

ICR Treatment Study Summary Report

Miami-Dade Water and Sewer Department

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Evaluation of Granular Activated Carbon Adsorption of Disinfection Byproduct Precursors for Compliance with the Information Collection Rule

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Attachments: 1 compact disc containing *Data Collection Spreadsheet*, *Treatment Study Summary Report Spreadsheet*, this report in portable document format (PDF), and laboratory reports listing all analytical results and QC data

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3

List of Abbreviations

3 List of Abbreviations

°C	degrees Celsius
µg	microgram
µL	microliter
µm	micrometer
A_0	logistic function parameter
A_f	logistic function parameter
B	logistic function parameter
BCAA	bromochloroacetic acid
BDCM	bromodichloromethane
BMRL	below minimum reporting level
BV	bed volume
BV ₅₀	bed volumes to 50 percent TOC breakthrough
C	concentration
\bar{C}	blended effluent concentration
C1	larger of two observed values for RPD calculation
C2	smaller of two observed values for RPD calculation
CCC	continuing calibration check
CCI	construction cost index
CDBAA	chlorodibromoacetic acid
CHBr ₃	bromoform
CHCl ₃	chloroform
Cl ⁻	chloride
CLD	chlorine demand
cm	centimeter
cu	cubic
CUR	carbon usage rate
D	column inner diameter
d	day
d	diameter
D	logistic function parameter
DBAA	dibromoacetic acid
DBCM	dibromochloromethane
DBP	disinfection byproduct
DCAA	dichloroacetic acid
DCBAA	dichlorobromoacetic acid
DS	distribution system
EBCT	empty-bed contact time
EPA	Environmental Protection Agency
ft	feet
g	gram
GAC	granular activated carbon
gal	gallon
gpm	gallons per minute

HAA	haloacetic acid
HAA5	sum of five haloacetic acids: MCAA, DCAA, TCAA, MBAA, DBAA
HAA6	sum of five haloacetic acids: MCAA, DCAA, TCAA, MBAA, DBAA, BCAA
HAA9	sum of five haloacetic acids: MCAA, DCAA, TCAA, MBAA, DBAA, BCAA, DCBAA, CDBAA, TBAA
hr	hour
<i>i</i>	individual contactor
ICR	Information Collection Rule
in	inch
inf	influent
l	bed length
L	liter
LC	large column
m	mass
max	maximum
MBAA	monobromoacetic acid
MCAA	monochloroacetic acid
MCL	maximum contaminant level
mg	milligram
MGD	million gallons per day
min	minimum
min	minute
mL	milliliter
mm	millimeter
MRL	minimum reporting level
MtBE	methyl tert-butyl ether
<i>n</i>	number of contactors
NA	not applicable
NA	not analyzed
NA _p	not applicable
NA _v	not available
ntu	nephelometric turbidity unit
O&M	operations and maintenance
p	particle
PE	performance evaluation
PPI	Producers Price Index
Q	flow rate
QA/QC	quality assurance/quality control
Re	Reynold's number
RPD	relative percent difference
RSSCT	rapid small-scale column test
sc	small column
SDS	simulated distribution system
sec	second
SF	scaling factor
SM	<i>Standard Methods</i>

SUVA	specific ultraviolet absorbance
t	time
T	total
TBAA	tribromoacetic acid
TCAA	trichloroacetic acid
THM	trihalomethane
THM4	sum of four trihalomethanes: CHCl_3 , BDCM, DBCM, and CHBr_3
TOC	total organic carbon
TOC_0	influent total organic carbon
TOX	total organic halide
TSUVA	total specific ultraviolet absorbance
UV	ultraviolet absorbance
UV_{254}	ultraviolet absorbance at 254 nm
ϵ	bed porosity
ν	kinematic viscosity
ρ	density

4

Conclusions and Recommendations

4 Conclusions and Recommendations

As required by the Information Collection Rule (ICR), a treatment study was conducted by Summers & Hooper, Inc. (S&H) to evaluate the removal of disinfection byproduct (DBP) precursors by granular activated carbon (GAC) for the Alexander Orr Water Treatment Plant, operated by the Miami-Dade Water and Sewer Department. The rapid small-scale column test (RSSCT) was utilized as the bench-scale method to simulate full-scale GAC performance. The treatment study was performed off-site at S&H's laboratory facilities in Cincinnati, Ohio. It was designed and conducted as required by section 141.141(3) of the ICR, published in the May 14, 1996 Federal Register. A bituminous coal-based GAC, F-400, manufactured by Calgon Carbon Corporation was investigated. DBP formation by disinfection with free chlorine was simulated by utilizing site-specific chlorination conditions designed to match distribution system conditions. The procedures followed were those contained in the *GAC Precursor Removal Studies* section of the *ICR Manual for Bench- and Pilot-Scale Treatment Studies* (USEPA, 1996a), and all analyses were conducted following approved methods and as required by the *ICR/DBP Analytical Methods Manual* (USEPA, 1996b).

An electronic deliverable is included as an attachment to this report. It includes: this report in portable document format (PDF) along with all data analyzed during this treatment study and all required QA/QC information; the *ICR Treatment Studies Data Collection Spreadsheets*, with all data input as required by EPA; and the *Treatment Study Summary Report Spreadsheet*, with all data input as required by EPA.

The source water to the Alexander Orr Water Treatment Plant is the Biscayne Aquifer, a groundwater. Because the source water is not impacted by seasonal variations in water quality, an evaluation of seasonal variability was not required. Instead, GAC optimization studies were performed by evaluating a range of empty-bed contact times (EBCTs) and influent pH levels.

Five EBCTs were evaluated, ranging from 5.0 to 20 minutes. The Alexander Orr Water Treatment Plant is a softening plant, and the softened water pH after recarbonation is typically 9.2. This pH level was maintained in the influent water to the RSSCTs simulating the range of EBCTs. In addition, a pH study was conducted, to determine whether increasing recarbonation to pH levels of 8.7 and 8.2 would improve GAC performance.

Based on complying with the placeholders for Stage 2 DBP maximum contaminant levels (MCLs), the formation of total trihalomethane (THM4) was the controlling parameter for GAC run time estimates. The study showed that with GAC adsorption, the system will easily comply with the placeholder for Stage 2 sum of five haloacetic acids (HAA5) MCL. All run times given reflect meeting the Stage 1 MCLs for THM4 and HAA5 with a 20 percent safety factor (64 and 48 µg/L, respectively) or the placeholder for Stage 2 MCLs for THM4 and HAA5 with a 20 percent safety factor (32 and 24 µg/L, respectively). All chlorination was conducted at pH 9.1, a relatively high pH, which likely favored the base-catalyzed formation of THMs.

Based on an EPA cost model, the cost for GAC to maintain simulated distribution system (SDS) DBP levels below the placeholders for Stage 2 MCLs using concrete gravity contactors was estimated as low as 25 cents/1,000 gallons for a 10 minute EBCT contactor with influent pH

adjustment to 8.2, assuming operation in parallel staggered mode. Without pH adjustment below 9.2, the most cost-effective system is either a 10 or 20 minute EBCT concrete gravity contactor, with costs of 30 and 27 cents/1,000 gallons, respectively. Overall, cost estimates for steel pressure contactors averaged 16 percent higher than concrete gravity contactors. The cost estimates do not include the cost of further pH adjustment (recarbonation) from pH 9.2 to 8.7 and 8.2. By meeting the placeholder for Stage 2 THM4 (with a 20 percent safety factor), the system will be in compliance with the placeholder for Stage 2 HAA5 MCL (with a 20 percent safety factor).

Based on the average influent total organic carbon (TOC) concentration of 4.0 mg/L and pH of 9.2, the contactor operation time measured as bed volumes to 50 percent TOC breakthrough (BV_{50}) was lower than that predicted for systems operating in the pH range of 7 to 8. For the 5.0 minute EBCT contactor, BV_{50} was 52 percent lower than that predicted, and for the 10, 12.5, 15, and 20 minute EBCT contactors, BV_{50} averaged 31 percent lower than predicted. Decreasing the influent pH improved BV_{50} values from 41 percent below that predicted for an influent pH 9.2 or 8.7, to 20 percent below that predicted, for an influent pH 8.2.

A normalized breakthrough evaluation (effluent fraction breakthrough) showed that TOC usually served as a conservative indicator for the breakthrough of SDS-HAA, while SDS-THM4 breakthrough was usually very well matched by TOC breakthrough. At times during most runs, normalized SDS-THM4 breakthrough exceeded normalized TOC breakthrough. Ultraviolet absorbance at 254 nm (UV_{254}) served as an excellent predictor of SDS total organic halide (TOX) breakthrough.

Overall, SDS-DBP formation was well-controlled by GAC, given sufficient contact time. For a 5.0 minute EBCT contactor, the run time to the placeholder for Stage 2 THM4 MCL (with a 20 percent safety factor) was only 6 days. Assuming 10 or more contactors operated in parallel and staggered operation, the blended effluent modeled SDS-THM4 allows for each individual 5.0 minute EBCT contactor to be operated for 12 days. Under the blended effluent assumption, run times are increased to 96 days for a 20 minute EBCT contactor. Thus, selection of an appropriate EBCT is important towards maintaining cost-effective adsorption of DBP precursors.

In general, GAC performance can be improved by lowering the influent TOC concentration and the decreasing influent pH. Lower influent TOC concentrations result in less loading on the GAC contactor; reducing the influent pH renders natural organic matter (DBP precursors) less soluble and therefore more adsorbable. Further optimization of the softening process could result in lower TOC concentrations. Although requiring higher chemical costs, GAC run times would be extended, lowering GAC operations and maintenance (O&M) costs. Lowering the influent pH may increase treatment costs due to the costs of pH adjustment before (and possibly after) GAC adsorption. However, this may be offset by cost savings due to an increase in GAC run time: the influent pH study showed that run times could be increased by 53 percent by decreasing the GAC influent pH from 9.2 to 8.2, for a 10 minute EBCT contactor. Thus, longer reactivation cycles are possible, resulting in an O&M savings. Alternatively, smaller GAC contactors could be constructed, reducing capital costs.

5

Background Information

5 Background Information

5.1 Treatment Plant Description

The Miami-Dade Water and Sewer Department operates the Alexander Orr Water Treatment Plant, a lime softening plant that provides water for a population of 894,400 in Miami, Florida. The state approved plant capacity is 196 MGD and the source water is the Biscayne Aquifer, a ground water.

Figure 1 shows a simple schematic of the Alexander Orr Water Treatment Plant. Single-stage softening is accomplished by the addition of lime (CaOH) and enhanced with activated silica. After the water is recarbonated to pH 9.2, chlorine and ammonia are added. The water is then filtered through rapid sand filters prior to distribution.

5.1.1 Treatment plant design information

Table 1 summarizes the Alexander Orr Water Treatment Plant design data. The data presented is based on data from report A.2 "Design Plant Parameters" and report A.3 "Design Plant Chemical Parameters," of the *ICR Water Utility Database System*.

5.1.2 Treatment challenges facing plant

The principal treatment challenge faced by the Alexander Orr Water Treatment Plant is to reduce hardness, color, and maintain low THM and HAA formation. The groundwater source contains moderately high hardness levels, most of which is calcium hardness, with a small amount of magnesium hardness. Source water TOC and color levels are also moderately high. The plant strives to maintain treated color below 5 color units. The groundwater is not under the influence of surface water, and does not contain coliforms or volatile organic compounds.

5.2 Tabular Summary of Source and Finished Water Quality

Tables 2 and 3 summarize average source and finished water quality, respectively, at the Alexander Orr Water Treatment Plant, based on data taken between July 1997 and December 1998. The data set used was derived from ICR monitoring efforts performed by the Miami-Dade Water and Sewer Department, and has not necessarily undergone EPA QA/QC review. The source water is characterized by moderate TOC and bromide levels, with source water TOC and bromide averaging 4.6 mg/L and 122 µg/L, respectively. The average percent TOC removal by the plant was 12 percent. The source water specific UV absorbance (TSUVA, defined as UV_{254}/TOC) averaged 2.7 L/mg-m. This was reduced to an average of 2.3 L/mg-m after treatment. Other than UV_{254} , source water quality variability was low.

Distribution system formed DBP levels were very low, due to the practice of chloramination at the plant. THM4 (DS-THM4) levels ranged from 20 to 32 µg/L. DS-THM4 levels averaged 26

µg/L, in compliance with the placeholder for Stage 2 MCLs. DS-HAA5 averaged 17 µg/L, in compliance with placeholder for Stage 2 MCLs for HAA5. Like DS-THM4, DS-HAA5 did not show a wide variability in measured concentrations.

