

ICR TREATMENT STUDY ANALYSIS

Base Analysis and Data Review Comments

Treatment Study ID	1029
Study Protocol	GAC RSSCT treatment study
Plant ICR Number	454
PWS Name	Omaha Metropolitan Utilities
City, State, Zip	Omaha, NE 68112

These are general comments that do not need to be responded to directly.

Major comments:

1. Reported SDS chlorination conditions were highly variable, especially during Quarters 1, 2, and 4. See specific comments below.

General Comments:

1. Quarter 1: Large variability in measured SDS conditions. Average incubation temperature was 8.0 ± 2.0 °C, range 4.0 to 10.4 °C. EPA tolerance goal is ± 2 °C. Average incubation time was 11.2 ± 1.5 hours, range 9 to 15 hours. EPA tolerance goal is $\pm 5\%$, about 33 minutes. Average incubation pH was 9.4 ± 0.4 , range 8.8 to 10.4. EPA tolerance goal is 0.4 pH units.
2. Quarter 1: Influent pH increases from 7.3 to 8.6 over the course of the run.
3. Quarter 1: While GAC influent TOC, UV₂₅₄, SDS-THM₄, and chlorine demand are fairly constant across all three samples, SDS-HAA₆ increases from 6 to 18 µg/L. SDS-TOX increased slightly, from 111 to 143 µg/L as Cl⁻, a 29 percent increase.
4. Quarter 2: Large variability in SDS incubation pH, which averaged 8.1 ± 0.7 , range 6.6 to 9.0. Since THM and HAA DBP speciation is sensitive to chlorination pH, speciation variability may have been affected by the wide range in reported SDS incubation pH values. Also, the relative amounts of THMs and HAAs formed may have been affected. For 10 samples, measured free chlorine residual was below 0.1 mg/L.
5. Quarter 2: Relatively high immediate breakthrough levels for THMs and HAAs.
6. Quarter 3: While GAC influent UV₂₅₄, SDS chlorine demand, and SDS-TOX are fairly constant over the course of the run, influent SDS-THM₄ and SDS-HAA₆ increase greatly

over the run. SDS-THM4 increases by 112 percent (18.5 to 39.3 µg/L) and SDS-HAA6 increases by 133 percent (8.9 to 20.7 µg/L). GAC influent TOC RSD is 17 percent, but measured levels do not follow the trends seen for SDS-THM4 and SDS-HAA6.

7. Quarter 3: Relative high immediate breakthrough of SDS-DCAA for both EBCT runs.
8. Quarter 4: GAC effluent TOC concentrations exceed the average influent concentration for both EBCTs.
9. Quarter 4: High variability in GAC influent SDS-THM4 and SDS-HAA6. Also, effluent concentrations exceed the average influent concentration during both EBCT runs.
10. Quarter 4: High immediate breakthrough observed for SDS-DBCM and SDS-BF for both EBCTs. High immediate breakthrough for SDS-DCAA during both EBCT runs. SDS-DCAA does not show a "breakthrough" pattern, but varies between 2 and 6 µg/L for the 10 minute EBCT run; for the 20 minute EBCT run, all values (except one) fall between 2 and 5 µg/L.
11. Quarter 4: Measured SDS conditions during unusually variable, especially in reported temperature.
12. The variability in SDS chlorination conditions prevalent for both EBCT runs during quarters 1, 2, and 4 may have affected DBP speciation and levels formed.
13. Immediate breakthrough of TOC during all 4 quarters and both EBCTs ranged from 0.9 to 1.5 mg/L, which is a relatively high nonadsorbable fraction. The water used for this study was a groundwater.

Outlier Data:

Eleven outliers removed.

Cell: A1

Comment: 1029-SAS.xls 2/18/00 10:41

All curve fits reviewed and approved. See below for log of refit datasets.

Cell: C9

Comment: 1029-10-01 - Run 1 (DBCM) 2/18/00 09:24

Original value (CoefA0) = -6 New value = -0.7194

Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: D9

Comment: 1029-10-01 - Run 1 (DBCM) 2/18/00 09:24

Original value (CoefAf) = 18 New value = 9.4636

Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: E9

Comment: 1029-10-01 - Run 1 (DBCM) 2/18/00 09:24

Original value (CoefB) = 1.4968 New value = 15.8368

Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: F9

Comment: 1029-10-01 - Run 1 (DBCM) 2/18/00 09:24

Original value (CoefD) = 0.0295 New value = 0.1184

Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: J9

Comment: 1029-10-01 - Run 1 (DBCM) 2/18/00 09:24

Original value (S) = 0 New value = 0

Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: C18

Comment: 1029-10-01 - Run 1 (TCAA) 2/18/00 09:25

Original value (CoefA0) = 0 New value = -0.4724

Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: D18

Comment: 1029-10-01 - Run 1 (TCAA) 2/18/00 09:25

Original value (CoefAf) = 0 New value = 3.7263

Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: E18

Comment: 1029-10-01 - Run 1 (TCAA) 2/18/00 09:25

Original value (CoefB) = 0 New value = 20.8193

Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: F18

Comment: 1029-10-01 - Run 1 (TCAA) 2/18/00 09:25

Original value (CoefD) = 0 New value = 0.0362

Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: J18

Comment: 1029-10-01 - Run 1 (TCAA) 2/18/00 09:25
Original value (S) = 0 New value = -0.1076
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: C24

Comment: 1029-10-02 - Run 3 (BCAA) 2/18/00 09:40
Original value (CoefA0) = 99999 New value = -0.0803
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D24

Comment: 1029-10-02 - Run 3 (BCAA) 2/18/00 09:40
Original value (CoefAf) = 99999 New value = 2.4429
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E24

Comment: 1029-10-02 - Run 3 (BCAA) 2/18/00 09:40
Original value (CoefB) = 99999 New value = 49.4288
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F24

Comment: 1029-10-02 - Run 3 (BCAA) 2/18/00 09:40
Original value (CoefD) = 99999 New value = 0.1093
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J24

Comment: 1029-10-02 - Run 3 (BCAA) 2/18/00 09:40
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C25

Comment: 1029-10-02 - Run 3 (BDCM) 2/18/00 09:44
Original value (CoefA0) = 99999 New value = -7.391
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D25

Comment: 1029-10-02 - Run 3 (BDCM) 2/18/00 09:44
Original value (CoefAf) = 99999 New value = 23.4585
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E25

Comment: 1029-10-02 - Run 3 (BDCM) 2/18/00 09:44
Original value (CoefB) = 99999 New value = 1.9567
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F25

Comment: 1029-10-02 - Run 3 (BDCM) 2/18/00 09:44
Original value (CoefD) = 99999 New value = 0.0496
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J25

Comment: 1029-10-02 - Run 3 (BDCM) 2/18/00 09:44
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C27

Comment: 1029-10-02 - Run 3 (CHBr3) 2/18/00 09:45
Original value (CoefA0) = 99999 New value = -0.2517
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: D27

Comment: 1029-10-02 - Run 3 (CHBr3) 2/18/00 09:45
Original value (CoefAf) = 99999 New value = 5.2866
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: E27

Comment: 1029-10-02 - Run 3 (CHBr3) 2/18/00 09:45
Original value (CoefB) = 99999 New value = 20.003
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: F27

Comment: 1029-10-02 - Run 3 (CHBr3) 2/18/00 09:45
Original value (CoefD) = 99999 New value = 1.039
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: J27

Comment: 1029-10-02 - Run 3 (CHBr3) 2/18/00 09:45
Original value (S) = 0 New value = -0.0971
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: C28

Comment: 1029-10-02 - Run 3 (CHCl3) 2/18/00 09:37
Original value (CoefA0) = 99999 New value = -3.9243
Fewer than 6 points. Logistic function (type 1) applied.

1029-10-02 - Run 3 (CHCl3) 2/18/00 09:43
Original value (CoefA0) = -3.9243 New value = -4.0275
Poor type -1 or 1 curve fit. Data was refit by iterative curve fit procedure.

Cell: D28

Comment: 1029-10-02 - Run 3 (CHCl3) 2/18/00 09:37
Original value (CoefAf) = 99999 New value = 50.7859
Fewer than 6 points. Logistic function (type 1) applied.

1029-10-02 - Run 3 (CHCl3) 2/18/00 09:43
Original value (CoefAf) = 50.7859 New value = 51.2228
Poor type -1 or 1 curve fit. Data was refit by iterative curve fit procedure.

Cell: E28

Comment: 1029-10-02 - Run 3 (CHCl3) 2/18/00 09:37
Original value (CoefB) = 99999 New value = 10.7124
Fewer than 6 points. Logistic function (type 1) applied.

1029-10-02 - Run 3 (CHCl3) 2/18/00 09:43

Original value (CoefB) = 10.7124 New value = 10.5699

Poor type -1 or 1 curve fit. Data was refit by iterative curve fit procedure.

Cell: F28

Comment: 1029-10-02 - Run 3 (CHCl3) 2/18/00 09:37

Original value (CoefD) = 99999 New value = 0.0387

Fewer than 6 points. Logistic function (type 1) applied.

1029-10-02 - Run 3 (CHCl3) 2/18/00 09:43

Original value (CoefD) = 0.0387 New value = 0.0383

Poor type -1 or 1 curve fit. Data was refit by iterative curve fit procedure.

Cell: J28

Comment: 1029-10-02 - Run 3 (CHCl3) 2/18/00 09:37

Original value (S) = 0 New value = 0

Fewer than 6 points. Logistic function (type 1) applied.

1029-10-02 - Run 3 (CHCl3) 2/18/00 09:43

Original value (S) = 0 New value = 0

Poor type -1 or 1 curve fit. Data was refit by iterative curve fit procedure.

