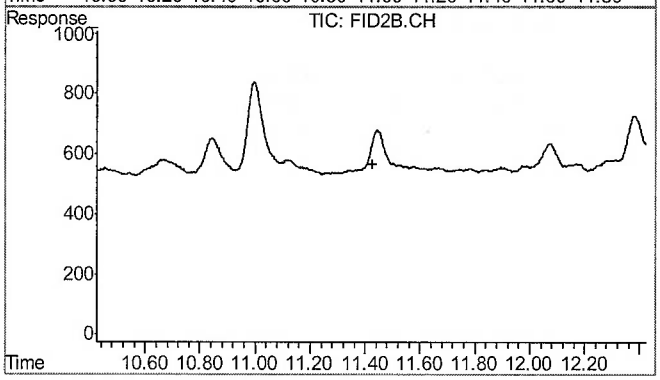
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.817 min
Response: 0
Conc: N.D.



#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.975 min
Response: 0
Conc: N.D.

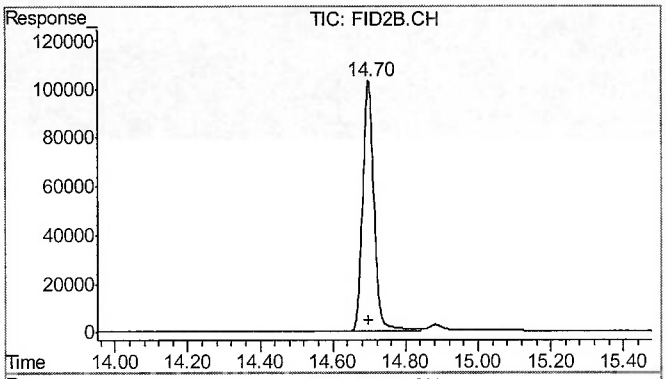


#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 11.425 min
Response: 0
Conc: N.D.

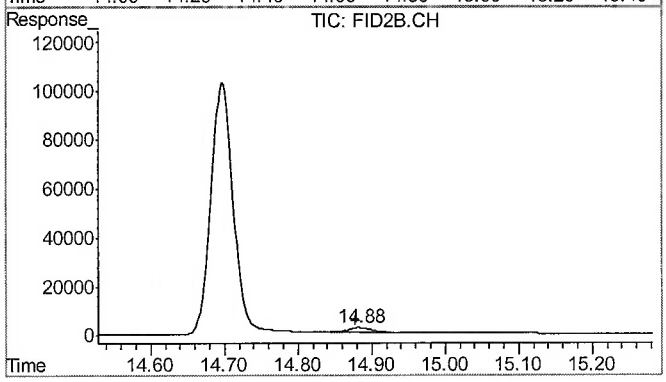
7.2.1

7



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.697 min
Delta R.T.: 0.000 min
Response: 2231162
Conc: 83.07 % m



#11 Naphthalene

R.T.: 14.883 min
Delta R.T.: 0.005 min
Response: 42272
Conc: 0.94 ug/L m

7.2.1

7

Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/27/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	9.6	21		
Antimony	30	1.7	3.2		
Arsenic	25	4.4	7.6		
Barium	10	.1	.5		
Beryllium	10	1.3	3.1		
Boron	50	1	2.6		
Cadmium	10	.6	.59		
Calcium	400	5.4	7.3	18.8	<400
Chromium	10	.3	.39		
Cobalt	5.0	.4	.4		
Copper	10	1.2	3		
Iron	70	1.2	19		
Lead	50	1.9	2.9		
Lithium	2.0	.5	.65		
Magnesium	200	6.5	11	5.6	<200
Manganese	5.0	1.2	1.8		
Molybdenum	10	2.1	2.1		
Nickel	30	.5	.53		
Phosphorus	100	14	59		
Potassium	1000	61	61	62.1	<1000
Selenium	50	4.8	5.7		
Silicon	50	2.9	2.1		
Silver	30	.4	.65		
Sodium	400	5.9	98	-57	<400
Strontium	5.0	.04	1.5		
Thallium	10	2.9	3		
Tin	50	12	24		
Titanium	10	.1	1.2		
Uranium	50	2.2	2.2		
Vanadium	10	.2	.39		
Zinc	30	.5	1.5		