Unit Process	Process Description
Washwater Return	Washwater Treated: No 24 Hour Average Water Flow Returned (MGD): 2.9
Solids Contact Clarifier	Clarifier Type: Sludge Blanket Clarifier Type: Upflow Clarifier Brand Name: Dorr Oliver Hydrotreators Surface Area (ft ²): 58,314 Liquid Volume (gal): 8,277,000 Short Circuiting Factor: NA _v Baffling Type: Unbaffled (Mixed tank) Chemical Type: Sodium Silicate Measurement Formula: Na ₂ SiO ₂ Dose Rate (mg/L): 1.50 Chemical Type: Calcium Oxide Measurement Formula: CaO Dose Rate (mg/L): 170
Disinfectant Addition	Chemical Type: CL ₂ Measured as: Cl ₂ Dose Rate (mg/L): 4.0
Disinfectant Addition	Chemical Type: NH ₃ A Measured as: NH ₃ Dose Rate (mg/L): 0.80
Disinfection Contact Basin	Surface Area (ft ²): 34,000 Liquid Volume (gal): 19,500,000 Baffling Type: Poor (Inlet/outlet only) Short Circuiting Factor: NA _v
Filtration	Surface Area (ft ²): 36,864 Liquid Volume (gal): 2,757,000 Total Media Depth (in): 36 Media Type: Dual (Sand/anthracite) Minimum Water Depth To Top of Media (ft): 4.0 Depth From Top of Media to Top of Backwash Trough (ft): 2.5
Clearwell	Surface Area (ft ²): 353,297 Liquid Volume (gal): 40,600,000 Minimum Liquid Volume (gal): 20,000,000 Baffling Type: Superior (Serpentine) Short Circuiting Factor: NA _v

NA_v: not available

Table 1 Summary of treatment plant design data

Water quality parameter	Mean	Standard deviation	Minimum	Maximum	Count
Temperature (°C)	26	2	23	29	16
pH	7.3	0.1	7.1	7.5	16
Alkalinity (mg/L as CaCO ₃)	202	10	186	220	16
Total hardness (mg/L as CaCO ₃)	222	6	212	232	16
Calcium hardness (mg/L as CaCO ₃)	202	6	194	212	16
TOC (mg/L)	4.6	0.6	3.8	5.6	16
UV ₂₅₄ (1/cm)	0.121	0.046	0.088	0.283	16
Bromide (µg/L)	122	23	88	170	16
TSUVA (L/mg-m)	2.7	1.1	2.1	6.7	16

Table 2 Summary of source water quality at the Alexander Orr Water Treatment Plant

Water quality parameter	Mean	Standard deviation	Maximum	Minimum	Count
Temperature (°C)	25	1	23	27	16
pH	9.2	0.2	8.9	9.7	16
Turbidity (ntu)	0.38	0.24	0.13	0.93	16
TOC (mg/L)	4.0	0.5	3.2	5.1	16
UV ₂₅₄ (1/cm)	0.093	0.008	0.080	0.112	16
TSUVA (L/mg-m)	2.3	0.2	2.0	2.8	16
DS-THM4 (µg/L)	26	3	20	32	20
DS-HAA5 (µg/L)	17	5	8	25	20
DS-HAA6 (µg/L)	21	5	11	30	20

DS: distribution system

Table 3 Summary of finished water quality at the Alexander Orr Water Treatment Plant

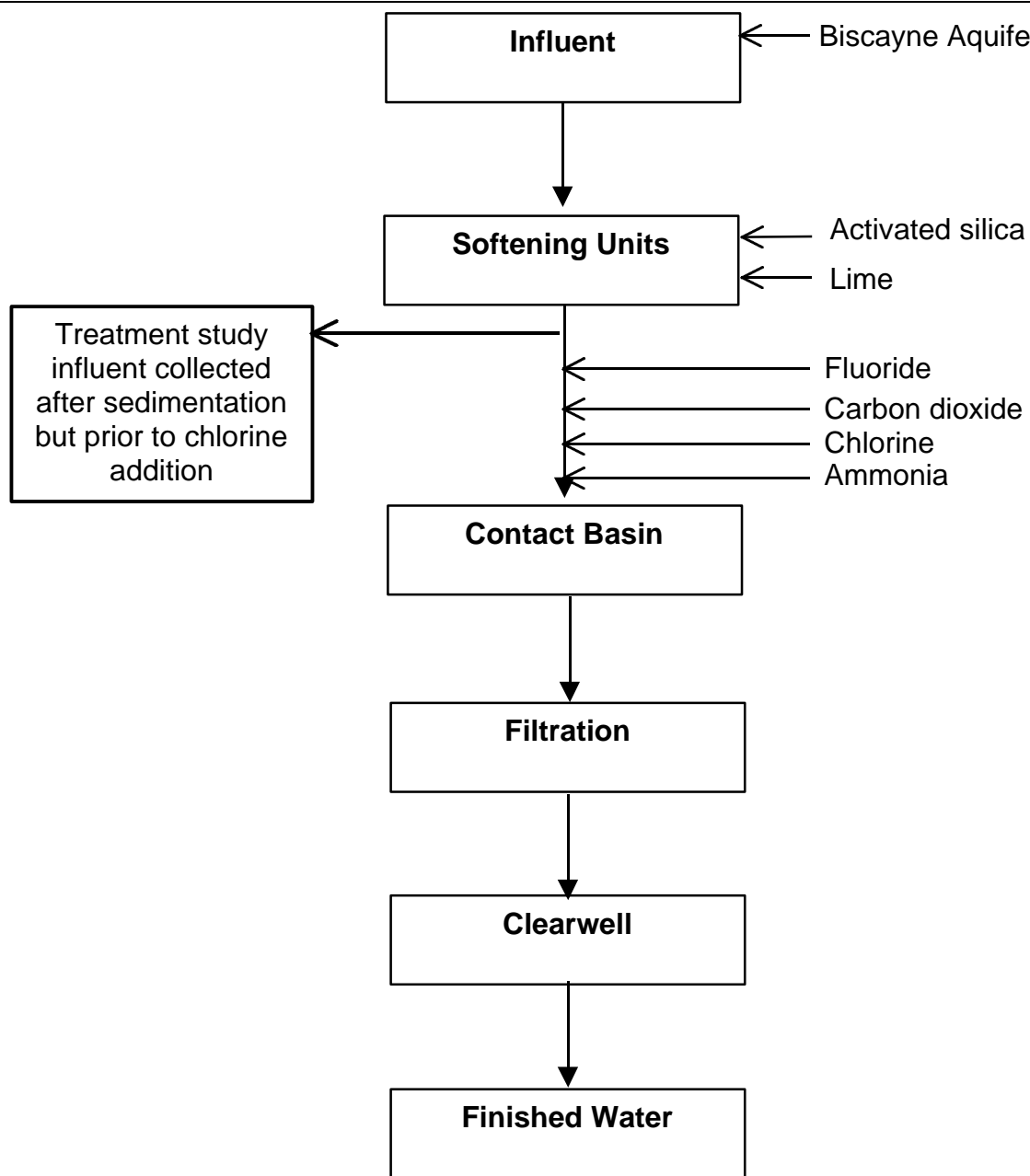


Figure 1 Alexander Orr Water Treatment Plant plant schematic

6

Materials and Methods

6 Materials and Methods

6.1 Treatment Study Influent Sampling Procedures

The treatment study influent water was sampled from the Alexander Orr Water Treatment Plant after full-scale single-stage softening, and prior to recarbonation, disinfectant addition, and filtration. To complete the study, water samples were taken on three occasions, summarized in Table 4.

The water was sampled in 55-gallon drums. The 55-gallon drums were of plastic construction and were extensively cleaned at S&H's laboratory facility prior to use. The cleaning process included three 24-hour soaks with hot water, a basic solution, and an acidic solution. Prior to use, the drums were filled with water and TOC samples taken to ensure that no measurable (as TOC) leaching of organic compounds from the inside surface of the drums was occurring.

The representativeness of treatment study influent water sampled was based on knowledge of plant operations at the time of sampling. Because the source water to the Alexander Orr Water Treatment Plant is a groundwater, little variability in source water quality was expected. For all three sampling sessions the treatment study influent water was shipped the day of sampling. The travel time for the first session was three days, under ambient temperature conditions. Due to the long travel time, a refrigerated carrier was utilized during the second and third sampling periods: the travel time was 4 days, but the drums were maintained at 4°C throughout the entire trip.

To check for significant biodegradation or other changes during shipment, an aliquot of the treatment study influent water was sampled for TOC approximately half way through each sampling event. The sample was immediately preserved. Upon arrival at S&H's laboratory facilities, a second aliquot was obtained for TOC analysis. Both samples were analyzed, and the results are summarized in Table 5.

The settled water TOC concentration before and after shipping did not change by more than 5 percent during any of the three sampling periods. An average 7.5 percent difference was observed between the TOC concentration of the plant filtered water and water after cartridge filtration at S&H's laboratory.

Source water TOC samples were also taken at the time of treatment study influent sampling. The values obtained are also summarized in Table 5. The source water showed an unexpected amount of variability: over the three samples taken, the average source water TOC concentration was 7.8 ± 1.9 mg/L, a relative standard deviation (RSD) of 24 percent. However, the plant settled water TOC concentration was fairly constant, averaging 4.8 ± 0.3 mg/L, a RSD of 6.1 percent.

At the Alexander Orr Water Treatment Plant, chlorine is used as an activation agent in the production of activated silica. It was estimated that an effective chlorine dose of about 1 mg/L was introduced to the water by the use of activated silica. The ICR requires that the treatment study influent sample be taken prior to the addition of oxidants that form halogenated DBPs.

Temporarily stopping the addition of activated silica would have resulted in a less efficient softening process, possibly yielding TOC concentrations 20 to 30 percent higher than normal, which would not have been representative to normal plant operation. Simulating the pretreatment process at the bench-scale level is less desirable, due to the difficulty of generating a representative sample of treated water. Furthermore, activated silica still would not have been used as part of the pretreatment process. Due to these considerations, the activated silica feed was not turned off during treatment study influent sampling. This procedure was discussed with USEPA, and approved, with the additional requirement that monitoring of preformed THMs and HAAs be conducted in the influent to RSSCTs and effluent from one RSSCT during each session. Based on this requirement, sampling for formed THMs and HAAs in the influent and effluent to RSSCTs was performed during all sessions of the treatment study.

Measurable levels of formed THMs and HAAs were detected in the settled water sample after cartridge filtration (influent to GAC). Samples were taken during RSSCT operation. Table 6 summarizes the levels of all DBP species detected. Species not listed in the table were reported as below the minimum reporting level (BMRL). The dominant species present were chloroform and dichloroacetic acid (DCAA), with average concentrations of 4 and 6 µg/L, respectively. All other species were measured at 2 µg/L or less. To characterize the breakthrough of the formed DBPs, samples taken directly from the RSSCT effluent (with no chlorination) were analyzed. The results of this additional sampling are reported in Section 8.3.

Additionally, prior to beginning the treatment study, a separate experiment was conducted to determine whether the DBP levels in the influent water changed over time. An aliquot of plant softened water was taken and split into two samples: one was quenched and preserved immediately for analysis; the second was held for two days under ambient temperature conditions (the expected travel time and conditions for the treatment study influent sample). The sample was then stored at 4°C for an additional 5 days, after which the sample was quenched and preserved. Both THM and HAA analysis were conducted on the samples. A raw water sample was also taken for THM and HAA analysis, but no detectable levels of THMs or HAAs were found. The results of this experiment, summarized in Table 7, show that no significant increase or decrease in concentration of THMs and HAAs formed after softening occurred after 7 days of travel and storage time. (Species not listed in the table were reported as BMRL). Based on these results, only one sample was taken during each treatment study session to determine the level of DBPs present in the treatment study influent water. It was assumed that the level of DBPs remained constant throughout the RSSCT run time.

6.2 Pretreatment Processes to the Advanced Treatment Processes

The full-scale and bench-scale pretreatment processes in place prior to bench-scale GAC are described in Figure 2. The water was sampled after full-scale lime-softening and sedimentation. Bench-scale filtration through a 1.0-µm glass fiber cartridge filter simulated full-scale rapid sand filtration. The TOC data for the filtered water, Table 5, shows that there was some TOC removal due to filtration by a 1.0-µm glass fiber cartridge filter. The average percent decrease in TOC concentration after filtration was 6.1 percent. Recarbonation was simulated by the addition of sulfuric acid to a pH of 9.1 to 9.2. During the operation of the RSSCT, the pH was maintained

within 0.1 pH units of the target GAC influent pH by the addition of dilute solutions of sulfuric acid or sodium hydroxide.

Table 8 summarizes the design data for each pretreatment process prior to GAC adsorption. Bench-scale cartridge filtration and pH adjustment were employed as bench-scale pretreatment during all three sessions.

6.3 Advanced Treatment Process Information

6.3.1 Schematics and descriptions of the process equipment used

Figures 3 and 4 show a schematic of the RSSCT systems. All components were of stainless steel, glass, or Teflon construction. The batch influent water was held in a stainless steel container. The influent water was pumped through each column using a metering diaphragm pump. The wetted parts of the pump were Teflon and glass. The pumps were rated for 1 percent speed control and 75 psi continuous duty. A stainless steel gas sampling cylinder was used as a pulse dampener. Pressure gauges with stainless steel connections were used to monitor the system pressure. The effluent flow rate was monitored constantly. The calibration of the effluent flow rate control system was checked by a manual measurement at least twice daily and adjusted as necessary to maintain it within 3 percent of the design flow rate.

The system configuration for the 5.0, 10, 12.5 minute EBCT contactors is shown in Figure 3. For these RSSCTs, the entire GAC bed was packed in a single column. The same configuration was used for the three 10-minute EBCT contactors used to evaluate influent pH. The 15- and 20-minute EBCT contactors were packed into two columns in series, as shown in Figure 4. This allowed for mixing of the top portion of the GAC bed, if necessary, without disturbing the remainder of the bed. However, backwashing was not required during this treatment study. Typically, 90 percent of the GAC bed was packed in the second column. Both columns were of equal inner diameters.

The GAC was packed in chromatography columns with Teflon fittings. The GAC support consisted of appropriately sized stainless steel screens, glass wool, and Teflon beads. The support system differed depending on the column inner diameter. Standard 11.0 mm inner diameter columns required a stainless steel support system as shown in Figure 5 (a). When 10.0 and 12.6 mm inner diameter columns were used, the support system shown in Figure 5 (b) was used so that the GAC was contained within the effective length of the column.

6.3.2 Design data for the advanced treatment process

The design data for the RSSCTs conducted during each quarter are summarized in Table 9. Each quarter, two RSSCTs were operated to simulate full-scale equivalent EBCTs of 10 and 20 minutes. Other than the EBCT, the design for the two RSSCTs operated during each quarterly session was identical. Over the course of the entire study, columns with inner diameters ranging from 8.0 to 10.0 mm were used, and Reynolds numbers in the RSSCTs used ranged from 0.33 to 0.50.

6.3.3 Procedures specific to the treatment study

6.3.3.1 GAC Preparation Procedures

A representative batch of Filtrasorb 400 (F-400), a bituminous-coal based GAC, was obtained from the manufacturer, Calgon Carbon Co. The GAC is a 12x40 mesh size (average particle diameter, $d_p = 1.06$ mm). Using a riffle splitter, a small (30-50 g) representative sample of the GAC was obtained. Using a jar mill, the GAC was ground to a 100x200 mesh size ($d_p = 0.113$ mm). Care was taken to frequently remove and sieve the GAC in the jar mill. The GAC was ground until the entire sample passed through the 100 mesh size sieve. Usually, a recovery of 25 to 30 percent was obtained, as defined by the amount of GAC retained between the 100 and 200 mesh size sieves divided by the total amount of GAC prior to grinding.

The ground GAC was transferred to a beaker, and covered with reagent grade (adsorbed-deionized) water. The GAC was washed by repeated additions and decantations of reagent grade water. The reagent grade water was added at a high rate and turbulence, to stir up the GAC and release fines. The supernatant water containing GAC fines was decanted after the GAC was allowed to settle. Towards the end of the cleaning procedure, the sample was sonicated twice for 5 to 10 seconds. The sonication step helped loosen fines that were subsequently removed by the addition and decantation of reagent grade water.

The GAC was dried in an oven at 80 to 90°C for 6 to 12 hours. The temperature was then raised to between 100 and 110°C and the sample was dried until it reached a constant weight. The sample was removed and cooled inside a dessicator. Once cooled, if not immediately used, it was stored in a glass vial sealed with a lid with TFE-lined septum until ready for use.