Cell: C29

Comment: 1029-10-02 - Run 3 (Cl2-D) 2/18/00 10:33

Original value (CoefA0) = -0.1422 New value = 0.246

Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: D29

Comment: 1029-10-02 - Run 3 (Cl2-D) 2/18/00 10:33

Original value (CoefAf) = 2.8048 New value = 1.1624

Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: E29

Comment: 1029-10-02 - Run 3 (Cl2-D) 2/18/00 10:33

Original value (CoefB) = 5.1927 New value = 16.4212

Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: F29

Comment: 1029-10-02 - Run 3 (Cl2-D) 2/18/00 10:33

Original value (CoefD) = 0.0348 New value = 0.1291

Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: J29

Comment: 1029-10-02 - Run 3 (Cl2-D) 2/18/00 10:33

Original value (S) = -0.0004 New value = 0

Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: C30

Comment: 1029-10-02 - Run 3 (DBAA) 2/18/00 09:46

Original value (CoefA0) = 99999 New value = -0.0213

Fewer than 6 points. Logistic function (type 1) applied.

Cell: D30

Comment: 1029-10-02 - Run 3 (DBAA) 2/18/00 09:46
Original value (CoefAf) = 99999 New value = 1.1405
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E30

Comment: 1029-10-02 - Run 3 (DBAA) 2/18/00 09:46
Original value (CoefB) = 99999 New value = 639.6623
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F30

Comment: 1029-10-02 - Run 3 (DBAA) 2/18/00 09:46
Original value (CoefD) = 99999 New value = 0.3907
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J30

Comment: 1029-10-02 - Run 3 (DBAA) 2/18/00 09:46
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C31

Comment: 1029-10-02 - Run 3 (DBCM) 2/18/00 09:38
Original value (CoefA0) = 99999 New value = -0.2818
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D31

Comment: 1029-10-02 - Run 3 (DBCM) 2/18/00 09:38
Original value (CoefAf) = 99999 New value = 7.746
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E31

Comment: 1029-10-02 - Run 3 (DBCM) 2/18/00 09:38
Original value (CoefB) = 99999 New value = 25.028
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F31

Comment: 1029-10-02 - Run 3 (DBCM) 2/18/00 09:38
Original value (CoefD) = 99999 New value = 0.5296
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J31

Comment: 1029-10-02 - Run 3 (DBCM) 2/18/00 09:38
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C32

Comment: 1029-10-02 - Run 3 (DCAA) 2/18/00 09:39
Original value (CoefA0) = 99999 New value = -0.2408
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D32

Comment: 1029-10-02 - Run 3 (DCAA) 2/18/00 09:39
Original value (CoefAf) = 99999 New value = 5.0408
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E32

Comment: 1029-10-02 - Run 3 (DCAA) 2/18/00 09:39
Original value (CoefB) = 99999 New value = 19.9301
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F32

Comment: 1029-10-02 - Run 3 (DCAA) 2/18/00 09:39
Original value (CoefD) = 99999 New value = 0.3696
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J32

Comment: 1029-10-02 - Run 3 (DCAA) 2/18/00 09:40
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C34

Comment: 1029-10-02 - Run 3 (HAA5) 2/18/00 09:41
Original value (CoefA0) = 99999 New value = -0.2972
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D34

Comment: 1029-10-02 - Run 3 (HAA5) 2/18/00 09:41
Original value (CoefAf) = 99999 New value = 6.1972
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E34

Comment: 1029-10-02 - Run 3 (HAA5) 2/18/00 09:41
Original value (CoefB) = 99999 New value = 19.8519
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F34

Comment: 1029-10-02 - Run 3 (HAA5) 2/18/00 09:41
Original value (CoefD) = 99999 New value = 0.5727
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J34

Comment: 1029-10-02 - Run 3 (HAA5) 2/18/00 09:41
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C35

Comment: 1029-10-02 - Run 3 (HAA6) 2/18/00 09:47
Original value (CoefA0) = 99999 New value = -0.3711
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D35

Comment: 1029-10-02 - Run 3 (HAA6) 2/18/00 09:47
Original value (CoefAf) = 99999 New value = 7.8711
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E35

Comment: 1029-10-02 - Run 3 (HAA6) 2/18/00 09:47
Original value (CoefB) = 99999 New value = 20.2089
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F35

Comment: 1029-10-02 - Run 3 (HAA6) 2/18/00 09:47
Original value (CoefD) = 99999 New value = 0.467
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J35

Comment: 1029-10-02 - Run 3 (HAA6) 2/18/00 09:47
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C37

Comment: 1029-10-02 - Run 3 (MBAA) 2/17/00 19:55
Original value (CoefA0) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: D37

Comment: 1029-10-02 - Run 3 (MBAA) 2/17/00 19:55
Original value (CoefAf) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: E37

Comment: 1029-10-02 - Run 3 (MBAA) 2/17/00 19:55
Original value (CoefB) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: F37

Comment: 1029-10-02 - Run 3 (MBAA) 2/17/00 19:55
Original value (CoefD) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: J37

Comment: 1029-10-02 - Run 3 (MBAA) 2/17/00 19:55
Original value (S) = 0 New value = 0
Fewer than 6 points. Step function applied.

Cell: K37

Comment: 1029-10-02 - Run 3 (MBAA) 2/17/00 19:55
Original value (t0) = 0 New value = 0
Fewer than 6 points. Step function applied.

Cell: C38

Comment: 1029-10-02 - Run 3 (MCAA) 2/17/00 19:57

Original value (CoefA0) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: D38

Comment: 1029-10-02 - Run 3 (MCAA) 2/17/00 19:57
Original value (CoefAf) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: E38

Comment: 1029-10-02 - Run 3 (MCAA) 2/17/00 19:57
Original value (CoefB) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: F38

Comment: 1029-10-02 - Run 3 (MCAA) 2/17/00 19:57
Original value (CoefD) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: J38

Comment: 1029-10-02 - Run 3 (MCAA) 2/17/00 19:57
Original value (S) = 0 New value = 0
Fewer than 6 points. Step function applied.

Cell: K38

Comment: 1029-10-02 - Run 3 (MCAA) 2/17/00 19:57
Original value (t0) = 0 New value = 0
Fewer than 6 points. Step function applied.

Cell: C40

Comment: 1029-10-02 - Run 3 (TCAA) 2/17/00 19:57
Original value (CoefA0) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: D40

Comment: 1029-10-02 - Run 3 (TCAA) 2/17/00 19:57
Original value (CoefAf) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: E40

Comment: 1029-10-02 - Run 3 (TCAA) 2/17/00 19:57
Original value (CoefB) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: F40

Comment: 1029-10-02 - Run 3 (TCAA) 2/17/00 19:57
Original value (CoefD) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: J40

Comment: 1029-10-02 - Run 3 (TCAA) 2/17/00 19:57
Original value (S) = 0 New value = 0

Fewer than 6 points. Step function applied.

Cell: K40

Comment: 1029-10-02 - Run 3 (TCAA) 2/17/00 19:57
Original value (t0) = 0 New value = 0
Fewer than 6 points. Step function applied.

Cell: C41

Comment: 1029-10-02 - Run 3 (THM4) 2/18/00 09:39
Original value (CoefA0) = 99999 New value = -35.1001
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D41

Comment: 1029-10-02 - Run 3 (THM4) 2/18/00 09:39
Original value (CoefAf) = 99999 New value = 72.9003
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E41

Comment: 1029-10-02 - Run 3 (THM4) 2/18/00 09:39
Original value (CoefB) = 99999 New value = 0.92
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F41

Comment: 1029-10-02 - Run 3 (THM4) 2/18/00 09:39
Original value (CoefD) = 99999 New value = 0.0691
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J41

Comment: 1029-10-02 - Run 3 (THM4) 2/18/00 09:39
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C43

Comment: 1029-10-02 - Run 3 (TOX) 2/18/00 09:47
Original value (CoefA0) = 0 New value = -8.2725
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D43

Comment: 1029-10-02 - Run 3 (TOX) 2/18/00 09:47
Original value (CoefAf) = 0 New value = 101.4915
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E43

Comment: 1029-10-02 - Run 3 (TOX) 2/18/00 09:47
Original value (CoefB) = 0 New value = 11.3813
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F43

Comment: 1029-10-02 - Run 3 (TOX) 2/18/00 09:47
Original value (CoefD) = 0 New value = 0.1062
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J43

Comment: 1029-10-02 - Run 3 (TOX) 2/18/00 09:47
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C62

Comment: 1029-10-03 - Run 5 (TCAA) 2/18/00 10:09
Original value (CoefA0) = 0 New value = -0.511
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D62

Comment: 1029-10-03 - Run 5 (TCAA) 2/18/00 10:09
Original value (CoefAf) = 0 New value = 6.5062
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E62

Comment: 1029-10-03 - Run 5 (TCAA) 2/18/00 10:09
Original value (CoefB) = 0 New value = 23.1898
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F62

Comment: 1029-10-03 - Run 5 (TCAA) 2/18/00 10:09
Original value (CoefD) = 0 New value = 0.0283
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J62

Comment: 1029-10-03 - Run 5 (TCAA) 2/18/00 10:09
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C71

Comment: 1029-10-04 - Run 7 (CHBr3) 2/18/00 10:14
Original value (CoefA0) = 0.4313 New value = 2.1006
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: D71

Comment: 1029-10-04 - Run 7 (CHBr3) 2/18/00 10:14
Original value (CoefAf) = 10.35 New value = 8.4606
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: E71

Comment: 1029-10-04 - Run 7 (CHBr3) 2/18/00 10:14
Original value (CoefB) = 4.8051 New value = 19.8181
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: F71

Comment: 1029-10-04 - Run 7 (CHBr3) 2/18/00 10:14
Original value (CoefD) = 0.126 New value = 0.2175
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: J71

Comment: 1029-10-04 - Run 7 (CHBr3) 2/18/00 10:14
Original value (S) = 0 New value = -0.0479
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: C75

Comment: 1029-10-04 - Run 7 (DBCM) 2/18/00 10:13
Original value (CoefA0) = -1.8408 New value = 3.2311
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: D75

Comment: 1029-10-04 - Run 7 (DBCM) 2/18/00 10:13
Original value (CoefAf) = 14.3913 New value = 7.4869
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: E75

Comment: 1029-10-04 - Run 7 (DBCM) 2/18/00 10:13
Original value (CoefB) = 2.0423 New value = 19.4595
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: F75

