Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183557.D
Acq On : 5 May 2014 8:10 pm
Operator : conniex
Sample : ic8469-5
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 06 10:48:14 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 10:34:27 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
49) methyl acrylate	9.825	55	12396	4.84 ug/L	98
50) propionitrile	9.846	54	16102	48.80 ug/L	92
51) bromochloromethane	10.060	128	6952	5.00 ug/L #	77
52) tetrahydrofuran	10.107	42	3662	4.74 ug/L	97
53) chloroform	10.118	83	22197	4.90 ug/L	97
54) tert-butyl Formate	10.170	59	9316	4.54 ug/L #	94
55) iso-butyl alcohol	10.557	74	1598	47.93 ug/L	85
58) freon 113	7.356	151	8958	5.13 ug/L	94
59) methacrylonitrile	10.013	41	6871	4.54 ug/L	94
60) 1,1,1-trichloroethane	10.384	97	18915	5.08 ug/L	89
62) tert-amyl methyl ether	10.855	87	8382	4.72 ug/L	93
63) iso-octane	10.829	57	35238	4.89 ug/L	96
66) epichlorohydrin	12.471	57	5632	22.44 ug/L	92
67) n-butyl alcohol	11.300	56	16161	247.28 ug/L	92
68) Cyclohexane	10.452	84	17380	4.97 ug/L	89
69) carbon tetrachloride	10.578	117	17325	5.16 ug/L	93
70) 1,1-dichloropropene	10.552	75	15321	5.12 ug/L	99
71) hexane	8.763	86	2027	5.00 ug/L	94
72) benzene	10.824	78	44850	5.08 ug/L	99
73) heptane	10.981	57	7131	5.19 ug/L	92
74) isopropyl acetate	10.730	43	20411	5.07 ug/L	99
75) 1,2-dichloroethane	10.834	62	15503	4.99 ug/L	95
78) trichloroethene	11.525	95	11983	5.10 ug/L	97
79) methylcyclohexane	11.760	83	18006	5.06 ug/L	88
80) 2-nitropropane	12.330	41	4520	4.87 ug/L	95
81) 2-chloroethyl vinyl ether	12.330	63	24391	22.34 ug/L	99
82) methyl methacrylate	11.791	100	3347	5.02 ug/L #	82
83) 1,2-dichloropropane	11.802	63	11350	5.05 ug/L	91
84) propyl acetate	11.838	73	2416	5.36 ug/L	84
85) dibromomethane	11.959	93	7210	5.04 ug/L	89
86) bromodichloromethane	12.084	83	16187	4.80 ug/L	99
87) cis-1,3-dichloropropene	12.560	75	19851	5.10 ug/L	96
89) 4-methyl-2-pentanone	12.681	58	5159	5.51 ug/L	94
90) toluene	12.958	92	30045	5.25 ug/L	92
91) 3-methyl-1-butanol	12.675	55	11127	105.09 ug/L	91
92) trans-1,3-dichloropropene	13.151	75	19216	5.03 ug/L	91
93) ethyl methacrylate	13.146	69	14562	4.75 ug/L	98
94) 1,1,2-trichloroethane	13.392	83	9122	5.16 ug/L	84
95) 2-hexanone	13.580	58	5068	5.42 ug/L #	77
97) cyclohexanone	15.772	55	16182	43.14 ug/L	93
98) tetrachloroethene	13.570	164	11869	5.22 ug/L	95
99) 1,3-dichloropropane	13.591	76	17883	4.85 ug/L	97
100) butyl acetate	13.648	56	7635	4.88 ug/L	99
101) dibromochloromethane	13.868	129	14068	4.91 ug/L	97
102) 1,2-dibromoethane	14.040	107	11629	4.79 ug/L	96
103) 3,3-dimethyl-1-Butanol	13.753	57	9739	48.03 ug/L #	98
105) chlorobenzene	14.548	112	34692	4.82 ug/L	98
106) 1,1,1,2-tetrachloroethane	14.610	131	14075	5.02 ug/L	93
107) ethylbenzene	14.610	91	58596	5.06 ug/L	99
108) m,p-xylene	14.726	106	45241	10.00 ug/L	96

7.6.5 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183557.D
Acq On : 5 May 2014 8:10 pm
Operator : conniex
Sample : ic8469-5
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 06 10:48:14 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 10:34:27 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
109) o-xylene	15.191	106	23450	4.99 ug/L	93
110) styrene	15.196	104	38458	5.13 ug/L	93
111) bromoform	15.489	173	10667	4.78 ug/L	93
113) isopropylbenzene	15.573	105	62837	5.07 ug/L	99
115) bromobenzene	16.012	156	17861	5.15 ug/L	99
116) 1,1,2,2-tetrachloroethane	15.897	83	17194	4.87 ug/L	99
117) trans-1,4-dichloro-2-b...	15.949	53	4296	4.65 ug/L	96
118) 1,2,3-trichloropropane	15.991	110	4895	5.12 ug/L	94
119) n-propylbenzene	16.028	91	67852	4.99 ug/L	100
120) 2-chlorotoluene	16.190	126	16016	5.10 ug/L	90
121) 4-chlorotoluene	16.300	91	45862	5.04 ug/L	99
123) 1,3,5-trimethylbenzene	16.190	105	53091	4.93 ug/L	96
124) tert-butylbenzene	16.587	119	48025	4.92 ug/L	98
125) pentachloroethane	16.666	167	11203	5.08 ug/L	95
126) 1,2,4-trimethylbenzene	16.634	105	53677	4.91 ug/L	92
128) sec-butylbenzene	16.823	105	70089	5.01 ug/L	97
129) 1,3-dichlorobenzene	17.027	146	34837	4.87 ug/L	98
130) p-isopropyltoluene	16.954	119	62763	5.03 ug/L	99
131) 1,4-dichlorobenzene	17.116	146	36944	5.01 ug/L	98
132) benzyl chloride	17.252	91	33154	4.55 ug/L	100
133) 1,2-dichlorobenzene	17.555	146	35183	4.95 ug/L	98
135) n-butylbenzene	17.414	92	29799	4.93 ug/L	98
137) 1,2-dibromo-3-chloropr...	18.418	157	4182	4.88 ug/L	89
138) 1,3,5-trichlorobenzene	18.622	180	29990	5.15 ug/L	99
139) 1,2,4-trichlorobenzene	19.359	180	24964	4.86 ug/L	96
140) hexachlorobutadiene	19.485	225	14347	5.08 ug/L	94
141) naphthalene	19.689	128	51914	4.81 ug/L	98
143) 1,2,3-trichlorobenzene	19.961	180	21994	5.00 ug/L	92
144) hexachloroethane	17.848	201	10753	4.83 ug/L	96

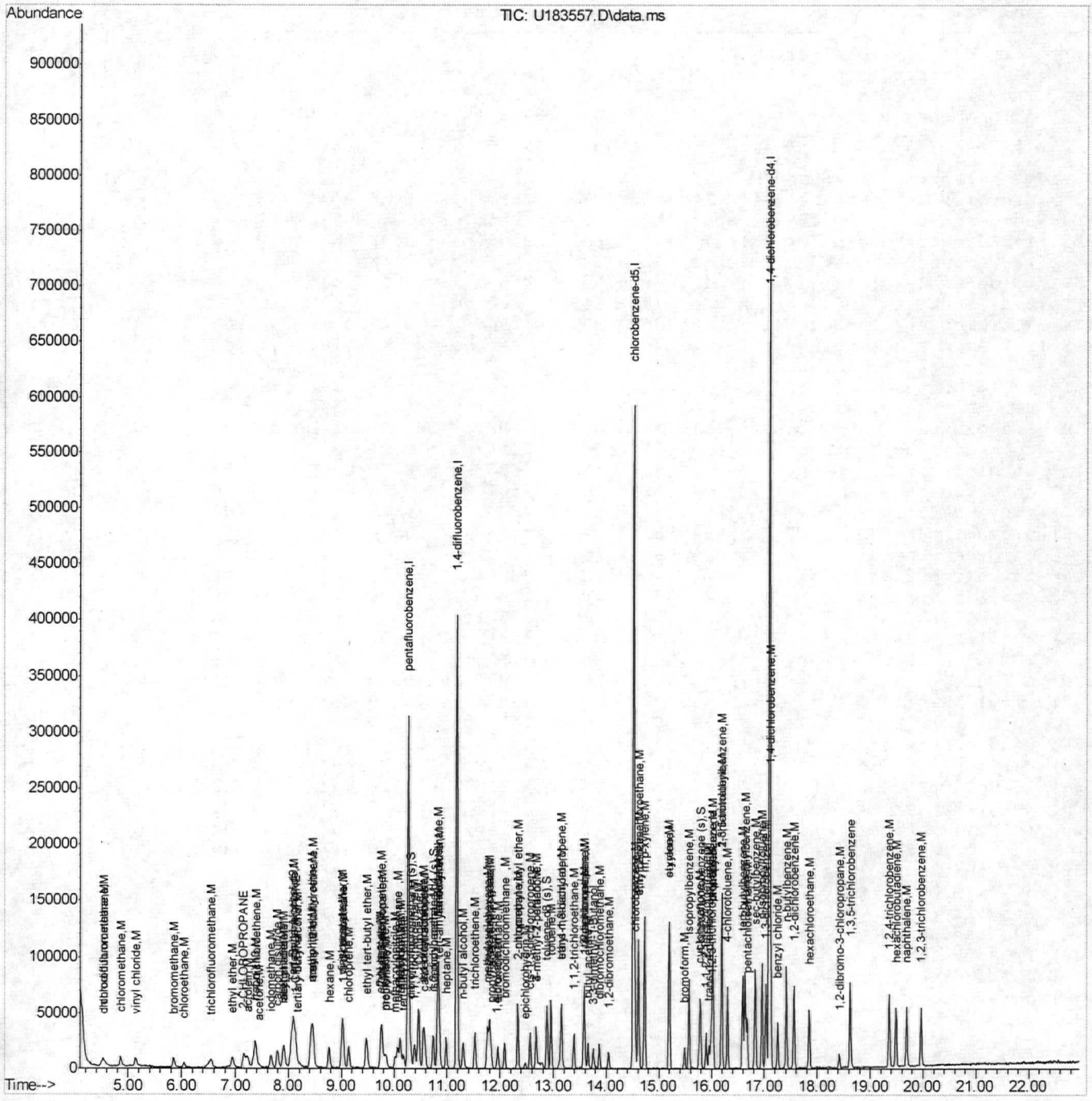
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.5 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183557.D
Acq On : 5 May 2014 8:10 pm
Operator : conniex
Sample : ic8469-5
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 06 10:48:14 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 10:34:27 2014
Response via : Initial Calibration



ACCUTEST LABORATORIES JB66517

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183558.D
Acq On : 5 May 2014 8:40 pm
Operator : conniex
Sample : ic8469-10
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 10:19:55 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 10:00:56 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.074	65	108757	500.00 ug/L	0.03
5) pentafluorobenzene	10.266	168	267732	50.00 ug/L	0.00
64) 1,4-difluorobenzene	11.181	114	382616	50.00 ug/L	0.00
96) chlorobenzene-d5	14.513	117	372811	50.00 ug/L	0.00
112) 1,4-dichlorobenzene-d4	17.091	152	234485	50.00 ug/L	0.00

System Monitoring Compounds					
56) dibromofluoromethane (s)	10.318	113	20871	9.60 ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery	= 19.20%#	
57) 1,2-dichloroethane-d4 (s)	10.742	65	24097	9.72 ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery	= 19.44%#	
88) toluene-d8 (s)	12.876	98	76099	9.26 ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery	= 18.52%#	
114) 4-bromofluorobenzene (s)	15.794	95	31840	9.22 ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery	= 18.44%#	

Target Compounds					Qvalue
2) tertiary butyl alcohol	8.189	59	10841	45.77 ug/L #	8
4) 1,4-dioxane	11.939	88	3687	203.84 ug/L #	94
11) chlorodifluoromethane	4.523	51	21167	10.01 ug/L	96
12) dichlorodifluoromethane	4.502	85	28806	10.23 ug/L	99
15) chloromethane	4.863	50	26090	9.34 ug/L	96
16) vinyl chloride	5.145	62	28006	10.00 ug/L	98
18) bromomethane	5.851	94	18584	10.20 ug/L	93
19) chloroethane	6.035	64	11787	9.55 ug/L	86
20) trichlorofluoromethane	6.547	101	38864	9.86 ug/L	96
23) ethyl ether	6.939	74	11945	9.78 ug/L	95
24) 2-CHLOROPROPANE	7.154	43	37042	9.81 ug/L	98
27) acrolein	7.211	56	43312	97.01 ug/L	94
28) 1,1-dichloroethene	7.384	96	21613	9.84 ug/L	93
29) acetone	7.426	58	2779	9.89 ug/L	88
30) allyl chloride	7.907	78	3984	10.80 ug/L	99
31) acetonitrile	7.907	40	14909	88.90 ug/L #	66
32) iodomethane	7.666	142	42773	9.89 ug/L	91
33) carbon disulfide	7.787	76	73758	9.79 ug/L	97
34) 1-CHLOROPROPANE	8.142	63	2216	11.29 ug/L #	68
35) methylene chloride	8.095	84	24361	9.98 ug/L	93
36) methyl acetate	7.891	43	17156	9.78 ug/L	97
37) methyl tert butyl ether	8.430	73	73476	10.20 ug/L	99
38) trans-1,2-dichloroethene	8.461	96	23391	9.63 ug/L	92
39) di-isopropyl ether	9.010	45	68148	9.81 ug/L	96
40) ethyl tert-butyl ether	9.476	59	72162	9.65 ug/L	97
41) 2-butanone	9.737	72	2817	8.96 ug/L #	61
42) 1,1-dichloroethane	9.031	63	41314	10.36 ug/L	97
43) chloroprene	9.136	53	30182	9.48 ug/L	99
44) acrylonitrile	8.430	53	41913	51.13 ug/L	95
45) vinyl acetate	9.010	86	4072	9.61 ug/L #	75
46) ethyl acetate	9.743	45	3108	9.83 ug/L	80
47) 2,2-dichloropropane	9.779	77	36061	10.04 ug/L	97
48) cis-1,2-dichloroethene	9.753	96	26193	9.91 ug/L	89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183558.D
Acq On : 5 May 2014 8:40 pm
Operator : conniex
Sample : ic8469-10
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 10:19:55 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 10:00:56 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
49) methyl acrylate	9.821	55	25262	9.87 ug/L	96
50) propionitrile	9.842	54	32761	99.39 ug/L	95
51) bromochloromethane	10.062	128	13082	9.41 ug/L	93
52) tetrahydrofuran	10.109	42	8489	10.99 ug/L	92
53) chloroform	10.114	83	42996	9.50 ug/L	99
54) tert-butyl Formate	10.177	59	19365	9.44 ug/L	100
55) iso-butyl alcohol	10.559	74	3181	95.49 ug/L #	73
58) freon 113	7.342	151	17044	9.77 ug/L	92
59) methacrylonitrile	10.020	41	15034	9.95 ug/L	91
60) 1,1,1-trichloroethane	10.386	97	38097	10.24 ug/L	97
62) tert-amyl methyl ether	10.851	87	17428	9.82 ug/L	97
63) iso-octane	10.825	57	72153	10.02 ug/L	99
66) epichlorohydrin	12.468	57	12002	47.33 ug/L	94
67) n-butyl alcohol	11.296	56	33628	509.28 ug/L	95
68) Cyclohexane	10.459	84	34051	9.63 ug/L	96
69) carbon tetrachloride	10.579	117	34915	10.30 ug/L	95
70) 1,1-dichloropropene	10.553	75	30764	10.17 ug/L	94
71) hexane	8.765	86	3916	9.57 ug/L #	77
72) benzene	10.825	78	88705	9.94 ug/L	100
73) heptane	10.982	57	13415	9.66 ug/L	99
74) isopropyl acetate	10.736	43	40695	10.00 ug/L	99
75) 1,2-dichloroethane	10.831	62	31676	10.09 ug/L	96
78) trichloroethene	11.521	95	23829	10.04 ug/L	89
79) methylcyclohexane	11.762	83	36232	10.07 ug/L	94
80) 2-nitropropane	12.337	41	8434	9.00 ug/L #	78
81) 2-chloroethyl vinyl ether	12.332	63	51720	46.88 ug/L	99
82) methyl methacrylate	11.793	100	6239	9.27 ug/L #	91
83) 1,2-dichloropropane	11.803	63	22335	9.83 ug/L	99
84) propyl acetate	11.829	73	4370	9.60 ug/L	98
85) dibromomethane	11.950	93	14752	10.21 ug/L	94
86) bromodichloromethane	12.081	83	32895	9.66 ug/L	93
87) cis-1,3-dichloropropene	12.562	75	38794	9.86 ug/L	95
89) 4-methyl-2-pentanone	12.682	58	9416	9.95 ug/L	93
90) toluene	12.954	92	58252	10.08 ug/L	99
91) 3-methyl-1-butanol	12.672	55	21340	198.00 ug/L	97
92) trans-1,3-dichloropropene	13.153	75	38942	10.09 ug/L	99
93) ethyl methacrylate	13.148	69	29334	9.47 ug/L	98
94) 1,1,2-trichloroethane	13.388	83	18747	10.50 ug/L	95
95) 2-hexanone	13.587	58	9225	9.76 ug/L	87
97) cyclohexanone	15.773	55	33391	88.52 ug/L	99
98) tetrachloroethene	13.576	164	23341	10.20 ug/L	97
99) 1,3-dichloropropane	13.587	76	36550	9.86 ug/L	98
100) butyl acetate	13.650	56	13896	8.82 ug/L	90
101) dibromochloromethane	13.869	129	28214	9.79 ug/L	99
102) 1,2-dibromoethane	14.042	107	24241	9.94 ug/L	94
103) 3,3-dimethyl-1-Butanol	13.749	57	19660	96.42 ug/L	98
105) chlorobenzene	14.544	112	70484	9.73 ug/L	97
106) 1,1,1,2-tetrachloroethane	14.607	131	27353	9.69 ug/L	97
107) ethylbenzene	14.612	91	115618	9.93 ug/L	98
108) m,p-xylene	14.727	106	90401	19.87 ug/L	98

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183558.D
Acq On : 5 May 2014 8:40 pm
Operator : conniex
Sample : ic8469-10
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 10:19:55 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 10:00:56 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
109) o-xylene	15.187	106	47890	10.12 ug/L	96
110) styrene	15.198	104	76689	10.18 ug/L	99
111) bromoform	15.485	173	21777	9.71 ug/L	95
113) isopropylbenzene	15.569	105	123097	9.95 ug/L	99
115) bromobenzene	16.014	156	34637	10.02 ug/L	96
116) 1,1,2,2-tetrachloroethane	15.899	83	34294	9.75 ug/L	97
117) trans-1,4-dichloro-2-b...	15.951	53	8969	9.73 ug/L	94
118) 1,2,3-trichloropropane	15.993	110	9690	10.17 ug/L	93
119) n-propylbenzene	16.024	91	136643	10.07 ug/L	98
120) 2-chlorotoluene	16.186	126	30897	9.87 ug/L	96
121) 4-chlorotoluene	16.301	91	91376	10.08 ug/L	98
123) 1,3,5-trimethylbenzene	16.191	105	108732	10.12 ug/L	97
124) tert-butylbenzene	16.589	119	97184	10.00 ug/L	97
125) pentachloroethane	16.673	167	22918	10.42 ug/L	98
126) 1,2,4-trimethylbenzene	16.631	105	109036	10.01 ug/L	93
127) 1,2,3-trimethylbenzene	16.631	105	109036	10.01 ug/L	99
128) sec-butylbenzene	16.824	105	140856	10.11 ug/L	98
129) 1,3-dichlorobenzene	17.028	146	69294	9.71 ug/L	97
130) p-isopropyltoluene	16.955	119	126827	10.20 ug/L	99
131) 1,4-dichlorobenzene	17.117	146	70498	9.60 ug/L	99
132) benzyl chloride	17.253	91	67183	9.24 ug/L	98
133) 1,2-dichlorobenzene	17.557	146	70352	9.93 ug/L	98
135) n-butylbenzene	17.415	92	61304	10.17 ug/L	97
137) 1,2-dibromo-3-chloropr...	18.419	157	7698	9.01 ug/L	82
138) 1,3,5-trichlorobenzene	18.618	180	58700	10.12 ug/L	99
139) 1,2,4-trichlorobenzene	19.361	180	50423	9.84 ug/L	98
140) hexachlorobutadiene	19.486	225	27476	9.75 ug/L	98
141) naphthalene	19.690	128	104764	9.74 ug/L	97
143) 1,2,3-trichlorobenzene	19.962	180	43848	9.99 ug/L	100
144) hexachloroethane	17.844	201	22548	10.16 ug/L	96

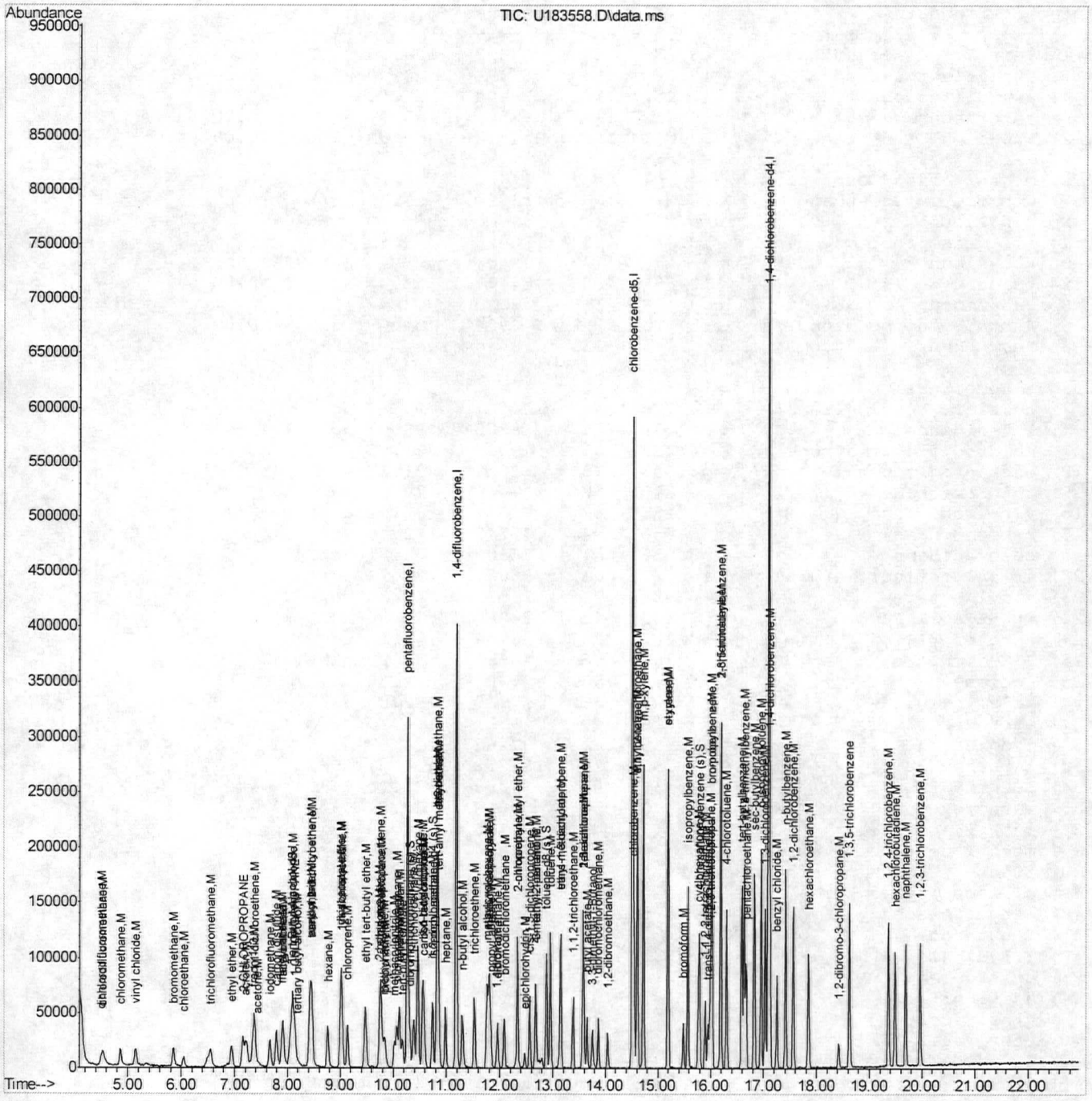
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.6 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183558.D
Acq On : 5 May 2014 8:40 pm
Operator : conniex
Sample : ic8469-10
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 06 10:19:55 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 10:00:56 2014
Response via : Initial Calibration



ACCUTEST LABORATORIES JB66517

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183559.D
Acq On : 5 May 2014 9:09 pm
Operator : conniex
Sample : ic8469-20
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 10:17:36 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:38:46 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.074	65	103807	500.00	ug/L	0.03
5) pentafluorobenzene	10.265	168	263474	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.181	114	378000	50.00	ug/L	0.00
96) chlorobenzene-d5	14.512	117	368581	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	17.091	152	231513	50.00	ug/L	0.00

System Monitoring Compounds						
56) dibromofluoromethane (s)	10.318	113	113254	51.38	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 102.76%			
57) 1,2-dichloroethane-d4 (s)	10.741	65	132070	52.41	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 104.82%			
88) toluene-d8 (s)	12.875	98	424079	51.43	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 102.86%			
114) 4-bromofluorobenzene (s)	15.793	95	178954	51.09	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 102.18%			

