

ICR TREATMENT STUDY ANALYSIS

Base Analysis and Data Review Comments

Treatment Study ID	1076
Study Protocol	GAC bench-scale treatment study
Plant ICR Number	639
PWS Name	City of Waco Utility Department
City, State, Zip	Waco, TX 76702

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

Major comments:

None.

General Comments:

1. The SDS incubation time for the first 3 quarters of testing was 3 hours, which reflected the retention time between the clearwell effluent and a point in the distribution system. The clearwell retention time is 5 hours. During the fourth quarter of testing, the clearwell retention time was incorporated into an SDS incubation time of 8 hours. The average incubation temperature utilized ranged from 21 to 24°C.

Outlier Data:

Four outliers removed.

Cell: A1

Comment: 1076-SAS.xls 2/17/00 19:35

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

Cell: C40

Comment: 1076-10-02 - Run 3 (TCAA) 2/17/00 19:03
Original value (CoefA0) = 0 New value = -0.0229
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D40

Comment: 1076-10-02 - Run 3 (TCAA) 2/17/00 19:03
Original value (CoefAf) = 0 New value = 1.6962
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E40

Comment: 1076-10-02 - Run 3 (TCAA) 2/17/00 19:03
Original value (CoefB) = 0 New value = 490.4568
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F40

Comment: 1076-10-02 - Run 3 (TCAA) 2/17/00 19:03
Original value (CoefD) = 0 New value = 0.0858
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J40

Comment: 1076-10-02 - Run 3 (TCAA) 2/17/00 19:03
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C50

Comment: 1076-10-03 - Run 5 (CHCl3) 2/17/00 19:09
Original value (CoefA0) = 0 New value = -0.55
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D50

Comment: 1076-10-03 - Run 5 (CHCl3) 2/17/00 19:09
Original value (CoefAf) = 0 New value = 8.0666
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E50

Comment: 1076-10-03 - Run 5 (CHCl3) 2/17/00 19:09
Original value (CoefB) = 0 New value = 29.6694
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F50

Comment: 1076-10-03 - Run 5 (CHCl3) 2/17/00 19:09
Original value (CoefD) = 0 New value = 0.0311
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J50

Comment: 1076-10-03 - Run 5 (CHCl3) 2/17/00 19:09
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C54

Comment: 1076-10-03 - Run 5 (DCAA) 2/17/00 19:09
Original value (CoefA0) = 0 New value = -0.2802
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D54

Comment: 1076-10-03 - Run 5 (DCAA) 2/17/00 19:09
Original value (CoefAf) = 0 New value = 4.2636
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E54

Comment: 1076-10-03 - Run 5 (DCAA) 2/17/00 19:09
Original value (CoefB) = 0 New value = 30.8885
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F54

Comment: 1076-10-03 - Run 5 (DCAA) 2/17/00 19:09
Original value (CoefD) = 0 New value = 0.0356
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J54

Comment: 1076-10-03 - Run 5 (DCAA) 2/17/00 19:09
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C62

Comment: 1076-10-03 - Run 5 (TCAA) 2/17/00 19:10
Original value (CoefA0) = 0 New value = -0.2507
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D62

Comment: 1076-10-03 - Run 5 (TCAA) 2/17/00 19:10
Original value (CoefAf) = 0 New value = 3.6722
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E62

Comment: 1076-10-03 - Run 5 (TCAA) 2/17/00 19:10
Original value (CoefB) = 0 New value = 27.5972
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F62

Comment: 1076-10-03 - Run 5 (TCAA) 2/17/00 19:10
Original value (CoefD) = 0 New value = 0.0266
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J62

Comment: 1076-10-03 - Run 5 (TCAA) 2/17/00 19:10
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C68

Comment: 1076-10-04 - Run 7 (BCAA) 2/17/00 19:17
Original value (CoefA0) = -2.7995 New value = -2.7196
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: D68

Comment: 1076-10-04 - Run 7 (BCAA) 2/17/00 19:17
Original value (CoefAf) = 10.2 New value = 12.1241
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: E68

Comment: 1076-10-04 - Run 7 (BCAA) 2/17/00 19:17
Original value (CoefB) = 2.545 New value = 3.4557
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: F68

Comment: 1076-10-04 - Run 7 (BCAA) 2/17/00 19:17
Original value (CoefD) = 0.0261 New value = 0.0246
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: J68

Comment: 1076-10-04 - Run 7 (BCAA) 2/17/00 19:17
Original value (S) = 0 New value = -0.0542
Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: C74

Comment: 1076-10-04 - Run 7 (DBAA) 2/17/00 19:20
Original value (CoefA0) = -3.3 New value = -0.534
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: D74

Comment: 1076-10-04 - Run 7 (DBAA) 2/17/00 19:20
Original value (CoefAf) = 9.9 New value = 5.6818
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: E74

Comment: 1076-10-04 - Run 7 (DBAA) 2/17/00 19:20
Original value (CoefB) = 1.8035 New value = 25.4782
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: F74

Comment: 1076-10-04 - Run 7 (DBAA) 2/17/00 19:20
Original value (CoefD) = 0.0347 New value = 0.1313
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: J74

Comment: 1076-10-04 - Run 7 (DBAA) 2/17/00 19:20

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: C76

Comment: 1076-10-04 - Run 7 (DCAA) 2/17/00 19:15

Original value (CoefA0) = -1.6567 New value = -0.2404

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: D76

Comment: 1076-10-04 - Run 7 (DCAA) 2/17/00 19:15

Original value (CoefAf) = 6.45 New value = 5.653

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: E76

Comment: 1076-10-04 - Run 7 (DCAA) 2/17/00 19:15

Original value (CoefB) = 4.1761 New value = 18.9121

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: F76

Comment: 1076-10-04 - Run 7 (DCAA) 2/17/00 19:16

Original value (CoefD) = 0.031 New value = 0.0443

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: J76

Comment: 1076-10-04 - Run 7 (DCAA) 2/17/00 19:16

Original value (S) = 0 New value = -0.0229

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: C78

Comment: 1076-10-04 - Run 7 (HAA5) 2/17/00 19:18

Original value (CoefA0) = -4.9688 New value = -7.8719

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: D78

Comment: 1076-10-04 - Run 7 (HAA5) 2/17/00 19:18

Original value (CoefAf) = 19.2 New value = 24.6856

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: E78

Comment: 1076-10-04 - Run 7 (HAA5) 2/17/00 19:18

Original value (CoefB) = 2.8511 New value = 2.3011

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: F78

Comment: 1076-10-04 - Run 7 (HAA5) 2/17/00 19:18

Original value (CoefD) = 0.0282 New value = 0.0233

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: J78

Comment: 1076-10-04 - Run 7 (HAA5) 2/17/00 19:18

Original value (S) = 0 New value = -0.0645

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: C79

Comment: 1076-10-04 - Run 7 (HAA6) 2/17/00 19:21

Original value (CoefA0) = -7.7738 New value = -14.4034

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: D79

Comment: 1076-10-04 - Run 7 (HAA6) 2/17/00 19:21

Original value (CoefAf) = 29.4 New value = 40.3713

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: E79

Comment: 1076-10-04 - Run 7 (HAA6) 2/17/00 19:21

Original value (CoefB) = 2.7383 New value = 1.9593

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: F79

Comment: 1076-10-04 - Run 7 (HAA6) 2/17/00 19:21

Original value (CoefD) = 0.0275 New value = 0.0217

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: J79

Comment: 1076-10-04 - Run 7 (HAA6) 2/17/00 19:21

Original value (S) = 0 New value = -0.1102

Poor peak curve fit. Data was refit by iterative curve fit procedure.