The dry bed density was measured using a sample of dried and cooled GAC. Stored GAC was dried in an oven as described above prior to the dry bed density measurement. To measure the dry bed density, a sample of the GAC was placed inside a 10-mL glass graduated cylinder to a level of 5 to 9 mL. The cylinder was tapped to pack the GAC. A volume was measured and recorded. This GAC was then weighed on a balance. The volume reading of the graduated cylinder was checked and calibrated if necessary by adding a known volume of water to it using a 10-mL class A graduated pipette. The GAC dry bed density was calculated by dividing the weight by the calibrated volume.

The calculated mass of GAC of each RSSCT was weighed, placed inside a clean beaker, and covered with reagent grade water. The wetted GAC was usually allowed to sit for 12-24 hours, followed by placement in a vacuum for about 1 hour to displace the air within the pores.

6.3.3.2 RSSCT Column Setup

The support for 11.0 mm inner diameter columns consisted of a 200 mesh size stainless steel screen and a 100 mesh size stainless steel screen placed on top of the Teflon fitting (Figure 5a). The GAC support for 10.0 and 12.6 mm inner diameter columns consisted of a stainless steel screen (60 or 100 mesh size), Teflon beads, glass wool, a 200 mesh size stainless steel screen, and a 100 mesh size stainless steel screen. The column support is detailed in Figure 5b. For all

column inner diameter sizes, a small amount of glass wool was placed inside the Teflon fitting, supported by a 60 mesh size stainless steel screen.

The columns were packed by adding the GAC as a slurry and packing the column by repeatedly tapping the sides. The 15- and 20-minute full-scale equivalent EBCT RSSCTs were packed into two columns of the same inner diameter placed in series. Only reagent grade water was used during the packing process.

6.3.3.3 Batch Influent Preparation

On arrival to S&H's laboratory facilities, the influent water was filtered through a 1.0- μ m nominal pore size glass fiber cartridge filter. The cartridge filter was pre-rinsed with deionized water. The pH of the influent water sample was reduced to 9.2 by addition of sulfuric acid prior to use as influent to GAC. Dilute solutions of sulfuric acid and sodium hydroxide were used to maintain the influent pH at 9.2 ± 0.1 during operation of the RSSCTs.

6.3.3.4 RSSCT Monitoring

The effluent flow rates were monitored constantly to ensure that the flow rates were maintained within 5 percent of the design flow rate. The calibration of the effluent flow rate control system was checked at least three times daily and adjusted when a flow rate differed by more than 3 percent from the design flow rate. The system pressure was monitored daily. The effluent TOC concentration was monitored frequently so that samples could be taken at 5 to 8 percent increments of the average influent TOC concentration.

6.4 Experimental Design

Because the source water for the Alexander Orr Water Treatment Plant is a groundwater, multiple RSSCT sessions to evaluate seasonal variability was not required. In lieu of evaluating seasonal variability, two GAC process parameters were evaluated: EBCT and influent pH. EBCTs of 5.0, 10, 12.5, 15, and 20 minutes were evaluated during two sessions. At a constant EBCT of 10 minutes, three influent pH values were evaluated: 8.2, 8.7, and 9.2. The experimental design is summarized in Table 10.

6.5 ICR Treatment Study Protocol

This treatment study was designed and conducted as required by section 141.141(3) of the Information Collection Rule (ICR), published in the May 14, 1996 Federal Register. The procedures contained in the *GAC Precursor Removal Studies* section of the *ICR Manual for Bench- and Pilot-Scale Treatment Studies* were followed. During RSSCT operation, a minimum of 12 effluent samples were taken at target 5 to 8 percent increments of the average influent TOC concentration. Three samples were taken in duplicate. All required analyses were conducted, including pH, temperature, TOC, UV₂₅₄, and SDS chlorination for THMs, HAAs, and TOX.

For the sessions during which EBCT was evaluated, the RSSCTs were operated in parallel. Therefore, only two influent A (alkalinity, calcium hardness, total hardness, ammonia, and bromide) and three influent B (pH, temperature, turbidity, TOC, UV₂₅₄, SDS chlorination) samples were taken during the course of each study, and the data from these applied to both the RSSCTs operated. For the influent pH evaluation studies, a separate batch influent was used for each column. Two influent A samples and 1 to 2 influent B samples were taken from each batch influent. A total of five influent B samples were taken.

The ICR requires that the RSSCTs be operated until the first of three conditions are met:

1. the effluent TOC concentration reaches at least 70 percent of the average influent TOC concentration
2. the effluent TOC concentration reaches a plateau at greater than 50 percent of the influent TOC concentration (a plateau is defined as an increase in TOC concentration of no more than 10 percent over a two-month full-scale equivalent time period)
3. the RSSCT has been operated for an equivalent of one year full-scale operation

All column runs were terminated based on meeting the first condition: the effluent TOC concentration reached or exceeded 70 percent of the average influent TOC concentration. Typically the twelfth and last RSSCT effluent sample was taken at this point. A thirteenth sample (analyzed for TOC, pH, and temperature only) was taken two full-scale equivalent weeks after the twelfth effluent sample to confirm that 70 percent TOC breakthrough was reached. Table 11 summarizes the run termination criteria used, percent breakthrough reached at the twelfth sample, and the corresponding full-scale equivalent run time.

A tabular summary of the all data analyzed during the treatment study is given in the Appendix. As required by EPA, the data was input into the *ICR Treatment Studies Data Collection Spreadsheets*. These files are included in electronic form at the end of this report.

6.6 Simulated Distribution System (SDS) Chlorination Conditions

The target simulated distribution system (SDS) conditions are summarized in Table 12. During all sessions, a 6-hour holding time was targeted. The samples were buffered at pH 9.1 using a borate buffer, and the target free chlorine residual was 0.75 mg/L as Cl₂. The incubation temperature used for all runs was 26°C. For GAC influent water, during all sessions, the average and standard deviation obtained for each parameter are summarized in Table 13. The same data are summarized in Table 14 for the effluent samples from all RSSCT runs.

6.7 Analytical Methods

A list of all analytical methods used during the study is shown in Table 15. A summary listing the laboratories involved for analytical support and the period over which analyses were conducted by each laboratory is shown in Table 16. Contact information for the laboratories involved is summarized in Table 17.

Session	Sampling Date
1	April 20, 1998
2	June 19, 1998
3	July 24, 1998

Table 4 Sampling dates for GAC bench-scale treatment study sessions

Sample date	Source water TOC concentration (mg/L)	Settled water TOC concentration (mg/L)		Percent change (%)	Filtered water TOC concentration (mg/L)	
		On day of sampling	Upon arrival at S&H		Plant	S&H
April	5.9	4.6	4.5	-2.2	3.7	4.2
June	7.7	4.6	4.4	-4.3	4.4	4.3
July	9.7	5.1	5.3	3.9	4.5	4.8

Table 5 Summary of TOC sampling before and after water shipment

Session	Formed THM concentration (µg/L)				Formed HAA concentration (µg/L)		
	CHCl ₃	BDCM	DBCM	DCAA	TCAA	DBAA	BCAA
April	5	BMRL	2	7	BMRL	BMRL	2
June	4	1	2	6	1	1	2
July	2	BMRL	BMRL	5	BMRL	BMRL	BMRL

Table 6 Summary of formed DBPs in treatment study influent water

Sample	Formed THM concentration (µg/L)			Formed HAA concentration (µg/L)	
	CHCl ₃	BDCM	DBCM	DCAA	BCAA
Softened water	5	1	2	5	1
Softened water + 7-day hold	5	1	2	4	1

Table 7 Impact of storage time on formed DBPs in treatment study influent

Unit Process	Process Description
Washwater Return (Full-Scale)	Washwater Treated: No 24 Hour Average Water Flow Returned (MGD): 2.9
Solids Contact Clarifier (Full-Scale)	Clarifier Type: Sludge Blanket Clarifier Type: Upflow Clarifier Brand Name: Dorr Oliver Hydrotreaters Surface Area (ft ²): 58,314 Liquid Volume (gal): 8,277,000 Short Circuiting Factor: NA _v Baffling Type: Unbaffled (Mixed tank) Chemical Type: Sodium Silicate Measurement Formula: Na ₂ OSiO ₂ Dose Rate (mg/L): 1.50 Chemical Type: Calcium Oxide Measurement Formula: CaO Dose Rate (mg/L): 170
Cartridge Filtration (Bench-Scale)	Surface Area (ft ²): 5.0 Nominal Pore Size (µm): 1.0 Filter Material: Glass fiber Filter Life (gallons of processed water): 150 - 200
pH Adjustment (Bench-Scale)	Chemical Type: Sulfuric acid Adjusted pH: 9.2 / 8.7 / 8.2 Dose Rate (mg/L): varied (4 - 17)

NA_v: Not available

Table 8 Summary of design data for each pretreatment process prior to GAC

Design parameter	Design value		
	10, 20 minute EBCT	5.0, 12.5, 15 minute EBCT	10 minute EBCT, influent pH study
GAC manufacturer	Calgon Carbon Co.	Calgon Carbon Co.	Calgon Carbon Co.
GAC brand name	F-400	F-400	F-400
GAC type	Bituminous	Bituminous	Bituminous
GAC mesh size	12x40	12x40	12x40
Particle diameter, d_{LC} (mm)	1.063	1.063	1.063
General design parameters			
Minimum Reynold's number, $Re_{SC, min}$ ()	0.50	0.51	0.51
Full-scale operating temperature ($^{\circ}C$)	25	25	25
Kinematic viscosity, ν_{LC} (m^2/s)	8.93E-07	8.93E-07	8.93E-07
Bed porosity, ϵ_{LC} ()	0.45	0.45	0.45
Measured dry bed density, ρ_{SC} (g/cm^3)	0.517	0.462	0.453
RSSCT design parameters			
RSSCT mesh size	100x200	100x200	100x200
Particle diameter, d_{SC} (mm)	0.113	0.113	0.113
Scaling factor, SF	9.44	9.44	9.44
Hydraulic loading rate, ν_{SC} (m/hr)	6.43	6.56	6.56
Column diameter, D_{SC} (mm)	10.0	12.6	11.0
Flow rate, Q_{SC} (mL/min)	8.4	13.6	10.4
Estimated run length			
RSSCT influent TOC concentration (mg/L)	4.1	4.1	4.1
Bed volumes to 50% TOC breakthrough, BV_{50}	3,500	3,500	3,500
Estimated total run time, BV_T	12,100	12,100	12,100
RSSCT 1			
Full-scale empty-bed contact time, $EBCT_{LC}$ (min)	10	5	(Influent pH 8.2) 10
Estimated full-scale run time, t_{LC}^T (days)	84	42	84
Estimated RSSCT run time, t_{SC}^T (days)	8.9	4.5	8.9
Volume water required, V_{SC} (L)	108	88	133
Mass GAC required, m_{SC} (g)	4.61	3.33	4.98
RSSCT empty-bed contact time, $EBCT_{SC}$ (min)	1.06	0.53	1.06
Bed length, l_{SC} (cm)	11.3	5.8	11.6
RSSCT 2			
Full-scale empty-bed contact time, $EBCT_{LC}$ (min)	20	12.5	(Influent pH 8.7) 10
Estimated full-scale run time, t_{LC}^T (days)	168	105	84
Estimated RSSCT run time, t_{SC}^T (days)	17.8	11.2	8.9
Volume water required, V_{SC} (L)	216	219	133
Mass GAC required, m_{SC} (g)	9.21	8.33	4.98
RSSCT empty-bed contact time, $EBCT_{SC}$ (min)	2.12	1.32	1.06
Bed length, l_{SC} (cm)	22.7	14.5	11.6
RSSCT 3			
Full-scale empty-bed contact time, $EBCT_{LC}$ (min)		15	(Influent pH 9.2) 10
Estimated full-scale run time, t_{LC}^T (days)		126	84
Estimated RSSCT run time, t_{SC}^T (days)		13.4	8.9
Volume water required, V_{SC} (L)		263	133
Mass GAC required, m_{SC} (g)		9.99	4.98
RSSCT empty-bed contact time, $EBCT_{SC}$ (min)		1.59	1.06
Bed length, l_{SC} (cm)		17.4	11.6

Table 9 Summary of RSSCT design parameters

Month sampled	Pretreatment	Influent pH	EBCT (min)
April	Lime softening / pH adjustment	9.2	10, 20
June	Lime softening / pH adjustment	8.2, 8.7, 9.2	10, 10, 10
July	Lime softening / pH adjustment	9.2	5.0, 12.5, 15

Table 10 Experimental design summary

EBCT (min)	Influent pH	Month sampled	Run termination criteria*	10 minute EBCT Run time (days)	Percent TOC breakthrough
5.0	9.2	July	1	22	76
10	9.2	April	1	37	72
12.5	9.2	July	1	57	78
15	9.2	July	1	62	73
20	9.2	April	1	110	76
10	8.2	June	1	48	73
10	8.7	June	1	36	72
10	9.2	June	1	53	75

- * 1: the effluent TOC concentration reaches at least 70 percent of the average influent TOC concentration
 2: the effluent TOC concentration reaches a plateau at greater than 50 percent of the influent TOC concentration (a plateau is defined as an increase in TOC concentration of no more than 10 percent over a two-month full-scale equivalent time period)
 3: the RSSCT has been operated for the full-scale equivalent of one year

Table 11 Summary of RSSCT run termination criteria, run time, and percent TOC breakthrough reached

Parameter	Value	Tolerance
Incubation time (hours)	6.0	0.3
Incubation temperature (°C)	26.0	2.0
pH	9.10	0.20
Free chlorine residual (mg/L)	0.75	0.30

Table 12 Simulated distribution system (SDS) chlorination target conditions for all runs

EBCT (min)	Incubation time (hours)		Incubation temperature (°C)		pH		Free chlorine residual (mg/L)	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
5.0	6.0	0.1	25.3	0.1	9.11	0.05	0.75	0.07
10	6.1	0.1	26.5	0.2	9.09	0.03	0.83	0.13
12.5	6.0	0.1	25.3	0.1	9.11	0.05	0.75	0.07
15	6.0	0.1	25.3	0.1	9.11	0.05	0.75	0.07
20	6.1	0.1	26.5	0.2	9.09	0.03	0.83	0.13
10 / influent pH 8.2	6.1	0.2	27.0	0.4	9.10	0.03	1.13	0.56
10 / influent pH 8.7	6.1	0.2	27.0	0.4	9.10	0.03	1.13	0.56
10 / influent pH 9.2	6.1	0.2	27.0	0.4	9.10	0.03	1.13	0.56

*pH is average of analysis at beginning and end of incubation period for each sample.