Target Compounds						Qvalue
2) tertiary butyl alcohol	8.178	59	23907	90.82	ug/L #	23
4) 1,4-dioxane	11.939	88	9283	492.03	ug/L #	93
11) chlorodifluoromethane	4.533	51	48035	21.05	ug/L	94
12) dichlorodifluoromethane	4.507	85	61552	21.13	ug/L	93
15) chloromethane	4.873	50	57448	20.09	ug/L	98
16) vinyl chloride	5.155	62	61037	20.72	ug/L	96
18) bromomethane	5.856	94	39242	22.49	ug/L	99
19) chloroethane	6.039	64	26899	21.21	ug/L	98
20) trichlorofluoromethane	6.547	101	86075	21.72	ug/L	95
23) ethyl ether	6.939	74	25051	20.33	ug/L	90
24) 2-CHLOROPROPANE	7.153	43	80257	21.50	ug/L #	94
27) acrolein	7.227	56	90638	195.17	ug/L	97
28) 1,1-dichloroethene	7.383	96	45637	21.20	ug/L	99
29) acetone	7.446	58	6265	21.66	ug/L	89
30) allyl chloride	7.906	78	7739	22.03	ug/L	92
31) acetonitrile	7.906	40	30351	166.29	ug/L #	63
32) iodomethane	7.666	142	92465	20.97	ug/L	99
33) carbon disulfide	7.791	76	156951	21.02	ug/L	97
34) 1-CHLOROPROPANE	8.131	63	4059	21.70	ug/L	98
35) methylene chloride	8.100	84	50017	20.57	ug/L	93
36) methyl acetate	7.891	43	37590	20.88	ug/L	98
37) methyl tert butyl ether	8.424	73	152959	20.86	ug/L	99
38) trans-1,2-dichloroethene	8.471	96	48737	21.03	ug/L	98
39) di-isopropyl ether	9.015	45	150935	20.54	ug/L	99
40) ethyl tert-butyl ether	9.475	59	156655	20.58	ug/L	99
41) 2-butanone	9.737	72	6632	20.85	ug/L #	87
42) 1,1-dichloroethane	9.031	63	85138	20.84	ug/L	99
43) chloroprene	9.136	53	68196	20.54	ug/L	94
44) acrylonitrile	8.435	53	87133	100.46	ug/L	97
45) vinyl acetate	9.015	86	8875	20.40	ug/L #	66
46) ethyl acetate	9.742	45	6738	21.01	ug/L	90
47) 2,2-dichloropropane	9.779	77	75775	21.51	ug/L	96
48) cis-1,2-dichloroethene	9.758	96	54441	21.25	ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183559.D
Acq On : 5 May 2014 9:09 pm
Operator : conniex
Sample : ic8469-20
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 10:17:36 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:38:46 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
49) methyl acrylate	9.821	55	52885	20.13 ug/L	95
50) propionitrile	9.847	54	68571	198.24 ug/L	86
51) bromochloromethane	10.061	128	28180	20.80 ug/L	94
52) tetrahydrofuran	10.108	42	16195	22.93 ug/L	95
53) chloroform	10.119	83	88699	21.31 ug/L	99
54) tert-butyl Formate	10.171	59	44546	19.63 ug/L	98
55) iso-butyl alcohol	10.553	74	7144	218.32 ug/L #	37
58) freon 113	7.347	151	41111	22.01 ug/L	92
59) methacrylonitrile	10.019	41	30846	20.64 ug/L	96
60) 1,1,1-trichloroethane	10.386	97	80691	21.21 ug/L	95
62) tert-amyl methyl ether	10.851	87	37670	20.56 ug/L	95
63) iso-octane	10.830	57	168807	21.57 ug/L	99
66) epichlorohydrin	12.472	57	25735	103.84 ug/L	98
67) n-butyl alcohol	11.296	56	70597	1113.59 ug/L	96
68) Cyclohexane	10.459	84	72567	20.84 ug/L	98
69) carbon tetrachloride	10.584	117	73600	21.54 ug/L	93
70) 1,1-dichloropropene	10.553	75	66705	21.43 ug/L	96
71) hexane	8.769	86	8718	21.82 ug/L #	83
72) benzene	10.825	78	187756	21.17 ug/L	99
73) heptane	10.982	57	30577	21.53 ug/L	98
74) isopropyl acetate	10.736	43	87784	20.66 ug/L	97
75) 1,2-dichloroethane	10.835	62	67117	21.27 ug/L	97
78) trichloroethene	11.526	95	50277	21.01 ug/L	96
79) methylcyclohexane	11.761	83	82887	21.78 ug/L	98
80) 2-nitropropane	12.326	41	19381	20.58 ug/L #	78
81) 2-chloroethyl vinyl ether	12.331	63	116222	93.85 ug/L	99
82) methyl methacrylate	11.798	100	13814	20.22 ug/L	94
83) 1,2-dichloropropane	11.808	63	47378	20.60 ug/L	97
84) propyl acetate	11.834	73	9615	21.47 ug/L	98
85) dibromomethane	11.955	93	30885	20.47 ug/L	95
86) bromodichloromethane	12.080	83	69347	20.73 ug/L	98
87) cis-1,3-dichloropropene	12.561	75	83652	20.60 ug/L	99
89) 4-methyl-2-pentanone	12.676	58	18703	20.51 ug/L #	87
90) toluene	12.954	92	123101	20.78 ug/L	99
91) 3-methyl-1-butanol	12.671	55	45200	465.89 ug/L	98
92) trans-1,3-dichloropropene	13.152	75	81041	20.79 ug/L	99
93) ethyl methacrylate	13.147	69	63542	20.53 ug/L	98
94) 1,1,2-trichloroethane	13.388	83	38041	20.78 ug/L	96
95) 2-hexanone	13.581	58	19552	21.81 ug/L	90
97) cyclohexanone	15.773	55	80182	204.33 ug/L	97
98) tetrachloroethene	13.571	164	50179	20.88 ug/L	96
99) 1,3-dichloropropane	13.586	76	76674	20.64 ug/L	99
100) butyl acetate	13.649	56	32197	21.29 ug/L	93
101) dibromochloromethane	13.869	129	61100	20.40 ug/L	98
102) 1,2-dibromoethane	14.041	107	50877	20.61 ug/L	98
103) 3,3-dimethyl-1-Butanol	13.754	57	39831	216.07 ug/L	99
105) chlorobenzene	14.549	112	149404	20.79 ug/L	97
106) 1,1,1,2-tetrachloroethane	14.611	131	59540	20.85 ug/L	97
107) ethylbenzene	14.606	91	245449	20.63 ug/L	99
108) m,p-xylene	14.727	106	192328	41.33 ug/L	98

7.6.7

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183559.D
Acq On : 5 May 2014 9:09 pm
Operator : conniex
Sample : ic8469-20
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 10:17:36 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:38:46 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
109) o-xylene	15.187	106	97838	20.58 ug/L	94
110) styrene	15.197	104	164889	20.32 ug/L	99
111) bromoform	15.485	173	46848	20.29 ug/L	98
113) isopropylbenzene	15.569	105	262624	20.29 ug/L	99
115) bromobenzene	16.018	156	73639	20.90 ug/L	96
116) 1,1,2,2-tetrachloroethane	15.898	83	70517	20.68 ug/L	98
117) trans-1,4-dichloro-2-b...	15.950	53	18973	20.56 ug/L	91
118) 1,2,3-trichloropropane	15.992	110	20676	21.67 ug/L	95
119) n-propylbenzene	16.024	91	292087	20.64 ug/L	100
120) 2-chlorotoluene	16.191	126	66788	21.08 ug/L	98
121) 4-chlorotoluene	16.301	91	192140	20.43 ug/L	100
123) 1,3,5-trimethylbenzene	16.191	105	235710	20.85 ug/L	99
124) tert-butylbenzene	16.588	119	211944	20.78 ug/L	99
125) pentachloroethane	16.672	167	47134	20.36 ug/L	97
126) 1,2,4-trimethylbenzene	16.630	105	233401	20.54 ug/L	99
128) sec-butylbenzene	16.824	105	306282	20.71 ug/L	98
129) 1,3-dichlorobenzene	17.028	146	148287	20.80 ug/L	98
130) p-isopropyltoluene	16.955	119	273379	20.90 ug/L	98
131) 1,4-dichlorobenzene	17.122	146	151721	21.09 ug/L	98
132) benzyl chloride	17.253	91	146356	20.75 ug/L	97
133) 1,2-dichlorobenzene	17.556	146	145265	20.85 ug/L	98
135) n-butylbenzene	17.415	92	131365	21.02 ug/L	97
137) 1,2-dibromo-3-chloropr...	18.419	157	17888	21.00 ug/L	94
138) 1,3,5-trichlorobenzene	18.623	180	126148	21.71 ug/L	99
139) 1,2,4-trichlorobenzene	19.360	180	109359	21.65 ug/L	99
140) hexachlorobutadiene	19.486	225	60332	22.43 ug/L	97
141) naphthalene	19.690	128	223178	21.64 ug/L	100
143) 1,2,3-trichlorobenzene	19.962	180	92879	21.69 ug/L	97
144) hexachloroethane	17.849	201	49433	20.98 ug/L	98

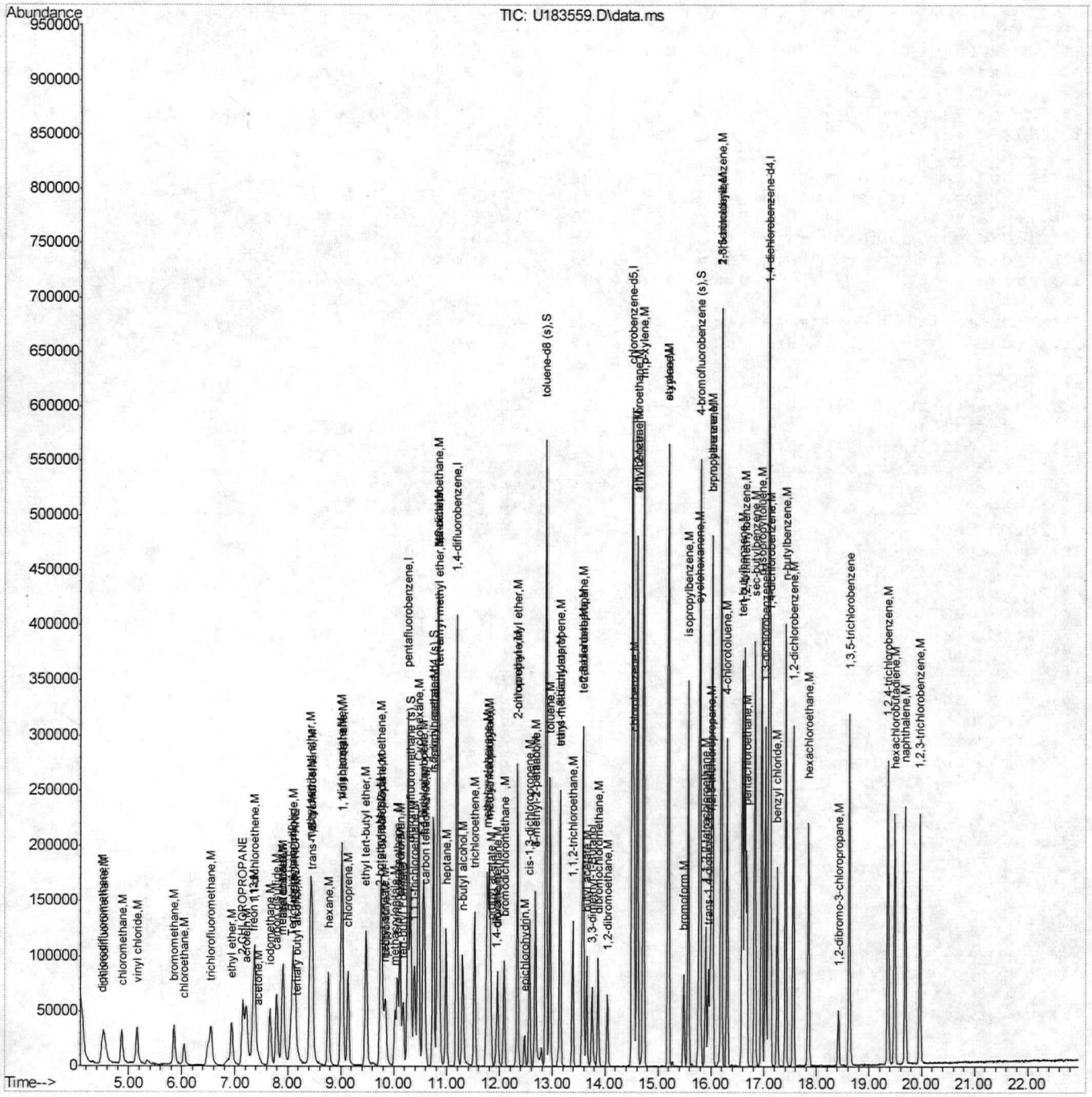
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.7 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183559.D
Acq On : 5 May 2014 9:09 pm
Operator : conniex
Sample : ic8469-20
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 06 10:17:36 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:38:46 2014
Response via : Initial Calibration



7.6.7

7

ACCUTEST LABORATORIES JB66517

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183560.D
Acq On : 5 May 2014 9:38 pm
Operator : conniex
Sample : icc8469-50
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 06 10:12:35 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:36:34 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.043	65	121236	500.00 ug/L	0.00
5) pentafluorobenzene	10.266	168	273479	50.00 ug/L	0.00
64) 1,4-difluorobenzene	11.181	114	398441	50.00 ug/L	0.00
96) chlorobenzene-d5	14.512	117	381581	50.00 ug/L	0.00
112) 1,4-dichlorobenzene-d4	17.091	152	238606	50.00 ug/L	0.00

System Monitoring Compounds					
56) dibromofluoromethane (s)	10.318	113	115051	50.12 ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 100.24%		
57) 1,2-dichloroethane-d4 (s)	10.742	65	134893	51.31 ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 102.62%		
88) toluene-d8 (s)	12.875	98	433900	49.94 ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 99.88%		
114) 4-bromofluorobenzene (s)	15.794	95	180587	49.81 ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 99.62%		

Target Compounds					Qvalue
2) tertiary butyl alcohol	8.153	59	68026	259.58 ug/L	100
4) 1,4-dioxane	11.908	88	24315	1283.10 ug/L #	100
11) chlorodifluoromethane	4.539	51	121300	50.26 ug/L	100
12) dichlorodifluoromethane	4.518	85	157440	50.93 ug/L	100
15) chloromethane	4.884	50	147681	49.72 ug/L	100
16) vinyl chloride	5.166	62	153943	49.58 ug/L	100
18) bromomethane	5.846	94	99550	54.42 ug/L	100
19) chloroethane	6.040	64	67198	50.97 ug/L	100
20) trichlorofluoromethane	6.542	101	214005	50.95 ug/L	100
23) ethyl ether	6.939	74	64953	50.47 ug/L	100
24) 2-CHLOROPROPANE	7.154	43	195400	50.19 ug/L	100
27) acrolein	7.211	56	239171	494.25 ug/L	100
28) 1,1-dichloroethene	7.379	96	112579	49.84 ug/L	100
29) acetone	7.426	58	15741	52.22 ug/L	100
30) allyl chloride	7.912	78	17216	47.64 ug/L	100
31) acetonitrile	7.896	40	96867	502.74 ug/L	100
32) iodomethane	7.666	142	229221	49.87 ug/L	100
33) carbon disulfide	7.787	76	385693	49.39 ug/L	100
34) 1-CHLOROPROPANE	8.137	63	9896	50.59 ug/L	100
35) methylene chloride	8.095	84	126720	50.05 ug/L	100
36) methyl acetate	7.886	43	92989	49.37 ug/L	100
37) methyl tert butyl ether	8.425	73	381181	50.05 ug/L	100
38) trans-1,2-dichloroethene	8.466	96	121193	50.07 ug/L	100
39) di-isopropyl ether	9.010	45	382145	49.77 ug/L	100
40) ethyl tert-butyl ether	9.476	59	393229	49.44 ug/L	100
41) 2-butanone	9.732	72	17229	51.97 ug/L	100
42) 1,1-dichloroethane	9.031	63	213513	50.08 ug/L	100
43) chloroprene	9.141	53	173264	49.64 ug/L	100
44) acrylonitrile	8.430	53	225112	249.03 ug/L	100
45) vinyl acetate	9.010	86	22580	49.75 ug/L	100
46) ethyl acetate	9.743	45	16856	50.24 ug/L	100
47) 2,2-dichloropropane	9.779	77	187533	51.00 ug/L	100
48) cis-1,2-dichloroethene	9.758	96	133899	50.08 ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183560.D
Acq On : 5 May 2014 9:38 pm
Operator : conniex
Sample : icc8469-50
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 06 10:12:35 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:36:34 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
49) methyl acrylate	9.821	55	134630	49.56 ug/L	100
50) propionitrile	9.842	54	177737	493.24 ug/L	100
51) bromochloromethane	10.067	128	71242	50.33 ug/L	100
52) tetrahydrofuran	10.103	42	37401	50.67 ug/L	100
53) chloroform	10.114	83	218216	50.32 ug/L	100
54) tert-butyl Formate	10.177	59	115481	48.94 ug/L	100
55) iso-butyl alcohol	10.553	74	17148	504.08 ug/L	100
58) freon 113	7.352	151	98648	50.02 ug/L	100
59) methacrylonitrile	10.020	41	77717	50.04 ug/L	100
60) 1,1,1-trichloroethane	10.386	97	199109	50.22 ug/L	100
62) tert-amyl methyl ether	10.851	87	96144	50.28 ug/L	100
63) iso-octane	10.830	57	409431	49.39 ug/L	100
66) epichlorohydrin	12.467	57	64610	247.60 ug/L	100
67) n-butyl alcohol	11.285	56	166545	2516.07 ug/L	100
68) Cyclohexane	10.459	84	185279	50.23 ug/L	100
69) carbon tetrachloride	10.579	117	182644	50.46 ug/L	100
70) 1,1-dichloropropene	10.553	75	165637	50.37 ug/L	100
71) hexane	8.765	86	21810	50.61 ug/L	100
72) benzene	10.825	78	470866	50.36 ug/L	100
73) heptane	10.982	57	76612	50.00 ug/L	100
74) isopropyl acetate	10.736	43	224288	50.15 ug/L	100
75) 1,2-dichloroethane	10.830	62	169757	50.99 ug/L	100
78) trichloroethene	11.521	95	125503	49.66 ug/L	100
79) methylcyclohexane	11.761	83	201972	49.37 ug/L	100
80) 2-nitropropane	12.332	41	49746	50.19 ug/L	100
81) 2-chloroethyl vinyl ether	12.332	63	322217	246.18 ug/L	100
82) methyl methacrylate	11.793	100	35926	49.66 ug/L	100
83) 1,2-dichloropropane	11.809	63	120343	49.67 ug/L	100
84) propyl acetate	11.835	73	23885	50.25 ug/L	100
85) dibromomethane	11.955	93	79234	49.97 ug/L	100
86) bromodichloromethane	12.086	83	175717	49.82 ug/L	100
87) cis-1,3-dichloropropene	12.562	75	213378	49.84 ug/L	100
89) 4-methyl-2-pentanone	12.677	58	48271	50.37 ug/L	100
90) toluene	12.954	92	311126	49.77 ug/L	100
91) 3-methyl-1-butanol	12.666	55	104841	1025.51 ug/L	100
92) trans-1,3-dichloropropene	13.153	75	202708	49.54 ug/L	100
93) ethyl methacrylate	13.147	69	161192	49.60 ug/L	100
94) 1,1,2-trichloroethane	13.388	83	95177	49.62 ug/L	100
95) 2-hexanone	13.582	58	48473	51.41 ug/L	100
97) cyclohexanone	15.768	55	214601	500.02 ug/L	100
98) tetrachloroethene	13.576	164	127035	51.09 ug/L	100
99) 1,3-dichloropropane	13.587	76	195590	51.01 ug/L	100
100) butyl acetate	13.650	56	80484	51.40 ug/L	100
101) dibromochloromethane	13.869	129	156876	50.59 ug/L	100
102) 1,2-dibromoethane	14.042	107	129596	50.84 ug/L	100
103) 3,3-dimethyl-1-Butanol	13.749	57	102897	532.70 ug/L	100
105) chlorobenzene	14.549	112	373228	50.28 ug/L	100
106) 1,1,1,2-tetrachloroethane	14.612	131	149288	50.68 ug/L	100
107) ethylbenzene	14.607	91	615992	50.12 ug/L	100
108) m,p-xylene	14.727	106	486240	100.96 ug/L	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183560.D
Acq On : 5 May 2014 9:38 pm
Operator : conniex
Sample : icc8469-50
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 06 10:12:35 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:36:34 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
109) o-xylene	15.192	106	246744	50.23 ug/L	100
110) styrene	15.198	104	418602	50.00 ug/L	100
111) bromoform	15.485	173	117381	49.57 ug/L	100
113) isopropylbenzene	15.569	105	663501	49.41 ug/L	100
115) bromobenzene	16.014	156	182815	50.10 ug/L	100
116) 1,1,2,2-tetrachloroethane	15.898	83	177975	50.50 ug/L	100
117) trans-1,4-dichloro-2-b...	15.951	53	47189	49.59 ug/L	100
118) 1,2,3-trichloropropane	15.987	110	49432	50.18 ug/L	100
119) n-propylbenzene	16.029	91	732208	49.70 ug/L	100
120) 2-chlorotoluene	16.191	126	164910	50.31 ug/L	100
121) 4-chlorotoluene	16.301	91	485558	49.75 ug/L	100
123) 1,3,5-trimethylbenzene	16.191	105	582580	49.84 ug/L	100
124) tert-butylbenzene	16.589	119	525548	49.83 ug/L	100
125) pentachloroethane	16.673	167	119932	50.07 ug/L	100
126) 1,2,4-trimethylbenzene	16.631	105	585090	49.78 ug/L	100
128) sec-butylbenzene	16.824	105	764753	49.83 ug/L	100
129) 1,3-dichlorobenzene	17.028	146	367463	50.14 ug/L	100
130) p-isopropyltoluene	16.955	119	675864	50.02 ug/L	100
131) 1,4-dichlorobenzene	17.117	146	373697	50.21 ug/L	100
132) benzyl chloride	17.253	91	368274	50.56 ug/L	100
133) 1,2-dichlorobenzene	17.556	146	364744	50.83 ug/L	100
135) n-butylbenzene	17.415	92	325896	50.30 ug/L	100
137) 1,2-dibromo-3-chloropr...	18.419	157	44588	50.82 ug/L	100
138) 1,3,5-trichlorobenzene	18.623	180	310188	51.64 ug/L	100
139) 1,2,4-trichlorobenzene	19.361	180	269693	51.58 ug/L	100
140) hexachlorobutadiene	19.492	225	146193	52.47 ug/L	100
141) naphthalene	19.690	128	549325	51.58 ug/L	100
143) 1,2,3-trichlorobenzene	19.968	180	226943	51.26 ug/L	100
144) hexachloroethane	17.849	201	123314	50.59 ug/L	100

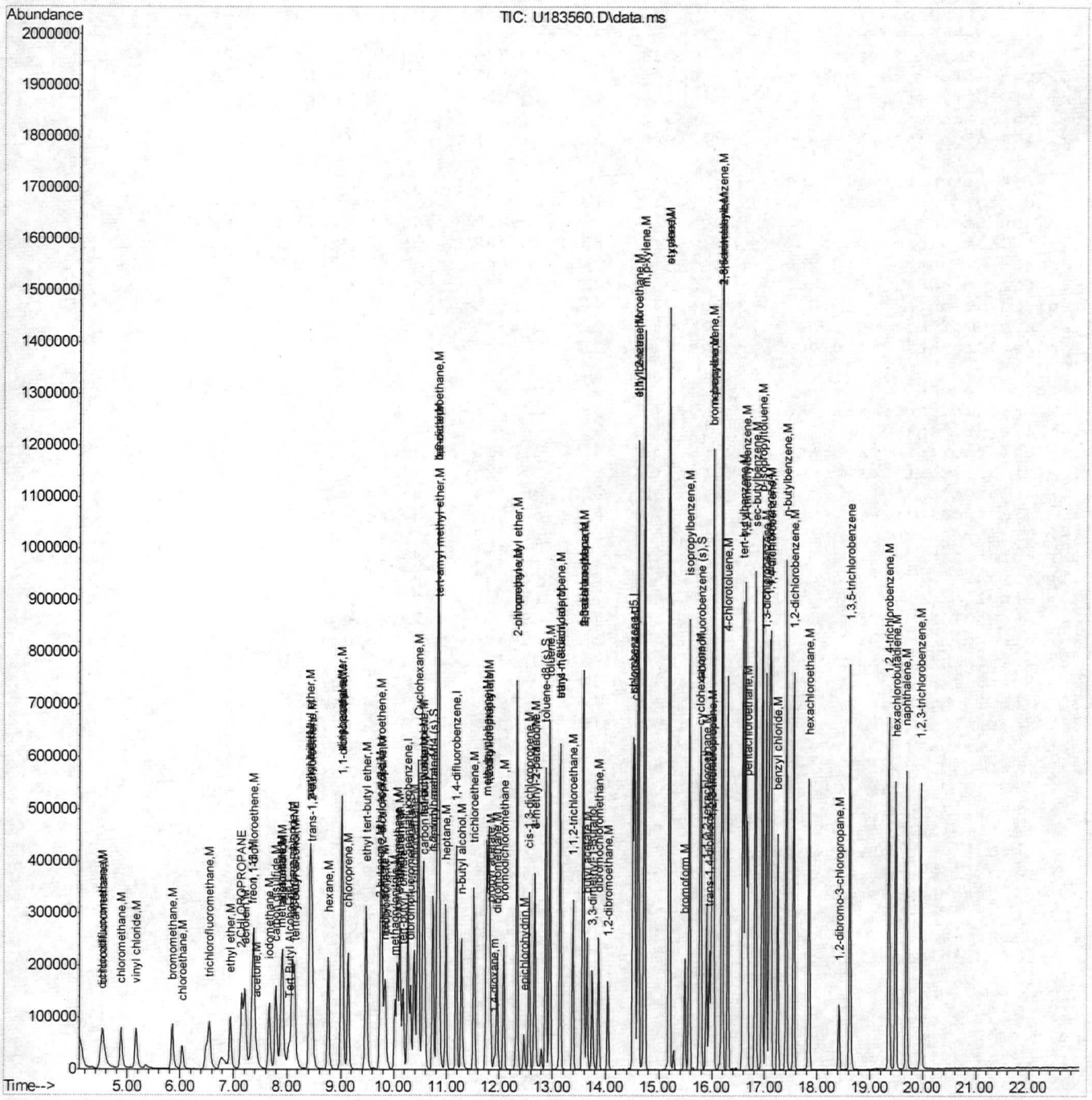
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.8