Cell: C84

Comment: 1076-10-04 - Run 7 (TCAA) 2/17/00 19:19

Original value (CoefA0) = 0 New value = -0.2639

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

Cell: D84

Comment: 1076-10-04 - Run 7 (TCAA) 2/17/00 19:19

Original value (CoefAf) = 0 New value = 2.2333

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

Cell: E84

Comment: 1076-10-04 - Run 7 (TCAA) 2/17/00 19:19

Original value (CoefB) = 0 New value = 27.6316

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

Cell: F84

Comment: 1076-10-04 - Run 7 (TCAA) 2/17/00 19:19

Original value (CoefD) = 0 New value = 0.0507

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

Cell: J84

Comment: 1076-10-04 - Run 7 (TCAA) 2/17/00 19:19

Original value (S) = 0 New value = 0

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

Cell: C94

Comment: 1076-20-01 - Run 2 (CHCl3) 2/17/00 19:31
Original value (CoefA0) = 0 New value = -0.4507
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D94

Comment: 1076-20-01 - Run 2 (CHCl3) 2/17/00 19:31
Original value (CoefAf) = 0 New value = 12.3342
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E94

Comment: 1076-20-01 - Run 2 (CHCl3) 2/17/00 19:31
Original value (CoefB) = 0 New value = 106.7705
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F94

Comment: 1076-20-01 - Run 2 (CHCl3) 2/17/00 19:31
Original value (CoefD) = 0 New value = 0.0289
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J94

Comment: 1076-20-01 - Run 2 (CHCl3) 2/17/00 19:31
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C98

Comment: 1076-20-01 - Run 2 (DCAA) 2/17/00 16:56
Original value (CoefA0) = 0 New value = -0.3398
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D98

Comment: 1076-20-01 - Run 2 (DCAA) 2/17/00 16:56
Original value (CoefAf) = 0 New value = 5.8322
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E98

Comment: 1076-20-01 - Run 2 (DCAA) 2/17/00 16:56
Original value (CoefB) = 0 New value = 71.0797
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F98

Comment: 1076-20-01 - Run 2 (DCAA) 2/17/00 16:56
Original value (CoefD) = 0 New value = 0.0282
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J98

Comment: 1076-20-01 - Run 2 (DCAA) 2/17/00 16:56
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C106

Comment: 1076-20-01 - Run 2 (TCAA) 2/17/00 16:57
Original value (CoefA0) = 0 New value = -0.2046
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D106

Comment: 1076-20-01 - Run 2 (TCAA) 2/17/00 16:57
Original value (CoefAf) = 0 New value = 4.9039
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E106

Comment: 1076-20-01 - Run 2 (TCAA) 2/17/00 16:57
Original value (CoefB) = 0 New value = 89.7014
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F106

Comment: 1076-20-01 - Run 2 (TCAA) 2/17/00 16:57
Original value (CoefD) = 0 New value = 0.0232
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J106

Comment: 1076-20-01 - Run 2 (TCAA) 2/17/00 16:57
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C118

Comment: 1076-20-02 - Run 4 (DBAA) 2/17/00 19:08
Original value (CoefA0) = -2.164 New value = -2.0522
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: D118

Comment: 1076-20-02 - Run 4 (DBAA) 2/17/00 19:08
Original value (CoefAf) = 7.8 New value = 6.8174
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: E118

Comment: 1076-20-02 - Run 4 (DBAA) 2/17/00 19:08
Original value (CoefB) = 2.6126 New value = 2.558
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: F118

Comment: 1076-20-02 - Run 4 (DBAA) 2/17/00 19:08
Original value (CoefD) = 0.0173 New value = 0.022
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: J118

Comment: 1076-20-02 - Run 4 (DBAA) 2/17/00 19:08
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: C120

Comment: 1076-20-02 - Run 4 (DCAA) 2/17/00 19:04

Original value (CoefA0) = 0 New value = -0.7863
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D120

Comment: 1076-20-02 - Run 4 (DCAA) 2/17/00 19:04
Original value (CoefAf) = 0 New value = 7.7186
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E120

Comment: 1076-20-02 - Run 4 (DCAA) 2/17/00 19:04
Original value (CoefB) = 0 New value = 22.4802
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F120

Comment: 1076-20-02 - Run 4 (DCAA) 2/17/00 19:04
Original value (CoefD) = 0 New value = 0.0174
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J120

Comment: 1076-20-02 - Run 4 (DCAA) 2/17/00 19:04
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C128

Comment: 1076-20-02 - Run 4 (TCAA) 2/17/00 19:07
Original value (CoefA0) = 0 New value = -0.0732
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D128

Comment: 1076-20-02 - Run 4 (TCAA) 2/17/00 19:07
Original value (CoefAf) = 0 New value = 2.1289
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E128

Comment: 1076-20-02 - Run 4 (TCAA) 2/17/00 19:07
Original value (CoefB) = 0 New value = 7000.0002
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F128

Comment: 1076-20-02 - Run 4 (TCAA) 2/17/00 19:07
Original value (CoefD) = 0 New value = 0.0594
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J128

Comment: 1076-20-02 - Run 4 (TCAA) 2/17/00 19:07
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C137

Comment: 1076-20-03 - Run 6 (CHBr3) 2/17/00 19:15
Original value (CoefA0) = -2.7772 New value = -0.5591

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

Cell: D137

Comment: 1076-20-03 - Run 6 (CHBr3) 2/17/00 19:15

Original value (CoefAf) = 8.775 New value = 5.7135

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

Cell: E137

Comment: 1076-20-03 - Run 6 (CHBr3) 2/17/00 19:15

Original value (CoefB) = 4.8972 New value = 15.5507

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

Cell: F137

Comment: 1076-20-03 - Run 6 (CHBr3) 2/17/00 19:15

Original value (CoefD) = 0.0295 New value = 0.0427

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

Cell: J137

Comment: 1076-20-03 - Run 6 (CHBr3) 2/17/00 19:15

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: C138

Comment: 1076-20-03 - Run 6 (CHCl3) 2/17/00 19:13

Original value (CoefA0) = 0 New value = -0.2219

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

Cell: D138

Comment: 1076-20-03 - Run 6 (CHCl3) 2/17/00 19:13

Original value (CoefAf) = 0 New value = 4.2107

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

Cell: E138

Comment: 1076-20-03 - Run 6 (CHCl3) 2/17/00 19:13

Original value (CoefB) = 0 New value = 80.8176

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

Cell: F138

Comment: 1076-20-03 - Run 6 (CHCl3) 2/17/00 19:13

Original value (CoefD) = 0 New value = 0.0245

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

Cell: J138

Comment: 1076-20-03 - Run 6 (CHCl3) 2/17/00 19:13

Original value (S) = 0 New value = 0

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

Cell: C142

Comment: 1076-20-03 - Run 6 (DCAA) 2/17/00 19:14

Original value (CoefA0) = 0 New value = -0.2837

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

Cell: D142

Comment: 1076-20-03 - Run 6 (DCAA) 2/17/00 19:14
Original value (CoefAf) = 0 New value = 5.099
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E142