Comment: 1029-10-04 - Run 7 (DBCM) 2/18/00 10:13
Original value (CoefD) = 0.0842 New value = 0.2012
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: J75

Comment: 1029-10-04 - Run 7 (DBCM) 2/18/00 10:13
Original value (S) = 0 New value = -0.0483
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: C90

Comment: 1029-20-01 - Run 2 (BCAA) 2/18/00 09:27
Original value (CoefA0) = 0 New value = -0.402
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D90

Comment: 1029-20-01 - Run 2 (BCAA) 2/18/00 09:27
Original value (CoefAf) = 0 New value = 3.7172
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E90

Comment: 1029-20-01 - Run 2 (BCAA) 2/18/00 09:27
Original value (CoefB) = 0 New value = 25.9611
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F90

Comment: 1029-20-01 - Run 2 (BCAA) 2/18/00 09:27
Original value (CoefD) = 0 New value = 0.0483
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J90

Comment: 1029-20-01 - Run 2 (BCAA) 2/18/00 09:27

Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C93

Comment: 1029-20-01 - Run 2 (CHBr3) 2/18/00 09:36
Original value (CoefA0) = -3.2 New value = -0.0456
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: D93

Comment: 1029-20-01 - Run 2 (CHBr3) 2/18/00 09:36
Original value (CoefAf) = 9.1419 New value = 4.2873
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: E93

Comment: 1029-20-01 - Run 2 (CHBr3) 2/18/00 09:36
Original value (CoefB) = 1.4968 New value = 2393.3851
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: F93

Comment: 1029-20-01 - Run 2 (CHBr3) 2/18/00 09:36
Original value (CoefD) = 0.0343 New value = 0.3391
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: J93

Comment: 1029-20-01 - Run 2 (CHBr3) 2/18/00 09:36
Original value (S) = 0 New value = 0
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: C112

Comment: 1029-20-02 - Run 4 (BCAA) 2/18/00 09:55
Original value (CoefA0) = 0 New value = -0.18
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: D112

Comment: 1029-20-02 - Run 4 (BCAA) 2/18/00 09:55
Original value (CoefAf) = 0 New value = 3.5083
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: E112

Comment: 1029-20-02 - Run 4 (BCAA) 2/18/00 09:55
Original value (CoefB) = 0 New value = 27.9491
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: F112

Comment: 1029-20-02 - Run 4 (BCAA) 2/18/00 09:55
Original value (CoefD) = 0 New value = 0.0538
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: J112

Comment: 1029-20-02 - Run 4 (BCAA) 2/18/00 09:55
Original value (S) = 0 New value = -0.0792

Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: C113

Comment: 1029-20-02 - Run 4 (BDCM) 2/18/00 10:04
Original value (CoefA0) = 0 New value = -1.1599
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D113

Comment: 1029-20-02 - Run 4 (BDCM) 2/18/00 10:04
Original value (CoefAf) = 0 New value = 11.509
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E113

Comment: 1029-20-02 - Run 4 (BDCM) 2/18/00 10:04
Original value (CoefB) = 0 New value = 9.2418
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F113

Comment: 1029-20-02 - Run 4 (BDCM) 2/18/00 10:04
Original value (CoefD) = 0 New value = 0.0612
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J113

Comment: 1029-20-02 - Run 4 (BDCM) 2/18/00 10:04
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C115

Comment: 1029-20-02 - Run 4 (CHBr3) 2/18/00 10:05
Original value (CoefA0) = 0 New value = -0.1839
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: D115

Comment: 1029-20-02 - Run 4 (CHBr3) 2/18/00 10:05
Original value (CoefAf) = 0 New value = 3.8617
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: E115

Comment: 1029-20-02 - Run 4 (CHBr3) 2/18/00 10:05
Original value (CoefB) = 0 New value = 20.0023
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: F115

Comment: 1029-20-02 - Run 4 (CHBr3) 2/18/00 10:05
Original value (CoefD) = 0 New value = 0.5242
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: J115

Comment: 1029-20-02 - Run 4 (CHBr3) 2/18/00 10:05
Original value (S) = 0 New value = -0.0137
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: C116

Comment: 1029-20-02 - Run 4 (CHCl3) 2/18/00 09:49
Original value (CoefA0) = 0 New value = -0.1114
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D116

Comment: 1029-20-02 - Run 4 (CHCl3) 2/18/00 09:49
Original value (CoefAf) = 0 New value = 9.4537
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E116

Comment: 1029-20-02 - Run 4 (CHCl3) 2/18/00 09:49
Original value (CoefB) = 0 New value = 318.3508
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F116

Comment: 1029-20-02 - Run 4 (CHCl3) 2/18/00 09:49
Original value (CoefD) = 0 New value = 0.1174
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J116

Comment: 1029-20-02 - Run 4 (CHCl3) 2/18/00 09:49
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C118

Comment: 1029-20-02 - Run 4 (DBAA) 2/18/00 10:07
Original value (CoefA0) = 0 New value = -0.8751
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: D118

Comment: 1029-20-02 - Run 4 (DBAA) 2/18/00 10:07
Original value (CoefAf) = 0 New value = 4.1119
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: E118

Comment: 1029-20-02 - Run 4 (DBAA) 2/18/00 10:07
Original value (CoefB) = 0 New value = 2.5699
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: F118

Comment: 1029-20-02 - Run 4 (DBAA) 2/18/00 10:07
Original value (CoefD) = 0 New value = 0.0234
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: J118

Comment: 1029-20-02 - Run 4 (DBAA) 2/18/00 10:07
Original value (S) = 0 New value = -0.0608
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: C119

Comment: 1029-20-02 - Run 4 (DBCM) 2/18/00 09:50
Original value (CoefA0) = 0 New value = -4.3952
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D119

Comment: 1029-20-02 - Run 4 (DBCM) 2/18/00 09:50
Original value (CoefAf) = 0 New value = 13.6129
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E119

Comment: 1029-20-02 - Run 4 (DBCM) 2/18/00 09:50
Original value (CoefB) = 0 New value = 2.0394
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F119

Comment: 1029-20-02 - Run 4 (DBCM) 2/18/00 09:50
Original value (CoefD) = 0 New value = 0.0623
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J119

Comment: 1029-20-02 - Run 4 (DBCM) 2/18/00 09:50
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C120

Comment: 1029-20-02 - Run 4 (DCAA) 2/18/00 09:54
Original value (CoefA0) = 0 New value = -2.1905
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D120

Comment: 1029-20-02 - Run 4 (DCAA) 2/18/00 09:54
Original value (CoefAf) = 0 New value = 6.3857
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E120

Comment: 1029-20-02 - Run 4 (DCAA) 2/18/00 09:54
Original value (CoefB) = 0 New value = 1.5422
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F120

Comment: 1029-20-02 - Run 4 (DCAA) 2/18/00 09:54
Original value (CoefD) = 0 New value = 0.0392
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J120

Comment: 1029-20-02 - Run 4 (DCAA) 2/18/00 09:54
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C122

Comment: 1029-20-02 - Run 4 (HAA5) 2/18/00 10:03

Original value (CoefA0) = 0 New value = -0.4303
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: D122

Comment: 1029-20-02 - Run 4 (HAA5) 2/18/00 10:03
Original value (CoefAf) = 0 New value = 76.1808
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: E122

Comment: 1029-20-02 - Run 4 (HAA5) 2/18/00 10:03
Original value (CoefB) = 0 New value = 66.6551
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: F122

Comment: 1029-20-02 - Run 4 (HAA5) 2/18/00 10:03
Original value (CoefD) = 0 New value = 0.0292
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: J122

Comment: 1029-20-02 - Run 4 (HAA5) 2/18/00 10:03
Original value (S) = 0 New value = -0.088
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: C123

Comment: 1029-20-02 - Run 4 (HAA6) 2/18/00 10:08
Original value (CoefA0) = 0 New value = -0.3599
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: D123

Comment: 1029-20-02 - Run 4 (HAA6) 2/18/00 10:08
Original value (CoefAf) = 0 New value = 74.391
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: E123

Comment: 1029-20-02 - Run 4 (HAA6) 2/18/00 10:08
Original value (CoefB) = 0 New value = 64.1394
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: F123

Comment: 1029-20-02 - Run 4 (HAA6) 2/18/00 10:08
Original value (CoefD) = 0 New value = 0.0318
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: J123

Comment: 1029-20-02 - Run 4 (HAA6) 2/18/00 10:08
Original value (S) = 0 New value = -0.1124
Fewer than 6 points above MRL. Data was fit to peak curve by iterative curve fit procedure.

Cell: C125

Comment: 1029-20-02 - Run 4 (MBAA) 2/17/00 20:01
Original value (CoefA0) = 99999 New value = 0

Fewer than 6 points. Step function applied.

Cell: D125

Comment: 1029-20-02 - Run 4 (MBAA) 2/17/00 20:01
Original value (CoefAf) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: E125

Comment: 1029-20-02 - Run 4 (MBAA) 2/17/00 20:01
Original value (CoefB) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: F125

Comment: 1029-20-02 - Run 4 (MBAA) 2/17/00 20:01
Original value (CoefD) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: J125

Comment: 1029-20-02 - Run 4 (MBAA) 2/17/00 20:01
Original value (S) = 0 New value = 0
Fewer than 6 points. Step function applied.

Cell: K125

Comment: 1029-20-02 - Run 4 (MBAA) 2/17/00 20:01
Original value (t0) = 0 New value = 0
Fewer than 6 points. Step function applied.