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183560.D
Acq On : 5 May 2014 9:38 pm
Operator : conniex
Sample : icc8469-50
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 06 10:12:35 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:36:34 2014
Response via : Initial Calibration



ACCUTEST LABORATORIES JB66517

7.6.8 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183561.D
Acq On : 5 May 2014 10:07 pm
Operator : conniex
Sample : ic8469-100
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 06 10:11:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:37:16 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.058	65	124748	500.00 ug/L	0.01
5) pentafluorobenzene	10.265	168	279538	50.00 ug/L	0.00
64) 1,4-difluorobenzene	11.180	114	402337	50.00 ug/L	0.00
96) chlorobenzene-d5	14.512	117	388920	50.00 ug/L	0.00
112) 1,4-dichlorobenzene-d4	17.090	152	246525	50.00 ug/L	0.00

System Monitoring Compounds					
56) dibromofluoromethane (s)	10.317	113	232269	98.99 ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 197.98%#		
57) 1,2-dichloroethane-d4 (s)	10.746	65	264682	98.50 ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 197.00%#		
88) toluene-d8 (s)	12.880	98	878242	100.11 ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 200.22%#		
114) 4-bromofluorobenzene (s)	15.793	95	369834	98.73 ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 197.46%#		

Target Compounds					Qvalue
2) tertiary butyl alcohol	8.173	59	135573	502.76 ug/L #	37
4) 1,4-dioxane	11.918	88	47203	2420.78 ug/L #	98
11) chlorodifluoromethane	4.533	51	232910	94.41 ug/L	99
12) dichlorodifluoromethane	4.512	85	295325	93.47 ug/L	96
15) chloromethane	4.888	50	302769	99.73 ug/L	99
16) vinyl chloride	5.176	62	302926	95.44 ug/L	99
18) bromomethane	5.851	94	181482	97.06 ug/L	98
19) chloroethane	6.028	64	134222	99.59 ug/L	99
20) trichlorofluoromethane	6.546	101	402935	93.85 ug/L	95
23) ethyl ether	6.944	74	129173	98.19 ug/L	91
24) 2-CHLOROPROPANE	7.153	43	392383	98.60 ug/L	98
27) acrolein	7.216	56	488886	988.39 ug/L	99
28) 1,1-dichloroethene	7.378	96	223493	96.81 ug/L	98
29) acetone	7.435	58	30449	98.82 ug/L	100
30) allyl chloride	7.911	78	37936	102.71 ug/L #	84
31) acetonitrile	7.901	40	190967	969.64 ug/L #	75
32) iodomethane	7.665	142	464025	98.76 ug/L	98
33) carbon disulfide	7.786	76	783066	98.11 ug/L	99
34) 1-CHLOROPROPANE	8.136	63	19554	97.80 ug/L	97
35) methylene chloride	8.094	84	256196	98.99 ug/L	98
36) methyl acetate	7.890	43	187915	97.60 ug/L	99
37) methyl tert butyl ether	8.429	73	777266	99.84 ug/L	100
38) trans-1,2-dichloroethene	8.466	96	242649	98.07 ug/L	98
39) di-isopropyl ether	9.015	45	769499	98.05 ug/L	98
40) ethyl tert-butyl ether	9.475	59	797398	98.08 ug/L	97
41) 2-butanone	9.731	72	33498	98.86 ug/L #	90
42) 1,1-dichloroethane	9.031	63	428517	98.32 ug/L	99
43) chloroprene	9.140	53	343113	96.18 ug/L	98
44) acrylonitrile	8.429	53	456312	493.86 ug/L	99
45) vinyl acetate	9.015	86	45683	98.47 ug/L #	91
46) ethyl acetate	9.742	45	33484	97.64 ug/L	79
47) 2,2-dichloropropane	9.778	77	369739	98.36 ug/L	98
48) cis-1,2-dichloroethene	9.758	96	268825	98.36 ug/L	96

7.6.9

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183561.D
Acq On : 5 May 2014 10:07 pm
Operator : conniex
Sample : ic8469-100
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 06 10:11:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:37:16 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
49) methyl acrylate	9.826	55	280752	101.10 ug/L	97
50) propionitrile	9.846	54	364329	989.15 ug/L	90
51) bromochloromethane	10.066	128	141930	98.10 ug/L	97
52) tetrahydrofuran	10.108	42	73910	97.96 ug/L	96
53) chloroform	10.113	83	438553	98.93 ug/L	99
54) tert-butyl Formate	10.176	59	239872	99.46 ug/L	99
55) iso-butyl alcohol	10.547	74	34608	995.28 ug/L #	5
58) freon 113	7.352	151	191493	95.00 ug/L	98
59) methacrylonitrile	10.019	41	158231	99.67 ug/L	97
60) 1,1,1-trichloroethane	10.385	97	400520	98.83 ug/L	95
62) tert-amyl methyl ether	10.856	87	192121	98.29 ug/L	97
63) iso-octane	10.830	57	795907	93.93 ug/L	100
66) epichlorohydrin	12.467	57	132205	501.73 ug/L	97
67) n-butyl alcohol	11.290	56	343764	5143.11 ug/L	99
68) Cyclohexane	10.458	84	366858	98.49 ug/L	99
69) carbon tetrachloride	10.579	117	360075	98.52 ug/L	97
70) 1,1-dichloropropene	10.553	75	329898	99.35 ug/L	99
71) hexane	8.764	86	40556	93.21 ug/L #	78
72) benzene	10.824	78	943326	99.92 ug/L	99
73) heptane	10.981	57	144062	93.11 ug/L	98
74) isopropyl acetate	10.736	43	453430	100.41 ug/L	100
75) 1,2-dichloroethane	10.835	62	335370	99.75 ug/L	99
78) trichloroethene	11.520	95	253803	99.45 ug/L	95
79) methylcyclohexane	11.761	83	389102	94.18 ug/L	96
80) 2-nitropropane	12.331	41	100514	100.42 ug/L	97
81) 2-chloroethyl vinyl ether	12.336	63	655583	496.03 ug/L	99
82) methyl methacrylate	11.797	100	72072	98.66 ug/L	95
83) 1,2-dichloropropane	11.808	63	245001	100.14 ug/L	99
84) propyl acetate	11.834	73	46997	97.92 ug/L	94
85) dibromomethane	11.954	93	161425	100.81 ug/L	97
86) bromodichloromethane	12.085	83	355598	99.84 ug/L	97
87) cis-1,3-dichloropropene	12.566	75	432081	99.95 ug/L	97
89) 4-methyl-2-pentanone	12.676	58	97617	100.88 ug/L	99
90) toluene	12.953	92	628768	99.60 ug/L	99
91) 3-methyl-1-butanol	12.671	55	206662	2001.90 ug/L	99
92) trans-1,3-dichloropropene	13.152	75	418180	101.21 ug/L	98
93) ethyl methacrylate	13.147	69	332132	101.22 ug/L	100
94) 1,1,2-trichloroethane	13.387	83	197108	101.76 ug/L	97
95) 2-hexanone	13.581	58	95846	100.66 ug/L	96
97) cyclohexanone	15.772	55	420810	961.95 ug/L	97
98) tetrachloroethene	13.576	164	253753	100.13 ug/L	97
99) 1,3-dichloropropane	13.586	76	394173	100.85 ug/L	99
100) butyl acetate	13.649	56	159579	100.00 ug/L	99
101) dibromochloromethane	13.868	129	315990	99.98 ug/L	98
102) 1,2-dibromoethane	14.041	107	261733	100.74 ug/L	97
103) 3,3-dimethyl-1-Butanol	13.753	57	189809	964.11 ug/L	99
105) chlorobenzene	14.548	112	761354	100.64 ug/L	99
106) 1,1,1,2-tetrachloroethane	14.611	131	303504	101.09 ug/L	97
107) ethylbenzene	14.611	91	1259935	100.57 ug/L	99
108) m,p-xylene	14.726	106	982474	200.14 ug/L	97

7.6.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183561.D
Acq On : 5 May 2014 10:07 pm
Operator : conniex
Sample : ic8469-100
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 06 10:11:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:37:16 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
109) o-xylene	15.192	106	503838	100.64 ug/L	99
110) styrene	15.197	104	862169	101.05 ug/L	99
111) bromoform	15.485	173	248097	102.79 ug/L	97
113) isopropylbenzene	15.573	105	1361104	98.11 ug/L	100
115) bromobenzene	16.013	156	371585	98.55 ug/L	97
116) 1,1,2,2-tetrachloroethane	15.898	83	361199	99.20 ug/L	100
117) trans-1,4-dichloro-2-b...	15.950	53	98209	99.89 ug/L	97
118) 1,2,3-trichloropropane	15.992	110	101167	99.39 ug/L	98
119) n-propylbenzene	16.028	91	1475780	96.95 ug/L	99
120) 2-chlorotoluene	16.191	126	334770	98.84 ug/L	94
121) 4-chlorotoluene	16.300	91	987255	97.91 ug/L	100
123) 1,3,5-trimethylbenzene	16.191	105	1195498	99.00 ug/L	99
124) tert-butylbenzene	16.588	119	1078604	98.99 ug/L	99
125) pentachloroethane	16.672	167	244586	98.83 ug/L	99
126) 1,2,4-trimethylbenzene	16.630	105	1201926	98.97 ug/L	98
128) sec-butylbenzene	16.823	105	1554445	98.04 ug/L	99
129) 1,3-dichlorobenzene	17.027	146	763202	100.79 ug/L	98
130) p-isopropyltoluene	16.954	119	1386214	99.29 ug/L	99
131) 1,4-dichlorobenzene	17.122	146	760325	98.87 ug/L	98
132) benzyl chloride	17.252	91	748225	99.42 ug/L	99
133) 1,2-dichlorobenzene	17.556	146	742892	100.20 ug/L	100
135) n-butylbenzene	17.414	92	657805	98.27 ug/L	98
137) 1,2-dibromo-3-chloropr...	18.419	157	90816	100.18 ug/L	94
138) 1,3,5-trichlorobenzene	18.623	180	614630	99.04 ug/L	99
139) 1,2,4-trichlorobenzene	19.360	180	533155	98.69 ug/L	99
140) hexachlorobutadiene	19.491	225	283450	98.47 ug/L	98
141) naphthalene	19.690	128	1094688	99.49 ug/L	98
143) 1,2,3-trichlorobenzene	19.962	180	453232	99.09 ug/L	99
144) hexachloroethane	17.849	201	249178	98.95 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

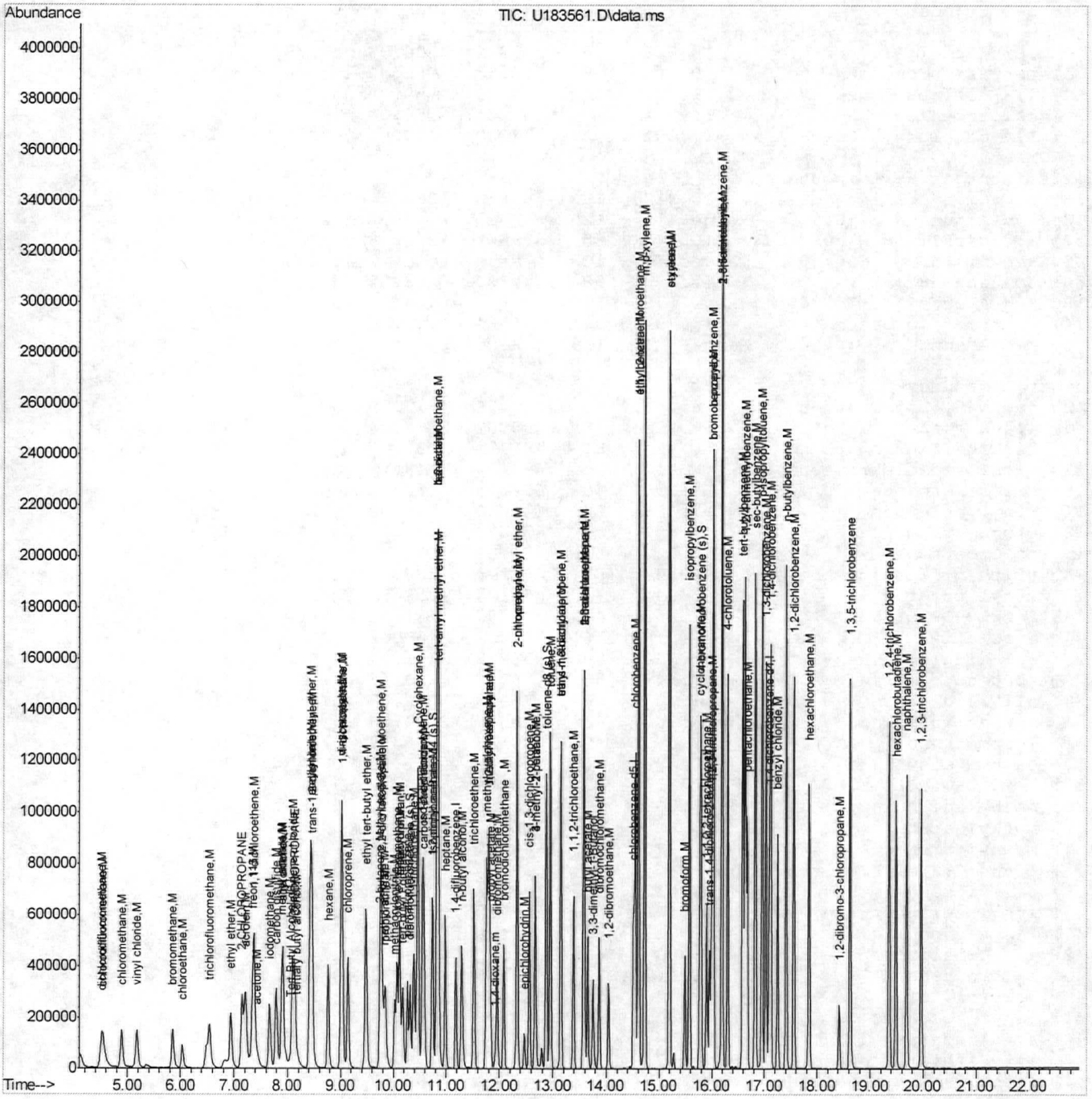
7.6.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183561.D
Acq On : 5 May 2014 10:07 pm
Operator : conniex
Sample : ic8469-100
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 06 10:11:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:37:16 2014
Response via : Initial Calibration



7.6.9

ACCUTEST LABORATORIES JB66517

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183562.D
Acq On : 5 May 2014 10:36 pm
Operator : conniex
Sample : ic8469-200
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 10:17:06 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:52:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.069	65	130825	500.00	ug/L	0.03
5) pentafluorobenzene	10.265	168	276853	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.181	114	405479	50.00	ug/L	0.00
96) chlorobenzene-d5	14.512	117	401034	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	17.091	152	247830	50.00	ug/L	0.00
System Monitoring Compounds						
56) dibromofluoromethane (s)	10.318	113	463615	206.21	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 412.42%#			
57) 1,2-dichloroethane-d4 (s)	10.747	65	518302	202.08	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 404.16%#			
88) toluene-d8 (s)	12.880	98	1770202	203.32	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 406.64%#			
114) 4-bromofluorobenzene (s)	15.794	95	756064	185.20	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 370.40%#			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.184	59	271958	878.78	ug/L #	21
4) 1,4-dioxane	11.923	88	99537	5576.24	ug/L #	98
11) chlorodifluoromethane	4.528	51	486152	230.37	ug/L	98
12) dichlorodifluoromethane	4.517	85	614124	248.57	ug/L	98
15) chloromethane	4.899	50	604675	210.33	ug/L	99
16) vinyl chloride	5.187	62	634040	219.00	ug/L	98
18) bromomethane	5.851	94	337624	179.50	ug/L	92
19) chloroethane	6.024	64	261786	218.52	ug/L	97
20) trichlorofluoromethane	6.536	101	834241	227.00	ug/L	96
23) ethyl ether	6.944	74	258127	251.69	ug/L	88
24) 2-CHLOROPROPANE	7.153	43	785297	201.05	ug/L #	92
27) acrolein	7.216	56	991022	2409.93	ug/L	98
28) 1,1-dichloroethene	7.373	96	458732	202.07	ug/L	98
29) acetone	7.441	58	58328	223.43	ug/L	97
30) allyl chloride	7.907	78	76613	252.07	ug/L #	81
31) acetonitrile	7.907	40	380208	2394.84	ug/L #	53
32) iodomethane	7.661	142	933126	208.72	ug/L	98
33) carbon disulfide	7.786	76	1594410	216.79	ug/L	99
34) 1-CHLOROPROPANE	8.132	63	39134	226.56	ug/L	92
35) methylene chloride	8.095	84	512186	202.92	ug/L	96
36) methyl acetate	7.886	43	386190	212.97	ug/L	98
37) methyl tert butyl ether	8.430	73	1540509	206.75	ug/L	100
38) trans-1,2-dichloroethene	8.461	96	489415	209.70	ug/L	99
39) di-isopropyl ether	9.015	45	1561711	217.49	ug/L	99
40) ethyl tert-butyl ether	9.476	59	1628442	221.00	ug/L	99
41) 2-butanone	9.737	72	64466	238.16	ug/L #	84
42) 1,1-dichloroethane	9.031	63	861981	208.94	ug/L	98
43) chloroprene	9.141	53	711653	216.11	ug/L	98
44) acrylonitrile	8.435	53	918652	1083.74	ug/L	99
45) vinyl acetate	9.015	86	92346	235.54	ug/L #	91
46) ethyl acetate	9.748	45	67594	236.78	ug/L	90
47) 2,2-dichloropropane	9.779	77	729720	196.53	ug/L	97
48) cis-1,2-dichloroethene	9.758	96	540481	206.87	ug/L	98

7.6.10

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183562.D
Acq On : 5 May 2014 10:36 pm
Operator : conniex
Sample : ic8469-200
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 10:17:06 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:52:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
49) methyl acrylate	9.826	55	554906	209.67 ug/L	98
50) propionitrile	9.847	54	739434	2347.44 ug/L	94
51) bromochloromethane	10.067	128	284695	198.10 ug/L	94
52) tetrahydrofuran	10.108	42	147460	184.59 ug/L	97
53) chloroform	10.119	83	872497	163.09 ug/L	99
54) tert-butyl Formate	10.176	59	487802	238.57 ug/L	99
55) iso-butyl alcohol	10.548	74	68314	2536.34 ug/L #	23
58) freon 113	7.352	151	399062	221.17 ug/L	96
59) methacrylonitrile	10.025	41	314223	201.14 ug/L	96
60) 1,1,1-trichloroethane	10.386	97	799178	207.83 ug/L	97
62) tert-amyl methyl ether	10.856	87	385023	219.21 ug/L	99
63) iso-octane	10.830	57	1699008	228.16 ug/L	99
66) epichlorohydrin	12.467	57	268107	1082.20 ug/L	99
67) n-butyl alcohol	11.296	56	669287	8982.04 ug/L	99
68) Cyclohexane	10.459	84	747344	214.83 ug/L	98
69) carbon tetrachloride	10.584	117	729824	203.14 ug/L	98
70) 1,1-dichloropropene	10.553	75	664314	207.17 ug/L	99
71) hexane	8.764	86	86624	238.25 ug/L #	79
72) benzene	10.825	78	1889270	199.67 ug/L	100
73) heptane	10.982	57	311856	124.44 ug/L	96
74) isopropyl acetate	10.736	43	907488	210.49 ug/L	99
75) 1,2-dichloroethane	10.835	62	664270	199.74 ug/L	99
78) trichloroethene	11.521	95	517955	205.85 ug/L	96
79) methylcyclohexane	11.761	83	843297	221.19 ug/L	97
80) 2-nitropropane	12.331	41	200987	202.40 ug/L #	90
81) 2-chloroethyl vinyl ether	12.337	63	1352332	1170.15 ug/L	100
82) methyl methacrylate	11.793	100	148245	207.86 ug/L	94
83) 1,2-dichloropropane	11.808	63	496377	206.14 ug/L	96
84) propyl acetate	11.834	73	96262	195.96 ug/L	100
85) dibromomethane	11.955	93	322977	210.97 ug/L	96
86) bromodichloromethane	12.085	83	720573	190.61 ug/L	100
87) cis-1,3-dichloropropene	12.567	75	874057	209.66 ug/L	97
89) 4-methyl-2-pentanone	12.676	58	193599	192.98 ug/L	100
90) toluene	12.954	92	1278446	208.65 ug/L	100
91) 3-methyl-1-butanol	12.671	55	405543	1183.57 ug/L	99
92) trans-1,3-dichloropropene	13.152	75	840487	205.39 ug/L	97
93) ethyl methacrylate	13.147	69	666656	218.32 ug/L	99
94) 1,1,2-trichloroethane	13.388	83	393377	207.82 ug/L	97
95) 2-hexanone	13.581	58	186515	186.21 ug/L	94
97) cyclohexanone	15.773	55	791776	2017.22 ug/L	99
98) tetrachloroethene	13.576	164	511179	207.65 ug/L	97
99) 1,3-dichloropropane	13.587	76	789817	198.05 ug/L	99
100) butyl acetate	13.649	56	319879	188.83 ug/L	96
101) dibromochloromethane	13.869	129	644156	216.70 ug/L	98
102) 1,2-dibromoethane	14.042	107	526764	200.77 ug/L	99
103) 3,3-dimethyl-1-Butanol	13.754	57	379458	1427.90 ug/L	99
105) chlorobenzene	14.549	112	1551427	199.07 ug/L	98
106) 1,1,1,2-tetrachloroethane	14.612	131	610747	201.22 ug/L	99
107) ethylbenzene	14.612	91	2577487	205.75 ug/L	100
108) m,p-xylene	14.727	106	2005436	409.68 ug/L	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183562.D
Acq On : 5 May 2014 10:36 pm
Operator : conniex
Sample : ic8469-200
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 10:17:06 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:52:08 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
109) o-xylene	15.192	106	1027667	201.98 ug/L	98
110) styrene	15.197	104	1759450	217.06 ug/L	99
111) bromoform	15.485	173	502035	216.22 ug/L	99
113) isopropylbenzene	15.574	105	2821972	215.91 ug/L	100
115) bromobenzene	16.013	156	756631	207.06 ug/L	98
116) 1,1,2,2-tetrachloroethane	15.898	83	724758	194.98 ug/L	99
117) trans-1,4-dichloro-2-b...	15.951	53	199279	213.30 ug/L	97
118) 1,2,3-trichloropropane	15.992	110	203936	202.61 ug/L	98
119) n-propylbenzene	16.029	91	3079267	214.75 ug/L	100
120) 2-chlorotoluene	16.191	126	676804	214.96 ug/L	94
121) 4-chlorotoluene	16.301	91	2037314	212.57 ug/L	99
123) 1,3,5-trimethylbenzene	16.191	105	2435552	214.45 ug/L	99
124) tert-butylbenzene	16.589	119	2198217	213.91 ug/L	99
125) pentachloroethane	16.672	167	496862	213.68 ug/L	99
126) 1,2,4-trimethylbenzene	16.636	105	2452684	213.08 ug/L	99
128) sec-butylbenzene	16.829	105	3198373	217.17 ug/L	99
129) 1,3-dichlorobenzene	17.028	146	1518358	201.33 ug/L	98
130) p-isopropyltoluene	16.955	119	2806003	213.55 ug/L	99
131) 1,4-dichlorobenzene	17.122	146	1539751	198.35 ug/L	99
132) benzyl chloride	17.253	91	1496377	194.70 ug/L	100
133) 1,2-dichlorobenzene	17.556	146	1466086	195.74 ug/L	99
135) n-butylbenzene	17.415	92	1337818	209.94 ug/L	99
137) 1,2-dibromo-3-chloropr...	18.414	157	179297	207.12 ug/L	93
138) 1,3,5-trichlorobenzene	18.623	180	1206840	196.79 ug/L	100
139) 1,2,4-trichlorobenzene	19.361	180	1051943	194.31 ug/L	99
140) hexachlorobutadiene	19.486	225	550191	184.77 ug/L	98
141) naphthalene	19.690	128	2142222	188.46 ug/L	100
143) 1,2,3-trichlorobenzene	19.967	180	896489	193.35 ug/L	98
144) hexachloroethane	17.849	201	500345	219.85 ug/L	99