Comment: 1076-20-03 - Run 6 (DCAA) 2/17/00 19:14
Original value (CoefB) = 0 New value = 80.9263
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F142

Comment: 1076-20-03 - Run 6 (DCAA) 2/17/00 19:14
Original value (CoefD) = 0 New value = 0.0229
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J142

Comment: 1076-20-03 - Run 6 (DCAA) 2/17/00 19:14
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C150

Comment: 1076-20-03 - Run 6 (TCAA) 2/17/00 16:50
Original value (CoefA0) = 0 New value = 1.425
Fewer than 6 points above MRL. Step function applied.

Cell: D150

Comment: 1076-20-03 - Run 6 (TCAA) 2/17/00 16:50
Original value (CoefAf) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: E150

Comment: 1076-20-03 - Run 6 (TCAA) 2/17/00 16:50
Original value (CoefB) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: F150

Comment: 1076-20-03 - Run 6 (TCAA) 2/17/00 16:50
Original value (CoefD) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: J150

Comment: 1076-20-03 - Run 6 (TCAA) 2/17/00 16:50
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: K150

Comment: 1076-20-03 - Run 6 (TCAA) 2/17/00 16:50
Original value (t0) = 0 New value = 199.4286
Fewer than 6 points above MRL. Step function applied.

Cell: C154

Comment: 1076-20-03 - Run 6 (TSUVA) 2/17/00 19:12
Original value (CoefA0) = -1.1534 New value = -0.5151
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: D154

Comment: 1076-20-03 - Run 6 (TSUVA) 2/17/00 19:12
Original value (CoefAf) = 3.4603 New value = 4.7346
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: E154

Comment: 1076-20-03 - Run 6 (TSUVA) 2/17/00 19:12
Original value (CoefB) = 1.2021 New value = 2.7126
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: F154

Comment: 1076-20-03 - Run 6 (TSUVA) 2/17/00 19:12
Original value (CoefD) = 0.0094 New value = 0.0028
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: J154

Comment: 1076-20-03 - Run 6 (TSUVA) 2/17/00 19:12
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: 1076-20-04 - Run 8 (DCAA) 2/17/00 19:23
Original value (CoefA0) = 0 New value = -0.244
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: D164

Comment: 1076-20-04 - Run 8 (DCAA) 2/17/00 19:23
Original value (CoefAf) = 0 New value = 6.2845
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: E164

Comment: 1076-20-04 - Run 8 (DCAA) 2/17/00 19:23
Original value (CoefB) = 0 New value = 172.9674
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: F164

Comment: 1076-20-04 - Run 8 (DCAA) 2/17/00 19:23
Original value (CoefD) = 0 New value = 0.0286
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: J164

Comment: 1076-20-04 - Run 8 (DCAA) 2/17/00 19:23
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Logistic function (type 1) applied.

Cell: C172

Comment: 1076-20-04 - Run 8 (TCAA) 2/17/00 16:53

Original value (CoefA0) = 0 New value = 1.475
Fewer than 6 points above MRL. Step function applied.

Cell: D172

Comment: 1076-20-04 - Run 8 (TCAA) 2/17/00 16:53
Original value (CoefAf) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: E172

Comment: 1076-20-04 - Run 8 (TCAA) 2/17/00 16:53
Original value (CoefB) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: F172

Comment: 1076-20-04 - Run 8 (TCAA) 2/17/00 16:53
Original value (CoefD) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: J172

Comment: 1076-20-04 - Run 8 (TCAA) 2/17/00 16:53
Original value (S) = 0 New value = 0
Fewer than 6 points above MRL. Step function applied.

Cell: K172

Comment: 1076-20-04 - Run 8 (TCAA) 2/17/00 16:53
Original value (t0) = 0 New value = 172.3972
Fewer than 6 points above MRL. Step function applied.

Cell: C176

Comment: 1076-20-04 - Run 8 (TSUVA) 2/17/00 19:22
Original value (CoefA0) = -0.7643 New value = -0.0629
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: D176

Comment: 1076-20-04 - Run 8 (TSUVA) 2/17/00 19:22
Original value (CoefAf) = 1.8332 New value = 1.1196
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: E176

Comment: 1076-20-04 - Run 8 (TSUVA) 2/17/00 19:22
Original value (CoefB) = 1.4074 New value = 15.189
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: F176

Comment: 1076-20-04 - Run 8 (TSUVA) 2/17/00 19:22
Original value (CoefD) = 0.0638 New value = 0.1193
Peak curve fit with S = 0. Refit to type 1 curve fit by iterative curve fit procedure.

Cell: J176

Comment: 1076-20-04 - Run 8 (TSUVA) 2/17/00 19:22
Original value (S) = 0 New value = 0

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

ICR Information

ID / ICR#: TX1550008 / 639
 ICR Contact: Mr. Mike Jones
 Phone No.: (254) 299-2401
 Period: 4/17/98 - 5/17/98 (30 B-S days)