Cell: C126

Comment: 1029-20-02 - Run 4 (MCAA) 2/18/00 10:06
Original value (CoefA0) = 0 New value = -0.1511
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D126

Comment: 1029-20-02 - Run 4 (MCAA) 2/18/00 10:06
Original value (CoefAf) = 0 New value = 4.0662
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E126

Comment: 1029-20-02 - Run 4 (MCAA) 2/18/00 10:06
Original value (CoefB) = 0 New value = 18582.7377
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F126

Comment: 1029-20-02 - Run 4 (MCAA) 2/18/00 10:06
Original value (CoefD) = 0 New value = 0.1574
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J126

Comment: 1029-20-02 - Run 4 (MCAA) 2/18/00 10:06
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C128

Comment: 1029-20-02 - Run 4 (TCAA) 2/17/00 20:06
Original value (CoefA0) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: D128

Comment: 1029-20-02 - Run 4 (TCAA) 2/17/00 20:06
Original value (CoefAf) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: E128

Comment: 1029-20-02 - Run 4 (TCAA) 2/17/00 20:06
Original value (CoefB) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: F128

Comment: 1029-20-02 - Run 4 (TCAA) 2/17/00 20:06
Original value (CoefD) = 99999 New value = 0
Fewer than 6 points. Step function applied.

Cell: J128

Comment: 1029-20-02 - Run 4 (TCAA) 2/17/00 20:06
Original value (S) = 0 New value = 0
Fewer than 6 points. Step function applied.

Cell: K128

Comment: 1029-20-02 - Run 4 (TCAA) 2/17/00 20:06
Original value (t0) = 0 New value = 0
Fewer than 6 points. Step function applied.

Cell: C129

Comment: 1029-20-02 - Run 4 (THM4) 2/18/00 09:53
Original value (CoefA0) = 0 New value = -14.1363
Fewer than 6 points. Logistic function (type 1) applied.

Cell: D129

Comment: 1029-20-02 - Run 4 (THM4) 2/18/00 09:53
Original value (CoefAf) = 0 New value = 45.6503
Fewer than 6 points. Logistic function (type 1) applied.

Cell: E129

Comment: 1029-20-02 - Run 4 (THM4) 2/18/00 09:53
Original value (CoefB) = 0 New value = 2.2045
Fewer than 6 points. Logistic function (type 1) applied.

Cell: F129

Comment: 1029-20-02 - Run 4 (THM4) 2/18/00 09:53
Original value (CoefD) = 0 New value = 0.048
Fewer than 6 points. Logistic function (type 1) applied.

Cell: J129

Comment: 1029-20-02 - Run 4 (THM4) 2/18/00 09:53
Original value (S) = 0 New value = 0
Fewer than 6 points. Logistic function (type 1) applied.

Cell: C139

Comment: 1029-20-03 - Run 6 (CI2-D) 2/18/00 10:10
Original value (CoefA0) = 0.1792 New value = 0.2978
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: D139

Comment: 1029-20-03 - Run 6 (CI2-D) 2/18/00 10:10
Original value (CoefAf) = 1.8 New value = 0.7612
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: E139

Comment: 1029-20-03 - Run 6 (CI2-D) 2/18/00 10:10
Original value (CoefB) = 14.0737 New value = 30.7992
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: F139

Comment: 1029-20-03 - Run 6 (CI2-D) 2/18/00 10:10
Original value (CoefD) = 0.0174 New value = 0.0367
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: J139

Comment: 1029-20-03 - Run 6 (CI2-D) 2/18/00 10:10
Original value (S) = 0 New value = 0
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: C140

Comment: 1029-20-03 - Run 6 (DBAA) 2/18/00 10:12
Original value (CoefA0) = -0.4349 New value = -0.7837
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: D140

Comment: 1029-20-03 - Run 6 (DBAA) 2/18/00 10:12
Original value (CoefAf) = 3.1304 New value = 3.1165
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: E140

Comment: 1029-20-03 - Run 6 (DBAA) 2/18/00 10:12
Original value (CoefB) = 3.3708 New value = 2.3545
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: F140

Comment: 1029-20-03 - Run 6 (DBAA) 2/18/00 10:12
Original value (CoefD) = 0.0355 New value = 0.0389
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: J140

Comment: 1029-20-03 - Run 6 (DBAA) 2/18/00 10:12

Original value (S) = -0.0001 New value = -0.0035
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: C150

Comment: 1029-20-03 - Run 6 (TCAA) 2/18/00 10:11
Original value (CoefA0) = 0 New value = -0.1001
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D150

Comment: 1029-20-03 - Run 6 (TCAA) 2/18/00 10:11
Original value (CoefAf) = 0 New value = 1.9944
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E150

Comment: 1029-20-03 - Run 6 (TCAA) 2/18/00 10:11
Original value (CoefB) = 0 New value = 1339.6756
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F150

Comment: 1029-20-03 - Run 6 (TCAA) 2/18/00 10:11
Original value (CoefD) = 0 New value = 0.0745
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J150

Comment: 1029-20-03 - Run 6 (TCAA) 2/18/00 10:11
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C154

Comment: 1029-20-03 - Run 6 (TSUVA) 2/18/00 10:09
Original value (CoefA0) = -0.931 New value = -0.111
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: D154

Comment: 1029-20-03 - Run 6 (TSUVA) 2/18/00 10:09
Original value (CoefAf) = 2.4132 New value = 1.5932
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: E154

Comment: 1029-20-03 - Run 6 (TSUVA) 2/18/00 10:09
Original value (CoefB) = 2.5988 New value = 19.9973
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: F154

Comment: 1029-20-03 - Run 6 (TSUVA) 2/18/00 10:09
Original value (CoefD) = 1.0596 New value = 0.8738
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: J154

Comment: 1029-20-03 - Run 6 (TSUVA) 2/18/00 10:09
Original value (S) = 0 New value = 0

Peak curve fit with $S = 0$. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: C164

Comment: 1029-20-04 - Run 8 (DCAA) 2/18/00 10:15

Original value (CoefA0) = 2.35 New value = 2.7789

Peak curve fit with $S = 0$. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: D164

Comment: 1029-20-04 - Run 8 (DCAA) 2/18/00 10:15

Original value (CoefAf) = 1.6737 New value = 1.4187

Peak curve fit with $S = 0$. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: E164

Comment: 1029-20-04 - Run 8 (DCAA) 2/18/00 10:15

Original value (CoefB) = 17.1148 New value = 25.4316

Peak curve fit with $S = 0$. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: F164

Comment: 1029-20-04 - Run 8 (DCAA) 2/18/00 10:15

Original value (CoefD) = 0.0775 New value = 0.0431

Peak curve fit with $S = 0$. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: J164

Comment: 1029-20-04 - Run 8 (DCAA) 2/18/00 10:15

Original value (S) = 0 New value = 0

Peak curve fit with $S = 0$. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: C169

Comment: 1029-20-04 - Run 8 (MBAA) 2/18/00 10:17

Original value (CoefA0) = 0 New value = 0

Fewer than 6 points above MRL. Peak curve/step function combination applied.

Cell: D169

Comment: 1029-20-04 - Run 8 (MBAA) 2/18/00 10:17

Original value (CoefAf) = 0 New value = 1.05

Fewer than 6 points above MRL. Peak curve/step function combination applied.

Cell: E169

Comment: 1029-20-04 - Run 8 (MBAA) 2/18/00 10:17

Original value (CoefB) = 0 New value = 0

Fewer than 6 points above MRL. Peak curve/step function combination applied.

Cell: F169

Comment: 1029-20-04 - Run 8 (MBAA) 2/18/00 10:17

Original value (CoefD) = 0 New value = 0

Fewer than 6 points above MRL. Peak curve/step function combination applied.

Cell: J169

Comment: 1029-20-04 - Run 8 (MBAA) 2/18/00 10:17

Original value (S) = 0 New value = -0.0668

Fewer than 6 points above MRL. Peak curve/step function combination applied.

Cell: C172

Comment: 1029-20-04 - Run 8 (TCAA) 2/18/00 10:40
Original value (CoefA0) = 0 New value = 1.06
Fewer than 6 points above MRL. Step function applied.

Cell: D172

Comment: 1029-20-04 - Run 8 (TCAA) 2/18/00 10:40
Original value (CoefAf) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: E172

Comment: 1029-20-04 - Run 8 (TCAA) 2/18/00 10:40
Original value (CoefB) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: F172

Comment: 1029-20-04 - Run 8 (TCAA) 2/18/00 10:40
Original value (CoefD) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: J172

Comment: 1029-20-04 - Run 8 (TCAA) 2/18/00 10:40
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: K172

Comment: 1029-20-04 - Run 8 (TCAA) 2/18/00 10:40
Original value (t0) = 0 New value = 110.9229
Fewer than 6 points above MRL. Step function applied.

Cell: C176

Comment: 1029-20-04 - Run 8 (TSUVA) 2/18/00 10:15
Original value (CoefA0) = 0.0724 New value = -0.0144
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: D176

Comment: 1029-20-04 - Run 8 (TSUVA) 2/18/00 10:15
Original value (CoefAf) = 1.0906 New value = 1.3649
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: E176

Comment: 1029-20-04 - Run 8 (TSUVA) 2/18/00 10:15
Original value (CoefB) = 15.8716 New value = 180.2585
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: F176

Comment: 1029-20-04 - Run 8 (TSUVA) 2/18/00 10:15
Original value (CoefD) = 0.0945 New value = 0.1785
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: J176

Comment: 1029-20-04 - Run 8 (TSUVA) 2/18/00 10:15
Original value (S) = -0.0041 New value = -0.0045
Poor peak curve fit. Data was refit by iterative curve fit procedure.