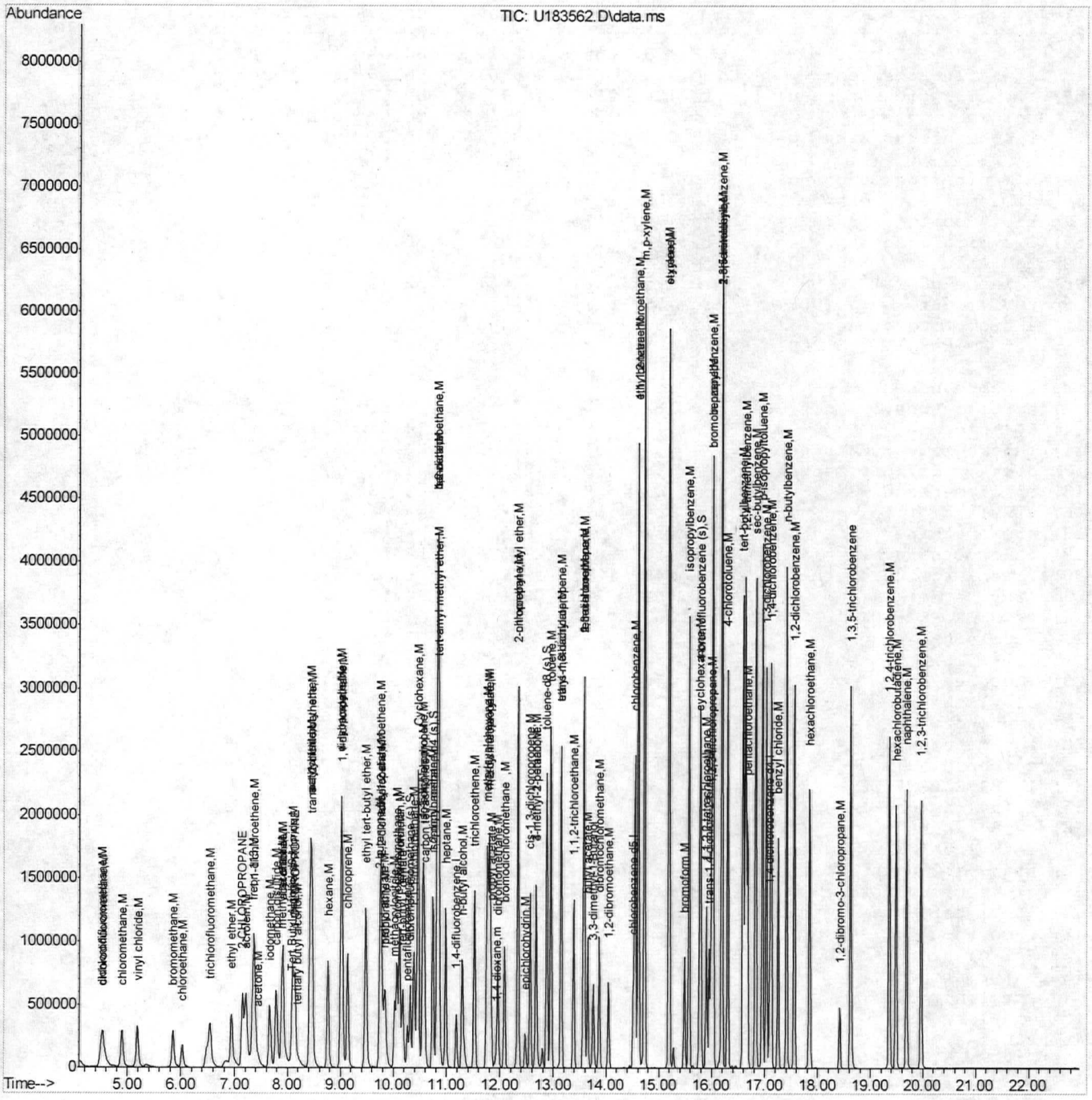
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.10 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183562.D
Acq On : 5 May 2014 10:36 pm
Operator : conniex
Sample : ic8469-200
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 06 10:17:06 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 08:52:08 2014
Response via : Initial Calibration



7.6.10 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183565.D
Acq On : 6 May 2014 12:03 am
Operator : conniex
Sample : icv8469-50
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 06 13:11:08 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Tert Butyl Alcohol-d9	8.053	65	125326	500.00	ug/L	0.01
5) pentafluorobenzene	10.265	168	279801	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.180	114	403772	50.00	ug/L	0.00
96) chlorobenzene-d5	14.512	117	391949	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	17.090	152	243224	50.00	ug/L	0.00
System Monitoring Compounds						
56) dibromofluoromethane (s)	10.317	113	116880	49.81	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 99.62%			
57) 1,2-dichloroethane-d4 (s)	10.746	65	132025	50.93	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 101.86%			
88) toluene-d8 (s)	12.875	98	445067	52.72	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 105.44%			
114) 4-bromofluorobenzene (s)	15.793	95	183443	51.21	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 102.42%			

Target Compounds						Qvalue
2) tertiary butyl alcohol	8.162	59	69329	257.51	ug/L	74
4) 1,4-dioxane	11.918	88	23460	1214.33	ug/L #	99
11) chlorodifluoromethane	4.538	51	107773	46.50	ug/L	95
12) dichlorodifluoromethane	4.512	85	121135	41.34	ug/L	94
15) chloromethane	4.883	50	125953	43.13	ug/L	99
16) vinyl chloride	5.166	62	133650	44.64	ug/L	98
18) bromomethane	5.851	94	86994	44.52	ug/L	99
19) chloroethane	6.039	64	72386	56.10	ug/L	97
20) trichlorofluoromethane	6.546	101	190789	46.59	ug/L	97
23) ethyl ether	6.939	74	68488	54.18	ug/L	91
24) 2-CHLOROPROPANE	7.153	43	208504	52.82	ug/L	98
27) acrolein	7.216	56	236007	507.13	ug/L	96
28) 1,1-dichloroethene	7.383	96	122335	52.01	ug/L	96
29) acetone	7.446	58	12507	40.41	ug/L	98
30) allyl chloride	7.911	78	23972	62.21	ug/L	94
31) acetonitrile	7.906	40	103609	591.17	ug/L #	36
32) iodomethane	7.666	142	241564	53.46	ug/L	98
33) carbon disulfide	7.786	76	432721	54.95	ug/L	99
34) 1-CHLOROPROPANE	8.131	63	10065	49.05	ug/L	100
35) methylene chloride	8.095	84	133216	52.22	ug/L	97
36) methyl acetate	7.891	43	90787	49.54	ug/L	99
37) methyl tert butyl ether	8.429	73	769560	98.97	ug/L	99
38) trans-1,2-dichloroethene	8.461	96	126924	49.76	ug/L	94
39) di-isopropyl ether	9.015	45	399738	53.01	ug/L	99
40) ethyl tert-butyl ether	9.475	59	405914	51.94	ug/L	98
41) 2-butanone	9.732	72	15838	48.19	ug/L #	80
42) 1,1-dichloroethane	9.031	63	226192	52.67	ug/L	100
43) chloroprene	9.135	53	169634	50.97	ug/L	99
44) acrylonitrile	8.434	53	235326	274.69	ug/L	97
45) vinyl acetate	9.015	86	24884	56.20	ug/L	98
46) ethyl acetate	9.742	45	17107	51.77	ug/L	85
47) 2,2-dichloropropane	9.779	77	183796	48.98	ug/L	98
48) cis-1,2-dichloroethene	9.758	96	136246	48.40	ug/L	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183565.D
Acq On : 6 May 2014 12:03 am
Operator : conniex
Sample : icv8469-50
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 06 13:11:08 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
49) methyl acrylate	9.826	55	140740	52.62 ug/L	96
50) propionitrile	9.841	54	187942	541.43 ug/L	97
51) bromochloromethane	10.066	128	72242	49.74 ug/L	98
52) tetrahydrofuran	10.108	42	44586	55.99 ug/L	94
53) chloroform	10.113	83	222762	47.10 ug/L	99
54) tert-butyl Formate	10.171	59	122310	57.07 ug/L	99
55) iso-butyl alcohol	10.547	74	17201	494.10 ug/L #	28
58) freon 113	7.357	151	105253	57.72 ug/L	97
59) methacrylonitrile	10.019	41	78860	50.42 ug/L	98
60) 1,1,1-trichloroethane	10.385	97	204417	51.30 ug/L	94
62) tert-amyl methyl ether	10.856	87	95741	51.61 ug/L	95
63) iso-octane	10.830	57	414818	55.12 ug/L	98
66) epichlorohydrin	12.467	57	65150	243.48 ug/L	97
67) n-butyl alcohol	11.285	56	169569	2433.93 ug/L	99
68) Cyclohexane	10.459	84	190818	52.44 ug/L	97
69) carbon tetrachloride	10.584	117	185476	51.86 ug/L	97
70) 1,1-dichloropropene	10.558	75	162999	51.06 ug/L	99
71) hexane	8.764	86	20164	46.67 ug/L #	83
72) benzene	10.825	78	485716	51.56 ug/L	98
74) isopropyl acetate	10.736	43	234898	53.30 ug/L	100
75) 1,2-dichloroethane	10.830	62	169737	51.27 ug/L	98
78) trichloroethene	11.520	95	129748	51.80 ug/L	98
79) methylcyclohexane	11.761	83	210340	55.42 ug/L	99
80) 2-nitropropane	12.331	41	50496	51.55 ug/L	94
81) 2-chloroethyl vinyl ether	12.331	63	368667	316.73 ug/L	99
82) methyl methacrylate	11.792	100	36936	52.02 ug/L	97
83) 1,2-dichloropropane	11.808	63	125820	52.48 ug/L	95
84) propyl acetate	11.834	73	25854	53.81 ug/L	92
85) dibromomethane	11.954	93	80816	50.30 ug/L	97
86) bromodichloromethane	12.085	83	177201	49.33 ug/L	99
87) cis-1,3-dichloropropene	12.561	75	212164	51.12 ug/L	97
89) 4-methyl-2-pentanone	12.676	58	49491	49.55 ug/L	97
90) toluene	12.953	92	316791	51.93 ug/L	98
91) 3-methyl-1-butanol	12.666	55	107568	946.00 ug/L	99
92) trans-1,3-dichloropropene	13.152	75	195981	48.10 ug/L	99
93) ethyl methacrylate	13.147	69	162747	49.79 ug/L	99
94) 1,1,2-trichloroethane	13.387	83	98101	51.19 ug/L	97
95) 2-hexanone	13.581	58	46553	46.24 ug/L	93
97) cyclohexanone	15.772	55	65670	165.59 ug/L	97
98) tetrachloroethene	13.576	164	139121	55.93 ug/L	98
99) 1,3-dichloropropane	13.591	76	195868	50.25 ug/L	100
100) butyl acetate	13.649	56	81528	51.19 ug/L	97
101) dibromochloromethane	13.869	129	152237	50.23 ug/L	93
102) 1,2-dibromoethane	14.041	107	128693	50.19 ug/L	100
103) 3,3-dimethyl-1-Butanol	13.754	57	106613	497.34 ug/L	99
105) chlorobenzene	14.548	112	379034	49.76 ug/L	99
106) 1,1,1,2-tetrachloroethane	14.606	131	148334	50.00 ug/L	98
107) ethylbenzene	14.606	91	626140	51.14 ug/L	100
108) m,p-xylene	14.726	106	493076	103.06 ug/L	98
109) o-xylene	15.192	106	245522	49.37 ug/L	99

7.6.11 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183565.D
Acq On : 6 May 2014 12:03 am
Operator : conniex
Sample : icv8469-50
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 06 13:11:08 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
110) styrene	15.197	104	422673	53.35 ug/L	99
111) bromoform	15.485	173	116556	49.44 ug/L	99
113) isopropylbenzene	15.568	105	674949	52.62 ug/L	100
115) bromobenzene	16.013	156	184255	50.22 ug/L	97
116) 1,1,2,2-tetrachloroethane	15.898	83	171855	47.11 ug/L	97
117) trans-1,4-dichloro-2-b...	15.950	53	46469	48.60 ug/L	96
118) 1,2,3-trichloropropane	15.992	110	48845	48.72 ug/L	96
119) n-propylbenzene	16.029	91	778432	55.32 ug/L	100
120) 2-chlorotoluene	16.191	126	164318	50.61 ug/L	93
121) 4-chlorotoluene	16.301	91	485836	51.65 ug/L	98
123) 1,3,5-trimethylbenzene	16.191	105	585930	52.57 ug/L	99
124) tert-butylbenzene	16.588	119	536021	53.03 ug/L	99
125) pentachloroethane	16.672	167	104965	46.00 ug/L	97
126) 1,2,4-trimethylbenzene	16.630	105	612919	54.26 ug/L	99
128) sec-butylbenzene	16.824	105	764343	52.88 ug/L	99
129) 1,3-dichlorobenzene	17.028	146	364221	49.21 ug/L	100
130) p-isopropyltoluene	16.954	119	692762	53.72 ug/L	99
131) 1,4-dichlorobenzene	17.116	146	372394	48.88 ug/L	98
132) benzyl chloride	17.252	91	365703	50.27 ug/L	98
133) 1,2-dichlorobenzene	17.556	146	363483	49.45 ug/L	99
135) n-butylbenzene	17.415	92	340554	54.45 ug/L	97
137) 1,2-dibromo-3-chloropr...	18.414	157	45897	51.80 ug/L	94
138) 1,3,5-trichlorobenzene	18.623	180	321467	53.41 ug/L	100
139) 1,2,4-trichlorobenzene	19.360	180	276184	51.98 ug/L	99
140) hexachlorobutadiene	19.486	225	148942	50.97 ug/L	98
141) naphthalene	19.690	128	555122	49.76 ug/L	99
143) 1,2,3-trichlorobenzene	19.967	180	232883	51.18 ug/L	97
144) hexachloroethane	17.849	201	124132	53.92 ug/L	100

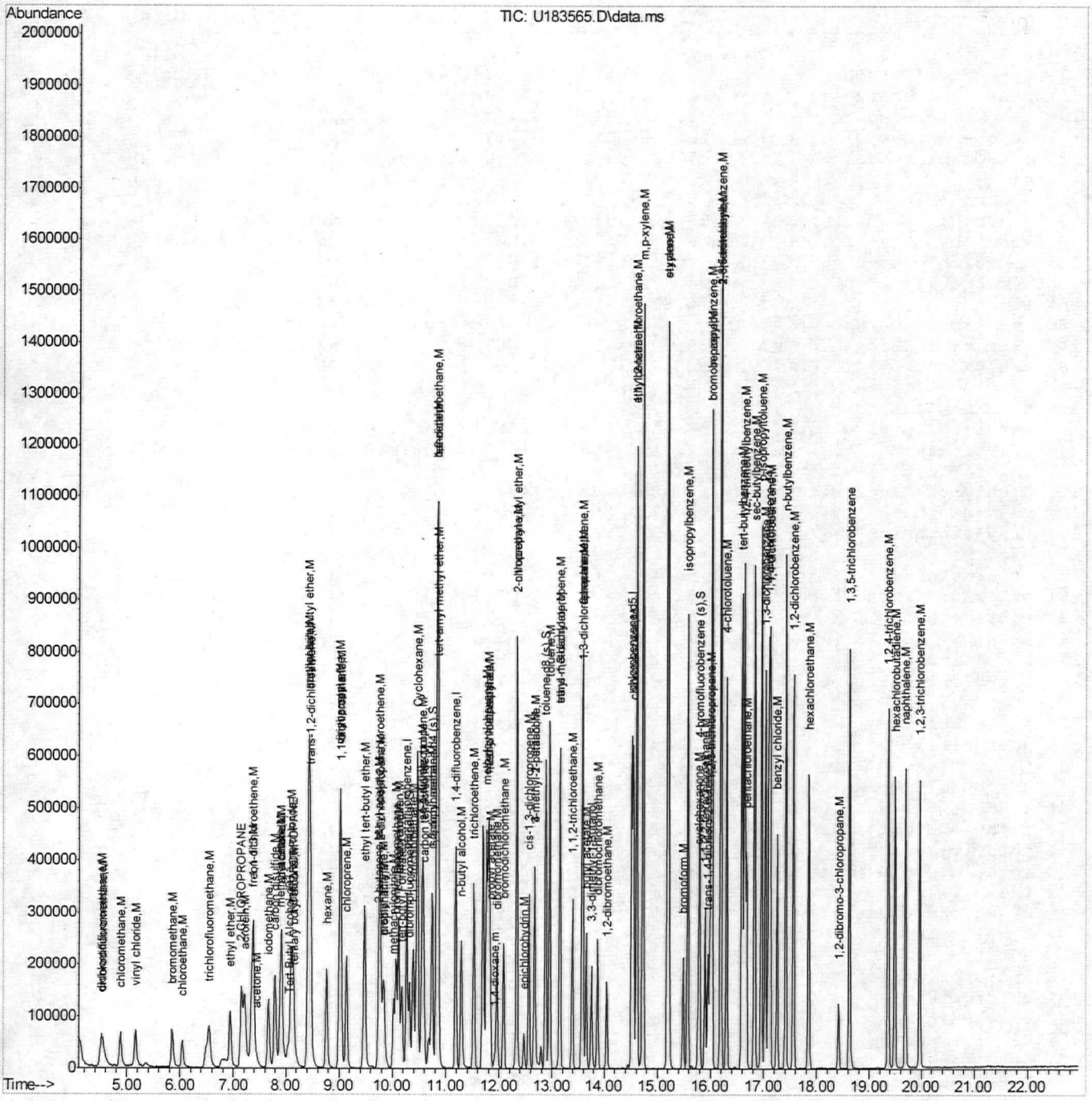
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.11 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : U183565.D
Acq On : 6 May 2014 12:03 am
Operator : conniex
Sample : icv8469-50
Misc : ms66620,vu8469,5.0,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 06 13:11:08 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration



7.6.11 7

ACCUTEST LABORATORIES JB66517

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\u-core\vu8476-8479\
Data File : u183729.d
Acq On : 10 May 2014 9:34 am
Operator : conniex
Sample : cc8469-20
Misc : ms67307,vu8478,5.0,,,,1
ALS Vial : 47 Sample Multiplier: 1

Quant Time: May 12 15:22:13 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.045	65	121474	500.00	ug/L	0.00
5) pentafluorobenzene	10.268	168	263248	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.183	114	374679	50.00	ug/L	0.00
96) chlorobenzene-d5	14.515	117	357172	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	17.093	152	220823	50.00	ug/L	0.00
System Monitoring Compounds						
56) dibromofluoromethane (s)	10.315	113	116335	52.70	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 105.40%			
57) 1,2-dichloroethane-d4 (s)	10.744	65	128133	52.54	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 105.08%			
88) toluene-d8 (s)	12.878	98	434469	55.46	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 110.92%			
114) 4-bromofluorobenzene (s)	15.791	95	177636	54.61	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 109.22%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.155	59	25651	98.30	ug/L	82
4) 1,4-dioxane	11.910	88	11077	581.48	ug/L #	96
11) chlorodifluoromethane	4.546	51	44270	20.30	ug/L	97
12) dichlorodifluoromethane	4.525	85	46675	16.93	ug/L	95
15) chloromethane	4.875	50	48050	17.49	ug/L	97
16) vinyl chloride	5.153	62	51941	18.44	ug/L	99
18) bromomethane	5.853	94	35109	19.10	ug/L	95
19) chloroethane	6.047	64	24562	20.23	ug/L	99
20) trichlorofluoromethane	6.544	101	75611	19.62	ug/L	97
23) ethyl ether	6.947	74	22337	18.78	ug/L	94
24) 2-CHLOROPROPANE	7.156	43	70898	19.09	ug/L	99
27) acrolein	7.219	56	87578	200.02	ug/L	99
28) 1,1-dichloroethene	7.386	96	40722	18.40	ug/L	88
29) acetone	7.438	58	4236	14.55	ug/L	93
30) allyl chloride	7.914	78	6873	18.96	ug/L	89
31) acetonitrile	7.898	40	39623	240.30	ug/L #	81
32) iodomethane	7.663	142	82975	19.52	ug/L	98
33) carbon disulfide	7.789	76	139119	18.78	ug/L	99
34) 1-CHLOROPROPANE	8.139	63	3361	17.41	ug/L	98
35) methylene chloride	8.097	84	46323	19.30	ug/L	97
36) methyl acetate	7.888	43	33307	19.32	ug/L	99
37) methyl tert butyl ether	8.427	73	136462	18.65	ug/L	100
38) trans-1,2-dichloroethene	8.469	96	43744	18.23	ug/L	100
39) di-isopropyl ether	9.012	45	136264	19.21	ug/L	98
40) ethyl tert-butyl ether	9.473	59	142029	19.32	ug/L	100
41) 2-butanone	9.734	72	5066	16.38	ug/L #	68
42) 1,1-dichloroethane	9.033	63	77478	19.18	ug/L	98
43) chloroprene	9.138	53	61691	19.70	ug/L	97
44) acrylonitrile	8.432	53	79681	98.86	ug/L	97
45) vinyl acetate	9.018	86	8104	19.45	ug/L #	93
46) ethyl acetate	9.739	45	5812	18.69	ug/L	99
47) 2,2-dichloropropane	9.776	77	70490	19.97	ug/L	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\u-core\vu8476-8479\
Data File : u183729.d
Acq On : 10 May 2014 9:34 am
Operator : conniex
Sample : cc8469-20
Misc : ms67307,vu8478,5.0,,,,1
ALS Vial : 47 Sample Multiplier: 1

Quant Time: May 12 15:22:13 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
48)	cis-1,2-dichloroethene	9.755	96	49258	18.60	ug/L		96
49)	methyl acrylate	9.828	55	47628	18.93	ug/L		97
50)	propionitrile	9.844	54	64339	197.01	ug/L		91
51)	bromochloromethane	10.069	128	26016	19.04	ug/L		94
52)	tetrahydrofuran	10.106	42	12772	17.05	ug/L		97
53)	chloroform	10.116	83	79283	17.82	ug/L		97
54)	tert-butyl Formate	10.179	59	40131	19.90	ug/L		98
55)	iso-butyl alcohol	10.555	74	6626	202.30	ug/L		93
58)	freon 113	7.355	151	35669	20.79	ug/L		90
59)	methacrylonitrile	10.022	41	26489	18.00	ug/L		94
60)	1,1,1-trichloroethane	10.388	97	73663	19.65	ug/L		99
62)	tert-amyl methyl ether	10.848	87	33291	19.07	ug/L		97
63)	iso-octane	10.833	57	130531	18.43	ug/L		98
66)	epichlorohydrin	12.470	57	22981	92.56	ug/L		94
67)	n-butyl alcohol	11.282	56	63775	986.48	ug/L		100
68)	Cyclohexane	10.461	84	67538	20.00	ug/L		99
69)	carbon tetrachloride	10.587	117	67913	20.46	ug/L		97
70)	1,1-dichloropropene	10.555	75	58711	19.82	ug/L		97
71)	hexane	8.767	86	7135	17.80	ug/L	#	75
72)	benzene	10.822	78	168950	19.33	ug/L		99
73)	heptane	10.984	57	24391	17.94	ug/L		95
74)	isopropyl acetate	10.733	43	76391	18.68	ug/L		96
75)	1,2-dichloroethane	10.833	62	60846	19.80	ug/L		94
78)	trichloroethene	11.523	95	45835	19.72	ug/L		99
79)	methylcyclohexane	11.758	83	70628	20.05	ug/L		97
80)	2-nitropropane	12.334	41	16822	18.51	ug/L	#	84
81)	2-chloroethyl vinyl ether	12.334	63	99905	92.50	ug/L		99
82)	methyl methacrylate	11.790	100	12306	18.68	ug/L	#	88
83)	1,2-dichloropropane	11.805	63	43217	19.43	ug/L		98
84)	propyl acetate	11.837	73	8634	19.36	ug/L		88
85)	dibromomethane	11.957	93	28199	18.91	ug/L		96
86)	bromodichloromethane	12.083	83	61379	18.41	ug/L		96
87)	cis-1,3-dichloropropene	12.564	75	74343	19.30	ug/L		97
89)	4-methyl-2-pentanone	12.674	58	16455	17.75	ug/L	#	89
90)	toluene	12.956	92	111596	19.71	ug/L		99
91)	3-methyl-1-butanol	12.668	55	38287	362.86	ug/L		99
92)	trans-1,3-dichloropropene	13.155	75	72201	19.10	ug/L		92
93)	ethyl methacrylate	13.150	69	55698	18.36	ug/L		96
94)	1,1,2-trichloroethane	13.390	83	33449	18.81	ug/L		97
95)	2-hexanone	13.584	58	15393	16.48	ug/L		96
97)	cyclohexanone	15.770	55	16126	44.62	ug/L		97
98)	tetrachloroethene	13.573	164	42112	18.58	ug/L		91
99)	1,3-dichloropropane	13.589	76	68798	19.37	ug/L		99
100)	butyl acetate	13.652	56	27071	18.65	ug/L		98
101)	dibromochloromethane	13.871	129	53674	19.43	ug/L		96
102)	1,2-dibromoethane	14.044	107	44979	19.25	ug/L		100
103)	3,3-dimethyl-1-Butanol	13.751	57	35374	181.08	ug/L		99
105)	chlorobenzene	14.546	112	132090	19.03	ug/L		97
106)	1,1,1,2-tetrachloroethane	14.614	131	53764	19.89	ug/L		96
107)	ethylbenzene	14.609	91	218523	19.59	ug/L		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\u-core\vu8476-8479\
Data File : u183729.d
Acq On : 10 May 2014 9:34 am
Operator : conniex
Sample : cc8469-20
Misc : ms67307,vu8478,5.0,,,,1
ALS Vial : 47 Sample Multiplier: 1