Design Information

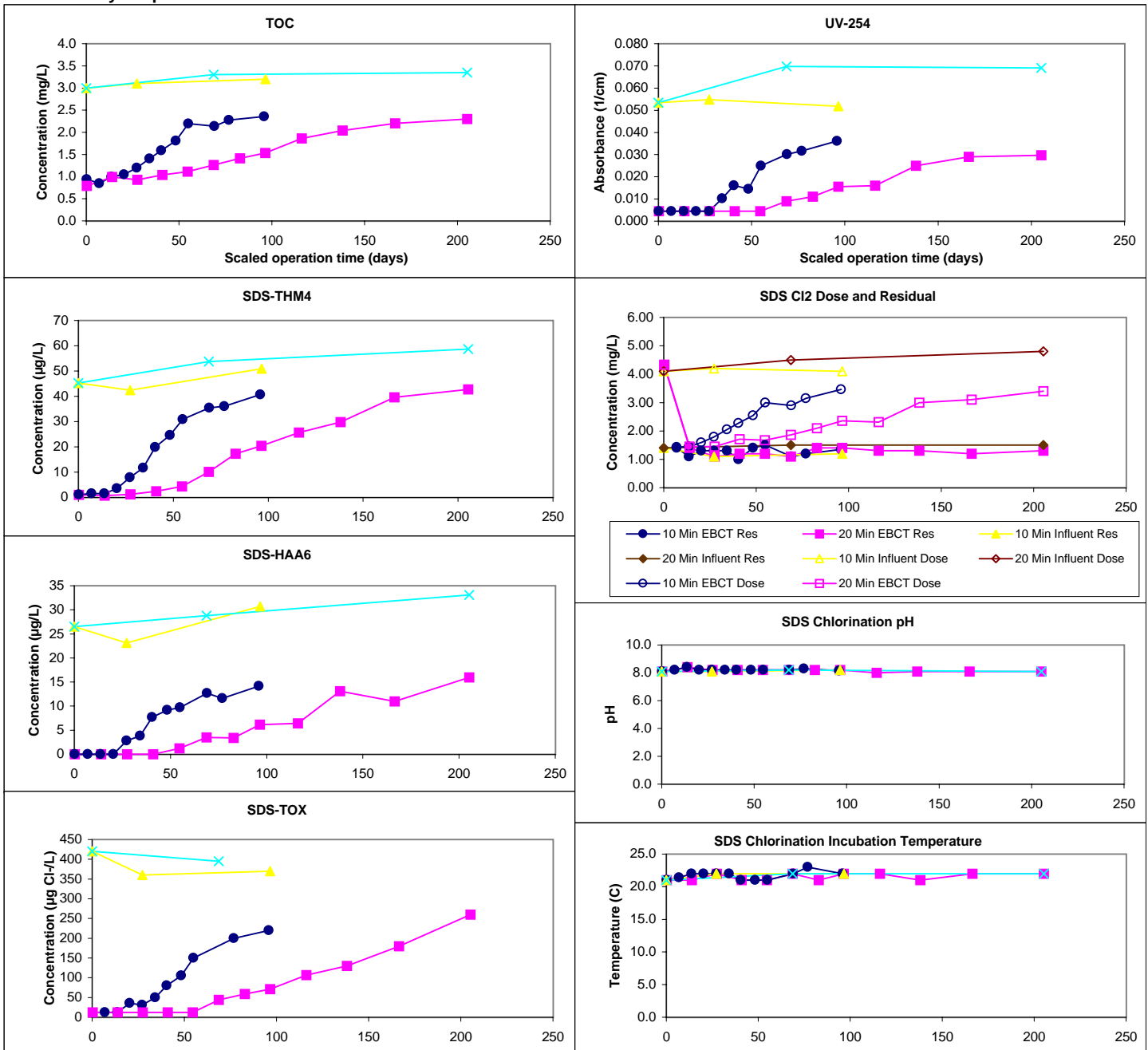
Design TOC: 3.3 mg/L
 Col Diameter: 10.0 mm
 Min Reynolds#: 0.50
 Full-Scale Temp: 23.0 C

Full-Scale GAC Size: 12x40 Bituminous Co
 Bench-Scale GAC Size: 80x120
 Scaling Factor: 6.90
 Meas Dry Bed Density: 0.50 g/cm3