Table 13 Summary of experimental SDS chlorination conditions for GAC influent water

EBCT (min)	Incubation time (hours)		Incubation temperature (°C)		pH		Free chlorine residual (mg/L)	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
5.0	6.0	0.1	25.2	0.1	9.10	0.03	0.58	0.06
10	6.0	0.1	26.7	0.1	9.02	0.03	0.79	0.04
12.5	6.0	0.1	25.2	0.1	9.10	0.03	0.58	0.06
15	6.0	0.1	25.5	0.1	9.08	0.02	0.74	0.07
20	6.0	0.1	26.6	0.2	9.01	0.04	0.76	0.07
10 / influent pH 8.2	6.1	0.1	26.8	0.3	9.06	0.02	0.86	0.08
10 / influent pH 8.7	6.1	0.1	26.5	0.1	9.04	0.03	0.86	0.03
10 / influent pH 9.2	6.1	0.2	27.2	0.1	9.08	0.02	1.05	0.25

*pH is average of analysis at beginning and end of incubation period for each sample.

Table 14 Summary of experimental SDS chlorination conditions for GAC effluent water

Analyte	Session	Method	Minimum reporting level (MRL)
Alkalinity	All	SM 2320 B	5 mg/L as CaCO ₃
Ammonia-Nitrogen	All	EPA 350.1	0.05 mg/L as NH ₃ -N
Bromide	All	EPA 300.0 A	0.02 mg/L
Calcium hardness	All	EPA 200.7	5 mg/L as CaCO ₃
Chlorine dose (solution standardization)	All	SM 4500-Cl B	Not applicable
Chlorine residual	All	SM 4500-Cl F	0.2 mg/L as Cl ₂
HAA (DCAA, TCAA, MBAA, DBAA, BCAA, BDCAA)	All	EPA 552.2	1.0 µg/L (each analyte)
HAA (MCAA, CDBAA)	All	EPA 552.2	2.0 µg/L (each analyte)
HAA (TBAA)		EPA 552.2	4.0 µg/L
pH	All	4500-H ⁺ B	NA
Temperature	All	SM 2550 B	NA
Total hardness	All	SM 2340 B	5 mg/L as CaCO ₃
Total organic carbon (TOC)	All	SM 5310 C	0.50 mg/L
Total organic halide (TOX)	All	SM 5320 B	25 µg/L as Cl ⁻
THM (CHCl ₃ , BDCM, DBCM, CHBr ₃)	All	EPA 551.1	1.0 µg/L (each analyte)
Turbidity	All	SM 2130 B	0.05 ntu
UV absorbance at 254 nm (UV ₂₅₄)	All	SM 5910 B	0.009 cm ⁻¹

NA: not applicable

SM: *Standard Methods***Table 15 Summary of analytical methods and MRLs**

Analyses performed	Sessions of service	Laboratory
Alkalinity, chlorine dose, chlorine residual, HAA9, pH, temperature, THM4, TOC, TOX, turbidity, UV ₂₅₄	All	Summers & Hooper, Inc.
Ammonia, bromide, calcium hardness, total hardness	All	Montgomery Watson Laboratories

Table 16 Summary of laboratories conducting analyses

	Summers & Hooper, Inc.	Montgomery Watson Laboratories
ICR lab ID number	ICROH033	ICRCA013
Contact name:	Stuart Hooper	Andrew Eaton
Contact phone number	(513) 679-2200	(626) 568-6400
Contact fax number	(513) 679-2201	(626) 568-6324

Table 17 Laboratory contact information

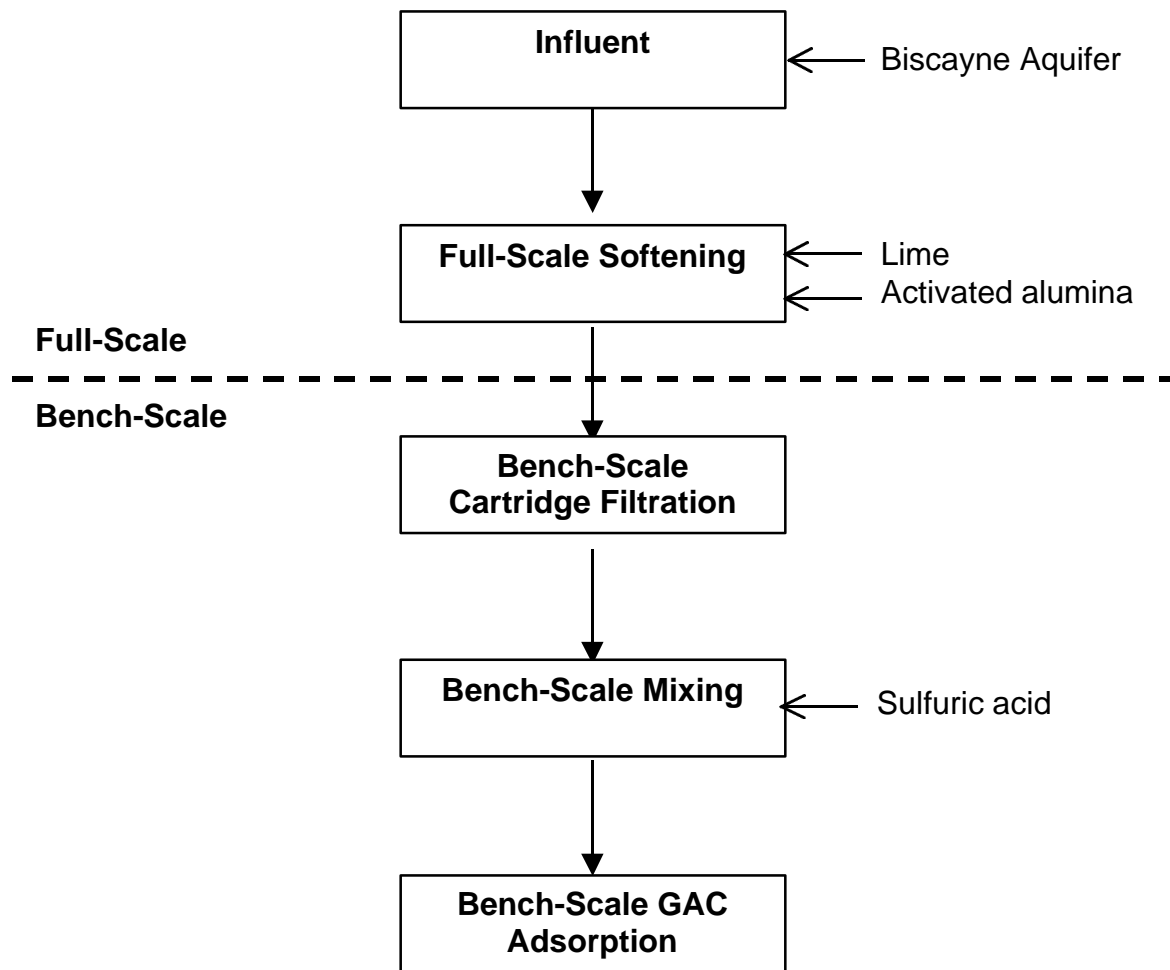


Figure 2 Schematic of pretreatment processes prior to GAC

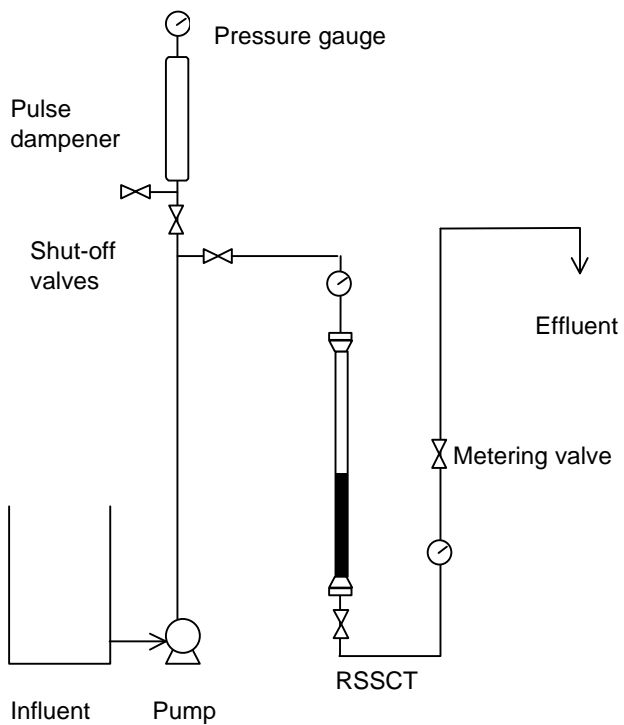


Figure 3 RSSCT system schematic for 5, 10, and 12.5 minute EBCT full-scale equivalent contactor and 10-minute EBCT, pH study contactors

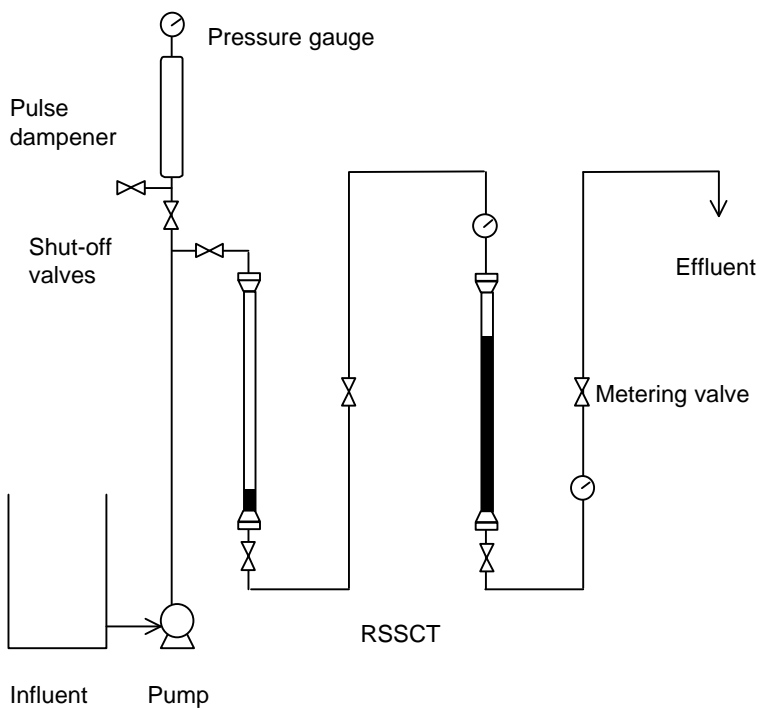
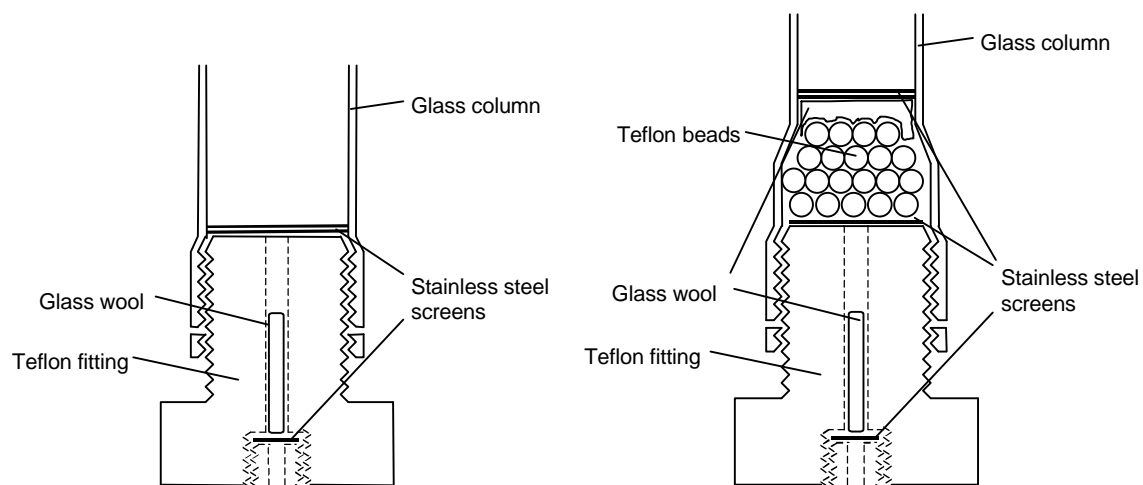


Figure 4 RSSCT system schematic for 15 and 20 minute EBCT full-scale equivalent contactors



(a) Standard 11.0 mm inner diameter column

(b) 10.0 and 12.6 mm inner diameter

Figure 5 RSSCT column GAC support system

7

Results and Discussion Overview

7 Results and Discussion Overview

7.1 Data Analysis

A significant amount of data was collected during the treatment study. The following chapters summarize various methods of analyzing the data. These include a discussion of the impact of contactor EBCT and GAC influent pH on DBP precursor control. Although data for single contactor operation was generated by this treatment study, in practice, multiple GAC contactors in parallel are used, and GAC run times are lengthened significantly by operating the contactors in a staggered mode. GAC run times are estimated based on a model that simulates the operation of multiple GAC contactors in parallel. Breakthrough curve extrapolations were performed: the algorithm used and the results obtained are presented. The extent to which TOC and UV₂₅₄ breakthrough served as indicators for DBP precursor breakthrough is analyzed. During the course of the treatment study, two RSSCTs were operated under the same experimental design (EBCT and GAC influent pH) using water from two sample dates. The results from the duplicate runs are compared. An evaluation of GAC performance based on TOC breakthrough and compared to other waters is presented. Finally, an EPA cost model is used to estimate the costs for GAC treatment based meeting the placeholders for Stage 2 DBP MCLs.

7.2 Problems Encountered

The only major problem encountered during the treatment study was the presence of preformed DBPs in the treatment study influent water, due to the use of chlorine as the activation agent for activated silica. The activated silica performed an important function in TOC and DBP precursor removal during softening, and it was felt that temporarily stopping the addition of activated silica would result in a water quality not representative of normal plant operation. This problem was discussed with the USEPA ICR Treatment Studies Coordinator. Based on the relatively low levels of preformed DBPs present after softening, the USEPA approved the treatment study sampling point, as long as preformed THMs and HAAs were monitored through GAC influent and effluent sampling. The GAC influent water was sampled during all treatment study sessions, and during each session, one RSSCT effluent was chosen for preformed DBP monitoring, which was accomplished by taking three samples during the run. Samples to be analyzed for preformed DBPs were not subject to SDS chlorination prior to THM and HAA analysis. GAC effluent samples were evenly spaced during the RSSCT run, typically taken with the third or fourth, seventh or eighth, and tenth or eleventh effluent samples. In addition, a travel and storage time study was performed to determine the effect of travel and storage time on preformed THM and HAA levels.