Quant Time: May 12 15:22:13 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
108) m,p-xylene	14.729	106	172046	39.46	ug/L	99
109) o-xylene	15.189	106	87146	19.23	ug/L	95
110) styrene	15.200	104	144134	19.97	ug/L	97
111) bromoform	15.487	173	40002	18.62	ug/L	93
113) isopropylbenzene	15.571	105	231606	19.89	ug/L	100
115) bromobenzene	16.016	156	65610	19.70	ug/L	96
116) 1,1,2,2-tetrachloroethane	15.901	83	61065	18.44	ug/L	97
117) trans-1,4-dichloro-2-b...	15.953	53	14702	16.93	ug/L	90
118) 1,2,3-trichloropropane	15.995	110	17116	18.80	ug/L	96
119) n-propylbenzene	16.026	91	254754	19.94	ug/L	99
120) 2-chlorotoluene	16.188	126	57568	19.53	ug/L	96
121) 4-chlorotoluene	16.303	91	166586	19.51	ug/L	98
123) 1,3,5-trimethylbenzene	16.193	105	200264	19.79	ug/L	99
124) tert-butylbenzene	16.586	119	184291	20.08	ug/L	98
125) pentachloroethane	16.675	167	42879	20.70	ug/L	96
126) 1,2,4-trimethylbenzene	16.633	105	200713	19.57	ug/L	98
128) sec-butylbenzene	16.826	105	258953	19.73	ug/L	99
129) 1,3-dichlorobenzene	17.030	146	127688	19.00	ug/L	99
130) p-isopropyltoluene	16.957	119	230579	19.69	ug/L	99
131) 1,4-dichlorobenzene	17.119	146	129372	18.70	ug/L	99
132) benzyl chloride	17.250	91	125293	18.97	ug/L	97
133) 1,2-dichlorobenzene	17.559	146	126509	18.96	ug/L	100
135) n-butylbenzene	17.417	92	106642	18.78	ug/L	97
137) 1,2-dibromo-3-chloropr...	18.416	157	15523	19.30	ug/L	93
138) 1,3,5-trichlorobenzene	18.625	180	107457	19.67	ug/L	100
139) 1,2,4-trichlorobenzene	19.358	180	92323	19.14	ug/L	99
140) hexachlorobutadiene	19.488	225	48311	18.21	ug/L	96
141) naphthalene	19.687	128	178815	17.66	ug/L	98
143) 1,2,3-trichlorobenzene	19.964	180	76396	18.49	ug/L	97
144) hexachloroethane	17.846	201	41584	19.90	ug/L	97

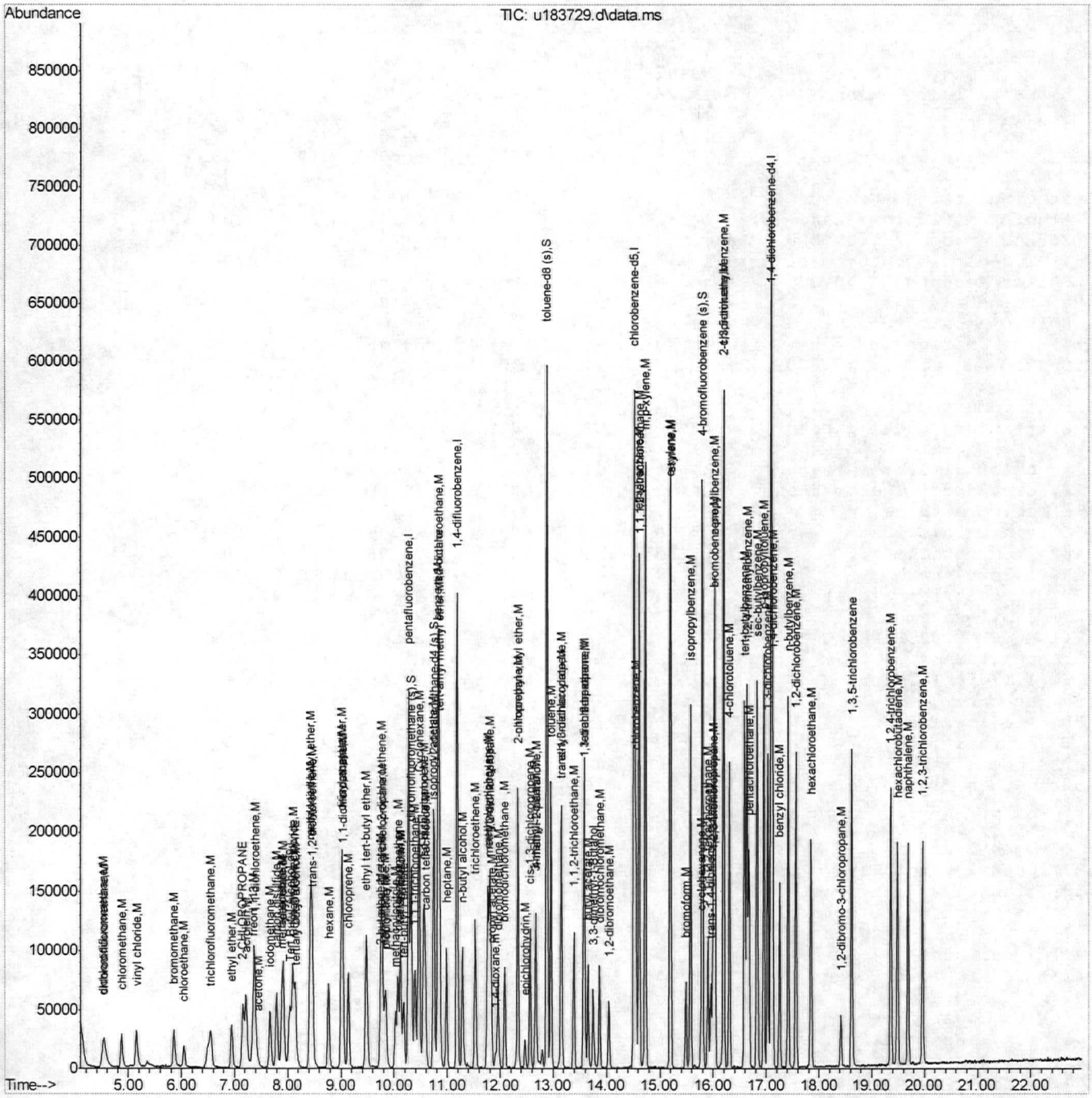
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.12 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\u-core\vu8476-8479\
Data File : u183729.d
Acq On : 10 May 2014 9:34 am
Operator : conniex
Sample : cc8469-20
Misc : ms67307,vu8478,5.0,,,,1
ALS Vial : 47 Sample Multiplier: 1

Quant Time: May 12 15:22:13 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration



ACCUTEST LABORATORIES JB66517

7.6.12 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\u-core\vu8483-8484\
Data File : u183819.d
Acq On : 13 May 2014 9:17 am
Operator : conniex
Sample : cc8469-20
Misc : ms67262,vu8483,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 13:57:40 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration

7.6.13

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Tert Butyl Alcohol-d9	8.063	65	122363	500.00	ug/L	0.02
5) pentafluorobenzene	10.265	168	246525	50.00	ug/L	0.00
64) 1,4-difluorobenzene	11.180	114	350560	50.00	ug/L	0.00
96) chlorobenzene-d5	14.512	117	350739	50.00	ug/L	0.00
112) 1,4-dichlorobenzene-d4	17.090	152	216261	50.00	ug/L	0.00
System Monitoring Compounds						
56) dibromofluoromethane (s)	10.312	113	111311	53.84	ug/L	0.00
Spiked Amount 50.000	Range 79 - 120		Recovery = 107.68%			
57) 1,2-dichloroethane-d4 (s)	10.741	65	122581	53.67	ug/L	0.00
Spiked Amount 50.000	Range 72 - 123		Recovery = 107.34%			
88) toluene-d8 (s)	12.875	98	417754	57.00	ug/L	0.00
Spiked Amount 50.000	Range 78 - 119		Recovery = 114.00%			
114) 4-bromofluorobenzene (s)	15.793	95	173488	54.46	ug/L	0.00
Spiked Amount 50.000	Range 74 - 119		Recovery = 108.92%			
Target Compounds						Qvalue
2) tertiary butyl alcohol	8.168	59	27451	104.43	ug/L #	48
4) 1,4-dioxane	11.918	88	10150	527.17	ug/L #	98
11) chlorodifluoromethane	4.543	51	43604	21.35	ug/L	89
12) dichlorodifluoromethane	4.517	85	66320	25.69	ug/L	94
15) chloromethane	4.878	50	59561	23.15	ug/L	100
16) vinyl chloride	5.160	62	60593	22.97	ug/L	99
18) bromomethane	5.851	94	39561	22.98	ug/L	98
19) chloroethane	6.044	64	26087	22.95	ug/L	93
20) trichlorofluoromethane	6.546	101	83215	23.06	ug/L	99
23) ethyl ether	6.949	74	23441	21.05	ug/L	95
24) 2-CHLOROPROPANE	7.158	43	72998	20.99	ug/L	99
27) acrolein	7.221	56	84921	207.11	ug/L	98
28) 1,1-dichloroethene	7.383	96	40583	19.58	ug/L	98
29) acetone	7.451	58	4318	15.84	ug/L	98
30) allyl chloride	7.906	78	7315	21.55	ug/L #	72
31) acetonitrile	7.901	40	37725	244.31	ug/L	91
32) iodomethane	7.665	142	83792	21.05	ug/L	100
33) carbon disulfide	7.786	76	139028	20.04	ug/L	100
34) 1-CHLOROPROPANE	8.131	63	3786	20.94	ug/L	95
35) methylene chloride	8.094	84	47739	21.24	ug/L	99
36) methyl acetate	7.896	43	34745	21.52	ug/L	99
37) methyl tert butyl ether	8.429	73	141863	20.71	ug/L	100
38) trans-1,2-dichloroethene	8.466	96	44724	19.90	ug/L	99
39) di-isopropyl ether	9.015	45	139589	21.01	ug/L	100
40) ethyl tert-butyl ether	9.475	59	144718	21.02	ug/L	98
41) 2-butanone	9.737	72	5062	17.48	ug/L #	56
42) 1,1-dichloroethane	9.036	63	80373	21.24	ug/L	97
43) chloroprene	9.135	53	60897	20.77	ug/L	97
44) acrylonitrile	8.434	53	84024	111.32	ug/L	95
45) vinyl acetate	9.010	86	7795	19.98	ug/L #	95
46) ethyl acetate	9.742	45	6243	21.44	ug/L	82
47) 2,2-dichloropropane	9.778	77	76392	23.10	ug/L	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\u-core\vu8483-8484\
Data File : u183819.d
Acq On : 13 May 2014 9:17 am
Operator : conniex
Sample : cc8469-20
Misc : ms67262,vu8483,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 13:57:40 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,2-dichloroethene	9.758	96	49726	20.05 ug/L	96
49)	methyl acrylate	9.820	55	48952	20.77 ug/L	96
50)	propionitrile	9.841	54	68467	223.87 ug/L	95
51)	bromochloromethane	10.071	128	26548	20.75 ug/L	89
52)	tetrahydrofuran	10.108	42	13795	19.66 ug/L	99
53)	chloroform	10.113	83	79601	19.10 ug/L	97
54)	tert-butyl Formate	10.176	59	41236	21.84 ug/L	99
55)	iso-butyl alcohol	10.547	74	5025	163.83 ug/L #	35
58)	freon 113	7.357	151	35023	21.80 ug/L	98
59)	methacrylonitrile	10.024	41	27672	20.08 ug/L	97
60)	1,1,1-trichloroethane	10.385	97	75089	21.39 ug/L	100
62)	tert-amyl methyl ether	10.851	87	34738	21.25 ug/L	90
63)	iso-octane	10.830	57	136558	20.59 ug/L	100
66)	epichlorohydrin	12.467	57	25405	109.36 ug/L	98
67)	n-butyl alcohol	11.290	56	71516	1182.33 ug/L	95
68)	Cyclohexane	10.458	84	67020	21.21 ug/L	97
69)	carbon tetrachloride	10.584	117	68520	22.07 ug/L	95
70)	1,1-dichloropropene	10.553	75	58040	20.94 ug/L	98
71)	hexane	8.764	86	6958	18.55 ug/L #	89
72)	benzene	10.825	78	168430	20.59 ug/L	99
73)	heptane	10.981	57	26358	20.73 ug/L	98
74)	isopropyl acetate	10.730	43	80501	21.04 ug/L	98
75)	1,2-dichloroethane	10.830	62	60450	21.03 ug/L	98
78)	trichloroethene	11.520	95	44375	20.40 ug/L	98
79)	methylcyclohexane	11.761	83	68755	20.86 ug/L	100
80)	2-nitropropane	12.331	41	17102	20.11 ug/L #	85
81)	2-chloroethyl vinyl ether	12.331	63	97653	96.63 ug/L	99
82)	methyl methacrylate	11.792	100	12742	20.67 ug/L	90
83)	1,2-dichloropropane	11.803	63	43171	20.74 ug/L	99
84)	propyl acetate	11.834	73	8773	21.03 ug/L	98
85)	dibromomethane	11.954	93	28637	20.53 ug/L	97
86)	bromodichloromethane	12.085	83	63222	20.27 ug/L	99
87)	cis-1,3-dichloropropene	12.561	75	76030	21.10 ug/L	99
89)	4-methyl-2-pentanone	12.676	58	17909	20.65 ug/L #	87
90)	toluene	12.953	92	112501	21.24 ug/L	99
91)	3-methyl-1-butanol	12.671	55	43219	437.78 ug/L	98
92)	trans-1,3-dichloropropene	13.152	75	74046	20.93 ug/L	95
93)	ethyl methacrylate	13.147	69	58164	20.49 ug/L	96
94)	1,1,2-trichloroethane	13.387	83	34945	21.00 ug/L	97
95)	2-hexanone	13.581	58	16879	19.31 ug/L	93
97)	cyclohexanone	15.772	55	16439	46.32 ug/L	94
98)	tetrachloroethene	13.576	164	42695	19.18 ug/L	95
99)	1,3-dichloropropane	13.586	76	69761	20.00 ug/L	98
100)	butyl acetate	13.649	56	29855	20.95 ug/L	90
101)	dibromochloromethane	13.868	129	55864	20.60 ug/L	99
102)	1,2-dibromoethane	14.041	107	47190	20.56 ug/L	99
103)	3,3-dimethyl-1-Butanol	13.753	57	39173	204.21 ug/L	100
105)	chlorobenzene	14.548	112	135052	19.81 ug/L	97
106)	1,1,1,2-tetrachloroethane	14.611	131	53580	20.18 ug/L	98
107)	ethylbenzene	14.606	91	224525	20.49 ug/L	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\u-core\vu8483-8484\
Data File : u183819.d
Acq On : 13 May 2014 9:17 am
Operator : conniex
Sample : cc8469-20
Misc : ms67262,vu8483,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 13:57:40 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
108) m,p-xylene	14.726	106	174462	40.75 ug/L	96
109) o-xylene	15.192	106	88342	19.85 ug/L	96
110) styrene	15.197	104	149033	21.02 ug/L	98
111) bromoform	15.485	173	41727	19.78 ug/L	98
113) isopropylbenzene	15.568	105	237401	20.82 ug/L	100
115) bromobenzene	16.013	156	67268	20.62 ug/L	100
116) 1,1,2,2-tetrachloroethane	15.898	83	64196	19.79 ug/L	99
117) trans-1,4-dichloro-2-b...	15.950	53	15752	18.53 ug/L	93
118) 1,2,3-trichloropropane	15.987	110	18264	20.49 ug/L	96
119) n-propylbenzene	16.028	91	258388	20.65 ug/L	98
120) 2-chlorotoluene	16.191	126	59279	20.53 ug/L	97
121) 4-chlorotoluene	16.300	91	171177	20.47 ug/L	99
123) 1,3,5-trimethylbenzene	16.191	105	205007	20.69 ug/L	97
124) tert-butylbenzene	16.588	119	182486	20.30 ug/L	100
125) pentachloroethane	16.672	167	45336	22.34 ug/L	97
126) 1,2,4-trimethylbenzene	16.630	105	206175	20.53 ug/L	99
128) sec-butylbenzene	16.823	105	263984	20.54 ug/L	100
129) 1,3-dichlorobenzene	17.027	146	131707	20.01 ug/L	98
130) p-isopropyltoluene	16.954	119	234533	20.45 ug/L	99
131) 1,4-dichlorobenzene	17.116	146	132740	19.60 ug/L	99
132) benzyl chloride	17.252	91	149667	23.14 ug/L	97
133) 1,2-dichlorobenzene	17.556	146	130221	19.92 ug/L	97
135) n-butylbenzene	17.409	92	109599	19.71 ug/L	96
137) 1,2-dibromo-3-chloropr...	18.419	157	16355	20.76 ug/L	98
138) 1,3,5-trichlorobenzene	18.617	180	111079	20.76 ug/L	98
139) 1,2,4-trichlorobenzene	19.355	180	95356	20.18 ug/L	99
140) hexachlorobutadiene	19.486	225	47573	18.31 ug/L	96
141) naphthalene	19.684	128	193703	19.53 ug/L	99
143) 1,2,3-trichlorobenzene	19.962	180	79832	19.73 ug/L	97
144) hexachloroethane	17.843	201	41431	20.24 ug/L	97

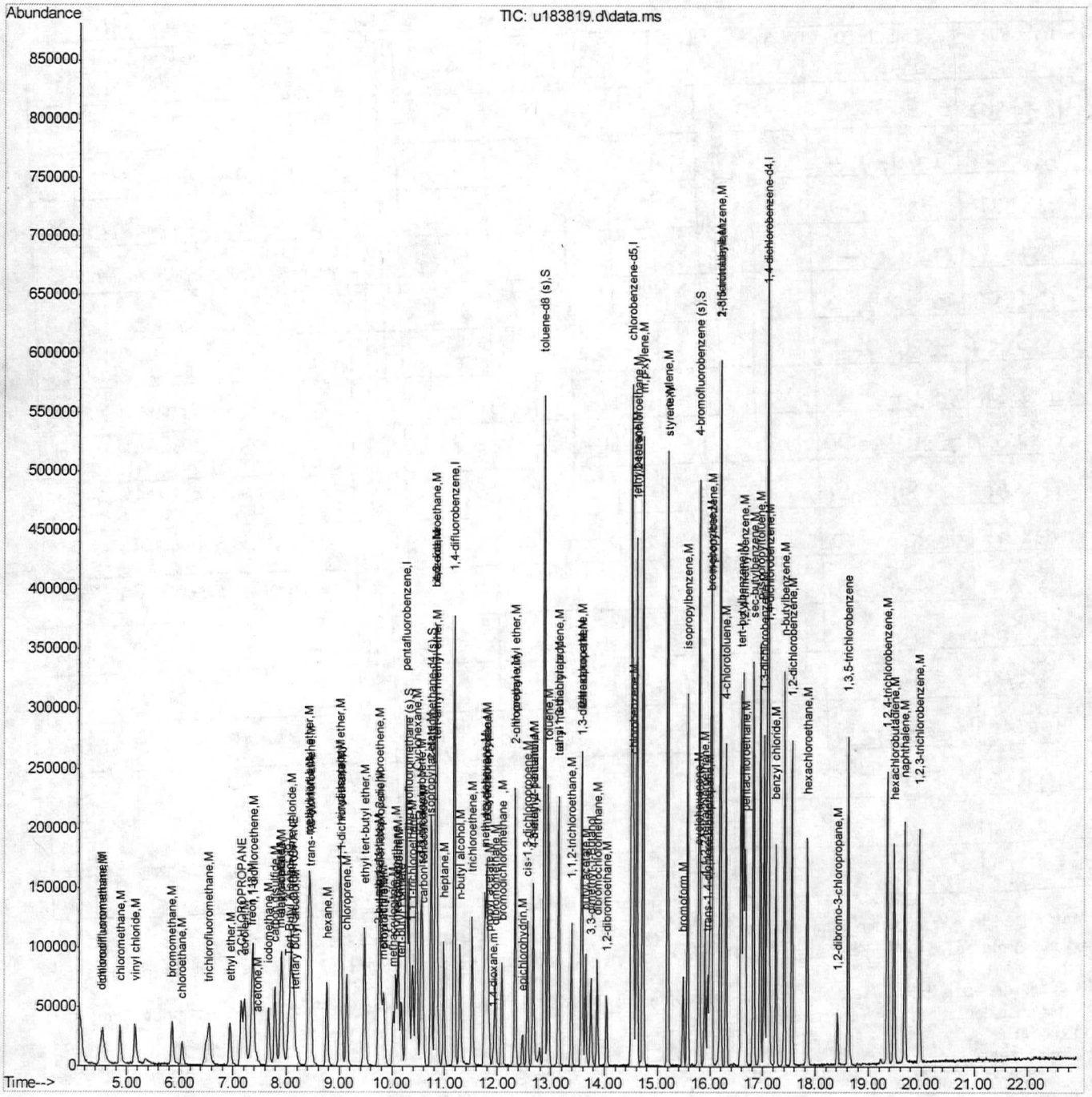
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.13

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\u-core\vu8483-8484\
Data File : u183819.d
Acq On : 13 May 2014 9:17 am
Operator : conniex
Sample : cc8469-20
Misc : ms67262,vu8483,5.0,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 14 13:57:40 2014
Quant Method : C:\MSDCHEM\1\METHODS\MU8469.M
Quant Title : SW-846 8260B, DB624 60m x 250um x 1.40um
QLast Update : Tue May 06 13:09:48 2014
Response via : Initial Calibration



ACCUTEST LABORATORIES JB66517

ACCUTEST.

VOLATILE ANALYSIS LOG

Batch ID: VAAU8469 VXL

Print Analyst Name: GUANGYU XU

Analyst Signature: Guangyu Xu

Date: 5/5/14

Standard Data

Lot #	Description	Conc.
V014-182-129	Txt A	1000ppm
-128	B	
-119	C	
-108	Hexane	
-86	Txt Acrolein	1000ppm
-114	Txt Ethanol	1000ppm
-78	Surrogate	1000ppm

Standard Data

Lot #	Description	Conc.
V014-182-118	STD A	1000ppm
-127	B	
-130	C	
-89	Acrolein	1000ppm
-98	Ethanol	10,000ppm
-123	Internal	250/500ppm
-78	Surrogate	1000ppm

Columns: DB-624 (60m x 0.25mm x 1.4µm)

Method V8260

Initial Cal. Method MU8469

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: Yuh Date: 5/6/14

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* <2
	U183552	BFB											OK		
	183553	IC8469-0.2	V8260 Water				5ml				✓		OK	1µl A,B,C, Acrolein, Z, Surr → 500ml DI	
	183554	IC8469-0.5									✓		OK	2.5µl A,B,C, Acrolein, Z, Surr → 500ml DI	
	183555	IC8469-1									✓		OK	5µl A,B,C, Acrolein, Z, Surr → 200ml DI	
	183556	IC8469-2									✓		OK	2µl A,B,C, Acrolein, Z, Surr → 100ml DI	
	183557	IC8469-5									✓		OK	5µl A,B,C, Acrolein, Ethanol Surr → 100ml DI	
	183558	IC8469-10									✓		OK	5µl A,B,C, Acrolein, Z, Surr → 50ml DI	
	183559	IC8469-20									✓		OK	10µl A,B,C, Acrolein, Z, 25µl Surr → 50ml DI	
	183560	IC8469-50									✓		OK	25µl A,B,C, Acrolein, Z, Surr → 50ml DI	
	183561	IC8469-100									✓		OK	50µl A,B,C, Acrolein, Z, Surr → 50ml DI	
	183562	IC8469-200									✓		OK	100µl A,B,C, Acrolein, Z, Surr → 50ml DI	
	183563	IB									—				
	183564	IB									—				
	183565	ICV8469-50									✓		OK	25µl Txt A,B,C, Txt Acrolein, hexane, Txt Ethanol, Surr → 50ml DI	
	183566	IB									—				

TX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
mple Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.

strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; computer miscalculation; 4 = analyst's correction error

m: OR001-9
. Date: 2/14/2007

ACCUTEST.