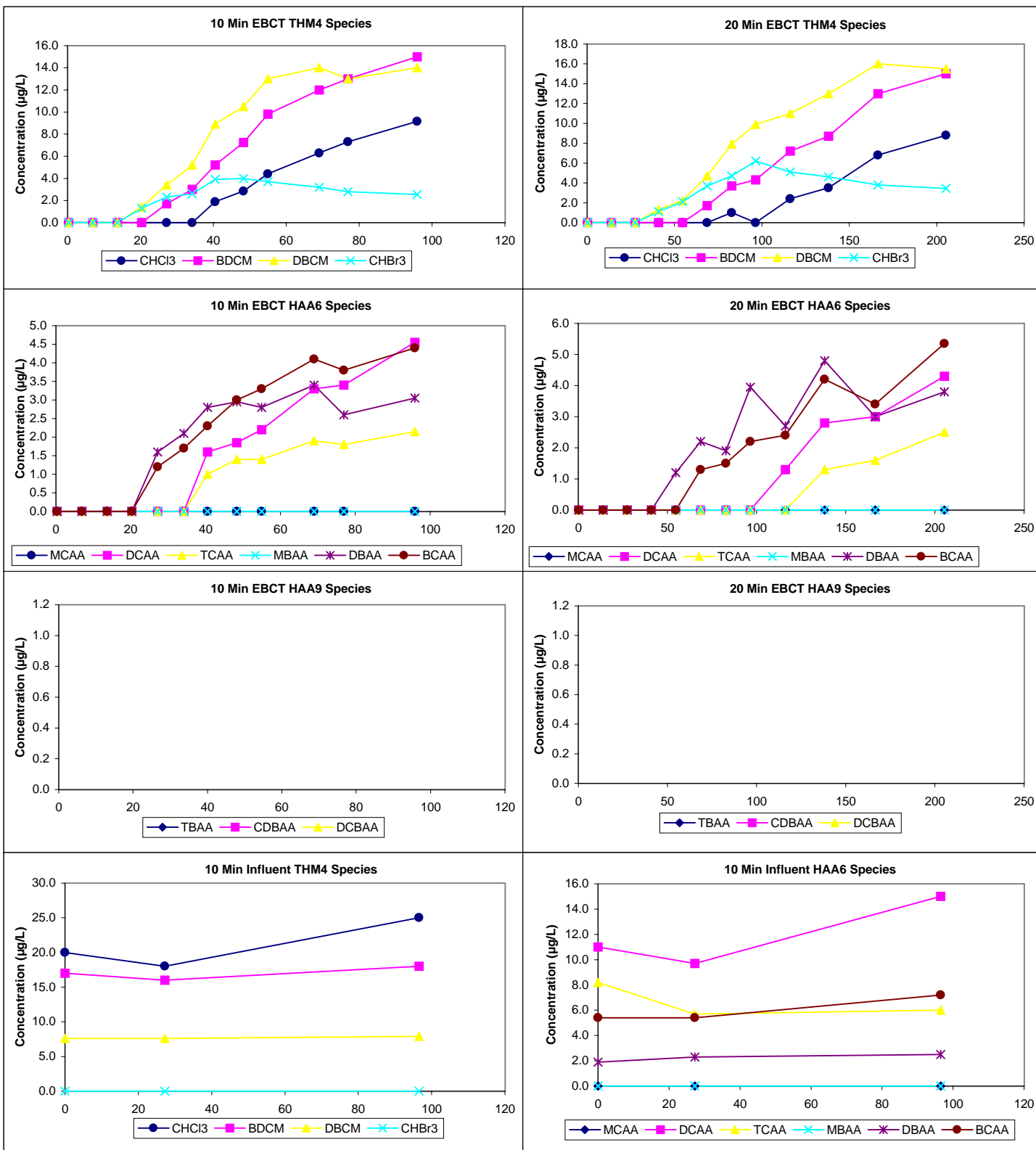
Water Quality Summary

Influent	10 Min Influent				20 Min Influent				<div>Res (0) Mean SD Count Min/Max</div> <div>Temp 1.39 0.58 29 1.00 - 4.30</div> <div>pH 21.6 0.6 30 21.0 - 23.0</div> <div>pH 8.2 0.1 30 8.0 - 8.4</div> <div>Time 3.0 0.0 30 3.0 - 3.0</div> <div>Comments:</div>				
	Mean	SD/RD	Count	Min/Max	Mean	SD/RD	Count	Min/Max					
TOC	3.1	0.1	3	3.0 - 3.2	3.2	0.2	3	3.0 - 3.4					
pH	8.0	0.1	3	7.9 - 8.1	7.9	0.2	3	7.7 - 8.0					
UV254	0.053	0.002	3	0.052 - 0.055	0.064	0.009	3	0.053 - 0.070					
SUVA	1.72	0.09	3	1.62 - 1.78	1.99	0.18	3	1.78 - 2.12					
Bromide	127	47	2	103 - 150	127	47	2	103 - 150					
SDS-TOX	383	32	3	360 - 420	408	25	2	395 - 420					
SDS-THM4	46	4	3	42 - 51	53	7	3	45 - 59					
SDS-HAA6	27	4	3	23 - 31	29	3	3	27 - 33					
Effluent	10 Min EBCT (14 B-S days)				20 Min EBCT (30 B-S days)				<div>Chart Legend:</div> <div><div><div></div>10 Min EBCT</div><div><div></div>20 Min EBCT</div><div><div></div>10 Min Influent</div><div><div></div>20 Min Influent</div></div>				
Effluent pH	8.2	0.1	12	8.1 - 8.4	8.2	0.1	12	8.1 - 8.4					
Effluent Temp	22.7	1.0	12	21.1 - 24.0	22.9	0.8	12	21.1 - 24.0					

Water Quality Graphs



Water Quality Graphs (Continued)



ICR Information

ID / ICR#: TX1550008 / 639
 ICR Contact: Mr. Mike Jones
 Phone No.: (254) 299-2401
 Period: 8/5/98 - 9/2/98 (28 B-S days)

Design Information

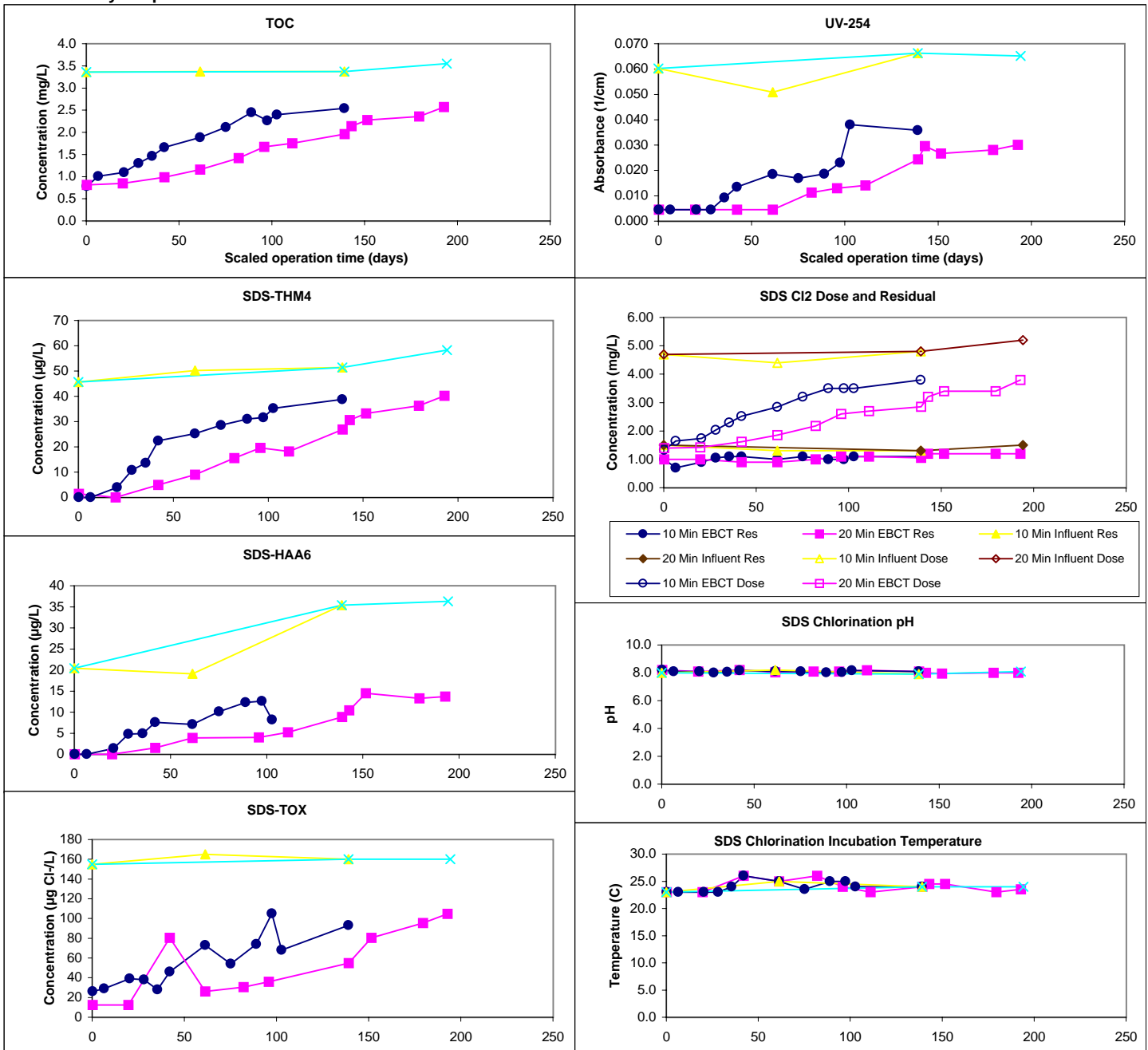
Design TOC: 3.4 mg/L
 Col Diameter: 10.0 mm
 Min Reynolds#: 0.50
 Full-Scale Temp: 29.0 C

Full-Scale GAC Size: 12x40 Bituminous Co
 Bench-Scale GAC Size: 80x120
 Scaling Factor: 6.90
 Meas Dry Bed Density: 0.50 g/cm3