The results of preformed DBP analysis in the GAC influent water, and the travel and storage time experiment are summarized in Section 6.1. The results of GAC effluent analyses are summarized in Section 8.3. In addition, the concentrations of each THM and HAA species present in the preformed DBP samples taken from the RSSCT effluent are plotted along with SDS-DBP species breakthrough profiles shown in Figures 54 through 79.

The design of the EBCT study included conducting RSSCTs to simulate full-scale EBCTs of 5.0, 7.5, 10, 15, and 20 minutes. However, due to an experimental error, a RSSCT simulating an EBCT of 12.5 minutes instead of 7.5 minutes was run. The error was discovered approximately midway through the run. Although the original experimental plan was not followed, the data generated by the 12.5 minute EBCT run was still extremely useful. Furthermore, due to the relatively fast breakthrough of DBP precursors at low EBCTs, EBCTs between 10 and 20 minutes are likely a more appropriate option for the Alexander Orr Water Treatment Plant than EBCTs below 10 minutes.

7.3 Water Quality Data

The average pretreated influent to GAC water quality for each quarterly sample is summarized in Table 18. Ammonia and bromide showed some variability in concentration among the three sessions. Differences in ammonia concentration may have affected chlorine demand, as evidenced by the increase in chlorine demand from 1.9 to 2.9 mg/L between sessions 1 and 2, while the ammonia concentration increased from below MRL (0.05 mg/L) to 0.16 mg/L. Bromide concentration varied during the three sessions, ranging from 92 to 140 µg/L. This variability may have affected DBP speciation. Little variability was observed in other inorganic water quality parameters. The average TOC concentration across all sessions was fairly constant: 4.2 ± 0.2 mg/L (RSD = 4 percent). UV_{254} averaged 0.086 ± 0.005 1/cm (RSD = 6 percent). Furthermore, the TSUVA, showed almost no variability across all sessions, averaging 2.1 L/mg-m, with an RSD of 2 percent.

Constant chlorination conditions were utilized during all three sessions, and influent SDS-DBP concentrations remained fairly constant: THM4, HAA6, and TOX RSDs were 11, 17, and 5 percent. The relatively high RSD measured for HAA6 can be attributed to the low levels of HAAs formed: HAA6 concentrations averaged 28 µg/L.

Water Quality Parameter	10, 20 minute EBCT		5.0, 12.5, 15 minute EBCT		10 minute EBCT, influent pH study					
					Influent pH 8.2		Influent pH 8.7		Influent pH 9.2	
	Average	St. Dev.	Average	St. Dev.	Average	St. Dev.	Average	St. Dev.	Average	St. Dev.
Temperature (°C)	18.0	1.2	18.3	1.6	20.5	1.3	18.2	0.8	20.6	1.1
pH	9.20	0.07	9.22	0.12	8.24	0.08	8.73	0.00	9.20	0.03
Turbidity (ntu)	0.10	0.00	0.14	0.02	0.20	NA	0.10	0.00	0.10	0.00
Alkalinity (mg/L as CaCO ₃)	38	4.8	23	3.2	24	3	31	3	27	3
Calcium hardness (mg/L as CaCO ₃)	30	NA	39	2.1	35	0	35	0	35	0
Total hardness (mg/L as CaCO ₃)	46	NA	54	3.5	54	0	54	1	54	0
Ammonia (mg/L)	BMRL	NA	0.16	0.06	0.07	0.09	0.00	0.00	0.14	0.08
Bromide (mg/L)	0.092	NA	0.115	0.021	0.125	0.021	0.140	0.000	0.105	0.007
TOC (mg/L)	4.2	0.13	4.5	0.05	4.2	0.1	4.2	0.1	4.0	0.1
UV ₂₅₄ (1/cm)	0.088	0.001	0.094	0.001	0.081	NA	0.082	0.001	0.083	0.000
Specific UV absorbance, SUVA (L/mg-m)	2.1	--	2.1	--	2.0	--	2.0	--	2.1	--
SDS-THM4 (µg/L)	64	3.2	85	13.1	77	NA	72	5	82	7
SDS-HAA5 (µg/L)	22	1.9	19	0.7	24	NA	18	2	16	6
SDS-HAA6 (µg/L)	30	3.0	26	0.7	35	NA	25	3	23	9
SDS-HAA9 (µg/L)	32	3.4	29	0.9	38	NA	29	6	26	12
SDS-TOX (µg Cl ⁻ /L)	217	6	224	4	210	NA	194	2	212	22
SDS-chlorine demand (mg/L)	1.9	0.1	2.9	0.1	2.2	NA	1.9	0.00	2.2	0.19

BMRL: below minimum reporting level

NA: not applicable; standard deviation calculation not possible

Table 18 Summary of GAC influent water quality

8

*Impact of Empty-Bed Contact
Time (EBCT)*

8 Impact of Empty-Bed Contact Time (EBCT)

8.1 Evaluation on Run Time Basis

Five EBCTs were evaluated over the course of this study: 5, 10, 12.5, 15, and 20 minutes. For purposes of comparison, the 10, 15, and 20 minute EBCT breakthrough data are compared as a set, followed by a comparison of the 5, 10, and 12.5 minute EBCT breakthrough data. By doing so, the graphs generated to compare the various EBCT runs are more easily compared.

Figure 6 shows the impact of EBCT on TOC breakthrough for EBCTs of 10, 15, and 20 minutes. A range of effluent TOC breakthrough behavior was observed, with run times to an effluent concentration of 2.0 mg/L ranging from 16 to 38 days. Run times to 70 percent TOC breakthrough ranged from 33 to 92 days. As the EBCT increased, the effluent breakthrough profile shifted to the right, indicating longer run times to a given effluent criterion.

Similar results were obtained for UV₂₅₄ and all SDS-DBPs, shown in Figures 7 through 13. Although SDS-THM and SDS-HAA breakthrough for the 15 minute EBCT contactor occurred later than that for the 10 minute EBCT contactor, at later run times, above 20 days, the two curves converged. The convergence for SDS-THM4 may have been caused by the high level of influent SDS-THM4 in the 10 minute EBCT run. The convergence at higher runtimes did not occur with SDS-TOX breakthrough. The GAC effluent SDS chlorine demand (CLD), Figure 13, showed a high immediate breakthrough, which was higher for the 15 minute EBCT contactor than for either the 10 or 20 minute EBCT contactors. The 15 minute EBCT run was conducted on a separate water sample, with an ammonia concentration of 0.16 mg/L, while the ammonia concentration during the 10 and 20 minute EBCT run influent water was BMRL (<0.05 mg/L). Differences in ammonia concentration between the two water samples may have caused the difference in immediate breakthrough of SDS-CLD, because ammonia is not adsorbed by GAC.

Figure 14 shows the impact of EBCT on TOC breakthrough for EBCTs of 5, 10, and 12.5 minutes. Again, a range of effluent TOC breakthrough behavior was observed, with run times to an effluent concentration of 2.0 mg/L ranging from 6 to 19 days. Run times to 70 percent TOC breakthrough ranged from 17 to 46 days. As the EBCT increased, the effluent breakthrough profile shifted to the right, indicating longer run times to a given effluent criterion.

Similar results were obtained for UV₂₅₄ and all SDS-DBPs, shown in Figures 15 through 20. Overall, there was little difference between breakthrough profiles observed for the 10 and 12.5 minute EBCT contactors. The 12.5 minute EBCT contactor only slightly outperformed the 10 minute EBCT contactor, but had an 8 percent higher influent TOC concentration. Again, relatively high immediate levels of breakthrough occurred with SDS chlorine demand (CLD), Figure 21. The different levels of immediate breakthrough were likely due to varying ammonia concentrations, a nonadsorbable inorganic compound, in the two water samples taken.

The effluent pH and temperature for all EBCT contactors was also monitored. The results are summarized in Tables 19 and 20. The variability of both effluent pH and temperature was very low during all runs.

Tables 21 through 25 summarize run times to various GAC effluent criteria for the all EBCT contactors evaluated. The SDS-DBP run time criteria chosen are based on Stage 1 (80 µg/L THM4 and 60 µg/L HAA5) and the placeholder for Stage 2 MCLs (40 µg/L THM4 and 30 µg/L HAA5), with a 20 percent safety factor. Based on the calculated run times for all EBCTs, the corresponding concentration of other measured parameters (DBP precursor surrogates and SDS-DBPs) at that run time were also calculated. For example, Table 21 shows that when the Stage 1 MCL for THM4 (with a 20 percent safety factor) was exceeded, the TOC concentration was 3.4 mg/L, the SDS-HAA5 concentration was 17 µg/L, and the SDS-TOX concentration was 135 µg Cl/L. The 64 µg/L MCL was exceeded after 22, 52, and 50 days for the 5.0, 12.5 and 15 minute EBCT contactors, respectively. The 64 µg/L MCL was not exceeded during operation of the 10 and 20 minute EBCT contactors.

Bar graph plots of run times to TOC, UV₂₅₄, THM4, and HAA5 criteria were generated. For the 10, 15, and 20 minute EBCT contactors, Figures 22 and 23 summarize run times to effluent TOC and UV₂₅₄ criteria, and Figures 24 and 25 summarize run times to effluent SDS-THM4 and SDS-HAA5 criteria. For cases where the effluent concentration did not reach the run time criterion, no bar is shown. Bar graph GAC run time summaries are shown in Figures 26 through 29 for the 5, 10, and 12.5 minute EBCT contactors. For all EBCT contactors, neither Stage 1 or 2 HAA5 criteria were ever exceeded. As stated above, the Stage 1 THM4 criterion, 64 µg/L, was exceeded during operation of the 5, 12.5, and 15 minute EBCT contactors, while the Stage 2 criterion, 32 µg/L, was exceeded during all runs. The TOC, UV₂₅₄, and TOX breakthrough criteria were chosen to represent a range of concentrations. A relative performance criterion, 50 percent breakthrough, c/c_0 , was also chosen for TOC and UV₂₅₄.

8.2 Evaluation on Throughput Basis

To better evaluate the impact of EBCT on DBP precursor removal by GAC, the breakthrough curves for each EBCT are plotted on a throughput basis, with units of bed volumes. This transformation normalizes for the different EBCTs. The following equation is used to convert from run time to throughput in bed volumes:

$$\text{Throughput (bed volumes)} = \frac{\text{Run time}}{\text{EBCT}} \quad (1)$$

For the 10, 15, and 20 minute EBCT runs, Figures 30 through 37 compare contactor performance for the breakthrough of TOC, UV₂₅₄, SDS-THM4, SDS-HAA5, SDS-HAA6, SDS-HAA9, SDS-TOX, and SDS-CLD. The TOC breakthrough curves, Figure 30, show very little difference in throughput performance throughout the entire run time between the 10 and 15 minute EBCT contactors. All three EBCTs showed similar breakthrough through approximately the first 2,500 bed volumes of operation, about 50 percent breakthrough. However, above 2,500 bed volumes (equivalent to an effluent TOC concentration of about 2.0 mg/L), the 20 minute EBCT contactor outperformed the 10 and 15 minute EBCT contactors. A comparison of UV₂₅₄ breakthrough for the three EBCT contactors is shown in Figure 31. Although little difference in performance was observed for the first 2,000 bed volumes, at higher throughput the removal of UV-absorbing compounds improved with increasing EBCT.

Above the 2,000 bed volume threshold (equivalent to SDS-THM4 formation of about 30 µg/L) SDS-THM4 breakthrough was better controlled by the 15 and 20 minute EBCT contactors than by the 10 minute EBCT contactor, as shown in Figure 32. Little difference was observed between the 15 and 20 minute EBCT contactors. Effluent SDS-HAA levels were relatively low for all three EBCTs, and only slight differences in performance were evident between EBCTs of 10 and 20 minutes (Figures 33 through 35). The 20 minute EBCT contactor outperformed the both the 10 and 15 minute EBCT contactors for the control of SDS-TOX (Figure 36). For the 10 and 15 minute EBCT contactors, SDS-TOX breakthrough trends were similar. Normalized SDS-CLD breakthrough data is shown in Figure 37. After adjusting for differences in inorganic chorine demand, there was little differences evident in SDS-CLD breakthrough.

For GAC contactor runs with EBCTs of 5.0, 10, and 12.5 minutes, Figure 38 compares the normalized TOC breakthrough of each contactor. The 10 and 12.5 minute EBCT contactors show very similar TOC breakthrough behaviors, and both outperform the 5.0 minute EBCT contactor. Similar results were observed for the throughput breakthrough of UV₂₅₄, Figure 39. The throughput breakthrough of SDS-THM4, SDS-HAA5, SDS-HAA6, SDS-HAA9, and SDS-TOX for EBCTs of 5.0, 10, and 12.5 minutes are shown in Figures 40 through 44. For SDS-THM4, the 10 minute EBCT contactor outperformed both the 5.0 and 12.5 minute EBCT contactors. However, the comparison is made difficult due to the 25 percent lower influent SDS-THM4 measured during the 10 minute EBCT run. SDS-HAA results (Figures 41 through 43) showed that the 10 and 12.5 minute EBCT contactors matched in performance for the control of HAA precursors, and both outperformed the 5.0 minute EBCT contactor. Similar results were obtained for SDS-TOX, as shown in Figure 44. Figure 45 shows that the effluent SDS-CLD during the 12.5 minute EBCT run was lower than that during the 5.0 minute EBCT run. Effluent SDS-CLD levels were lower during the 10 minute EBCT run, likely due to lower ammonia levels.

A summary comparison of throughput to various TOC, UV₂₅₄, SDS-THM4, and SDS-HAA5 effluent criteria for EBCTs between 10 and 20 minutes is shown in Figures 46 through 49. No bars are plotted for runs that did not exceed run time criteria. A summary of throughput to the same effluent criteria for EBCTs between 5.0 and 12.5 minutes is shown in Figures 50 through 53.

8.3 DBP Species Breakthrough Evaluation

It is important to track the breakthrough behavior of specific DBP species, since some may be of potential health concern and a MCL could be set for a specific DBP species. GAC does not remove bromide and this can result in relatively high bromide to TOC ratios in the GAC effluent. Because of the high bromide to TOC ratios, GAC effluent SDS-DBPs may undergo shifts in speciation to more brominated DBP species, especially during the early part of the breakthrough. In some cases, effluent levels are higher than influent levels.

For EBCTs between 10 and 20 minutes, Figures 54, 55, 56, and 57 show the breakthrough behavior of formed chloroform (CHCl₃), bromodichloromethane (BDCM), dibromochloromethane (DBCM), and bromoform (CHBr₃), respectively. For all EBCTs, effluent concentrations of SDS-BDCM and SDS-CHBr₃ at some time during the run exceeded

those measured when the GAC influent was chlorinated, due to the high bromide to TOC ratio in the GAC effluent. The MRL for each analyte is indicated on each plot as a dashed line.