VOLATILE ANALYSIS LOG

Batch ID: VU8478

Print Analyst Name: GUANGYU XU

Analyst Signature: [signature]

Date: 5/9/14

Columns: ZB-624 (60m x 0.25mm x 1.4µm)

Method 1/8260B

Initial Cal. Method MU8469

Standard Data

Lot #	Description	Conc.
VU14-180-149	Std A	1000ppm
-108	B	
-141	C	
-108	Hexane	
-86	Std Acrolein	1000ppm
-114	Std Ethanol	1000ppm
3/27/2014 (16)	DI Water	

Standard Data

Lot #	Description	Conc.
VU14-180-148	STD A	1000ppm
-137	B	
-130	C	
-89	Acrolein	1000ppm
-83	ZIC	250/2500ppm

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature] Date: 5/12/14

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* <2
	U183728	BFB				1							ok	9:00am	
	183729	CC8469-20				2					✓	✓	ok	20µl STD A, B, C, Acrolein → 100ml DI	
	183730	IB				3					✓	✓	✓		
	183731	MB				4				+	✓	✓	ok		
	183732	BS				5					✓	✓	ok	25µl Std A, B, C, Hexane, Std Acrolein, Std Ethanol → 50ml DI	
	183733	IB				6					✓	✓	✓		
	183734	JB66517-8	67307 SL	GW	1	7	5		1x		✓	✓	ok		✓
	183735	JB66517-1				8					✓	✓	ok		✓
	183736	JB66517-2				9					✓	✓	ok/DL	RR, DL 10X	✓
	183737	JB66517-3				10					✓	✓	ok/DL	RR, DL 10X	✓
	183738	JB66517-8MS			2,3	11			1x		✓	✓	ok		✓
	183739	JB66517-8MSD			2,3	12			1x		✓	✓	ok		✓
	183740	IB				13					✓	✓	✓		
	183741	JB66517-5	67307 SL	GW	1	14	5		1x		✓	✓	ok		✓
	183742	JB66517-6				15					✓	✓	~~NOT RAN~~ ok		✓
	183743	JB66517-8				16					✓	✓	ok		✓
	183744	JB66517-9				17					✓	✓	ok		✓

MTX = Matrix Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt. = volume (ul) extract injected * IF pH > 2, comment on sample result.

All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

ACCUTEST.

VOLATILE ANALYSIS LOG

Batch ID: VU8478

Print Analyst Name: GUANGYU XU

Analyst Signature: Guangyu Xu

Date: 5/9/14

Standard Data			Standard Data		
Lot #	Description	Conc.	Lot #	Description	Conc.
				ref P59	

Columns: ZB-624 / 60mx 0.25mmx1.4um

Method 1826OB

Initial Cal. Method VU8469

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [illegible] Date: 5/12/14

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* <2
	VU83745	JB66517-7/12	67307 SL	GW	1	18	5		1X		✓	✓	NOT RAN OK	MOSH(4)	✓
	183746	JB66517-4/7	↓	GW	↓	19	↓		↓		✓	✓	OK		✓
	183747	JB66517-11/14	↓	WFB	↓	20	↓		↓		✓	✓	OK		✓
	183748	JB66517-10	↓	WTB	↓	21	↓		↓		✓	✓	OK		✓
	183749	JB66420-9	67234 TCL2ct, TBA	GW	↓	22	↓		↓		✓	✓	OK		✓
	183750	JB66420-12	↓	GW	↓	23	↓		↓		✓	✓	OK	8:29 pm	✓

GX. 5/9/14

MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.

All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

ACCUTEST.

VOLATILE ANALYSIS LOG

Batch ID: VU8483

Print Analyst Name: GUANGYU Xu

Analyst Signature: Guangyu Xu

Date: 5/13/14

Columns: ZB-624/60mx0.25mmx1.4um

Method 8260B

Initial Cal. Method VU8469

Standard Data

Lot #	Description	Conc.
VOLY-1821-129	8xt A	1000ppm
-128	B	
-141	C	
-143	Hexane	
-89	8xt Acrolein	1000ppm
212713(5/14/14)	2xt 2th Amt	1000ppm

Standard Data

Lot #	Description	Conc.
VOLY-1821-18	STD A	1000ppm
-127	B	
-145	C	
-89	Acrolein	1000ppm
-124	I/S	250/2500ppm

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature] Date: 5/14/14

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* <2
	183818 ~~183718~~ U 8xt Stany	BFB				1							OK	8:31am	
	183819 ~~183719~~ 8xt 5/13/14	CC84469-20				2							OK	20ml STD A,B,C, Acrolein → 100ml DI	
	183820	IB				3					✓	✓	OK		
	183821	MB21 8x 5/13/14				4					✓	✓	OK		
	183822	BS				5					✓	✓	OK	25ml 8xt A,B,C, Hexane ~~8xt Acrolein, 8xt 2th Amt → 50ml DI~~	
DL	183823	JB66517-2	67307 SL	GW	2	6	5/50		10X		✓	✓	OK		✓
DL	183824	JB66517-3	↓		2	7	5/50		10X		✓	✓	OK		✓
R	183825	JB66479-1	67262 TCL 8ot, TBA		2	8	1/50		50X		✓	✓	OK	20X RR, ~~25X~~ 8x 5/13/14	✓
	183826	JB66479-7	67262 BTXMT		2	9	5		1X		✓	✓	OK		✓
	183827	JB66479-10	67262 TCL 8ot, TBA			10	10/50		5X		✓	✓	OK		✓
	183828	JB66479-1				11	2.5/50		20X		✓	✓	OK		✓
	183829	JB66479-16				12	1/50		50X		✓	✓	OK	2:46pm	✓
	183830	JB66479-9				13	0.5/50		100X		✓	✓	OK		✓
	183831	JB66479-13	↓	↓	↓	14	2/50		25X		✓	✓	OK		✓
	183832	JB66479-7ms	67262 BTXMT	GW	2	15	5		1X				no data		✓
	183832a	JB66479-7ms	↓	GW	2	15	5		1X		✓	✓	OK		✓
	183833	JB66479-7msD		GW	2	16	5		1X		✓	✓	OK		✓
	183834	IB				17					✓	✓	OK		

MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.

Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.

All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9

Rev. Date: 2/14/2007

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7.7.3

7

ACCUTEST.

VOLATILE ANALYSIS LOG

Batch ID: V118483

Print Analyst Name: GUANGYU XU

Analyst Signature: Guangyu Xu

Date: 5/13/14

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
	Ref P79	

Columns: ZB-624 60m x 0.25mm x 1.4μm

Method 1826OB

Initial Cal. Method MU8469

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature] Date: 5/13/14

R	Data File	Sample ID	Test	MTX	Vial #	ALS #	Samp. Amt (ml or g)	MOH amt. (ul)	Secondary dilution	L+	IS	SU	Status (Data)	Comments	pH* <2
	U183835	JB66479-17	67262. TCLout, TBA	W	1	18	5		1x		✓	✓	OK		✓
	183836	JB66479-2		GX	1	19					✓	✓	OK		✓
	183837	JB66479-14 GX, 5/13/14			1	20					✓	✓	OK		✓
	183838	JB66479-15				21					✓	✓	OK		✓
	183839	JB66479-14	67262 TCLout, TBA			22					✓	✓	ok	8:10 pm	✓
	~~183840~~	~~JB66479-2~~ GX, 5/13/14				23				GX, 5/13/14			not load		

GX, 5/13/14

MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.

Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.

All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9

Rev. Date: 2/14/2007

B

Appendix B

Second Quarter 2014 Effluent Air Laboratory Analytical Reports

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6/2/2014
Mr. Peter Hollatz
AECOM Environment
27755 Diehl Road
Suite 100
Warrenville IL 60555

Project Name: UTC SER 9110
Project #: 60312350
Workorder #: 1405321

Dear Mr. Peter Hollatz

The following report includes the data for the above referenced project for sample(s) received on 5/16/2014 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-14A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott
Project Manager

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WORK ORDER #: 1405321

Work Order Summary

CLIENT:	Mr. Peter Hollatz AECOM Environment 27755 Diehl Road Suite 100 Warrenville, IL 60555	**BILL TO:**	Accounts Payable-Warrenville AECOM Environment 27755 Diehl Road Suite 100 Warrenville, IL 60555
PHONE:	630-836-1700	**P.O. #**	AMC51992
FAX:	630-836-1711	**PROJECT #**	60312350 UTC SER 9110
DATE RECEIVED:	05/16/2014	**CONTACT:**	Ausha Scott
DATE COMPLETED:	06/02/2014		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	P1SVE-EFFC1-051514	Modified TO-14A	4.9 "Hg	15.1 psi
02A	P1SVE-EFFC2-051514	Modified TO-14A	3.5 "Hg	15.1 psi
03A	P1SVE-EFFC3-051514	Modified TO-14A	3.5 "Hg	15.6 psi
04A	P2SVE-EFFC4-051514	Modified TO-14A	3.7 "Hg	14.9 psi
05A	P2SVE-EFFC5-051514	Modified TO-14A	4.7 "Hg	15.2 psi
06A	Lab Blank	Modified TO-14A	NA	NA
07A	CCV	Modified TO-14A	NA	NA
08A	LCS	Modified TO-14A	NA	NA
08AA	LCSD	Modified TO-14A	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 06/02/14

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-13-6, UT NELAP CA009332013-4, VA NELAP - 460197, WA NELAP - C935
Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2013, Expiration date: 10/17/2014.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-14A
AECOM Environment
Workorder# 1405321

Five 1 Liter Summa Canister samples were received on May 16, 2014. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications. Please note that TO-14A was validated for specially treated canisters, and the use of Tedlar bags for sample collection is outside the scope of the method.

Requirement	*TO-14A*	*ATL Modifications*
Initial Calibration criteria	RSD</=30%	Follow TO-15 requirements of RSD</=30% with two compounds allowed out to </=40%RSD.
BFB absolute abundance criteria	Within 10% of that from previous day	CCV internal standard area counts are compared to ICAL, corrective action when recovery is less than 60%.
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Sample Drying System	Nafion Dryer	Multibed hydrophobic sorbent
BFB ion abundance criteria	Ion abundance listed in Table 4 of TO-14A	Follow ion abundance criteria listed in Method TO-15

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples P1SVE-EFFC3-051514 and P2SVE-EFFC5-051514 due to the presence of high level target species.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated calculation due to estimated sampling rate.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P1SVE-EFFC1-051514

Lab ID#: 1405321-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	1.2	1.9	4.8	7.6
1,1-Dichloroethane	1.2	32	4.9	130
cis-1,2-Dichloroethene	1.2	6.0	4.8	24
1,1,1-Trichloroethane	1.2	95	6.6	520
Trichloroethene	1.2	6.8	6.5	36
Tetrachloroethene	1.2	55	8.2	380

Client Sample ID: P1SVE-EFFC2-051514

Lab ID#: 1405321-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Chloroethane	4.6	16	12	41
1,1-Dichloroethene	1.1	4.8	4.5	19
Acetone	11	25	27	59
1,1-Dichloroethane	1.1	99	4.6	400
cis-1,2-Dichloroethene	1.1	7.8	4.5	31
1,1,1-Trichloroethane	1.1	240	6.2	1300
Trichloroethene	1.1	6.6	6.2	36
Tetrachloroethene	1.1	14	7.8	92

Client Sample ID: P1SVE-EFFC3-051514

Lab ID#: 1405321-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	2.3	12	9.2	47
1,1-Dichloroethane	2.3	15	9.4	59
cis-1,2-Dichloroethene	2.3	86	9.2	340
1,1,1-Trichloroethane	2.3	770	13	4200
Trichloroethene	2.3	20	12	100
Tetrachloroethene	2.3	6.9	16	47

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P2SVE-EFFC4-051514

Lab ID#: 1405321-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	1.1	6.9	4.5	27
1,1-Dichloroethane	1.1	10	4.6	43
cis-1,2-Dichloroethene	1.1	22	4.5	88
1,1,1-Trichloroethane	1.1	470	6.2	2500
Trichloroethene	1.1	17	6.2	91
Toluene	1.1	3.9	4.3	15
Tetrachloroethene	1.1	38	7.8	260

Client Sample ID: P2SVE-EFFC5-051514

Lab ID#: 1405321-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	3.0	14	12	54
1,1-Dichloroethane	3.0	20	12	82
cis-1,2-Dichloroethene	3.0	65	12	260
1,1,1-Trichloroethane	3.0	1000	16	5600
Trichloroethene	3.0	33	16	180
Tetrachloroethene	3.0	71	20	480

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Client Sample ID: P1SVE-EFFC1-051514

Lab ID#: 1405321-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3053022**	**Date of Collection:**	**5/15/14 8:55:00 AM**
Dil. Factor:	**2.42**	**Date of Analysis:**	**5/30/14 10:14 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
Chloroethane	4.8	Not Detected	13	Not Detected
1,1-Dichloroethene	1.2	1.9	4.8	7.6
Acetone	12	Not Detected	29	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
1,1-Dichloroethane	1.2	32	4.9	130
2-Butanone (Methyl Ethyl Ketone)	4.8	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	6.0	4.8	24
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	95	6.6	520
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	6.8	6.5	36
Toluene	1.2	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	55	8.2	380
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: P1SVE-EFFC2-051514

Lab ID#: 1405321-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3053023**	**Date of Collection:**	**5/15/14 9:05:00 AM**
Dil. Factor:	**2.29**	**Date of Analysis:**	**5/30/14 10:49 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
Chloroethane	4.6	16	12	41
1,1-Dichloroethene	1.1	4.8	4.5	19
Acetone	11	25	27	59
Methylene Chloride	11	Not Detected	40	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
1,1-Dichloroethane	1.1	99	4.6	400
2-Butanone (Methyl Ethyl Ketone)	4.6	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.1	7.8	4.5	31
Chloroform	1.1	Not Detected	5.6	Not Detected
1,1,1-Trichloroethane	1.1	240	6.2	1300
Carbon Tetrachloride	1.1	Not Detected	7.2	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	6.6	6.2	36
Toluene	1.1	Not Detected	4.3	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	14	7.8	92
Ethyl Benzene	1.1	Not Detected	5.0	Not Detected
m,p-Xylene	1.1	Not Detected	5.0	Not Detected
o-Xylene	1.1	Not Detected	5.0	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: P1SVE-EFFC3-051514

Lab ID#: 1405321-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3053024**	**Date of Collection:**	**5/15/14 9:20:00 AM**
Dil. Factor:	**4.67**	**Date of Analysis:**	**5/30/14 11:13 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	2.3	Not Detected	6.0	Not Detected
Chloroethane	9.3	Not Detected	25	Not Detected
1,1-Dichloroethene	2.3	12	9.2	47
Acetone	23	Not Detected	55	Not Detected
Methylene Chloride	23	Not Detected	81	Not Detected
trans-1,2-Dichloroethene	2.3	Not Detected	9.2	Not Detected
1,1-Dichloroethane	2.3	15	9.4	59
2-Butanone (Methyl Ethyl Ketone)	9.3	Not Detected	28	Not Detected
cis-1,2-Dichloroethene	2.3	86	9.2	340
Chloroform	2.3	Not Detected	11	Not Detected
1,1,1-Trichloroethane	2.3	770	13	4200
Carbon Tetrachloride	2.3	Not Detected	15	Not Detected
Benzene	2.3	Not Detected	7.4	Not Detected
1,2-Dichloroethane	2.3	Not Detected	9.4	Not Detected
Trichloroethene	2.3	20	12	100
Toluene	2.3	Not Detected	8.8	Not Detected
1,1,2-Trichloroethane	2.3	Not Detected	13	Not Detected
Tetrachloroethene	2.3	6.9	16	47
Ethyl Benzene	2.3	Not Detected	10	Not Detected
m,p-Xylene	2.3	Not Detected	10	Not Detected
o-Xylene	2.3	Not Detected	10	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	92	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: P2SVE-EFFC4-051514

Lab ID#: 1405321-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3053025**	**Date of Collection:**	**5/15/14 9:00:00 AM**
Dil. Factor:	**2.29**	**Date of Analysis:**	**5/30/14 11:42 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
Chloroethane	4.6	Not Detected	12	Not Detected
1,1-Dichloroethene	1.1	6.9	4.5	27
Acetone	11	Not Detected	27	Not Detected
Methylene Chloride	11	Not Detected	40	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
1,1-Dichloroethane	1.1	10	4.6	43
2-Butanone (Methyl Ethyl Ketone)	4.6	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.1	22	4.5	88
Chloroform	1.1	Not Detected	5.6	Not Detected
1,1,1-Trichloroethane	1.1	470	6.2	2500
Carbon Tetrachloride	1.1	Not Detected	7.2	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	17	6.2	91
Toluene	1.1	3.9	4.3	15
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	38	7.8	260
Ethyl Benzene	1.1	Not Detected	5.0	Not Detected
m,p-Xylene	1.1	Not Detected	5.0	Not Detected
o-Xylene	1.1	Not Detected	5.0	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	93	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: P2SVE-EFFC5-051514

Lab ID#: 1405321-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3053026**	**Date of Collection:**	**5/15/14 9:10:00 AM**
Dil. Factor:	**6.02**	**Date of Analysis:**	**5/31/14 12:05 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	3.0	Not Detected	7.7	Not Detected
Chloroethane	12	Not Detected	32	Not Detected
1,1-Dichloroethene	3.0	14	12	54
Acetone	30	Not Detected	72	Not Detected
Methylene Chloride	30	Not Detected	100	Not Detected
trans-1,2-Dichloroethene	3.0	Not Detected	12	Not Detected
1,1-Dichloroethane	3.0	20	12	82
2-Butanone (Methyl Ethyl Ketone)	12	Not Detected	36	Not Detected
cis-1,2-Dichloroethene	3.0	65	12	260
Chloroform	3.0	Not Detected	15	Not Detected
1,1,1-Trichloroethane	3.0	1000	16	5600
Carbon Tetrachloride	3.0	Not Detected	19	Not Detected
Benzene	3.0	Not Detected	9.6	Not Detected
1,2-Dichloroethane	3.0	Not Detected	12	Not Detected
Trichloroethene	3.0	33	16	180
Toluene	3.0	Not Detected	11	Not Detected
1,1,2-Trichloroethane	3.0	Not Detected	16	Not Detected
Tetrachloroethene	3.0	71	20	480
Ethyl Benzene	3.0	Not Detected	13	Not Detected
m,p-Xylene	3.0	Not Detected	13	Not Detected
o-Xylene	3.0	Not Detected	13	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1405321-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3053007**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 11:02 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	89	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: CCV

Lab ID#: 1405321-07A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3053002**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 07:49 AM**	

Compound	**%Recovery**
Vinyl Chloride	96
Chloroethane	97
1,1-Dichloroethene	98
Acetone	90
Methylene Chloride	92
trans-1,2-Dichloroethene	96
1,1-Dichloroethane	97
2-Butanone (Methyl Ethyl Ketone)	94
cis-1,2-Dichloroethene	98
Chloroform	97
1,1,1-Trichloroethane	96
Carbon Tetrachloride	96
Benzene	94
1,2-Dichloroethane	96
Trichloroethene	128
Toluene	96
1,1,2-Trichloroethane	94
Tetrachloroethene	93
Ethyl Benzene	95
m,p-Xylene	96
o-Xylene	97

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCS

Lab ID#: 1405321-08A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3053003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 08:16 AM**	

Compound	%Recovery	Method Limits
Vinyl Chloride	99	70-130
Chloroethane	99	70-130
1,1-Dichloroethene	113	70-130
Acetone	92	70-130
Methylene Chloride	106	70-130
trans-1,2-Dichloroethene	86	70-130
1,1-Dichloroethane	103	70-130
2-Butanone (Methyl Ethyl Ketone)	98	70-130
cis-1,2-Dichloroethene	116	70-130
Chloroform	102	70-130
1,1,1-Trichloroethane	101	70-130
Carbon Tetrachloride	100	70-130
Benzene	98	70-130
1,2-Dichloroethane	99	70-130
Trichloroethene	96	70-130
Toluene	97	70-130
1,1,2-Trichloroethane	96	70-130
Tetrachloroethene	95	70-130
Ethyl Benzene	97	70-130
m,p-Xylene	99	70-130
o-Xylene	97	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: LCSD

Lab ID#: 1405321-08AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**3053004**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/30/14 08:43 AM**	

Compound	**%Recovery**	**Method Limits**
Vinyl Chloride	96	70-130
Chloroethane	96	70-130
1,1-Dichloroethene	110	70-130
Acetone	92	70-130
Methylene Chloride	103	70-130
trans-1,2-Dichloroethene	84	70-130
1,1-Dichloroethane	100	70-130
2-Butanone (Methyl Ethyl Ketone)	96	70-130
cis-1,2-Dichloroethene	113	70-130
Chloroform	101	70-130
1,1,1-Trichloroethane	100	70-130
Carbon Tetrachloride	98	70-130
Benzene	97	70-130
1,2-Dichloroethane	101	70-130
Trichloroethene	98	70-130
Toluene	97	70-130
1,1,2-Trichloroethane	96	70-130
Tetrachloroethene	95	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	100	70-130
o-Xylene	96	70-130

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130

C

Appendix C

Second Quarter 2014 Phase1/Phase 2 AS/SVE System Operations Data Sheets

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	7-21-14	7-22-14	7/23/14							
TIME	9:58am	9:15am	1035							
OBSERVER'S INITIALS	RC	DL	NP							
ALARMS										
Shut Down Alarm Code	NA	NA	N/A							
Non-critical Alarm Code	NA	NA	N/A							
HOURS METERS										
B-701 SVE (hrs)	30922	30946	30971							
C-2201 SPRG (hrs)	26999	27023	27048							
F-2501 H-XCH (hrs)	26999	27023	27048							
ANALOGS										
MV-701 SVE POS (%)	27	27	27							
PT-701 SVE (-wc)	81.6	81.6	81.6							
PT-2501 SPRG (psi)	13.1	13.2	13.1							
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0							
PTHA-2501 SPRG (psi)	17.0	17.0	17.0							
SET POINTS 2										
SVON-101 SVE (min)	60	60	60							
SVON-102 SVE (min)	60	60	60							
SVON-103 SVE (min)	180	180	180							
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60							
SVON-2802 SPRG (min)	60	60	60							
SVON-2803 SPRG (min)	180	180	180							
SPRG DELAY (min)	Ø	0	0							
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30							

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	7-11-14	7-12-14	7-13-14	7-14-14	7-15-14	7-16-14	7-17-14	7-18-14	7-19-14	7-20-14
TIME	8:17 Am	9:02Am	10:15 Am	7:40 Am	8:27 Am	11:00 Am	8:28 Am	10:02 Am	8:05AM	11:15
OBSERVER'S INITIALS	RK	KA	DL	RK	RK	RK	RK	RK	DE	DL
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	30681	30706	30731	30752	30777	30804	30825	30851	30873	30900
C-2201 SPRG (hrs)	26756	26781	26806	26828	26853	26879	26901	26927	26949	26976
F-2501 H-XCH (hrs)	26756	26781	26806	26828	26853	26879	26901	26927	26949	26976
ANALOGS										
MV-701 SVE POS (%)	27	27	27	27	27	27	27	27	27	27
PT-701 SVE (-wc)	81.6	81.6	-81.6	81.6	81.6	81.6	81.6	68.0	81.6	81.6
PT-2501 SPRG (psi)	11.9	11.9	11.8	13.4	13.3	13.0	11.8	13.0	13.1	11.7
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30	30	30	30	30	30	30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	7-1-14	7-2-14	7-3-14	7-4-14	7-5-14	7-6-14	7-7-14	7-8-14	7-9-14	7-10-14
TIME	8:55 Am	2:52 Pm	8:26 Am	7:07 Am	10:15 Am	7:35 Am	8:47 Am	8:29 Am	10:01 Am	8:37 Am
OBSERVER'S INITIALS	RK	RK	RK	RK	DL	DE/KA	RK	RK	RK	RK
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	30442	30472	30490	30512	30539	30561	30586	30609	30635	30658
C-2201 SPRG (hrs)	26514	26544	26562	26585	26612	26634	26659	26683	26709	26732
F-2501 H-XCH (hrs)	26514	26544	26562	26585	26612	26634	26659	26683	26709	26732
ANALOGS										
MV-701 SVE POS (%)	27	27	27	27	27	27	27	27	27	27
PT-701 SVE (-wc)	81.6	81.6	68.0	81.6	81.6	81.6	81.6	81.6	81.6	68.0
PT-2501 SPRG (psi)	13.0	13.0	12.8	12.9	12.9	12.9	13.0	13.1	13.0	12.9
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30	30	30	30	30	30	30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	6-21-14	6-22-14	6-23-14	6-24-14	6-25-14	6-26-14	6-27-14	6-28-14	6-29-14	6-30-14
TIME	2:00 PM	8:10 AM	8:33 AM	8:48 AM	10:04 AM	8:44 AM	7:54 AM	7:55 AM	8:20 AM	10:20 AM
OBSERVER'S INITIALS	DL	DE	RK	RK	RK	RK	RK	DE	KA	RK
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	30207	30226	30250	30274	30300	30322	30345	30369	30394	30420
C-2201 SPRG (hrs)	26277	26296	26320	26345	26370	26393	26416	26441	26465	26491
F-2501 H-XCH (hrs)	26277	26296	26320	26345	26370	26393	26416	26441	26465	26491
ANALOGS										
MV-701 SVE POS (%)	27	27	27	27	27	27	27	27	27	27
PT-701 SVE (-wc)	-68	-81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	68.0
PT-2501 SPRG (psi)	12.8	11.8	13.0	13.0	13.0	13.2	11.7	11.9	13.0	13.1
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
SET POINTS 4										
MV-[illegible] SVE POS (%)	30	30	30	30	30	30	30	30	30	3[illegible]