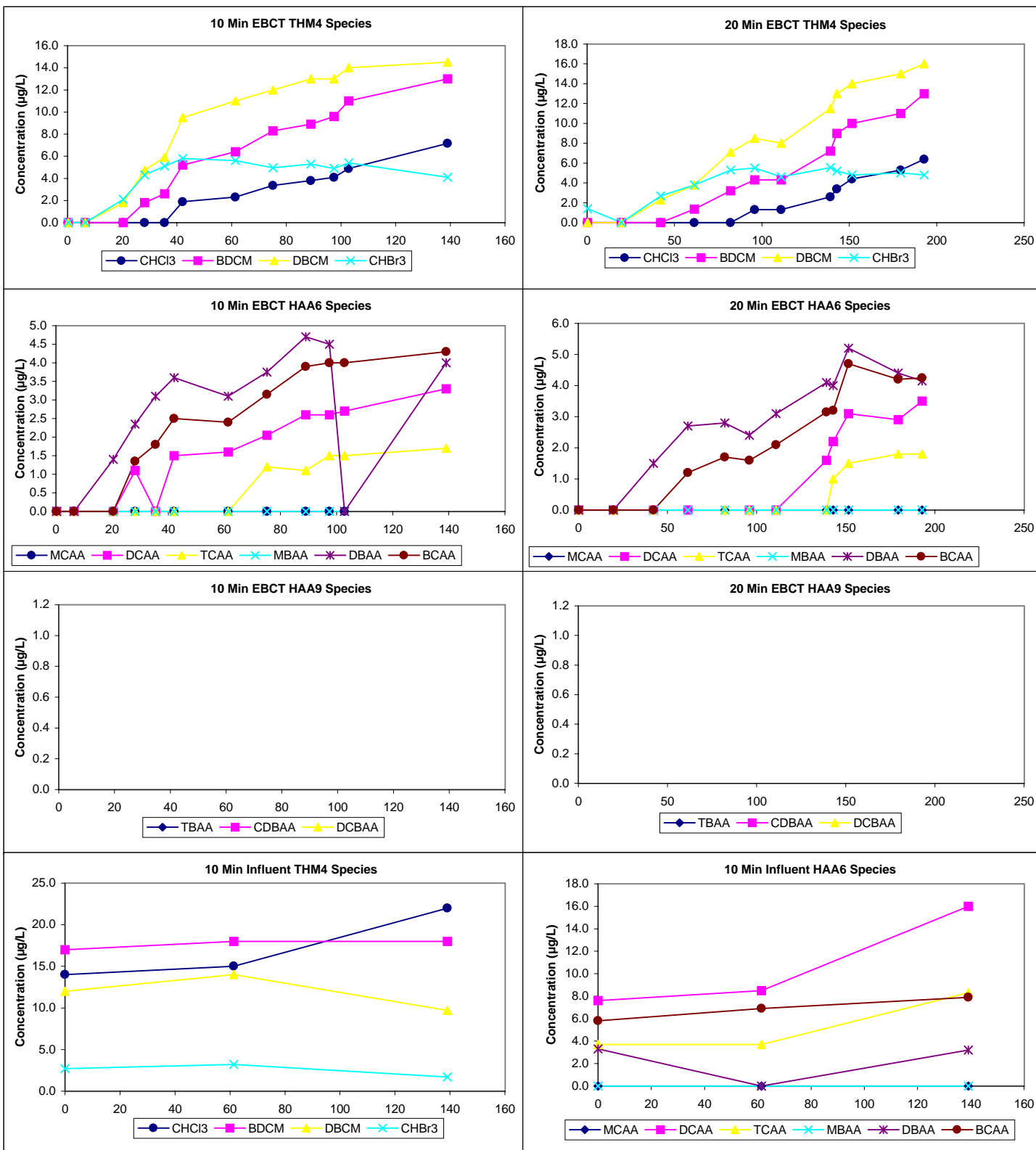
Water Quality Summary

Influent	10 Min Influent				20 Min Influent								
	Mean	SD/RD	Count	Min/Max	Mean	SD/RD	Count	Min/Max		Mean	SD	Count	Min/Max
TOC	3.4	0.0	3	3.4 - 3.4	3.4	0.1	3	3.4 - 3.6	Res (0)	1.11	0.18	30	0.70 - 1.50
pH	8.0	0.1	3	7.9 - 8.1	8.0	0.0	3	7.9 - 8.0	Temp	24.0	1.0	30	23.0 - 26.0
UV254	0.059	0.008	3	0.051 - 0.066	0.064	0.003	3	0.060 - 0.066	pH	8.1	0.1	30	7.9 - 8.2
SUVA	1.76	0.23	3	1.51 - 1.97	1.87	0.09	3	1.79 - 1.97	Time	3.0	0.0	30	3.0 - 3.0
Bromide	143	7	2	139 - 146	130	32	2	114 - 146	Comments:				
SDS-TOX	160	5	3	155 - 165	158	3	3	155 - 160					
SDS-THM4	49	3	3	46 - 51	52	6	3	46 - 58					
SDS-HAA6	25	9	3	19 - 35	31	9	3	20 - 36					
Effluent	10 Min EBCT (20 B-S days)				20 Min EBCT (28 B-S days)				Chart Legend:				
Effluent pH	8.0	0.1	12	7.9 - 8.2	8.0	0.1	12	7.9 - 8.2					
Effluent Temp	23.8	0.9	12	22.0 - 25.0	24.1	0.8	12	23.0 - 25.0					

Water Quality Graphs



Water Quality Graphs (Continued)



ICR Information

ID / ICR#: TX1550008 / 639
 ICR Contact: Mr. Mike Jones
 Phone No.: (254) 299-2401
 Period: 10/29/98 - 12/1/98 (33 B-S days)

Design Information

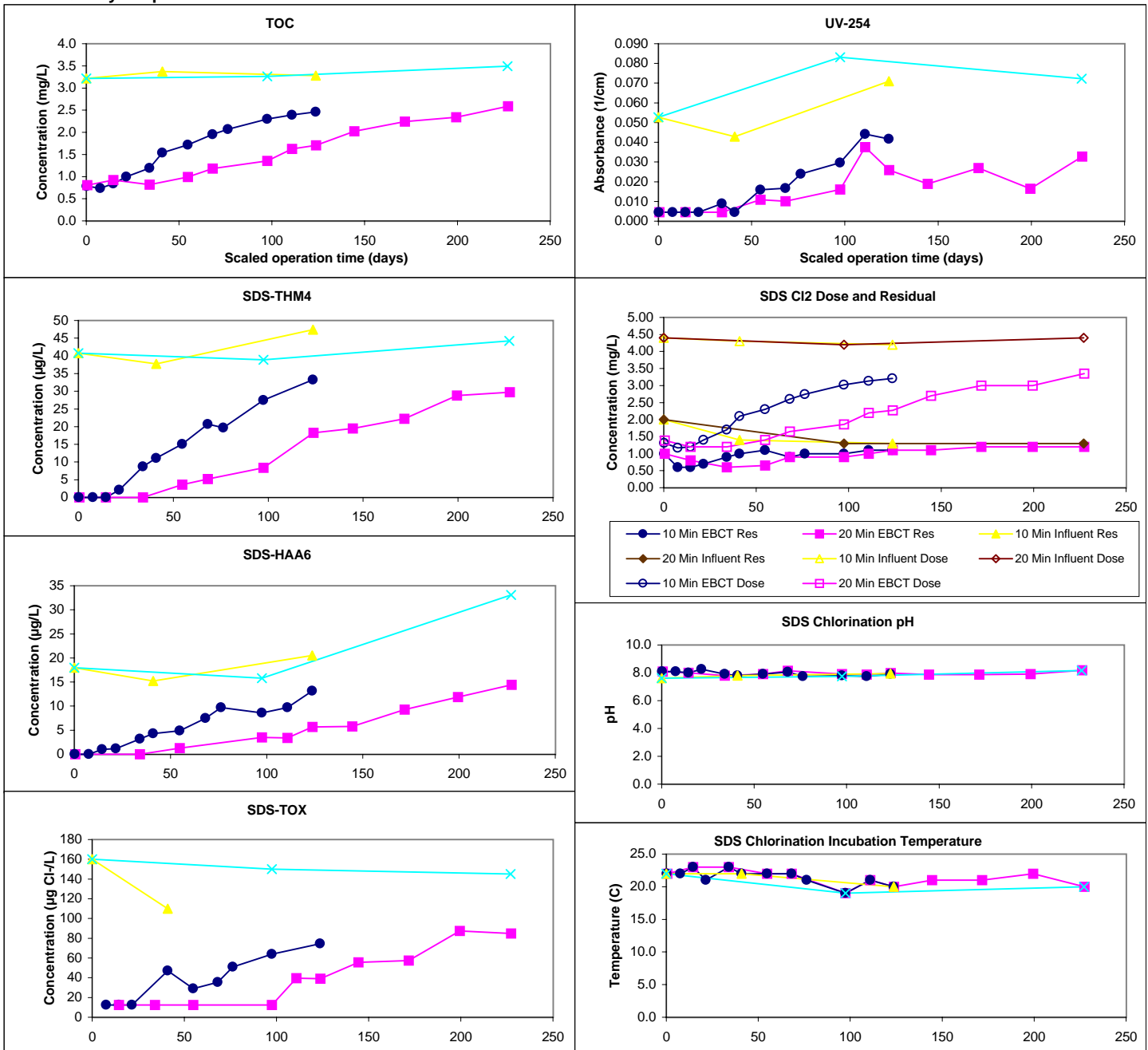
Design TOC: 3.2 mg/L
 Col Diameter: 10.0 mm
 Min Reynolds#: 0.50
 Full-Scale Temp: 21.0 C