Associated samples MP7763: D35614-1F, D35614-2F, D35614-3F, D35614-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

8.1.1

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/27/12

Metal	D35556-1 Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	anr				
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron	anr				
Cadmium	anr				
Calcium	15100	39700	25000	98.4	75-125
Chromium	anr				
Cobalt	anr				
Copper	anr				
Iron	anr				
Lead	anr				
Lithium					
Magnesium	1620	25000	25000	93.5	75-125
Manganese	anr				
Molybdenum	anr				
Nickel	anr				
Phosphorus					
Potassium	7140	33500	25000	105.4	75-125
Selenium	anr				
Silicon					
Silver	anr				
Sodium	10000000002060000		25000	120.0	75-125
Strontium					
Thallium	anr				
Tin					
Titanium	anr				
Uranium					
Vanadium	anr				
Zinc	anr				

Associated samples MP7763: D35614-1F, D35614-2F, D35614-3F, D35614-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

8.1.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/27/12

Metal	D35556-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron	anr					
Cadmium	anr					
Calcium	15100	39300	25000	96.8	1.0	20
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Lithium						
Magnesium	1620	25100	25000	93.9	0.4	20
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium	7140	33600	25000	105.8	0.3	20
Selenium	anr					
Silicon						
Silver	anr					
Sodium	10000000001820000		25000	-840.0(a	12.4	20
Strontium						
Thallium	anr					
Tin						
Titanium	anr					
Uranium						
Vanadium	anr					
Zinc	anr					

Associated samples MP7763: D35614-1F, D35614-2F, D35614-3F, D35614-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

8.1.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/27/12

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	anr			
Calcium	25500	25000	102.0	80-120
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	25700	25000	102.8	80-120
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium	26200	25000	104.8	80-120
Selenium	anr			
Silicon				
Silver	anr			
Sodium	26300	25000	105.2	80-120
Strontium				
Thallium	anr			
Tin				
Titanium	anr			
Uranium				
Vanadium	anr			
Zinc	anr			

Associated samples MP7763: D35614-1F, D35614-2F, D35614-3F, D35614-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

8.1.3

8

SERIAL DILUTION RESULTS SUMMARY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 06/27/12

Metal	D35556-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	anr			
Calcium	15100	16500	9.4	0-10
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	1620	1780	10.2*(a)	0-10
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium	7140	7070	1.0	0-10
Selenium	anr			
Silicon				
Silver	anr			
Sodium	10000000002080000		2.2	0-10
Strontium				
Thallium	anr			
Tin				
Titanium	anr			
Uranium				
Vanadium	anr			
Zinc	anr			

Associated samples MP7763: D35614-1F, D35614-2F, D35614-3F, D35614-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP7763
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.

8.1.4

8

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN15606	5.0	0.0	mg/l	100	98.7	98.7	90-110%
Alkalinity, Carbonate	GN15607	5.0	0.0	mg/l	100	98.7	98.7	80-120%
Alkalinity, Total as CaCO3	GN15605	5.0	0.0	mg/l	100	98.7	98.7	90-110%
Bromide	GP7531/GN15513	0.20	0.0	mg/l	20	19.8	99.0	90-110%
Chloride	GP7531/GN15513	0.50	0.28	mg/l	20	19.7	98.5	90-110%
HEM Oil and Grease	GP7619/GN15658	5.0	0.0	mg/l	40	36.9	92.3	78-114%
Nitrogen, Nitrate	GP7531/GN15513	0.045	0.0	mg/l	4.52	4.31	95.4	90-110%
Nitrogen, Nitrite	GP7531/GN15513	0.010	0.0	mg/l	6.09	6.25	102.6	90-110%
Solids, Total Dissolved	GN15581	10	0.0	mg/l	400	402	100.5	90-110%
Sulfate	GP7531/GN15513	0.50	0.0	mg/l	30	29.5	98.3	90-110%
Total Organic Carbon	GP7527/GN15510	1.0	0.0	mg/l	7.2	7.19	99.9	90-110%