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	6-11-14	6-12-14	6-13-14	6-14-14	6-15-14	6-16-14	6-17-14	6-18-14	6-18-14	6-20-14
TIME	1:58 Pm	2:42 Pm	10:55 Am	8:51 Am	8:45 AM	7:53 Am	7:38 AM.	7:32 Am	8:50 Am	10:02 Am
OBSERVER'S INITIALS	RK	RK	RK	RK	DE/KA	RK	DE/RK	RK	RK	RK
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	29968	29993	30013	30035	30059	30082	30105	30129	30155	30180
C-2201 SPRG (hrs)	26035	26060	26081	26103	26127	26150	26174	26198	26224	26249
F-2501 H-XCH (hrs)	26035	26060	26080	26103	26127	26150	26174	26198	26224	26249
ANALOGS										
MV-701 SVE POS (%)	27	27	27	27	27	27	27	27	27	27
PT-701 SVE (-wc)	81.6	81.6	81.6	81.6	68.0	81.6	81.6	81.6	81.6	81.6
PT-2501 SPRG (psi)	12.9	13.0	11.8	13.1	12.7	13.0	13.0	13.1	13.0	13.0
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30	30	30	30	30	30	30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	6-1	6-2	6-3	6-4	6-5	6-6	6-7	6-8	6-9	6-10
TIME	11:10AM	2:00pm	12:30PM	2:10PM	1:45	2:20PM	10:05AM	8:10AM		10:05AM
OBSERVER'S INITIALS	DE/DL	KA/DE	DL	DE/KA	DL	DE/KA	DE	KA		TK
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NOT	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	TAKEN	NA
HOURS METERS										
B-701 SVE (hrs)	29726	29752	29775	29801	29824	29849	29868	29890		29990
C-2201 SPRG (hrs)	25790	25817	25840	25866	25890	25915	25934	25957		26007
F-2501 H-XCH (hrs)	25790	25817	25840	25866	25890	25915	25934	25957		26007
ANALOGS										
MV-701 SVE POS (%)	27	27	27	27	27	27	27	27		27
PT-701 SVE (-wc)	81.6	81.6	81.6	81.6	-81.6	81.6	81.6	68.0		68.0
PT-2501 SPRG (psi)	12.3	13.5	12.2	11.7	12.9	12.8	12.9	12.8		12.6
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0		17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60		60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60		60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180		180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60		60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60		60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180		180
SPRG DELAY (min)	0	Ø	Ø	0	Ø	Ø	Ø	Ø		Ø
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30	30	30	30	30		30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	5-22-14	5-23-14	5-24-14	5-25-14	5-26-14	5-27-14	5-28-14	5-29-14	5-30-14	5-31-14
TIME	8:25Am	1:08 Pm	10:50Am	7:21 Am	11:30AM	10:25Am	1:48Pm	6:30Am	8:45Am	12:10pm
OBSERVER'S INITIALS	RK	RK	KA	RK	DE	RK	RK	RK	DE/RK	KA
ALARMS										
Shut Down Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	29483	29512	29534	29554	29582	29605	29632	29649	29675	29703
C-2201 SPRG (hrs)	25546	25575	25596	25617	25645	25669	25696	25713	25740	25767
F-2501 H-XCH (hrs)	25546	25575	25596	25617	25645	25669	25696	25713	25740	25767
ANALOGS										
MV-701 SVE POS (%)	27	27	27	27	27	27	27	27	27	27
PT-701 SVE (-wc)	81.6	81.6	68.0	68.0	81.6	81.6	81.6	81.6	81.6	68.0
PT-2501 SPRG (psi)	11.8	12.9	13.2	12.7	12.9	12.9	11.6	13.0	13.0	12.7
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	Ø	Ø	Ø	Ø	0	Ø	Ø	Ø	Ø	0
SET POINTS 4										
MV-701 SVE POS (%)	30	30	30	30	30	30	30	30	30	30

DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

DATE	3-12-13	3-13-14	3/14/14	5/15-14	5-16-14	5-17-14	5-18-14	5-19-14	5-20-14	5-21-14
TIME	1:04 Pm	2:34 pm	1020	1100	12:43 Pm	7:05 AM	10:35 AM	10:57 AM	7:39 AM	12:15 PM
OBSERVER'S INITIALS	RK	RK	NP	A.H.	RK	RK	RA	RK	RK	RK
ALARMS										
Shut Down Alarm Code	NA	NA	N/A	N/A	NA	NA	NA	NA	NA	NA
Non-critical Alarm Code	NA	NA	N/A	N/A.	NA	NA	NA	NA	NA	NA
HOURS METERS										
B-701 SVE (hrs)	28790	28816	28836	29318	29344	29362	29390	29414	29435	29464
C-2201 SPRG (hrs)	25325	25351	25371	25379	25405	25423	25451	25476	25496	25526
F-2501 H-XCH (hrs)	25325	25351	25371	25379	25405	25423	25451	25476	25496	25526
ANALOGS										
MV-701 SVE POS (%)	29	29	29	27	27	27	27	27	27	27
PT-701 SVE (-wc)	81.6	68.0	68.0	81.6	81.6	81.6	81.6	81.6	68.0	81.6
PT-2501 SPRG (psi)	11.6	12.9	12.9	12.9	12.8	12.9	11.6	11.8	13.1	11.7
SET POINTS										
PTLA-2501 SPRG (psi)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PTHA-2501 SPRG (psi)	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
SET POINTS 2										
SVON-101 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-102 SVE (min)	60	60	60	60	60	60	60	60	60	60
SVON-103 SVE (min)	180	180	180	180	180	180	180	180	180	180
SET POINTS 3										
SVON-2801 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2802 SPRG (min)	60	60	60	60	60	60	60	60	60	60
SVON-2803 SPRG (min)	180	180	180	180	180	180	180	180	180	180
SPRG DELAY (min)	Ø	Ø	0	0	Ø	Ø	Ø	Ø	Ø	Ø
SET POINTS 4										
MV SVE POS (%)	30	30	30	30	30	30	30	30	30	30

WEEKLY DOCUMENTATION SHEET

SYSTEM COMPONENTS

DATE	7-7-14	7-14-14	7-21-14	7/23/14					
TIME	8:49 Am	7:42 Am	10:01 Am	1035					
OBSERVER'S INITIALS	RK	RK	RK	NP					

SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE, MOISTURE, ETC.

Comments and Notes	NA	NA	NA	N/A					

SOIL VAPOR EXTRACTION (SVE)

Hours of Operation (hrs)	30586	30752	30922	30971					
Inlet Vacuum (-wc)	88	88	88	88					
Pre-Filter Vacuum (-wc)	90	92	94	94					
Post-Filter Vacuum (-wc)	78	82	78	78					
Outlet Pressure (wc)	7	6	6	6					
Outlet Temperature (°F)	168	162	169	170					
Outlet Magnehelic* (in H_2O)	0.9	0.9	0.9	0.9					
Water Level Sight Glass (in)	Ø	Ø	Ø	Ø					

AIR SPARGE (SPRG)

Hours Operation (hrs)	26659	26828	26999	27048					
Oil Sight Glass (half pt.)	OK	OK	OK	OK					

HEAT EXCHANGER (H-XCH)

Hours Operation (hrs)	26659	26828	26999	27048					
Inlet Temperature (°F)	223	210	215	220					
Inlet Pressure (psi)	13	17	16	17					
Outlet Temperature (°F)	127	115	117	120					
Outlet Pressure (psi)	12.5	13.5	13.5	13.5					
Outlet Magnehelic* (in H_2O)	4.0	4.0	4.0	4.0					

ELECTRICAL USAGE (see display panel below main breaker and next to control panel)

Kilowatts (kwh)	153382	154244	155131	155386					

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

WEEKLY DOCUMENTATION SHEET

SYSTEM COMPONENTS

DATE	5-15-14	5-19-14	5-27-14	6-2-14	6-10-14	6-16-14	6-23-14	6/26/14	6-30-14
TIME	1100	10:58	10:26Am	1:55pm	10:06 Am	7:55 Am	8:34 Am	1430	10:21 Am
OBSERVER'S INITIALS	BH.	RK	RL	KA	TH	RK	RL	NP	RK

SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE, MOISTURE, ETC.

Comments and Notes	N/A.	NA	NA	NA	NA	NA	NA	NA	NA

SOIL VAPOR EXTRACTION (SVE)

Hours of Operation (hrs)	29318	29414	29605	29752	29940	30082	30250	30328	30420
Inlet Vacuum (-wc)	86	82	84	84	80	85	86	85	80
Pre-Filter Vacuum (-wc)	92	88	90	92	84	92	92	90	84
Post-Filter Vacuum (-wc)	78	82	78	70	69	75	78	78	69
Outlet Pressure (wc)	7	7	6	6	6	6	6	6	6
Outlet Temperature (°F)	148	152	164	164	156	160	164	168	160
Outlet Magnehelic* (in H_2O)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Water Level Sight Glass (in)	Ø	Ø	1"	0	Ø	Ø	Ø	Ø	Ø

AIR SPARGE (SPRG)

Hours Operation (hrs)	25379	25476	25669	25817	26007	26150	26320	26399	26491
Oil Sight Glass (half pt.)	OK	OK	OK	OK	OK	OK	OK	OK	OK

HEAT EXCHANGER (H-XCH)

Hours Operation (hrs)	25379	25476	25669	25817	26007	26150	26320	26399	26491
Inlet Temperature (°F)	205	201	224	224	223	210	210	210	215
Inlet Pressure (psi)	15	14	15	15	15	16	16	16	13
Outlet Temperature (°F)	105	104	119	118	116	115	117	114	122
Outlet Pressure (psi)	13	11.5	12	12	12	13	13	13	14
Outlet Magnehelic* (in H_2O)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

ELECTRICAL USAGE (see display panel below main breaker and next to control panel)

Kilowatts (kwh)	146904	147398	148359	149110	150063	150774	151645	152055	152520

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

WEEKLY DOCUMENTATION SHEET

SYSTEM COMPONENTS

DATE	11-18-13	1-15-14	1-27-14	2-3-14	2-11-14	2-17-14	3-3-14	3-10-14	3/14/14
TIME	8:47 Am	1240	10:22Am	8:42Am	1:38Pm	7:56Am	10:25Am	10:13Am	1020
OBSERVER'S INITIALS	RK	NJP	RK	RK	RK	RK	RK	RK	NJP

SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE, MOISTURE, ETC.

Comments and Notes	NA	NA	NA	NA	NA	NA	NA	NA	NP

SOIL VAPOR EXTRACTION (SVE)

Hours of Operation (hrs)	26229	27622	27907	28072	28268	28306	28573	28740	28836
Inlet Vacuum (-wc)	84	86	86	88	82	82	82	86	82
Pre-Filter Vacuum (-wc)	86	90	88	90	90	88	88	90	82
Post-Filter Vacuum (-wc)	76	78	76	78	78	78	70	78	68
Outlet Pressure (wc)	8	8	8	8	8	8	8	7	7
Outlet Temperature (°F)	145	128	122	125	123	134	130	140	135
Outlet Magnehelic* (in H_2O)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Water Level Sight Glass (in)	Ø	0	Ø	2"	Ø	5"	8"	9"	9"

AIR SPARGE (SPRG)

Hours Operation (hrs)	24136	24145	24433	24599	24798	24937	25106	25274	25371
Oil Sight Glass (half pt.)	OK	OK	OK	OK	OK	OK	OK	OK	OK

HEAT EXCHANGER (H-XCH)

Hours Operation (hrs)	24136	24145	24433	24599	24798	24937	25106	25274	25371
Inlet Temperature (°F)	201	180	176	180	175	190	180	205	200
Inlet Pressure (psi)	14	17	16	17	17	16	15	17	16
Outlet Temperature (°F)	101	80	82	84	82	90	88	98	100
Outlet Pressure (psi)	13.5	15	13	16	14	14	12.5	16	16
Outlet Magnehelic* (in H_2O)	4.0	4	4	4	4	4	4	3.5	4

ELECTRICAL USAGE (see display panel below main breaker and next to control panel)

Kilowatts (kwh)	139794	140104	141607	142482	143541	144274	145197	146081	146600

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

MONTHLY DOCUMENTATION SHEET

SVE MANIFOLD

DATE	10-24-13	11.18.13	1-15-14	2-19-14	3/14/14	5-15-14	6/26/14	7/23/14		
TIME	1200	1400	1240	1010	1020	1100	1430	1035		
INITIALS	A.H.	P.H.	NP	A.H.	NP	AH.	NP	NP		

MAGNEHELIC GAUGE*

CELL 1	SVE-1 (in H_2O)	0.9	0.9	1.1	1.0	1.1	1.2	1.2	~~1.2~~ 1.2		
	SVE-2 (in H_2O)	1.5	1.4	1.4	1.5	1.4	1.4	1.4	~~1.0~~ 1.5		
CELL 2	SVE-3 (in H_2O)	1.2	1.3	1.3	1.3	1.2	1.3	1.3	1.3		
	SVE-4 (in H_2O)	1.3	1.2	1.1	1.1	1.2	1.3	1.3	1.3		
CELL 3	SVE-5 (in H_2O)	0.20 ~~0.02~~ AH	0.30	0.10	0.80	0.80	0.9	1.1	1.2		
	SVE-6 (in H_2O)	0.60	0.0	0.0	0.90	0.80	1.0	1.0	1.0		

VACUUM GAUGE

CELL 1	SVE-1 (-wc)	32	30	30	30	29	30	30	~~38~~ 32		
	SVE-2 (-wc)	30	30	30	30	30	30	32	~~38~~ 30		
CELL 2	SVE-3 (-wc)	20	20	20	20	20	20	20	~~20~~ 20		
	SVE-4 (-wc)	20	20	19.5	19	20	16	20	~~20~~ 20		
CELL 3	SVE-5 (-wc)	36	35	36	34	35	34	36	38		
	SVE-6 (-wc)	36	40	38	38	38	38	38	38		

ep plastic pinch valves on tubing to magnehelic gauge closed excep. taking a reading.

MONTHLY DOCUMENTATION SHEET

AIR SPARGE MANIFOLD

DATE		10-24-13	11.18.13	1-15-14	2.19.14	3/14/14	5.15-14	6/26/14	7/23/14		
TIME		1200	1400	1240	1010	1020	1100	1430	1035		
INITIALS		A.H.	D.H.	NP	A.H.	NP	A.H.	NP	NP		
ROTOMETER											
CELL 1	AS-1 (scfm)	18	20	17.5	20	16	19	17	18		
	AS-2 (scfm)	20	20	20	21	20	20	20	21		
	AS-3 (scfm)	20	20	21	21	21	20	20	20		
	AS-4 (scfm)	19	19	19.5	18.5	19	19	19	19		
	AS-5 (scfm)	18	20	18.5	20	18.5	20	18	19		
CELL 2	AS-6 (scfm)	16	16	17	17	16	16.5	16.5	16		
	AS-7 (scfm)	16	14.5	17	17	16	16.5	16	16.5		
	AS-8 (scfm)	21	21.5	21	21.5	21	21	21	21		
	AS-9 (scfm)	16	17.5	16	17.5	20	18	16	16		
	AS-10 (scfm)	23	23	23	23.5	23.5	23	23	23		
CELL 3	AS-11 (scfm)	16	16.5	15	18	20	15	16	16		
	AS-12 (scfm)	18	17	19	20	21	19	19	19		
	AS-13 (scfm)	17	16	18	18.5	18	18	17	17		
	AS-14 (scfm)	24	23	25	19	20	24	24	24		
	AS-15 (scfm)	21	20	21.5	16	17	21	21	21		
PRESSURE GAUGE											
CELL 1	AS-1 (psi)	11.5	10.5	12	9	11	10	11	11		
	AS-2 (psi)	11.0	11	11	8.5	10	9.5	10.5	~~13.5~~ 10		
	AS-3 (psi)	10.5	10	11	10	9.5	9.0	10	~~10~~ 10		
	AS-4 (psi)	11.0	10.5	12	9.5	10.5	10	10.5	~~11~~ 10.5		
	AS-5 (psi)	11.0	10.5	13	10	11	10.5	11	~~13~~ 10.5		
CELL 2	AS-6 (psi)	11.5	11	11	~~11.7~~ 10.5	10	10.5	10	11		
	AS-7 (psi)	13	13	13	~~11.7~~ 13	11	10.5	10	12		
	AS-8 (psi)	11.5	11.5	12	~~12.5~~ 11	11	11	11	11		
	AS-9 (psi)	13	12.5	13	12	11.5	12	12	12.5		
	AS-10 (psi)	12.5	12.5	13	12.5	12.5	11	11	11.5		
CELL 3	AS-11 (psi)	10.5	11	11.5	10.5	11	9.5	9.5	11		
	AS-12 (psi)	13.5	13.5	13.5	14.0	12.5	11.0	13.5	13.5		
	AS-13 (psi)	13.0	13	13	14.0	12.5	10.5	10.5	10		
	AS-14 (psi)	12.0	13.5	13	14.0	14	10.5	10.5	11		
	AS-15 (psi)	12.5	13	13.5	13.5	14	12.5	13	13		

MONTHLY DOCUMENTATION SHEET

WELL HEAD GAUGES

DATE		3/14/14	5-15-14	6/26/14	7/23/14						
TIME		1020	1100	1430	1035						
INITIALS		NP	A.A.	NP	NP						
CELL 1	AS-1 (psi)	COVERED	3.5	2.0	2.5						
	AS-2 (psi)		3.0	0.0	1.0						
	AS-3 (psi)		9.0	11.0	10.5						
	AS-4 (psi)		3.0	1.0	1.5						
	AS-5 (psi)		13.0	12.0	12.5						
CELL 2	AS-6 (psi)		7.0	7.0	7.0						
	AS-7 (psi)		6.5	5.0	4.5						
	AS-8 (psi)		4.5	2.0	3.0						
	AS-9 (psi)		0.0	0.0	0.0						
	AS-10 (psi)		1.5	1.0	1.0						
CELL 3	AS-11 (psi)		7.0	5.0	5.0						
	AS-12 (psi)		0.0	0.0	0.0						
	AS-13 (psi)		7.0	6.0	6.5						
	AS-14 (psi)		0.0	0.0	0.0						
	AS-15 (psi)		4.0	2.0	2.5						
CELL 1	SVE-1 (in H_2O)	COVERED	6.5	6.5	6.0						
	SVE-2 (in H_2O)		2.0	4.5	3.0						
CELL 2	SVE-3 (in H_2O)		3.0	2.5	2.5						
	SVE-4 (in H_2O)		1.0	1.0	1.0						
L 3	SVE-5 (in H_2O)		2.5	1.5	2.0						
	SVE-6 (in H_2O)		1.0	1.0	1.0						

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	7/23/14								
TIME	0500								
OBSERVER'S INITIALS	MP								

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	80° CLEAR								

ALARMS

Alarm Code	N/A								

P&ID

PDT-701 SVE (-wc)	0.06								
PT-701 SVE (-wc)	-66								
PT-702 SVE (-wc)	52.9								
PT-2201 SPRG (psi)	28.2								
P-401 PUMP (cycles)	4								

P&ID2

PDT-801 SVE (-wc)	0.26								
PT-801 SVE (-wc)	-68								
PT-802 SVE (-wc)	46.4								
PT-2301 SPRG (psi)	0.0								
P-501 PUMP (cycles)	105								

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	7/23/14								
TIME	0900								
OBSERVER'S INITIALS	MP								
HOURS METERS									
B-701 SVE (hrs)	2640								
C-2201 SPRG (hrs)	2625								
C-2202 SPRG (hrs)	2625								
B-801 SVE (hrs)	2630								
C-2301 SPRG (hrs)	2630								
C-2302 SPRG (hrs)	2630								
SET POINTS									
PAL-701 SVE (wc)	-27								
PAH-702 SVE (wc)	100.0								
PAL-702 SVE (wc)	10.0								
PAH-2201 SPRG (psi)	30.0								
PAL-2201 SPRG (psi)	0.0								
PAL-801 SVE (wc)	-25								
PAH-802 SVE (wc)	100.0								
PAL-802 SVE (wc)	10.0								
PAH-2301 SPRG (psi)	30.0								
PAL-2301 SPRG (psi)	0.0								
SV-2801 SPRG (min)	40								
SV-2802 SPRG (min)	20								
SV-2901 SPRG (min)	20								
SV-2902 SPRG (min)	20								

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	7-14-14	7-15-14	7-16-14	7-17-14	7-18-14	7-19-14	7-20-14	7-21-14	7-22-14
TIME	7:58 AM	8:31 AM	11:05 AM	8:37 AM	10:07 AM	8:15 AM	11:[illegible]	10:0 AM	9:40 AM
OBSERVER'S INITIALS	RK	RK	RK	RK	RK	DE	DL	RK	DL
WEATHER CONDITIONS									
Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	Cloudy 72°F	Cloudy 70°F	CLEAR 79°F	CLEAR 76°F	CLEAR 82°F	CLEAR 76°F	Clear 78°F	CLEAR 88°F	Cloudy 80°F
ALARMS									
Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA
P&ID									
PDT-701 SVE (-wc)	0.04	0.07	0.04	0.15	0.16	0.04	0.00	0.07	0.17
PT-701 SVE (-wc)	-70	-68	-69	-66	-67	-66	-68	-69	-69
PT-702 SVE (-wc)	54.6	55.9	54.1	53.3	52.6	53.9	52.9	52.7	52.5
PT-2201 SPRG (psi)	28.0	28.6	28.0	15.8	28.1	28.5	27.7	27.8	27.9
P-401 PUMP (cycles)	4	4	4	4	4	4	4	4	4
P&ID2									
PDT-801 SVE (-wc)	0.24	0.25	0.26	0.27	0.25	0.28	0.27	0.25	0.23
PT-801 SVE (-wc)	-73	-72	-69	-69	-67	-69	-64	-69	-70
PT-802 SVE (-wc)	45.9	47.6	47.4	46.5	46.6	46.4	45.9	45.9	46.0
PT-2301 SPRG (psi)	0.0	0.0	2.1	1.1	0.0	0.0	0.4	2.9	0.7
P-501 PUMP (cycles)	87	88	91	93	95	97	100	102	103

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	7-14-14	7-15-14	7-16-14	7-17-14	7-18-14	7-19-14	7-20-14	7-21-14	7-22-14
TIME	7:58 Am	8:31 Am	11:05 Am	8:37 AM	10:07 Am	8:15 AM	11:00 Am	10:10 Am	9:00 Am
OBSERVER'S INITIALS	RK	RK	RK	RK	RK	DE	DL	RK	DL
HOURS METERS									
B-701 SVE (hrs)	2423	2448	2474	2496	2521	2543	2576	2593	2616
C-2201 SPRG (hrs)	2412	2437	2464	2485	2511	2533	2559	2583	2606
C-2202 SPRG (hrs)	2412	2437	2464	2485	2511	2533	2559	2582	2606
B-801 SVE (hrs)	2412	2437	2464	2485	2511	2533	2559	2583	2606
C-2301 SPRG (hrs)	2412	2437	2464	2485	2511	2533	2559	2582	2606
C-2302 SPRG (hrs)	2412	2437	2464	2485	2511	2533	2559	2582	2606
SET POINTS									
PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	[illegible]	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	7-5-14	7-6-14	7-7-14	7-8-14	7-9-14	7-10-14	7-11-14	7-12-14	7-13-14
TIME	10:20 AM	7:45AM	9:02AM	8:39AM	10:05AM	8:47AM	8:28AM	9:10 AM	10:00AM
OBSERVER'S INITIALS	DL	DE/KA	TRC	TRC	TRC	TRC	TRC	KA	DL

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	74 cloudy	76° cloudy	90°F CLEAR	84°F CLEAR	CLEAR 86°F	CLEAR 80°F	CLEAR 82°F	CLOUDY RAIN 78°F	SUNNY 75°F

ALARMS

Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA

P&ID

PDT-701 SVE (-wc)	.13	.11	0.12	0.16	0.05	0.10	0.12	0.08	.08
PT-701 SVE (-wc)	-65	-69	-71	-73	-69	-65	-66	-67	-68
PT-702 SVE (-wc)	54.5	53.9	52.5	52.6	52.7	55.0	54.5	54.0	53.3
PT-2201 SPRG (psi)	15.2	15.0	27.9	27.7	15.2	28.2	15.5	27.8	28.1
P-401 PUMP (cycles)	4	4	4	4	4	4	4	4	4

P&ID2

PDT-801 SVE (-wc)	-24	-23	-0.24	0.24	0.27	0.25	0.25	0.21	.26
PT-801 SVE (-wc)	-69	73	-74	-75	-71	-69	-68	-71	-71
PT-802 SVE (-wc)	47.3	46.4	45.7	45.8	46.0	47.2	47.0	46.1	46.5
PT-2301 SPRG (psi)	0.7	2.1	2.6	0.8	1.1	0.9	3.8	0.3	3.7
P-501 PUMP (cycles)	72	75	76	77	77	78	81	83	86

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	7-5-14	7-6-14	7-7-14	7-8-14	7-9-14	7-10-14	7-11-14	7-12-14	7-13-14
TIME	10:20	7:45 AM	9:02 AM	8:39 AM	10:05 AM	8:47 AM	8:28 AM	9:10 AM	10:00 AM
OBSERVER'S INITIALS	OL	DE/KA	RK	RK	RK	RK	RK	KA	OL
HOURS METERS									
B-701 SVE (hrs)	2210	2231	2256	2280	2305	2328	2352	2376	2401
C-2201 SPRG (hrs)	2199	2220	2246	2269	2295	2317	2341	2366	2391
C-2202 SPRG (hrs)	2199	2220	2246	2269	2295	2317	2341	2366	2391
B-801 SVE (hrs)	2199	2220	2246	2269	2295	2317	2341	2366	2391
C-2301 SPRG (hrs)	2199	2220	2246	2269	2295	2317	2341	2366	2391
C-2302 SPRG (hrs)	2199	2220	2246	2269	2295	2317	2341	2366	2391
SET POINTS									
PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	Ø	Ø	Ø	Ø	Ø	Ø	Ø	0	Ø
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	[illegible]	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-26-14	6-27-14	6-28-14	6-29-14	6-30-14	7-1-14	7-2-14	7-3-14	7-4-14
TIME	8:49AM	7:59AM	8:05AM	8:10AM	10:37AM	9:02AM	2:56PM	8:30AM	7:11AM
OBSERVER'S INITIALS	RK	RK	DE	KA	RK	RK	RK	RK	RK
WEATHER CONDITIONS									
Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	CLOUDY 76°F	CLEAR 80°F	CLOUDY 84°F	SUNNY 78°F	CLOUDY 84°F	CLEAR 82°F	CLOUDY 76°F	CLEAR 72°F	CLEAR 74°F
ALARMS									
Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA
P&ID									
PDT-701 SVE (-wc)	0.11	0.12	0.10	0.12	0.07	0.08	0.06	0.07	0.03
PT-701 SVE (-wc)	-68	-70	-68	-70	-72	-72	-69	-66	-65
PT-702 SVE (-wc)	54.2	53.3	52.5	52.2	53.1	53.2	54.3	55.1	55.1
PT-2201 SPRG (psi)	28.0	14.9	14.9	15.3	27.8	27.9	28.1	28.1	15.3
P-401 PUMP (cycles)	4	4	4	4	4	4	4	4	4
P&ID2									
PDT-801 SVE (-wc)	0.25	0.28	0.26	0.25	0.25	0.26	0.27	0.26	0.27
PT-801 SVE (-wc)	-71	-70	-70	-71	-73	-74	-72	-70	-68
PT-802 SVE (-wc)	46.2	46.2	45.8	46.2	45.7	46.0	46.2	46.8	46.9
PT-2301 SPRG (psi)	0.0	2.5	3.3	2.7	7.7	3.2	2.6	3.0	3.5
P-501 PUMP (cycles)	60	61	61	62	62	63	64	66	69