Full-Scale GAC Size: 12x40 Bituminous Co
 Bench-Scale GAC Size: 80x120
 Scaling Factor: 6.90
 Meas Dry Bed Density: 0.50 g/cm3

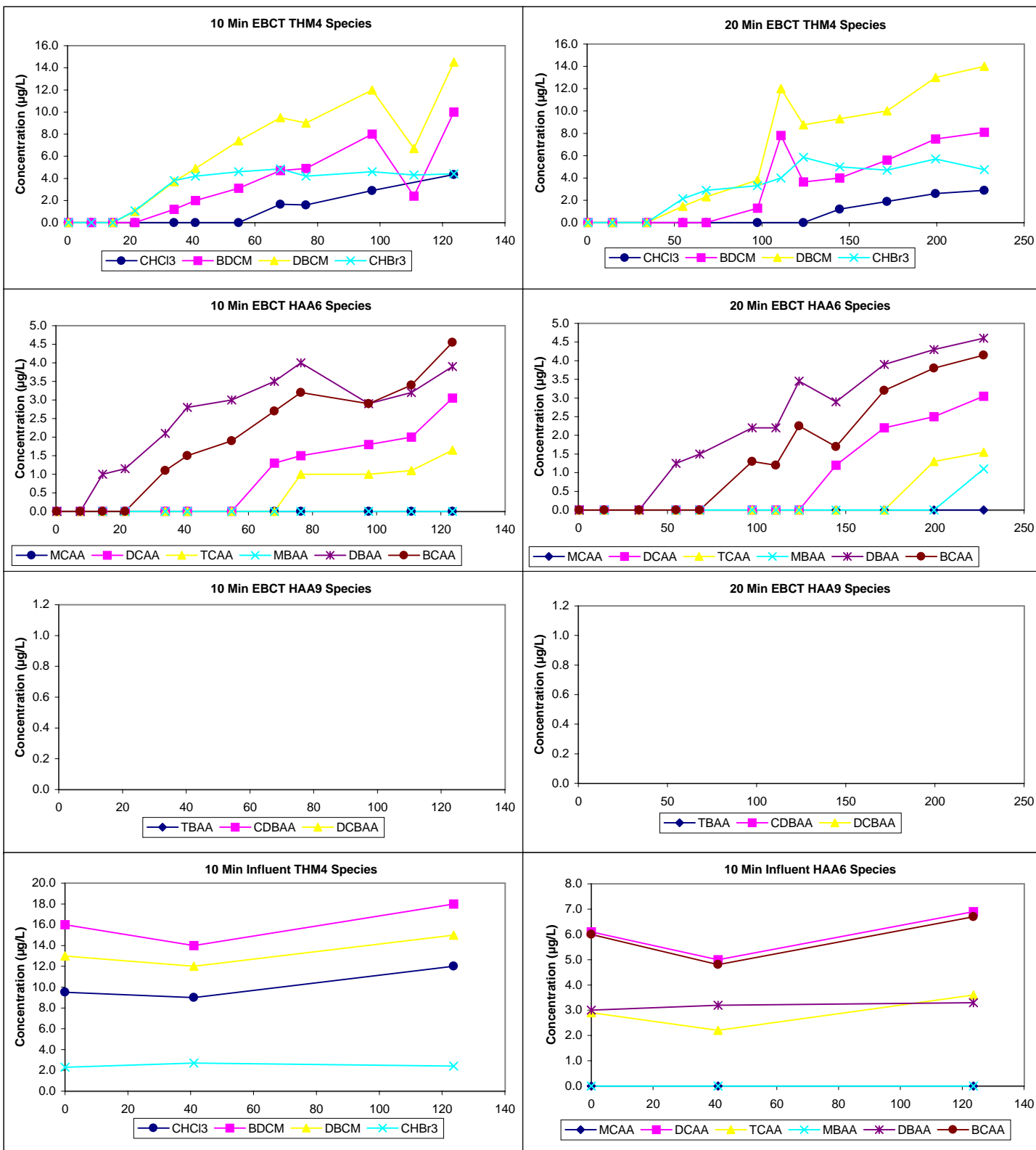
Water Quality Summary

Influent	10 Min Influent				20 Min Influent								
	Mean	SD/RD	Count	Min/Max	Mean	SD/RD	Count	Min/Max		Mean	SD	Count	Min/Max
TOC	3.3	0.1	3	3.2 - 3.4	3.3	0.1	3	3.2 - 3.5	Res (0)	1.07	0.33	30	0.60 - 2.00
pH	7.8	0.1	3	7.6 - 7.9	7.8	0.1	3	7.6 - 7.9	Temp	21.3	1.2	30	19.0 - 23.0
UV254	0.055	0.014	3	0.043 - 0.071	0.069	0.015	3	0.053 - 0.083	pH	7.9	0.2	30	7.6 - 8.3
SUVA	1.69	0.45	3	1.27 - 2.16	2.09	0.46	3	1.64 - 2.55	Time	3.0	0.0	30	3.0 - 3.0
Bromide	115	3	2	113 - 116	114	2	2	113 - 115	Comments:				
SDS-TOX	135	50	2	110 - 160	152	8	3	145 - 160					
SDS-THM4	42	5	3	38 - 47	41	3	3	39 - 44					
SDS-HAA6	18	3	3	15 - 21	22	9	3	16 - 33					
Effluent	10 Min EBCT (18 B-S days)				20 Min EBCT (33 B-S days)				Chart Legend:				
Effluent pH	8.0	0.1	12	7.8 - 8.2	8.0	0.1	12	7.8 - 8.2					
Effluent Temp	23.0	0.8	12	22.0 - 24.0	23.0	0.8	12	22.0 - 24.0					