ICR Information

ID / ICR#: NE 3105507 / 454
 ICR Contact: Zoltan Kerekes
 Phone No.: 402-449-8181
 Period: 4/22/98 - 5/13/98 (21 B-S days)

Design Information

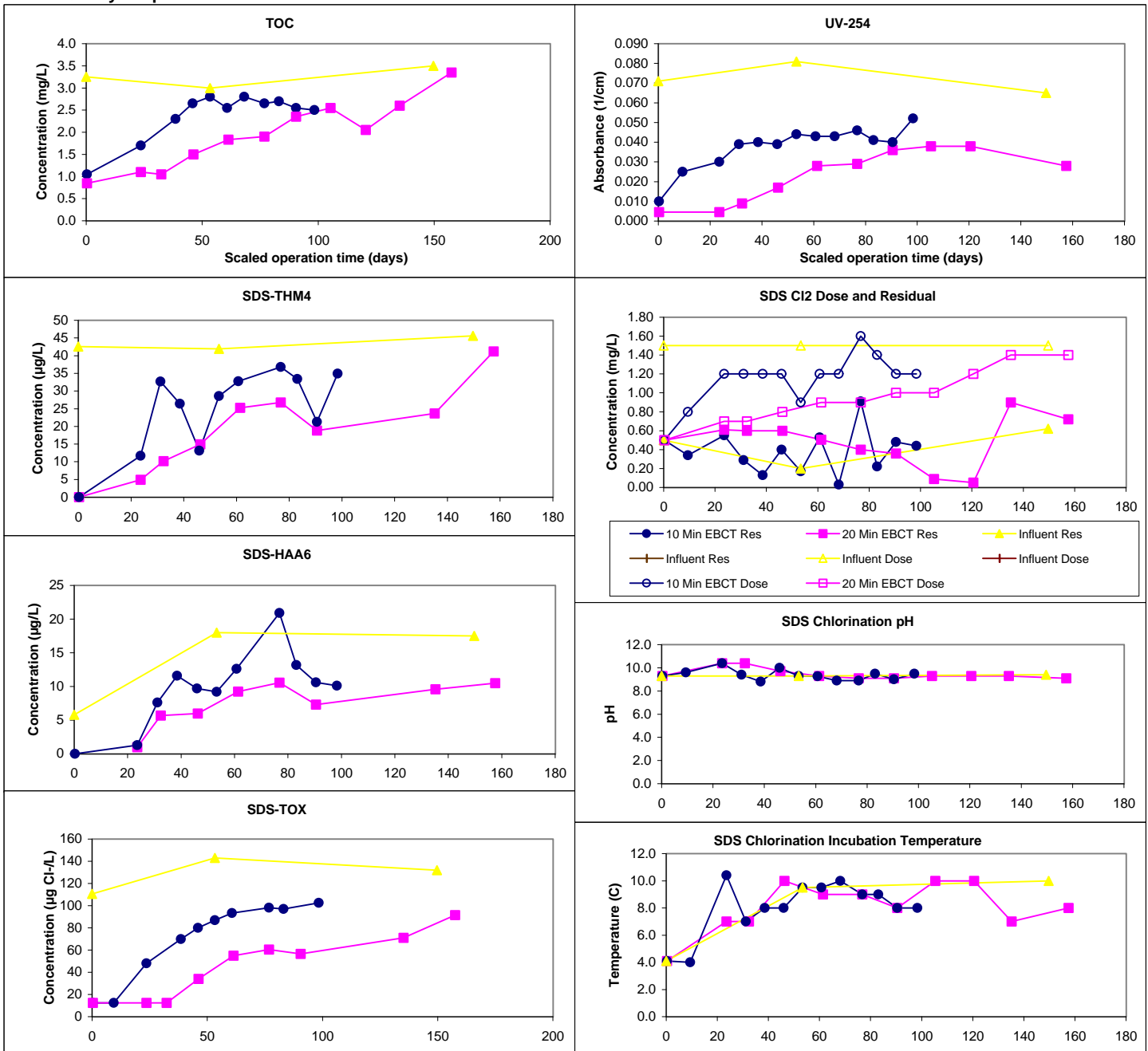
Design TOC: 3.3 mg/L
 Col Diameter: 11.0 mm
 Min Reynolds#: 0.50
 Full-Scale Temp: 15.0 C

Full-Scale GAC Size: 8x30 Bituminous coal
 Bench-Scale GAC Size: 60x100
 Scaling Factor: 7.40
 Meas Dry Bed Density: 0.50 g/cm3

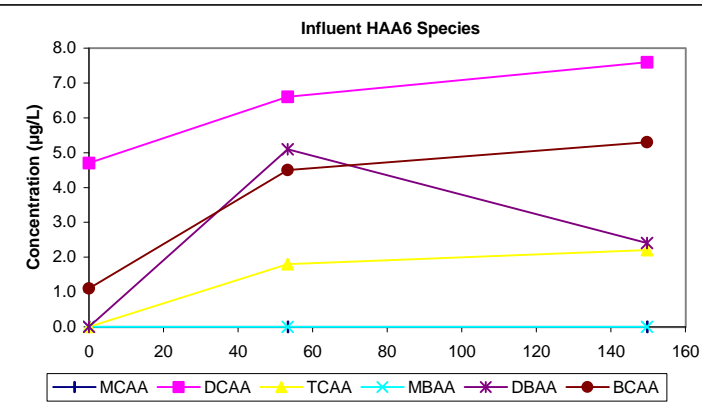
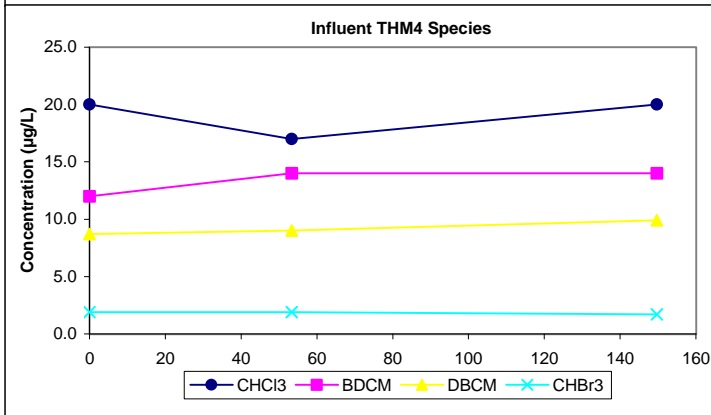
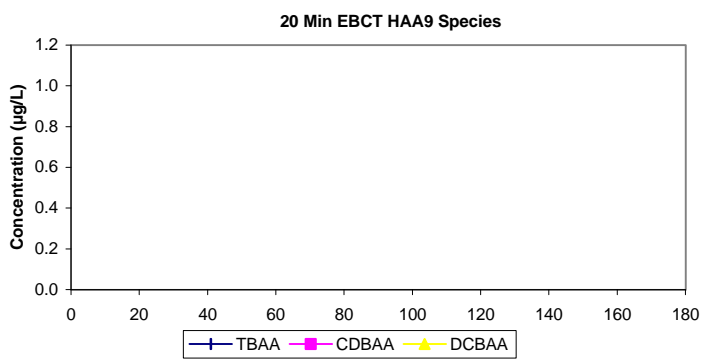
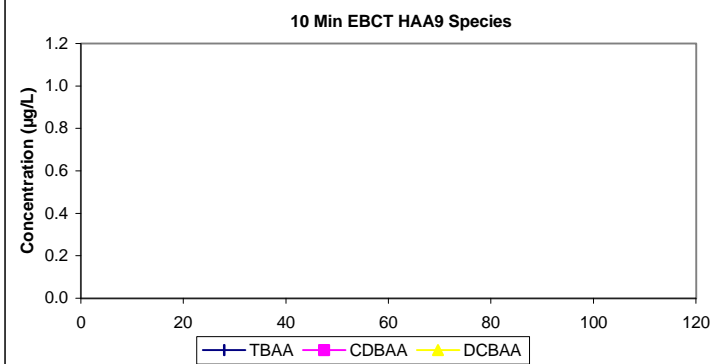
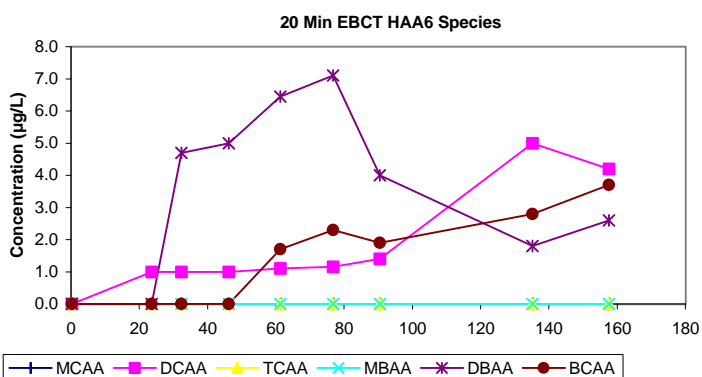
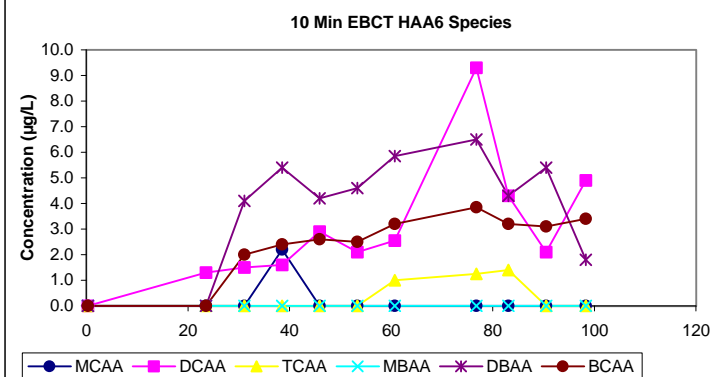
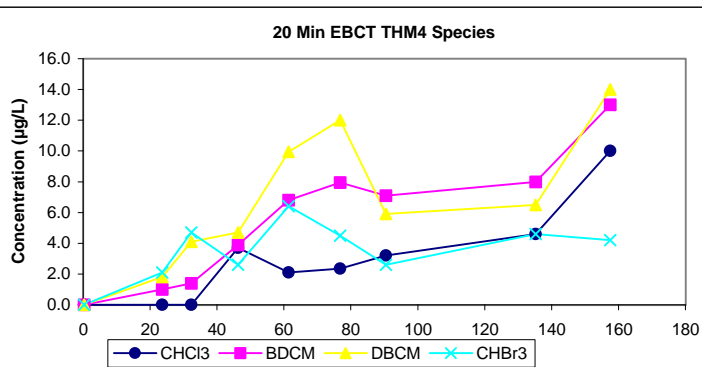
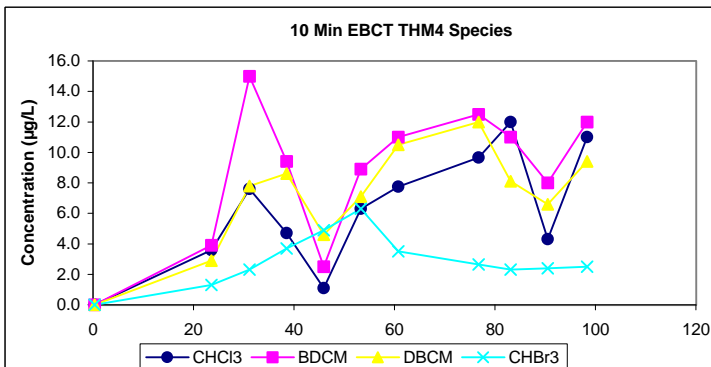
Water Quality Summary