Due to the presence of formed DBPs in the GAC influent, the 10 minute EBCT GAC effluent was monitored for instantaneous DBPs, or the breakthrough of these formed compounds prior to SDS chlorination. The levels of DBP species measured in the GAC effluent for CHCl_3 and DBCM are plotted in Figures 54 and 56; only DBP species measured at detectable concentrations in the GAC influent were plotted in the GAC effluent. Effluent levels of instantaneous CHCl_3 and DBCM were not detected.

All nine HAA species were analyzed during the study. Plots of the effluent formed breakthrough profiles for the nine HAA species for EBCTs between 10 and 20 minutes are shown in Figures 58 through 66. The HAA species measured are monochloroacetic acid (MCAA), dichloroacetic acid (DCAA), trichloroacetic acid (TCAA), monobromoacetic acid (MBAA), dibromoacetic acid (DBAA), bromochloroacetic acid (BCAA), dichlorobromoacetic acid (DCBAA), chlorodibromoacetic acid (CDBAA), and tribromoacetic acid (TBAA). Because of the high bromide to TOC ratio in the GAC effluent DBAA was formed higher in the chlorinated effluent than in the chlorinated influent sometime during each EBCT run.

The breakthrough of instantaneous HAAs was also monitored, in the 10 minute EBCT GAC effluent. Only two HAA species were detected above the MRL in the GAC influent: DCAA and BCAA. Both of these species also showed breakthrough in the GAC effluent above the MRL. In fact, the breakthrough of preformed DCAA accounted for all the DCAA formed after SDS chlorination; subsequent chlorination of the GAC effluent water sample containing DCAA did not yield a higher concentration of DCAA. Although BCAA showed some breakthrough during the run, reaching a value of about 2 $\mu\text{g/L}$ after about 28 days, an additional amount of BCAA was formed after SDS chlorination, as the total measured SDS-BCAA was about 4 $\mu\text{g/L}$.

For EBCTs between 5.0 and 12.5 minutes, Figures 67, 68, 69, and 70 show the breakthrough behavior of formed CHCl_3 , BDCM, DBCM, and CHBr_3 , respectively. Again, for BDCM and CHBr_3 , effluent concentrations exceeded the chlorinated influent concentration sometime during the run for all EBCTs, due to the high bromide to TOC ratio in the GAC effluent.

The breakthrough of the nine HAA species for EBCTs between 5.0 and 12.5 minutes is shown in Figures 71 through 79. For all EBCTs, the GAC effluent DBAA was formed at higher concentrations than measured in the chlorinated GAC influent water. For the 5.0 minute EBCT contactor, effluent formed BCAA and DCBAA exceeded the chlorinated influent sometime during the run.

Figures 67 through 79 also include the breakthrough of instantaneous DBPs, for both the 10 and 12.5 minute EBCT contactors. The instantaneous breakthrough for the 10 minute EBCT contactor was described above. Similar results were obtained for the 12.5 minute EBCT contactor. Both instantaneous CHCl_3 and DBCM were detected at levels above the MRL in the GAC effluent, but neither showed effluent breakthrough above the MRL. Of the HAA species, only preformed DCAA was detected in the GAC influent to the 12.5 minute EBCT contactor. Figure 72 shows the instantaneous breakthrough of DCAA. Unlike what was observed for the 10 minute EBCT contactor, where all the effluent SDS-DCAA was due to the breakthrough of

preformed DCAA, during the 12.5 minute EBCT run, additional levels of DCAA were formed after chlorination of the GAC effluent. After 18 days, no instantaneous breakthrough of DCAA was detected, while the SDS-DCAA formation reached about 5 µg/L. After 34 days, preformed DCAA reached 4 µg/L in the GAC effluent, and the total DCAA measured after SDS chlorination was about 6 µg/L.

Effluent sample number	Effluent pH			Effluent temperature (°C)		
	10 min EBCT	15 min EBCT	20 min EBCT	10 min EBCT	15 min EBCT	20 min EBCT
1	9.1	9.3	9.4	21	23	21
2	8.8	8.5	8.9	22	23	22
3	8.7	8.7	8.7	22	23	22
4	8.7	8.8	8.7	22	22	22
5	8.7	8.7	8.9	22	22	22
6	8.8	8.5	9.2	22	23	22
7	8.7	8.7	9.4	22	23	22
8	8.7	8.8	8.9	22	22	21
9	8.7	8.7	8.7	22	24	22
10	8.8	8.6	8.7	22	23	22
11	8.8	8.4	8.9	23	23	21
12	8.8	8.8	8.6	23	22	21
13	8.5	8.2		22	22	22
Mean	8.7	8.7	8.9	22	23	22
Standard deviation	±0.1	±0.2	±0.3	±0.3	±0.5	±0.4
Percent standard deviation	2	3	3	2	2	2

Table 19 GAC effluent pH and temperature data for 10, 15, and 20 minute EBCT contactors

Effluent sample number	Effluent pH			Effluent temperature (°C)		
	5.0 min EBCT	10 min EBCT	12.5 min EBCT	5.0 min EBCT	10 min EBCT	12.5 min EBCT
1	9.1	9.1	9.1	23	21	24
2	8.8	8.8	8.7	23	22	24
3	9.0	8.7	8.8	23	22	24
4	9.1	8.7	8.8	23	22	24
5	9.0	8.7	9.0	22	22	23
6	9.1	8.8	8.9	22	22	23
7	9.2	8.7	8.7	22	22	23
8	9.1	8.7	8.8	22	22	24
9	8.9	8.7	9.0	22	22	22
10	8.7	8.8	8.5	22	22	23
11	8.4	8.8	8.5	23	23	24
12	8.5	8.8	8.5	22	23	23
13		8.5	8.9		22	23
Mean	8.9	8.7	8.8	22	22	23
Standard deviation	±0.3	±0.1	±0.2	±0.5	±0.3	±0.5
Percent standard deviation	3	2	2	2	2	2

Table 20 GAC effluent pH and temperature data for 5.0, 10, and 12.5 minute EBCT contactors

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (single contactor)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.5	2.0	6	1,660	2.0	0.024	33	9	11	11	55
			1.0	4	1,150	1.0	0.010	16	3	4	4	22
			2.3†	7	1,900	2.3	0.029	37	10	13	13	68
UV ₂₅₄	(1/cm)	0.094	0.040	9	2,580	2.6	0.040	49	12	16	17	94
			0.020	5	1,510	1.8	0.020	29	7	9	9	46
			0.047†	12	3,360	2.8	0.047	53	12	16	17	109
SDS-THM4	(µg/L)	85	80	*	*							
			64	22	6,350	3.4	0.063	64	17	23	26	135
			32	6	1,620	2.0	0.023	32	8	11	11	53
SDS-HAA5	(µg/L)	19	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	26	7,580	3.6	0.066	66	17	24	26	140
SDS-HAA9	(µg/L)	29	48	*	*							
			24	19	5,540	3.3	0.059	63	16	22	24	134
SDS-TOX	(µg Cl ⁻ /L)	224	120	14	4,040	3.0	0.051	57	13	18	20	120
			70	7	1,930	2.3	0.030	38	10	13	13	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time, value of listed parameter is left blank.

#Data not available for listed parameter at given breakthrough criterion.

Table 21 Run times to selected GAC effluent criteria (5 minute EBCT)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (single contactor)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.2	2.0	16	2,370	2.0	0.027	32	11	14	14	64
			1.0	10	1,370	1.0	0.011	15	2	2	2	28
			2.1†	17	2,510	2.1	0.028	34	12	15	15	69
UV ₂₅₄	(1/cm)	0.088	0.040	25	3,630	2.6	0.040	40	12	16	16	92
			0.020	13	1,860	1.6	0.020	26	6	8	8	46
			0.044†	28	4,040	2.8	0.044	42	12	17	17	100
SDS-THM4	(µg/L)	64	80	*	*							
			64	*	*							
			32	16	2,320	2.0	0.026	32	11	13	13	63
SDS-HAA5	(µg/L)	22	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	30	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	32	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	217	120	*	*							
			70	18	2,550	2.1	0.029	34	12	15	15	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time, value of listed parameter is left blank.

#Data not available for listed parameter at given breakthrough criterion.

Table 22 Run times to selected GAC effluent criteria (10 minute EBCT)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (single contactor)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.5	2.0	19	2,240	2.0	0.024	39	10	13	13	56
			1.0	12	1,350	1.0	0.009	15	2	3	3	19
			2.3†	25	2,890	2.3	0.029	43	11	15	15	71
UV ₂₅₄	(1/cm)	0.094	0.040	36	4,100	2.8	0.040	53	12	16	17	100
			0.020	17	1,960	1.8	0.020	34	8	10	10	45
			0.047†	43	4,920	3.1	0.047	58	13	18	19	117
SDS-THM4	(µg/L)	85	80	*	*							
			64	52	6,000	3.4	0.054	64	15	20	21	133
			32	16	1,820	1.7	0.018	32	7	9	9	39
SDS-HAA5	(µg/L)	19	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	29	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	224	120	44	5,110	3.1	0.048	59	13	18	19	120
			70	25	2,830	2.2	0.029	43	11	15	15	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time, value of listed parameter is left blank.

#Data not available for listed parameter at given breakthrough criterion.

Table 23 Run times to selected GAC effluent criteria (12.5 minute EBCT)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (single contactor)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.5	2.0	28	2,660	2.0	0.025	44	12	15	15	64
			1.0	16	1,500	1.0	0.009	17	3	4	4	25
			2.3†	32	3,060	2.3	0.030	44	14	18	18	75
UV ₂₅₄	(1/cm)	0.094	0.040	45	4,280	2.7	0.040	55	14	18	20	99
			0.020	22	2,090	1.7	0.020	33	10	12	12	45
			0.047†	54	5,200	3.0	0.047	65	15	21	22	114
SDS-THM4	(µg/L)	85	80	*	*							
			64	50	4,820	2.9	0.045	64	15	20	21	109
			32	21	2,020	1.7	0.019	32	9	11	11	42
SDS-HAA5	(µg/L)	19	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	29	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	224	120	59	5,620	3.2	0.049	66	15	21	23	120
			70	30	2,850	2.2	0.028	44	13	17	17	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time, value of listed parameter is left blank.

#Data not available for listed parameter at given breakthrough criterion.

Table 24 Run times to selected GAC effluent criteria (15 minute EBCT)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (single contactor)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.2	2.0	38	2,750	2.0	0.025	32	10	13	13	61
			1.0	20	1,460	1.0	0.010	14	2	2	2	20
			2.1†	41	2,980	2.1	0.027	34	11	14	14	66
UV ₂₅₄	(1/cm)	0.088	0.040	73	5,230	2.6	0.040	44	9	13	14	90
			0.020	29	2,080	1.7	0.020	26	6	8	8	44
			0.044†	82	5,910	2.8	0.044	46	10	14	14	96
SDS-THM4	(µg/L)	64	80	*	*							
			64	*	*							
			32	37	2,680	2.0	0.025	32	10	12	12	60
SDS-HAA5	(µg/L)	22	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	30	48	*	*							
			24	107	7,670	3.1	0.053	50	18	24	26	128
SDS-HAA9	(µg/L)	32	48	*	*							
			24	102	7,350	3.1	0.052	49	16	22	24	123
SDS-TOX	(µg Cl ⁻ /L)	217	120	100	7,220	3.0	0.051	49	16	21	23	120
			70	46	3,330	2.2	0.030	37	11	14	14	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time, value of listed parameter is left blank.

#Data not available for listed parameter at given breakthrough criterion.

Table 25 Run times to selected GAC effluent criteria (20 minute EBCT)

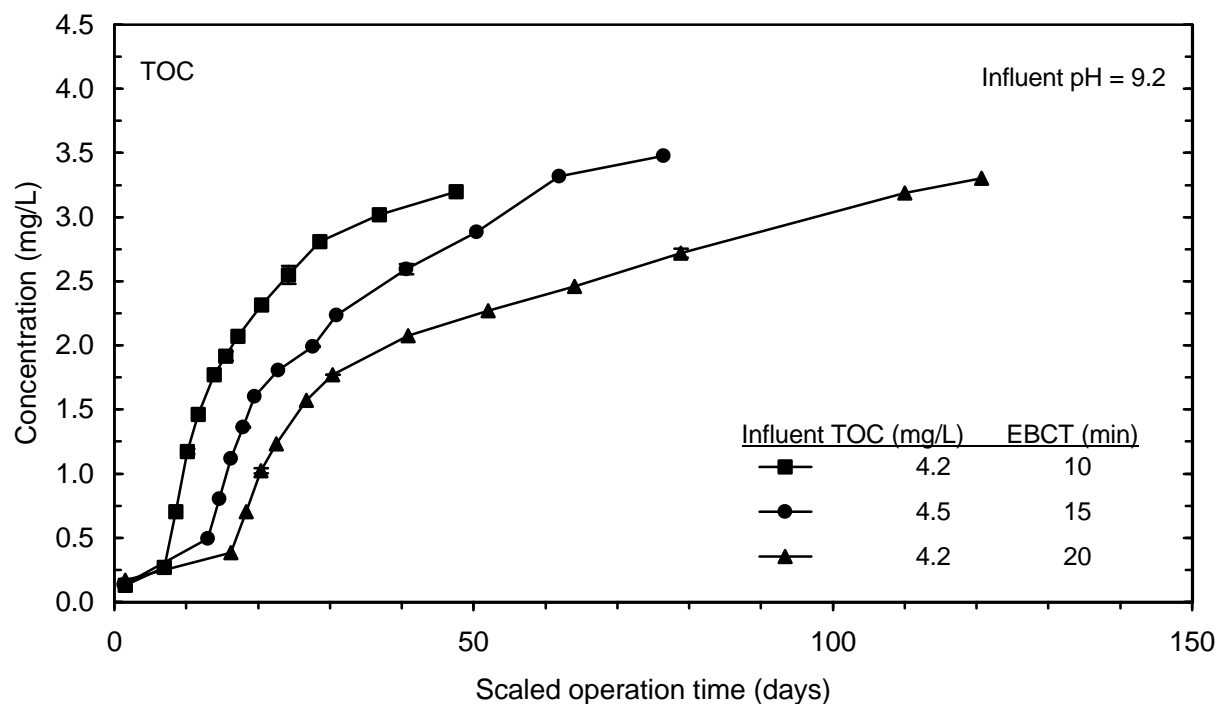


Figure 6 Impact of EBCT on TOC breakthrough (10 to 20 minutes)