Associated Samples:
Batch GN15581: D35614-1, D35614-2, D35614-3, D35614-4
Batch GN15605: D35614-1, D35614-2, D35614-3, D35614-4
Batch GN15606: D35614-1, D35614-2, D35614-3, D35614-4
Batch GN15607: D35614-1, D35614-2, D35614-3, D35614-4
Batch GP7527: D35614-1, D35614-2, D35614-3, D35614-4
Batch GP7531: D35614-1, D35614-2, D35614-3, D35614-4
Batch GP7619: D35614-1, D35614-2, D35614-3, D35614-4
(*) Outside of QC limits

9.1 9

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP7619/GN15658	mg/l	40	33.3	10.3	20%

Associated Samples:
Batch GP7619: D35614-1, D35614-2, D35614-3, D35614-4
(*) Outside of QC limits

9.2
9

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN15605	D35590-1	mg/l	484	490	1.3	0-20%
Solids, Total Dissolved	GN15581	D35590-1	mg/l	668	668	0.0	0-25%
Total Organic Carbon	GP7527/GN15510	D35259-2	mg/l	0.98	0.89	9.6	0-20%

Associated Samples:
Batch GN15581: D35614-1, D35614-2, D35614-3, D35614-4
Batch GN15605: D35614-1, D35614-2, D35614-3, D35614-4
Batch GP7527: D35614-1, D35614-2, D35614-3, D35614-4
(*) Outside of QC limits

9.3
9

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO3	GN15605	D35590-1	mg/l	484	100	574	90.4	80-120%
Bromide	GP7531/GN15513	D35605-2	mg/l	0.0	2.5	2.5	100.0	80-120%
Bromide	GP7531/GN15513	D35605-2	mg/l	0.0	2.5	2.5	100.0	80-120%
Chloride	GP7531/GN15513	D35605-2	mg/l	36.5	100	136	99.2	80-120%
Chloride	GP7531/GN15513	D35605-2	mg/l	36.8	100	136	99.2	80-120%
HEM Oil and Grease	GP7619/GN15658	D35613-1	mg/l	69.9	40	109	97.8	78-114%
Nitrogen, Nitrate	GP7531/GN15513	D35605-2	mg/l	2.9	5.65	8.5	99.1	80-120%
Nitrogen, Nitrite	GP7531/GN15513	D35605-2	mg/l	0.23	0.305	0.53	98.5	80-120%
Sulfate	GP7531/GN15513	D35605-2	mg/l	14.5	10	24.1	93.0	80-120%
Sulfate	GP7531/GN15513	D35605-2	mg/l	14.8	10	24.1	93.0	80-120%
Total Organic Carbon	GP7527/GN15510	D35259-1	mg/l	2.3	10	12.1	98.0	80-120%

Associated Samples:
Batch GN15605: D35614-1, D35614-2, D35614-3, D35614-4
Batch GP7527: D35614-1, D35614-2, D35614-3, D35614-4
Batch GP7531: D35614-1, D35614-2, D35614-3, D35614-4
Batch GP7619: D35614-1, D35614-2, D35614-3, D35614-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

9.4 9

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D35614
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN15605	D35590-1	mg/l	484	100	569	0.8	20%
Bromide	GP7531/GN15513	D35605-2	mg/l	0.0	2.5	2.5	0.0	20%
Bromide	GP7531/GN15513	D35605-2	mg/l	0.0	2.5	2.5	0.0	20%
Chloride	GP7531/GN15513	D35605-2	mg/l	36.5	100	134	1.5	20%
Chloride	GP7531/GN15513	D35605-2	mg/l	36.8	100	134	1.5	20%
Nitrogen, Nitrate	GP7531/GN15513	D35605-2	mg/l	2.9	5.65	8.4	1.2	20%
Nitrogen, Nitrite	GP7531/GN15513	D35605-2	mg/l	0.23	0.305	0.54	1.9	20%
Sulfate	GP7531/GN15513	D35605-2	mg/l	14.5	10	24.1	0.0	20%
Sulfate	GP7531/GN15513	D35605-2	mg/l	14.8	10	24.1	0.0	20%
Total Organic Carbon	GP7527/GN15510	D35259-1	mg/l	2.3	10	12.0	0.8	20%

Associated Samples:
Batch GN15605: D35614-1, D35614-2, D35614-3, D35614-4
Batch GP7527: D35614-1, D35614-2, D35614-3, D35614-4
Batch GP7531: D35614-1, D35614-2, D35614-3, D35614-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

9.5
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