Influent	Influent				Influent				Res (3)	Mean	SD	Count	Min/Max
	Mean	SD/RD	Count	Min/Max	Mean	SD/RD	Count	Min/Max					
TOC	3.3	0.3	3	3.0 - 3.5									
pH	8.2	0.3	3	8.0 - 8.6									
UV254	0.072	0.008	3	0.065 - 0.081									
SUVA	2.25	0.42	3	1.86 - 2.70									
Bromide	89	7	2	85 - 92									
SDS-TOX	129	17	3	111 - 143									
SDS-THM4	43	2	3	42 - 46									
SDS-HAA6	14	7	3	6 - 18									
Effluent	10 Min EBCT (13 B-S days)				20 Min EBCT (21 B-S days)				Chart Legend:	<div><div><div></div><div>10 Min EBCT</div></div><div><div></div><div>20 Min EBCT</div></div><div><div></div><div>Influent</div></div><div><div></div><div>Influent</div></div></div>			
	Effluent pH	8.1	0.3	13	7.3 - 8.5	8.2	0.4	11					
Effluent Temp	21.2	0.3	13	21.0 - 21.9	21.3	0.3	11	21.0 - 22.0					

Water Quality Graphs



Water Quality Graphs (Continued)



ICR Information





ID / ICR#: NE 3105507 / 454
 ICR Contact: Zoltan Kerekes
 Phone No.: 402-449-8181
 Period: 7/30/98 - 8/17/98 (18 B-S days)

Design Information

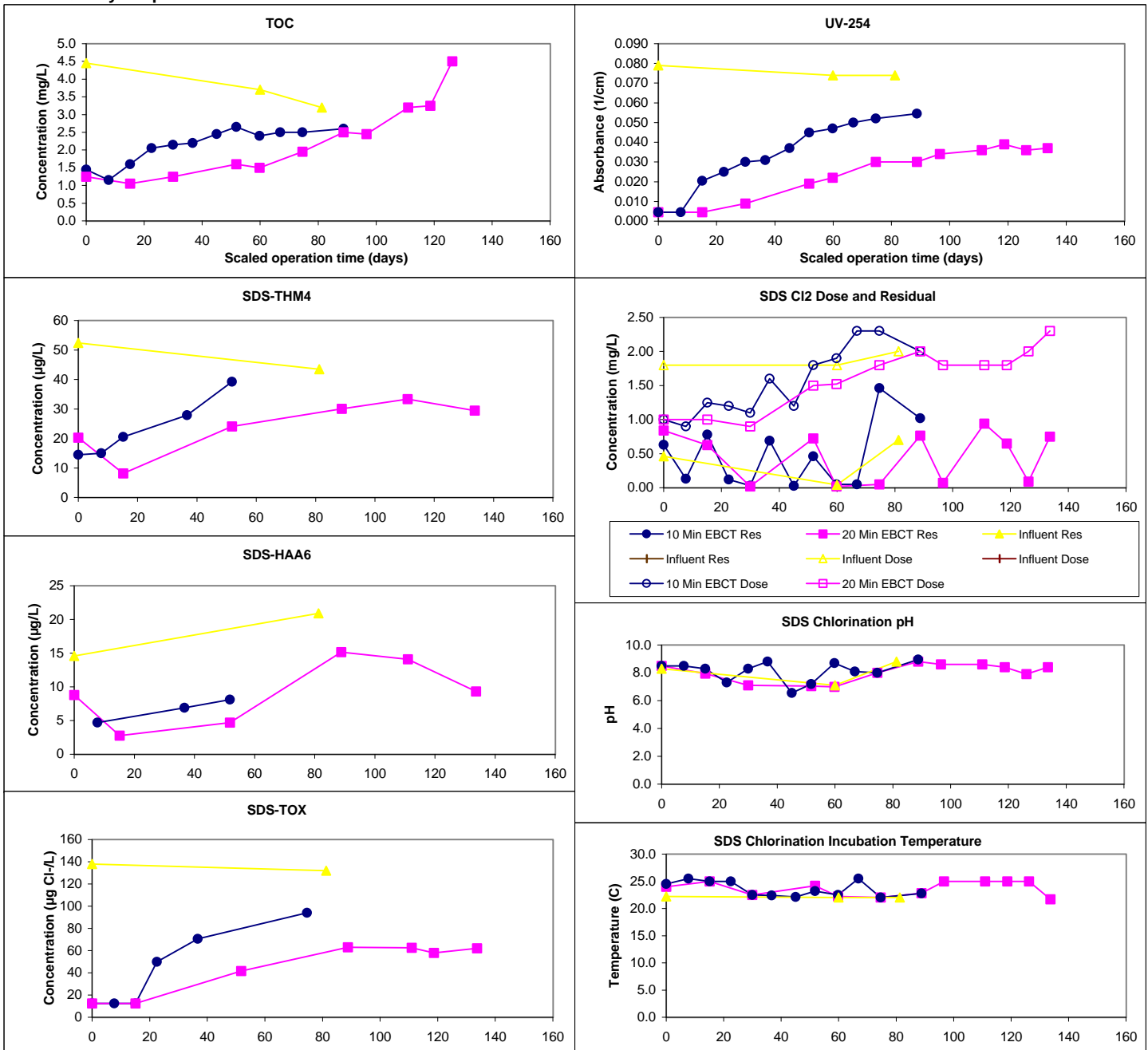
Design TOC: 4.4 mg/L
 Col Diameter: 11.0 mm
 Min Reynolds#: 0.50
 Full-Scale Temp: 15.0 C

Full-Scale GAC Size: 8x30 Bituminous coal
 Bench-Scale GAC Size: 60x100
 Scaling Factor: 7.40
 Meas Dry Bed Density: 0.50 g/cm3

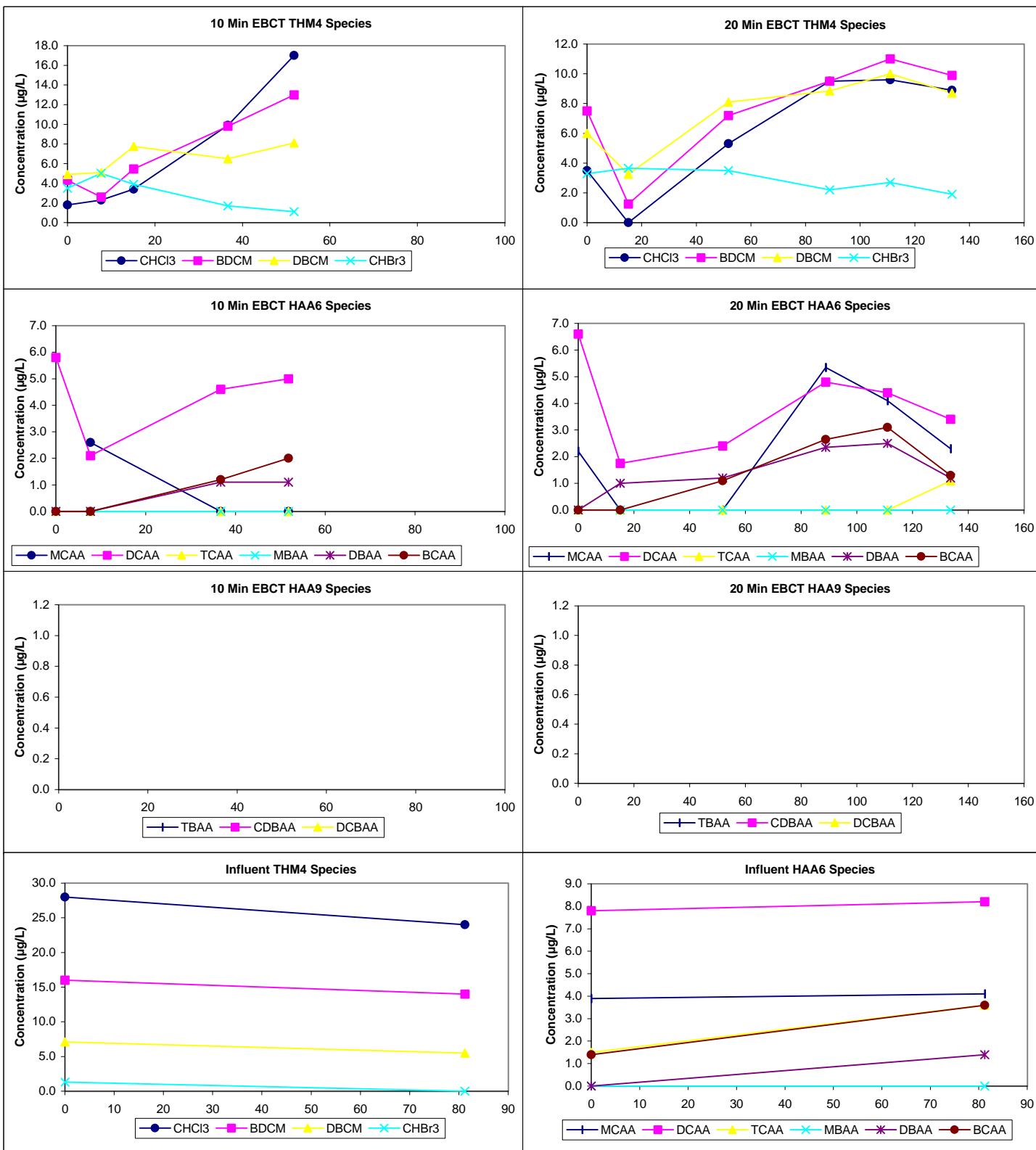
Water Quality Summary

Influent	Influent				Influent								
	Mean	SD/RD	Count	Min/Max	Mean	SD/RD	Count	Min/Max		Mean	SD	Count	Min/Max
TOC	3.8	0.6	3	3.2 - 4.5					Res (10)	0.45	0.40	27	0.02 - 1.46
pH	8.6	0.4	3	8.3 - 9.0					Temp	23.5	1.4	27	21.7 - 25.5
UV254	0.076	0.003	3	0.074 - 0.079					pH	8.1	0.7	27	6.6 - 9.0
SUVA	2.03	0.27	3	1.78 - 2.31					Time	5.0	0.1	27	4.5 - 5.0
Bromide	53	7	2	49 - 56					Comments:				
SDS-TOX	135	6	2	132 - 138									
SDS-THM4	48	9	2	44 - 52									
SDS-HAA6	18	6	2	15 - 21									
Effluent	10 Min EBCT (12 B-S days)				20 Min EBCT (18 B-S days)				Chart Legend:				
Effluent pH	8.2	0.1	12	8.0 - 8.4	8.0	0.5	12	7.3 - 8.5		 10 Min EBCT			
Effluent Temp	22.3	1.3	12	21.0 - 25.0	22.7	1.7	12	21.0 - 25.0		 20 Min EBCT			
									 Influent				
									 Influent				