Water Quality Graphs



Water Quality Graphs (Continued)



ICR Information

ID / ICR#: TX 1550008 / 639
 ICR Contact: Mr. Mike Jones
 Phone No.: (254)2992401
 Period: 2/3/99 - 3/4/99 (29 B-S days)

Design Information

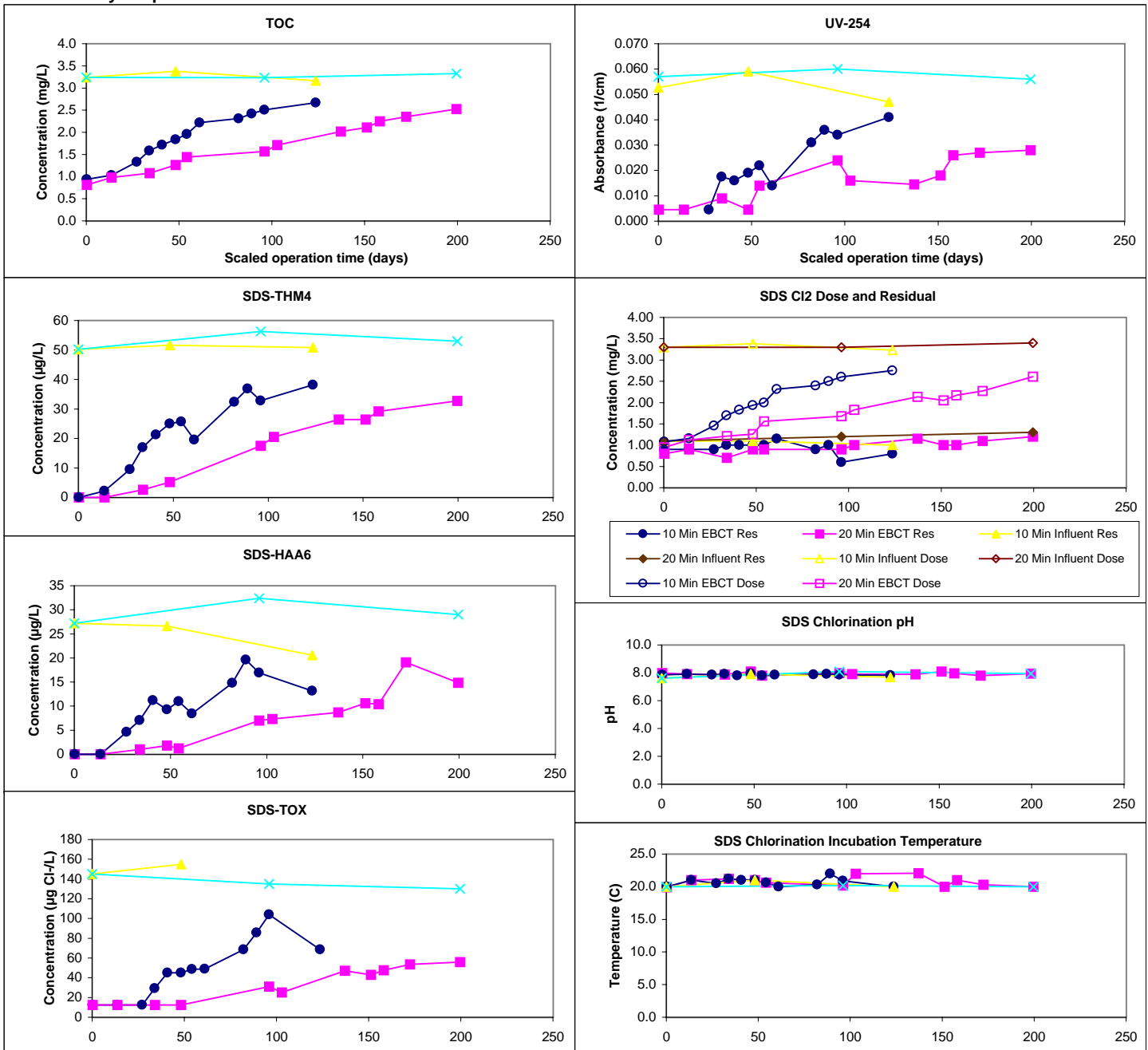
Design TOC: 3.5 mg/L
 Col Diameter: 10.0 mm
 Min Reynolds#: 0.50
 Full-Scale Temp: 19.0 C

Full-Scale GAC Size: 12x40 Bituminous Co
 Bench-Scale GAC Size: 80x120
 Scaling Factor: 6.90
 Meas Dry Bed Density: 0.50 g/cm3

Water Quality Summary

Influent	10 Min Influent				20 Min Influent				<div>Res (0) Mean SD Count Min/Max</div> <div>Temp 0.98 0.15 30 0.60 - 1.30</div> <div>pH 20.6 0.6 30 19.9 - 22.1</div> <div>pH 7.9 0.1 30 7.6 - 8.1</div> <div>Time 8.0 0.0 30 8.0 - 8.0</div> <div>Comments:</div> <div><div>Chart Legend:</div><div><div><div></div>10 Min EBCT</div><div><div></div>20 Min EBCT</div><div><div></div>10 Min Influent</div><div><div></div>20 Min Influent</div></div></div>				
	Mean	SD/RD	Count	Min/Max	Mean	SD/RD	Count	Min/Max					
TOC	3.3	0.1	3	3.2 - 3.4	3.3	0.1	3	3.2 - 3.3					
pH	7.6	0.1	3	7.5 - 7.7	7.8	0.3	3	7.6 - 8.2					
UV254	0.053	0.006	3	0.047 - 0.059	0.058	0.002	3	0.056 - 0.060					
SUVA	1.62	0.13	3	1.49 - 1.75	1.77	0.09	3	1.68 - 1.86					
Bromide	141	19	2	131 - 150	142	21	2	131 - 152					
SDS-TOX	150	10	2	145 - 155	137	8	3	130 - 145					
SDS-THM4	51	1	3	50 - 52	53	3	3	50 - 56					
SDS-HAA6	25	4	3	21 - 27	30	3	3	27 - 32					
Effluent	10 Min EBCT (18 B-S days)				20 Min EBCT (29 B-S days)				<div>Chart Legend:</div> <div><div><div></div>10 Min EBCT</div><div><div></div>20 Min EBCT</div><div><div></div>10 Min Influent</div><div><div></div>20 Min Influent</div></div>				
Effluent pH	7.9	0.1	12	7.8 - 8.1	8.0	0.1	12	7.8 - 8.1					
Effluent Temp	23.1	0.8	12	22.3 - 25.0	22.9	1.0	12	21.5 - 25.1					

Water Quality Graphs



Water Quality Graphs (Continued)