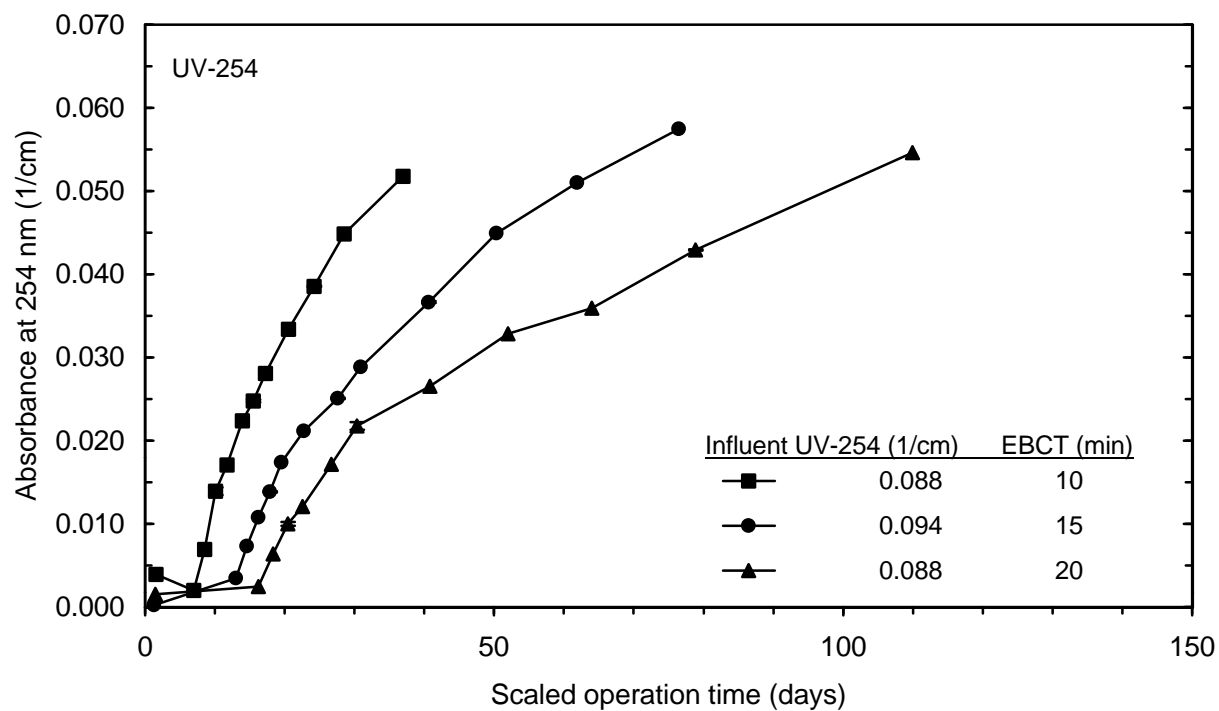


Figure 7 Impact of EBCT on UV-254 breakthrough (10 to 20 minutes)

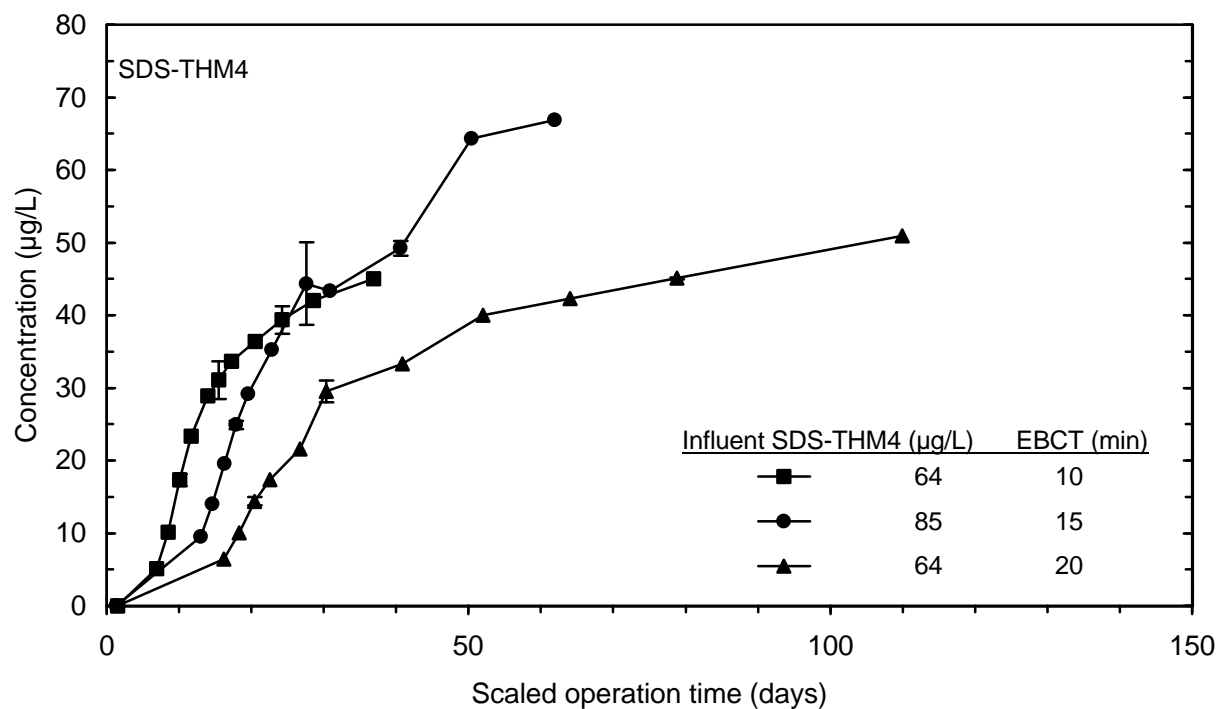


Figure 8 Impact of EBCT on SDS-THM4 breakthrough (10 to 20 minutes)

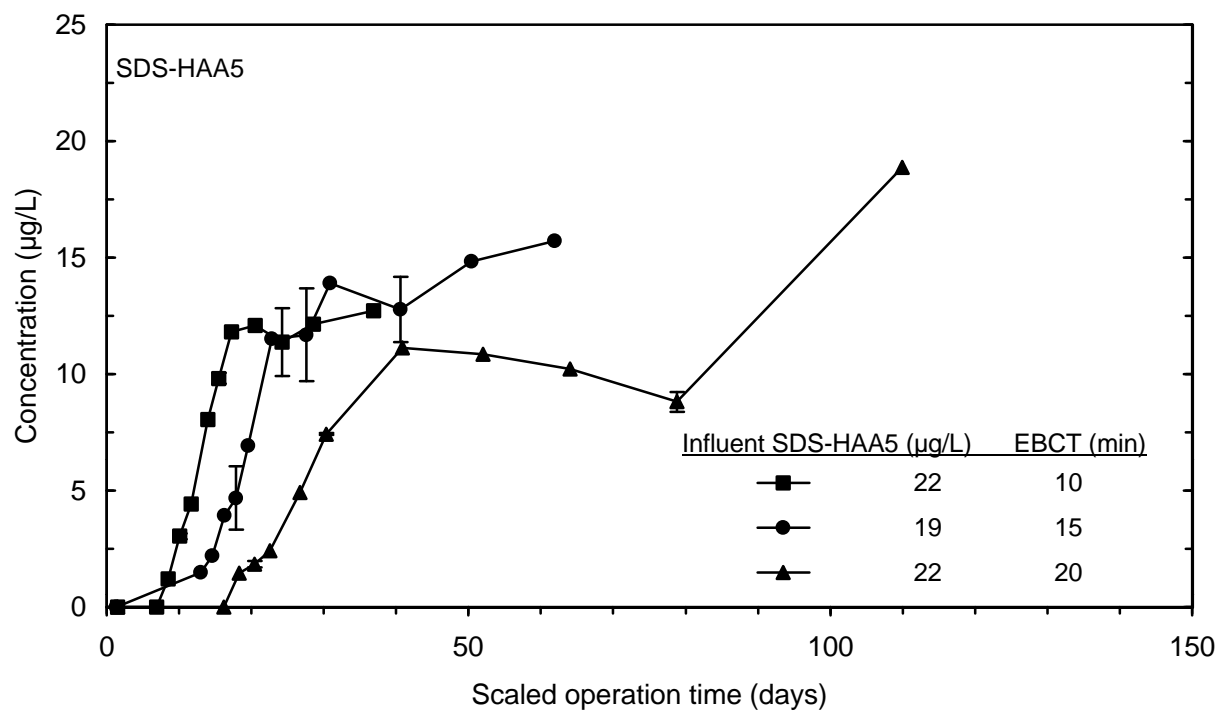


Figure 9 Impact of EBCT on SDS-HAA5 breakthrough (10 to 20 minutes)

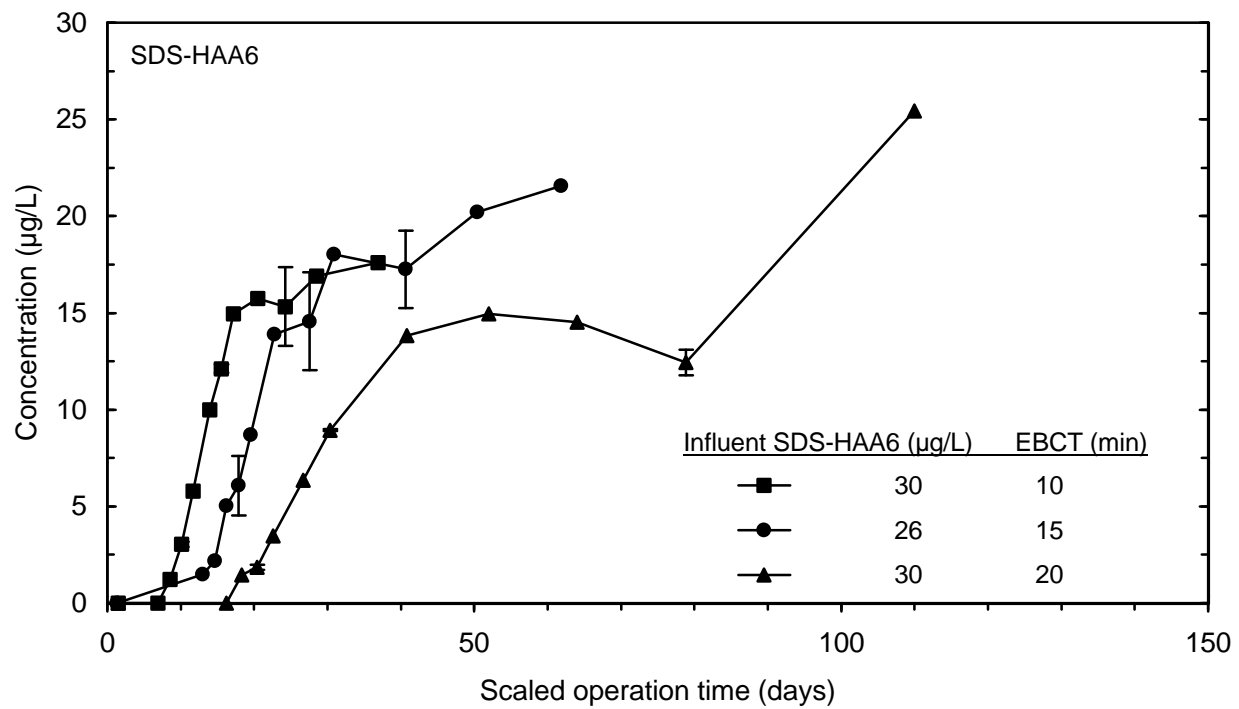


Figure 10 Impact of EBCT on SDS-HAA6 breakthrough (10 to 20 minutes)

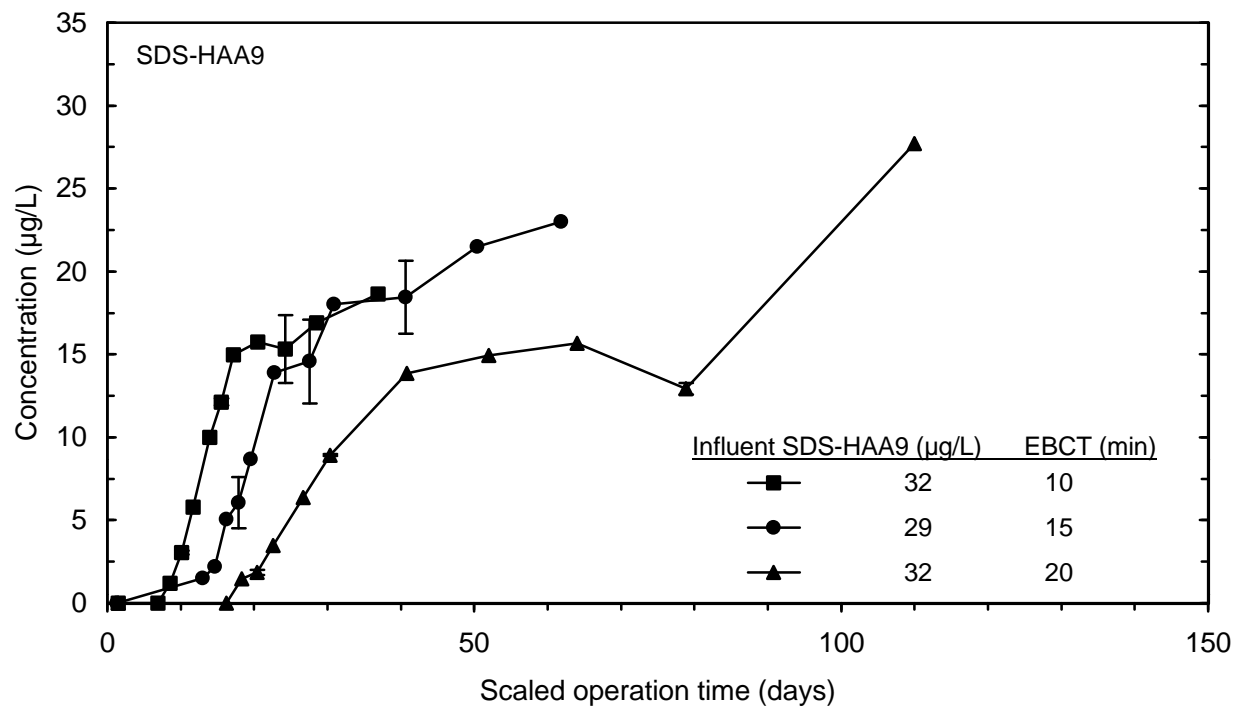


Figure 11 Impact of EBCT on SDS-HAA9 breakthrough (10 to 20 minutes)