Water Quality Graphs



Water Quality Graphs (Continued)



ICR Information





ID / ICR#: NE 3105507 / 454
 ICR Contact: Zoltan Kerekes
 Phone No.: 402-449-8181
 Period: 11/27/98 - 1/2/99 (35 B-S days)

Design Information

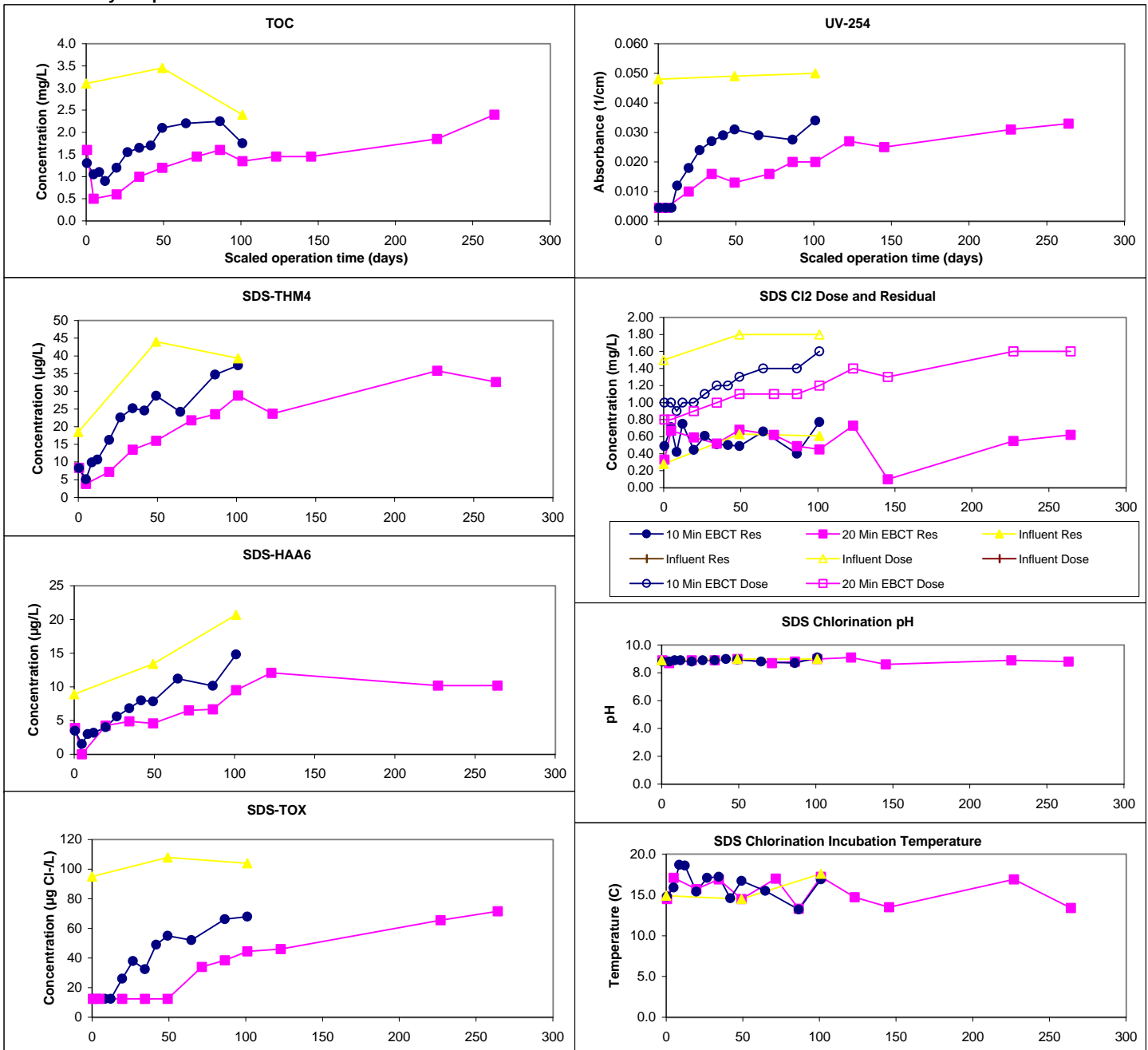
Design TOC: 3.0 mg/L
 Col Diameter: 11.0 mm
 Min Reynolds#: 0.50
 Full-Scale Temp: 15.0 C

Full-Scale GAC Size: 8x30 Bituminous coal
 Bench-Scale GAC Size: 60x100
 Scaling Factor: 7.40
 Meas Dry Bed Density: 0.50 g/cm3

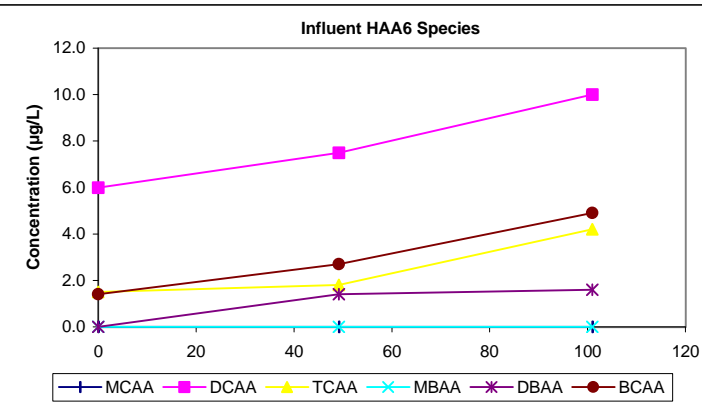
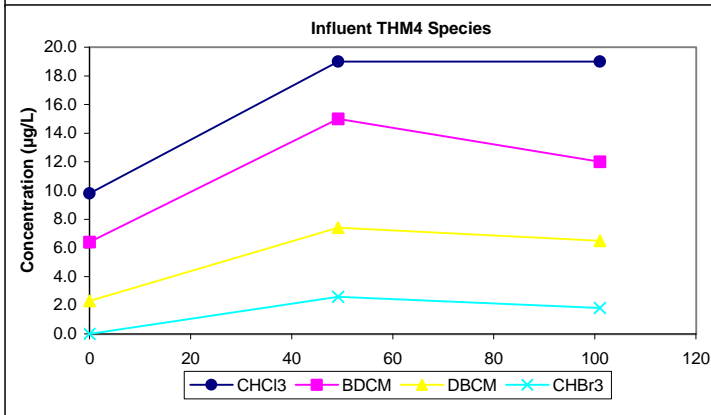
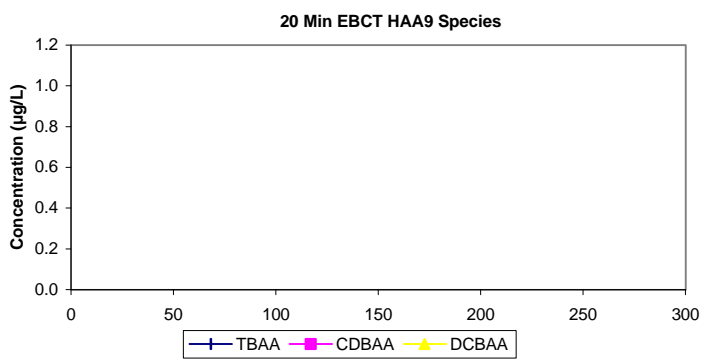
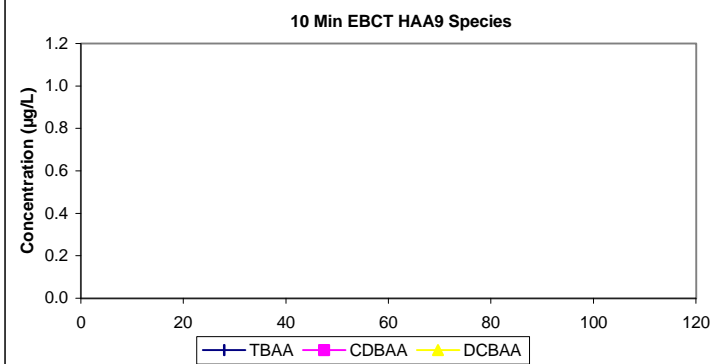
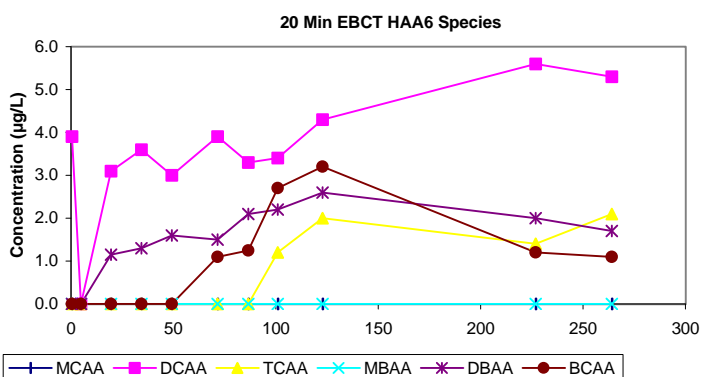
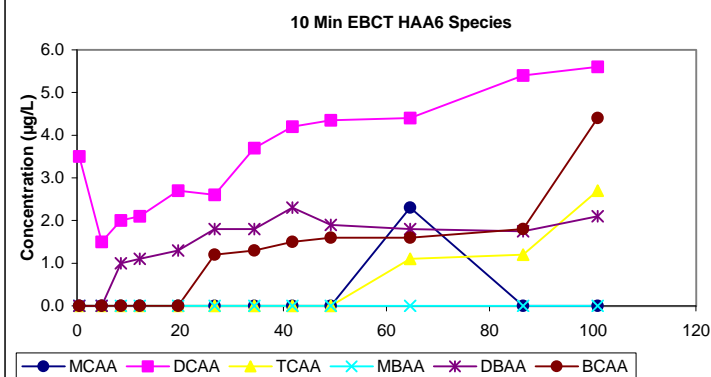
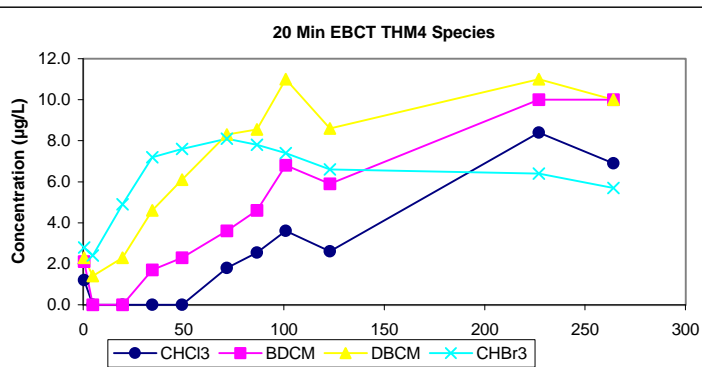
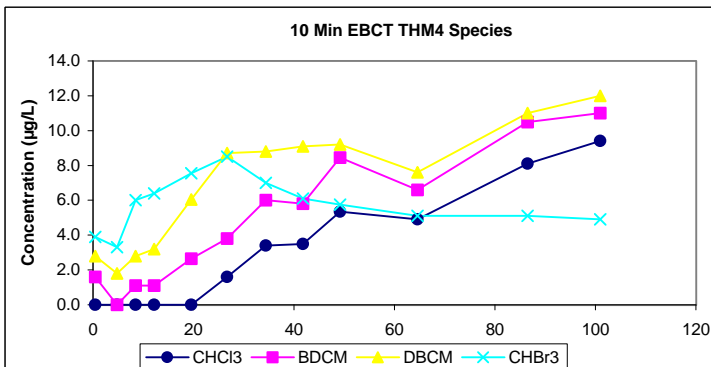
Water Quality Summary