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-26-14	6-27-14	6-28-14	6-29-14	6-30-14	7-1-14	7-2-14	7-3-14	7-4-14
TIME	8:49 AM	7:59 AM	8:05 AM	8:10 AM	10:37 AM	9:02 AM	2:56 PM	8:30 AM	7:11 AM
OBSERVER'S INITIALS	RK	RK	DE	KA	RK	RK	RK	RK	RK
HOURS METERS									
B-701 SVE (hrs)	1993	2016	2040	2064	2090	2113	2142	2160	2187
C-2201 SPRG (hrs)	1982	2005	2029	2053	2079	2102	2132	2149	2172
C-2202 SPRG (hrs)	1982	2005	2029	2053	2079	2102	2132	2149	2172
B-801 SVE (hrs)	1982	2005	2029	2053	2079	2102	2132	2149	2172
C-2301 SPRG (hrs)	1982	2005	2029	2053	2079	2102	2132	2149	2172
C-2302 SPRG (hrs)	1982	2005	2029	2053	2079	2102	2132	2149	2172
SET POINTS									
PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-17-14	6-18-14	6-19-14	6-20-14	6-21-14	6-22-14	6-23-14	6-24-14	6-25-14
TIME	7:48AM	7:30AM	8:54AM	10:09AM	2:15PM	8:20AM	8:50AM	8:51AM	10:08AM
OBSERVER'S INITIALS	DE/RL	TRC	TRC	TRC	DL	DE	RL	TRC	TRC

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	CLOUDY 76°	Cloudy 82°F	Rain 74°F	Cloudy 80°F	cloudy 80°F	SUNNY 78°	CLOUDY 76°F	PARTLY SUNNY 84°F	CLEAR 91°F

ALARMS

Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA

P&ID

PDT-701 SVE (-wc)	0.11	0.15	0.18	0.14	0.17	0.19	0.11	0.21	0.10
PT-701 SVE (-wc)	.74	-73	-69	-70	-73	-71	-73	-71	-69
PT-702 SVE (-wc)	53.1	51.9	53.4	52.9	51.5	52.2	52.7	53.0	51.6
PT-2201 SPRG (psi)	27.0	26.6	15.1	14.9	27.3	27.5	14.8	15.1	14.8
P-401 PUMP (cycles)	4	4	4	4	4	4	4	4	4

P&ID2

PDT-801 SVE (-wc)	0.26	0.24	0.26	0.25	0.23	0.25	0.23	0.22	0.22
PT-801 SVE (-wc)	-70	-69	-68	-70	-72	-72	-74	-73	-71
PT-802 SVE (-wc)	46.6	46.1	46.8	46.1	44.8	45.2	46.2	46.0	44.6
PT-2301 SPRG (psi)	6.0	3.8	1.7	7.2	8.1	6.6	0.8	1.5	2.8
P-501 PUMP (cycles)	45	46	47	48	50	51	53	55	58

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-17-14	6-18-14	6-19-14	6-20-14	6-21-14	6-22-14	6-23-14	6-24-14	6-25-14
TIME	7:48AM	7:30AM	8:54AM	10:09AM	7:15PM	8:20AM	8:50AM	8:52AM	10:09AM
OBSERVER'S INITIALS	DE/RK	RK	RK	RK	DL	DE	RK	RK	RK
HOURS METERS									
B-701 SVE (hrs)	1776	1800	1825	1850	1878	1896	1921	1945	1970
C-2201 SPRG (hrs)	1765	1789	1814	1840	1867	1886	1910	1934	1960
C-2202 SPRG (hrs)	1765	1789	1814	1840	1867	1886	1910	1934	1960
B-801 SVE (hrs)	1765	1789	1814	1840	1867	1886	1910	1934	1960
C-2301 SPRG (hrs)	1765	1789	1814	1840	1867	1886	1910	1934	1960
C-2302 SPRG (hrs)	1765	1789	1814	1840	1867	1886	1910	1934	1960
SET POINTS									
PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	[illegible]	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-7-14	6-8-14	6-10-14	6-11-14	6-12-14	6-13-14	6-14-14	6-15-14	6-16-14
TIME	10:20AM	8:15Am	10:25Am	2:02Pm	2:36Pm	11:00AM	8:56Am	8:50 AM	8:05 Am
OBSERVER'S INITIALS	DE	KA	RK	RK	RK	RK	RK	DE/KA	RK

WEATHER CONDITIONS

Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	CLOUDY 82°F	SUNNY 78°F	CLOUDY 79°F	CLOUDY 72°F	CLOUDY 82°F	SUNNY 74°F	SUNNY 74°F	CLOUDY 78°	CLEAR 76°F

ALARMS

Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA

P&ID

PDT-701 SVE (-wc)	0.10	0.11	0.19	0.19	0.07	0.12	0.07	0.09	0.08
PT-701 SVE (-wc)	-69	-71	-69	-73	-70	-69	-69	-74	-68
PT-702 SVE (-wc)	53.2	53.2	53.8	52.5	52.0	53.5	53.0	52.5	53.8
PT-2201 SPRG (psi)	26.4	27.1	27.0	26.9	27.1	27.4	15.1	20.8	27.1
P-401 PUMP (cycles)	4	4	4	4	4	4	4	4	4

P&ID2

PDT-801 SVE (-wc)	0.26	0.25	0.27	0.27	0.29	0.26	0.28	0.29	0.27
PT-801 SVE (-wc)	-65	-66	-68	-69	-68	-65	-64	-68	-65
PT-802 SVE (-wc)	46.7	47.9	46.7	47.0	46.3	46.5	47.9	46.7	46.4
PT-2301 SPRG (psi)	5.4	4.5	3.3	1.8	3.4	1.8	2.9	3.0	1.7
P-501 PUMP (cycles)	37	37	39	40	41	42	43	44	44

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BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	6-7-14	6-8-14	6-10-14	6-11-14	6-12-14	6-13-14	6-14-14	6-15-14	6-16-14
TIME	10:20 AM	8:15 AM	10:25 AM	2:02 PM	2:36 PM	11:00 AM	8:56 AM	8:50 AM	8:05 AM
OBSERVER'S INITIALS	DE	KA	TAL	TAL	TAL	TAL	TAL	DE/KA	TAL
HOURS METERS									
B-701 SVE (hrs)	1539	1561	1611	1638	1663	1683	1705	1729	1752
C-2201 SPRG (hrs)	1528	1550	1600	1628	1652	1673	1695	1719	1742
C-2202 SPRG (hrs)	1528	1550	1600	1628	1652	1673	1695	1719	1742
B-801 SVE (hrs)	1528	1550	1600	1628	1652	1673	1695	1719	1742
C-2301 SPRG (hrs)	1528	1550	1600	1628	1652	1673	1695	1719	1742
C-2302 SPRG (hrs)	1528	1550	1600	1628	1652	1673	1695	1719	1742
SET POINTS									
PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	5-29-14	5-30-14	5-31-14	6-1-14	6-2-14	6-3-14	6-4-14	6-5-14	6-6-14
TIME	6:34AM	9:02 AM	1:205 PM	11:20AM	1:35pm	12:45 PM	2:20 PM	1:30 PM	2:10 PM
OBSERVER'S INITIALS	RK	RK	KA	DE/DL	KA/DE	DL	KA/DE	DL	DE/KA
WEATHER CONDITIONS									
Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	Cloudy 74°F	CLEAR 80°F	CLEAR 82°F	cloudy 82°F	Cloudy 90°F	Clear 85°F	cloudy 74°F	Sunny 78°F	CLEAR 86°F
ALARMS									
Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA
P&ID									
PDT-701 SVE (-wc)	0.17	0.09	0.09	0.10	0.11	.07	0.17	.09	0.10
PT-701 SVE (-wc)	-68	-67	-67	-68	-71	-69	-71	-69	.67
PT-702 SVE (-wc)	54.0	53.1	52.0	51.9	52.2	52.4	53.5	51.6	52.7
PT-2201 SPRG (psi)	27.1	15.1	15.2	15.4	14.8	14.9	26.8	26.6	15.4
P-401 PUMP (cycles)	4	4	4	4	4	4	4	4	4
P&ID2									
PDT-801 SVE (-wc)	0.25	0.33	0.29	0.26	0.26	.27	0.29	.30	0.25
PT-801 SVE (-wc)	-65	-62	-63	-65	-68	-65	-67	-66	-66
PT-802 SVE (-wc)	47.7	47.1	46.5	46.1	46.6	47.0	47.6	46.3	46.7
PT-2301 SPRG (psi)	2.9	3.0	7.0	4.8	6.0	6.3	4.6	3.7	4.8
P-501 PUMP (cycles)	31	32	32	33	33	34	35	36	36

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	5-29-14	5-30-14	5-31-14	6-1-14	6-2-14	6-3-14	6-4-14	6-5-14	6-6-14
TIME	6:35AM	9:02AM	12:05PM	11:20AM	1:35PM	12:45PM	2:20PM	1:30PM	2:10PM
OBSERVER'S INITIALS	RK	DE/RK	KA	DE/DL	DE/KA	DL	KA/DE	DL	DE/KA
HOURS METERS									
B-701 SVE (hrs)	1319	1346	1373	1396	1422	1445	1471	1494	1519
C-2201 SPRG (hrs)	1309	1335	1362	1385	1412	1435	1460	1483	1508
C-2202 SPRG (hrs)	1309	1335	1362	1385	1412	1435	1460	1483	1508
B-801 SVE (hrs)	1309	1335	1362	1385	1412	1435	1460	1483	1508
C-2301 SPRG (hrs)	1309	1335	1362	1385	1412	1435	1460	1483	1508
C-2302 SPRG (hrs)	1309	1335	1362	1385	1411	1435	1460	1483	1508
SET POINTS									
PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.00	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	?	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	5-20-14	5-21-14	5-22-14	5-23-14	5-24-14	5-25-14	5.26.14	5-27-14	5-28-14
TIME	7:30AM	12:49pm	8:30 Am	12:31 Pm	10:40Am	7:13Am	11:35 AM	10:47 Am	1:52 Pm
OBSERVER'S INITIALS	TRC	TRC	RK	RK	KA	RK	DE	TRC	TRC
WEATHER CONDITIONS									
Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	CLEAR 72°F	CLEAR 91°F	CLEAR 70°F	CLEAR 79°F	CLEAR 76°F	CLEAR 72°F	CLEAR 80°F	CLEAR 84°F	CLEAR 84°F
ALARMS									
Alarm Code	NA	NA	NA	NA	NA	NA	NA	NA	NA
P&ID									
PDT-701 SVE (-wc)	0.16	0.14	0.13	0.14	0.12	0.13	0.11	0.12	0.08
PT-701 SVE (-wc)	-70	-69	-68	-65	-66	-69	-69	-69	-68
PT-702 SVE (-wc)	53.4	52.0	54.4	54.1	53.6	54.3	52.6	53.2	52.1
PT-2201 SPRG (psi)	26.7	26.1	15.0	15.1	16.3	14.8	14.7	26.5	26.7
P-401 PUMP (cycles)	4	4	4	4	4	4	4	4	4
P&ID2									
PDT-801 SVE (-wc)	0.27	0.25	0.29	0.29	0.27	0.28	0.28	0.29	0.28
PT-801 SVE (-wc)	-67	-66	-64	-62	-61	-63	-64	-65	-65
PT-802 SVE (-wc)	47.3	45.5	47.7	47.7	46.7	47.4	45.8	46.2	46.3
PT-2301 SPRG (psi)	4.5	5.8	3.7	5.6	5.9	4.0	4.5	6.0	4.7
P-501 PUMP (cycles)	25	25	26	27	28	28	29	30	30

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	5-20-14	5-21-14	5-22-14	5-23-14	5-24-14	5-25-14	5-26-14	5-27-14	5-28-14
TIME	7:30 AM	12:49 Pm	8:30 AM	12:31 Pm	10:40 Am	7:13 AM	11:35 AM	10:47 Am	1:52 Pm
OBSERVER'S INITIALS	RK	RK	RK	RK	KA	RK	DE	RK	RK
HOURS METERS									
B-701 SVE (hrs)	1104	1134	1153	1181	1204	1224	1252	1276	1303
C-2201 SPRG (hrs)	1104	1134	1143	1171	1193	1213	1241	1265	1292
C-2202 SPRG (hrs)	1104	1134	1143	1171	1193	1213	1241	1265	1292
B-801 SVE (hrs)	1104	1134	1143	1171	1193	1213	1241	1265	1292
C-2301 SPRG (hrs)	1104	1134	1143	1171	1193	1213	1241	1265	1292
C-2302 SPRG (hrs)	1104	1134	1143	1171	1193	1213	1241	1265	1292
SET POINTS									
PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27	-27	-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25	-25	-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40	40	40	40
SV-2802 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2901 SPRG (min)	20	20	20	20	20	20	20	20	20
SV-2902 SPRG (min)	20	20	20	20	20	20	20	20	20

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	3-11-14	3-12-14	3-13-14	3/14/14	5-15-14	5-16-14	5-17-14	5-18-14	5-19-14
TIME	1:53 Pm	1:09 Pm	2:38 Pm	0950	1130	12:32 Pm	5:50 Am	10:20 AM	10:43 Am
OBSERVER'S INITIALS	RK	TRK	TK	NOP	A.H.	RK	TK	KA/DE	TK
WEATHER CONDITIONS									
Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.)	CLOUDY 80°F	CLOUDY 80°F	CLEAR 78°F	CLEAR 79°	Cloudy 60°	CLOUDY RAINY 59°F	CLEAR 42°F	SUNNY 74°F	RAINY 64°F
ALARMS									
Alarm Code	NA	NA	NA	N/A	N/A	NA. HARD TO READ SCREEN DARK.	SYSTEM IN ALARM WONT RESET CALLED PGE.	CANNOT READ SCREEN	SCREEN DARK.
P&ID									
PDT-701 SVE (-wc)	0.06	0.11	0.12	0.12	0.21	0.21		0.16	0.7
PT-701 SVE (-wc)	-73	-70	-70	-77	-77	-74		-66	-67
PT-702 SVE (-wc)	53.6	55.1	55.3	52.3	51.8	52.5		54.4	55.6
PT-2201 SPRG (psi)	28.6	28.7	28.6	28.2	27.0	26.8		26.8	15.6
P-401 PUMP (cycles)	3	3	3	3	3	4		4	4
P&ID2									
PDT-801 SVE (-wc)	0.05	0.04	0.07	0.05	0.31	0.32		0.33	0.27
PT-801 SVE (-wc)	-40	-37	-44	-45	-65	-65		-61	-43
PT-802 SVE (-wc)	55.4	58.3	55.7	55.6	49.0	47.1		48.0	47.9
PT-2301 SPRG (psi)	5.5	3.1	5.4	5.1	2.1	2.2		5.2	2.8
P-501 PUMP (cycles)	22	22	22	22	23	24		24	24

DAILY DOCUMENTATION SHEET

BUILDINGS 1 - 2

Control Panel Touch Screen

DATE	3-11-14	3-12-14	3-13-14		5-15-14	5-16-14	5-17-14	5-18-14	5-19-14
TIME	1:53 Pm	1:09 Pm	2:38 Pm		1130	12:32 Pm	5:51 Am	10:20 Am	10:43 Am
OBSERVER'S INITIALS	RK	RK	RK		A.H	RK	RK	KA/DE	RK
HOURS METERS									
B-701 SVE (hrs)	915	938	964	983	989	1014	ALARM	10.59	1084
C-2201 SPRG (hrs)	915	938	964	983	989	1014	OFF	10.49	1084
C-2202 SPRG (hrs)	915	938	964	983	989	1014		10.49	1084
B-801 SVE (hrs)	915	938	964	983	989	1014		10.49	1084
C-2301 SPRG (hrs)	915	938	964	983	989	1014		10.49	1084
C-2302 SPRG (hrs)	915	938	964	983	989	1014		10.49	1084
SET POINTS									
PAL-701 SVE (wc)	-27	-27	-27	-27	-27	-27		-27	-27
PAH-702 SVE (wc)	100.0	100.0	100.0	100	100	100.0		100.0	100.0
PAL-702 SVE (wc)	10.0	10.0	10.0	10	10	10.0		10.0	10.0
PAH-2201 SPRG (psi)	30.0	30.0	30.0	30	30	30.0		30.0	30.0
PAL-2201 SPRG (psi)	0.0	0.0	0.0	0 0	0.0	0.0		0.0	0.0
PAL-801 SVE (wc)	-25	-25	-25	-25	-25	-25		-25	-25
PAH-802 SVE (wc)	100.0	100.0	100.0	100	100	100.0		100.0	100.0
PAL-802 SVE (wc)	10.0	10.0	10.0	10	10	10.0		10.0	10.0
PAH-2301 SPRG (psi)	30.0	30.0	30.0	30	30	30.0		30.0	30.0
PAL-2301 SPRG (psi)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
SV-2801 SPRG (min)	40	40	40	40	40	40		40	40
SV-2802 SPRG (min)	20	20	20	20	20	20		20	20
SV-2901 SPRG (min)	20	20	20	20	20	20		20	20
SV-2902 SPRG (min)	20	20	20	20	20	20		20	20

WEEKLY DOCUMENTATION SHEET
BUILDING 1
SYSTEM COMPONENTS

DATE	7-21-14	7/23/14							
TIME	10:14 AM	0900							
OBSERVER'S INITIALS	TRL	NP							
SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE; MOISTURE, ETC.									
Comments and Notes	CLEAR 89°F	CLEAR 80°							
SOIL VAPOR EXTRACTION (SVE) BLOWER B-701									
Pre-Filter Vacuum (-wc)	60	60							
Post-Filter Vacuum (-wc)	94	95							
Inlet Magnehelic* (in H_2O)	0.3	0.3							
Inlet Vacuum (-wc)	100+	100+							
SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)									
Inlet Pressure (wc)	52	52							
Inlet Temperature (°F)	127	130							
Outlet Pressure (wc)	8	8							
Outlet Temperature (°F)	115	105							
Water Level Sight Glass (in)	Ø	Ø							
AIR SPARGE (SPRG) COMPRESSOR C-2201									
Upper Oil Sight Glass (half pt.)	OK	OK							
Lower Oil Sight Glass (half pt.)	OK	OK							
AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)									
Inlet Pressure (psi)	28.5	29							
Inlet Temperature (°F)	275	270							
Outlet Pressure (psi)	29	30							
Outlet Temperature (°F)	122	115							

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

WEEKLY DOCUMENTATION SHEET
BUILDING 1
SYSTEM COMPONENTS

DATE	5-27-14	6-2-14	6-10-14	6-16-14	6-23-14	6/26/14	6-30-14	7-7-14	7-14-14
TIME	10:44 Am	1:20 Pm	10:23 Am	8:10 Am	8:47 Am	1340	10:34 Am	9:03 Am	8:02 Am
OBSERVER'S INITIALS	RK	KA/DE	RK	RK	RK	NP	RK	RK	RK

SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE; MOISTURE, ETC.

Comments and Notes	CLEAR 82°F	CLOUDY 90°F	CLOUDY 79°F	CLEAR 76°F	CLOUDY 78°F	SUNNY 80°F	CLOUDY 84°F	CLEAR 90°F	CLOUDY 72°F

SOIL VAPOR EXTRACTION (SVE) BLOWER B-701

Pre-Filter Vacuum (-wc)	59	60	59	60	60	60	59	60	59
Post-Filter Vacuum (-wc)	90	90	90	93	94	92	92	94	83
Inlet Magnehelic* (in H_2O)	.3	.3	0.3	.3	.3	.3	0.2.5	.3	0.2.5
Inlet Vacuum (-wc)	BROKEN	BROKEN	BROKEN	→	→	64	100	200	OFF SCALE

SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)

Inlet Pressure (wc)	90	90	90	90	90	52	52	52	54
Inlet Temperature (°F)	126	126	126	126	126	130	126	130	115
Outlet Pressure (wc)	8	8	8	8	8	8	9	8	8
Outlet Temperature (°F)	92	110	94	100	99	110	112	115	98
Water Level Sight Glass (in)	94	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø

AIR SPARGE (SPRG) COMPRESSOR C-2201

Upper Oil Sight Glass (half pt.)	OK	OK	OK	OK	OK	OK	OK	OK	OK
Lower Oil Sight Glass (half pt.)	OK	OK	OK	OK	OK	OK	OK	OK	OK

AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)

Inlet Pressure (psi)	25	13	27	28	15.5	28	27.5	27.5	17.5
Inlet Temperature (°F)	250	225	227	266	215	250	245	260	230
Outlet Pressure (psi)	26	14	18	27.5	16	29	28.5	28.5	16.5
Outlet Temperature (°F)	119	120	118	118	118	118	124	122	115

.p plastic pinch valves on tubing to magnehelic gauge closed except taking a reading.

WEEKLY DOCUMENTATION SHEET
BUILDING 1
SYSTEM COMPONENTS

DATE	1-27-14	2-3-14	2-11-14	2-17-14	3-3-14	3-10-14	3/14/14	5-15-14	5-19-14
TIME	10:37Am	8:25Am	1:26 Pm	8:14Am	10:08Am	10:25Am	0930	1130	10:40 Am
OBSERVER'S INITIALS	RL	RL	RL	RL	RL	RL	NJP	A.H.	RL
SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE; MOISTURE, ETC.									
Comments and Notes	CLEAR 74°F	CLEAR 72°F	CLEAR 76°F	SNOW 78°F	CLEAR COLD. 77°F	CLEAR 80°F	CLEAR 80°	Cloudy 60°	RAIN 66°F
SOIL VAPOR EXTRACTION (SVE) BLOWER B-701									
Pre-Filter Vacuum (-wc)	89	94	95	94	81	80	65	65	59
Post-Filter Vacuum (-wc)	105	110	115	117	109	110	95	98	90
Inlet Magnehelic* (in H_2O)	0	0	0	0	0	0	0	0.25	0.25
Inlet Vacuum (-wc)	105	NEEDLE BROKE OFF	→*	→*	→*	→*	→*	Broke.	BROKE
SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)									
Inlet Pressure (wc)	0	0	0	0	0	0	0	88	86
Inlet Temperature (°F)	95	95	105	115	100	125	125	120	115
Outlet Pressure (wc)	8	7	7	7	8	7	8	8	8
Outlet Temperature (°F)	80	64	80	92	80	90	88	84	88
Water Level Sight Glass (in)	2"	0	0	0	0	0	0	10"	Ø
AIR SPARGE (SPRG) COMPRESSOR C-2201									
Upper Oil Sight Glass (half pt.)	OK	OK	OK	OK	OK	OK	OK	ok	OK
Lower Oil Sight Glass (half pt.)	OK	OK	OK	OK	OK	OK	OK	ok	OK
AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)									
Inlet Pressure (psi)	13	13	15	27	14	14	26	25.5	26
Inlet Temperature (°F)	175	165	175	248	190	230	230	240	245
Outlet Pressure (psi)	15	14	16	28	16.5	16	28	26	20
Outlet Temperature (°F)	124	105	104	110	111	111	117	100	119

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

WEEKLY DOCUMENTATION SHEET
BUILDING 2
SYSTEM COMPONENTS

DATE	7/23/14								
TIME	0945								
OBSERVER'S INITIALS	MP								

SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE, MOISTURE, ETC.

Comments and Notes									

SOIL VAPOR EXTRACTION (SVE) BLOWER B-801

Pre-Filter Vacuum (-wc)	60								
Post-Filter Vacuum (-wc)	65								
Inlet Magnehelic* (in H_2O)	0.35								
Inlet Vacuum (-wc)	110+								

SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)

Inlet Pressure (wc)	47								
Inlet Temperature (°F)	125								
Outlet Pressure (wc)	1								
Outlet Temperature (°F)	100								
Water Level Sight Glass (in)	10"								

AIR SPARGE (SPRG) COMPRESSOR C-2301

Upper Oil Sight Glass (half pt.)	OK								
Lower Oil Sight Glass (half pt.)	OK								

AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)

Inlet Pressure (psi)	19								
Inlet Temperature (°F)	225								
Outlet Pressure (psi)	18.5								
Outlet Temperature (°F)	118								

* p plastic pinch valves on tubing to magnehelic gauge closed except v .aking a reading.