Influent	Influent				Influent												
	Mean	SD/RD	Count	Min/Max	Mean	SD/RD	Count	Min/Max		Mean	SD	Count	Min/Max				
TOC	3.0	0.5	3	2.4 - 3.5						Res (0)	0.54	0.15	27	0.10 - 0.77			
pH	8.7	0.2	3	8.6 - 8.9						Temp	15.8	1.6	27	13.2 - 18.7			
UV254	0.049	0.001	3	0.048 - 0.050						pH	8.9	0.1	27	8.6 - 9.1			
SUVA	1.68	0.35	3	1.42 - 2.08						Time	11.6	0.3	27	10.5 - 12.5			
Bromide	53	13	2	46 - 59						Comments:							
SDS-TOX	102	7	3	95 - 108													
SDS-THM4	34	14	3	19 - 44													
SDS-HAA6	14	6	3	9 - 21													
Effluent	10 Min EBCT (14 B-S days)									20 Min EBCT (36 B-S days)				Chart Legend:			
Effluent pH	8.7	0.2	12	8.3 - 8.9	8.7					0.2	12	8.3 - 8.9	 10 Min EBCT				
Effluent Temp	20.4	0.4	12	19.4 - 20.8	20.0					1.1	12	16.8 - 20.8	 20 Min EBCT				
									 Influent								
									 Influent								

Water Quality Graphs



Water Quality Graphs (Continued)



ICR Information

ID / ICR#: NE 3105507 / 454
 ICR Contact: Zoltan Kerekes
 Phone No.: 402-449-8181
 Period: 3/24/99 - 4/16/99 (23 B-S days)

Design Information

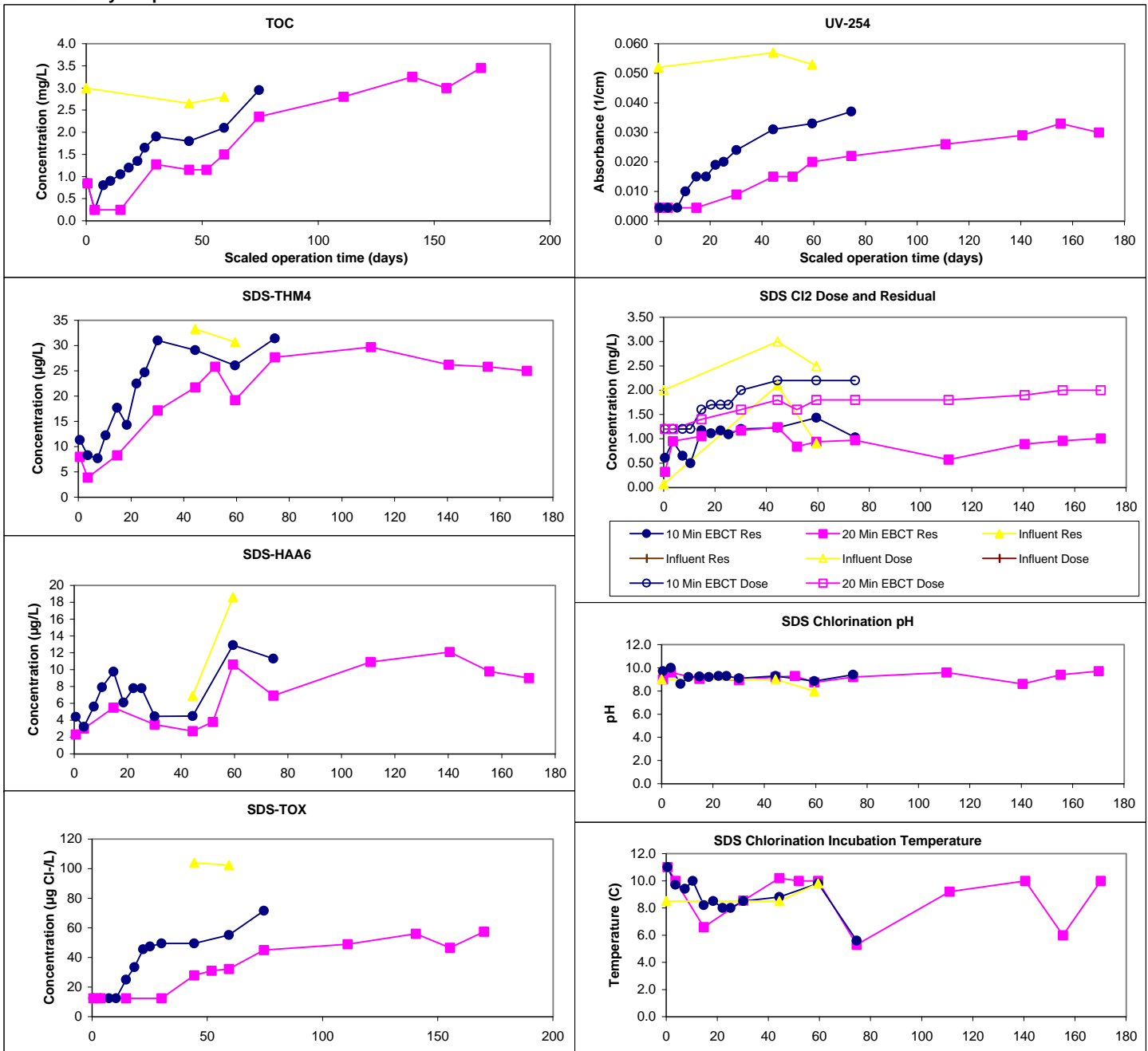
Design TOC: 3.0 mg/L
 Col Diameter: 11.0 mm
 Min Reynolds#: 0.50
 Full-Scale Temp: 15.0 C

Full-Scale GAC Size: 8x30 Bituminous coal
 Bench-Scale GAC Size: 60x100
 Scaling Factor: 7.40
 Meas Dry Bed Density: 0.50 g/cm3

Water Quality Summary

Influent	Influent				Influent				Res (1)	Mean	SD	Count	Min/Max
	Mean	SD/RD	Count	Min/Max	Mean	SD/RD	Count	Min/Max					
TOC	2.8	0.2	3	2.7 - 3.0									
pH	8.9	0.3	3	8.5 - 9.1									
UV254	0.054	0.003	3	0.052 - 0.057									
SUVA	1.93	0.21	3	1.73 - 2.15									
Bromide	83	4	2	81 - 85									
SDS-TOX	103	2	2	103 - 104									
SDS-THM4	32	3	2	31 - 33									
SDS-HAA6	13	12	2	7 - 19									
Effluent	10 Min EBCT (10 B-S days)												
Effluent pH	9.1	0.2	12	8.8 - 9.4	9.0	0.2	12	8.6 - 9.4					
Effluent Temp	20.4	0.4	12	19.4 - 21.0	20.5	0.5	12	19.3 - 21.1					

Water Quality Graphs



Water Quality Graphs (Continued)