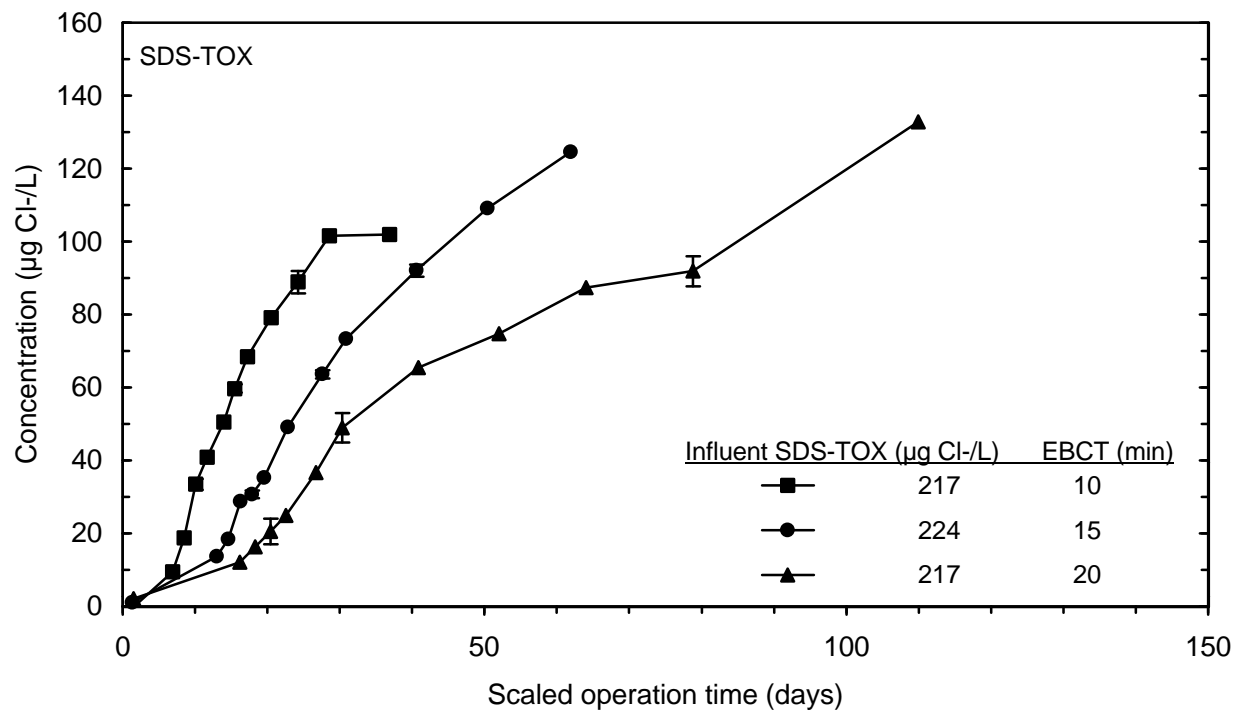


Figure 12 Impact of EBCT on SDS-TOX breakthrough (10 to 20 minutes)

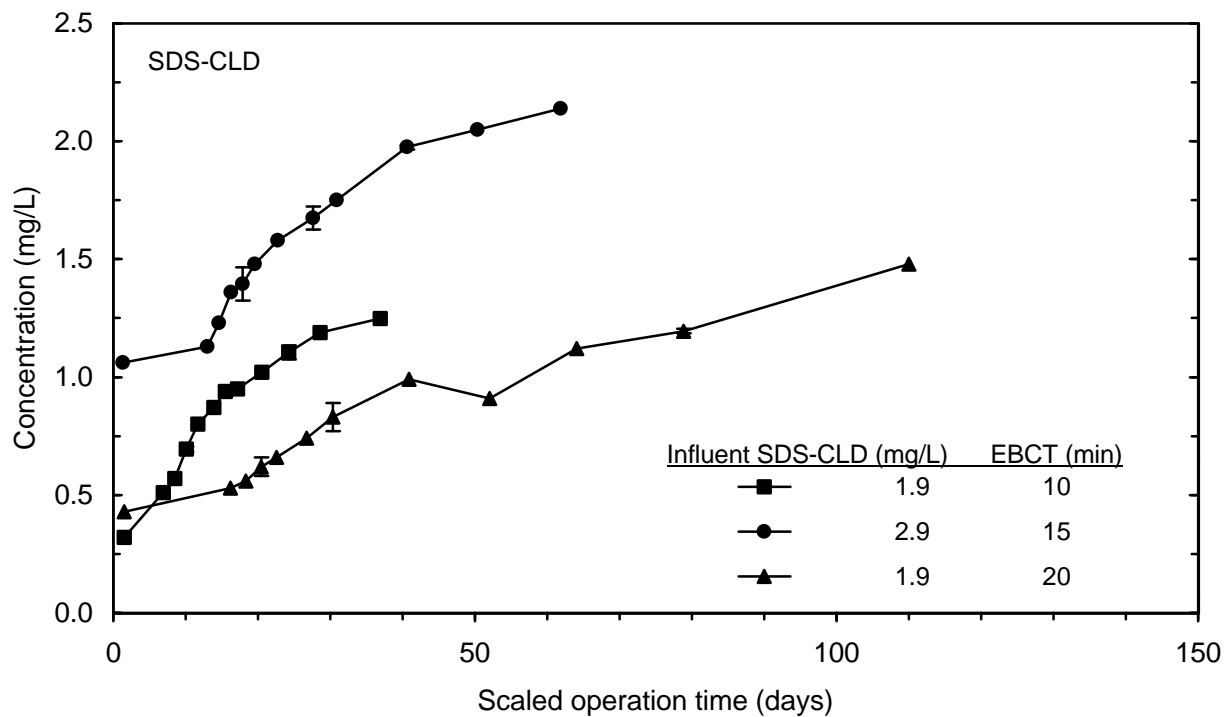


Figure 13 Impact of EBCT on SDS-CLD breakthrough (10 to 20 minutes)

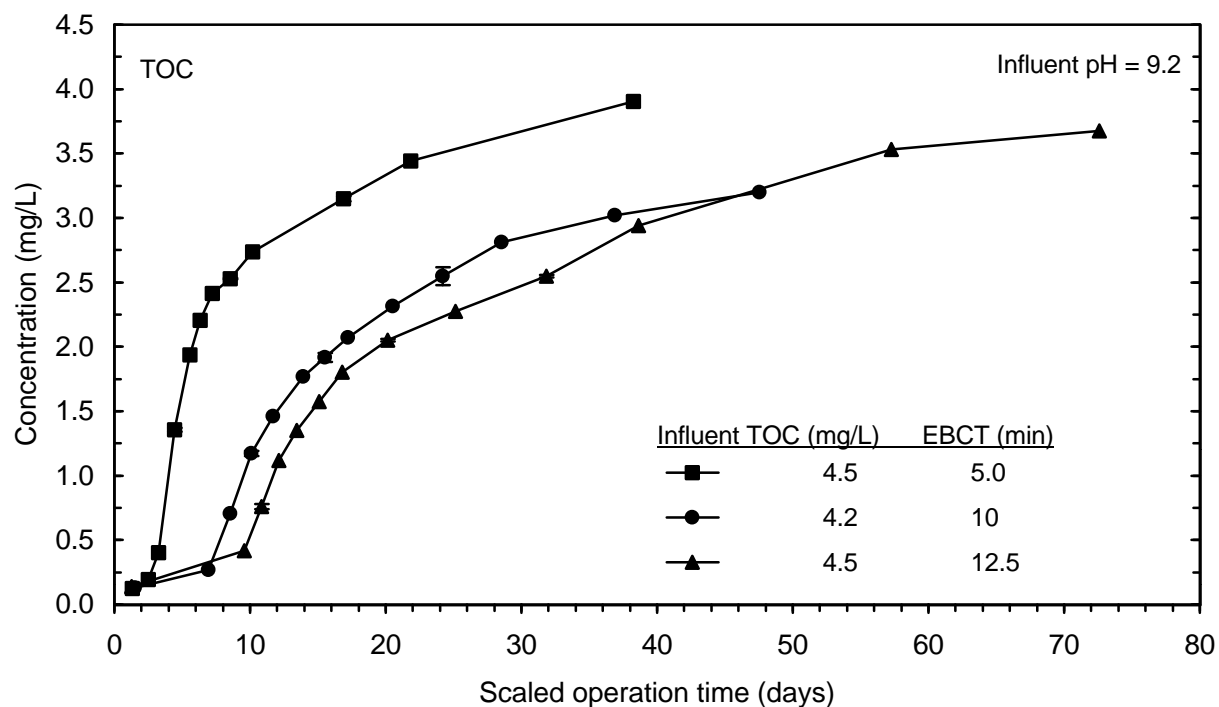


Figure 14 Impact of EBCT on TOC breakthrough (5.0 to 12.5 minutes)

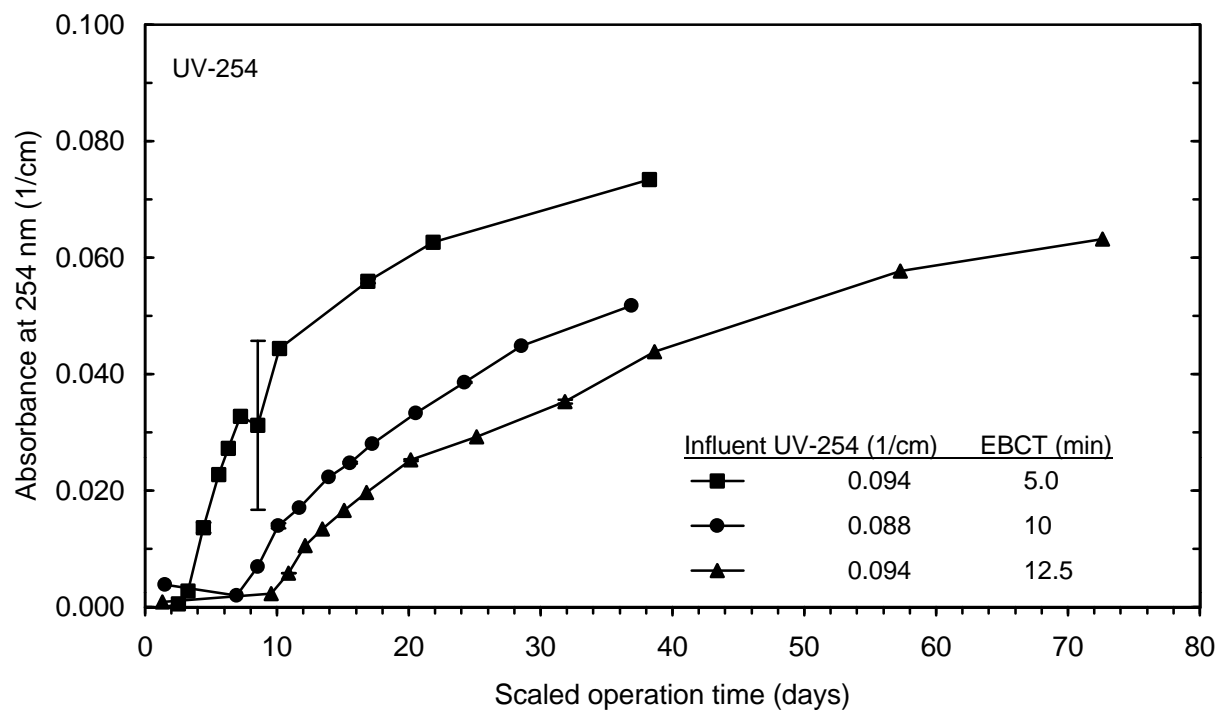


Figure 15 Impact of EBCT on UV-254 breakthrough (5.0 to 12.5 minutes)

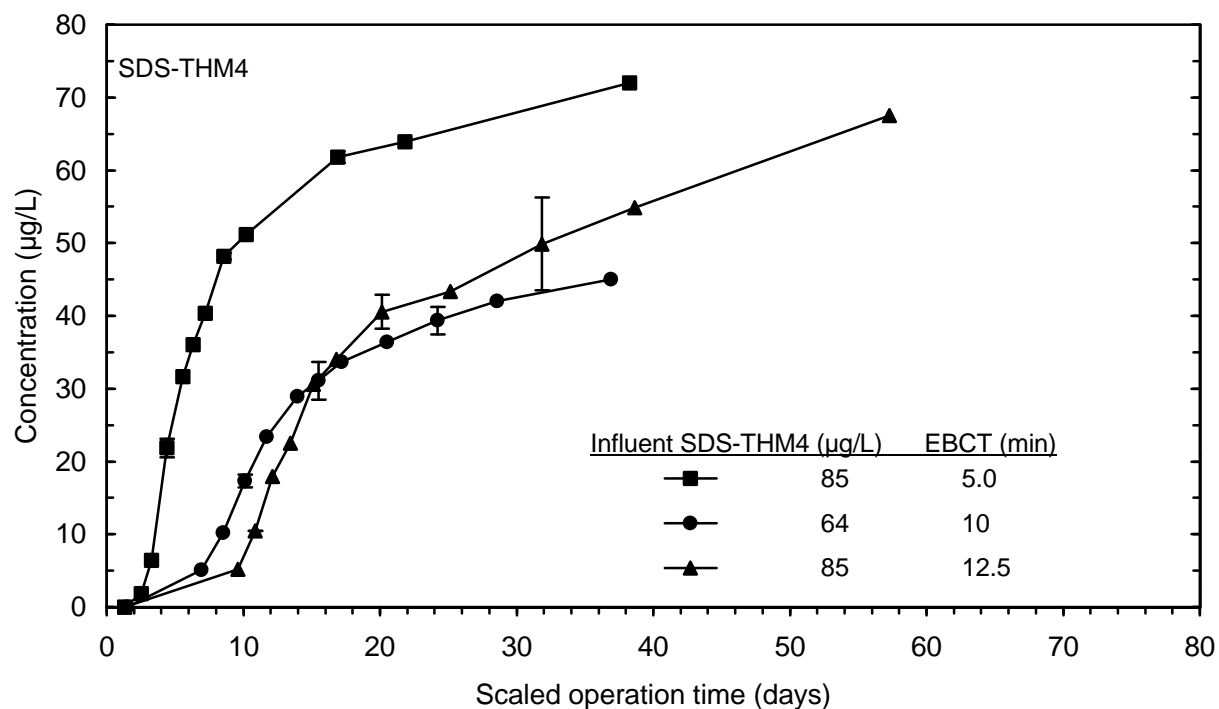


Figure 16 Impact of EBCT on SDS-THM4 breakthrough (5.0 to 12.5 minutes)

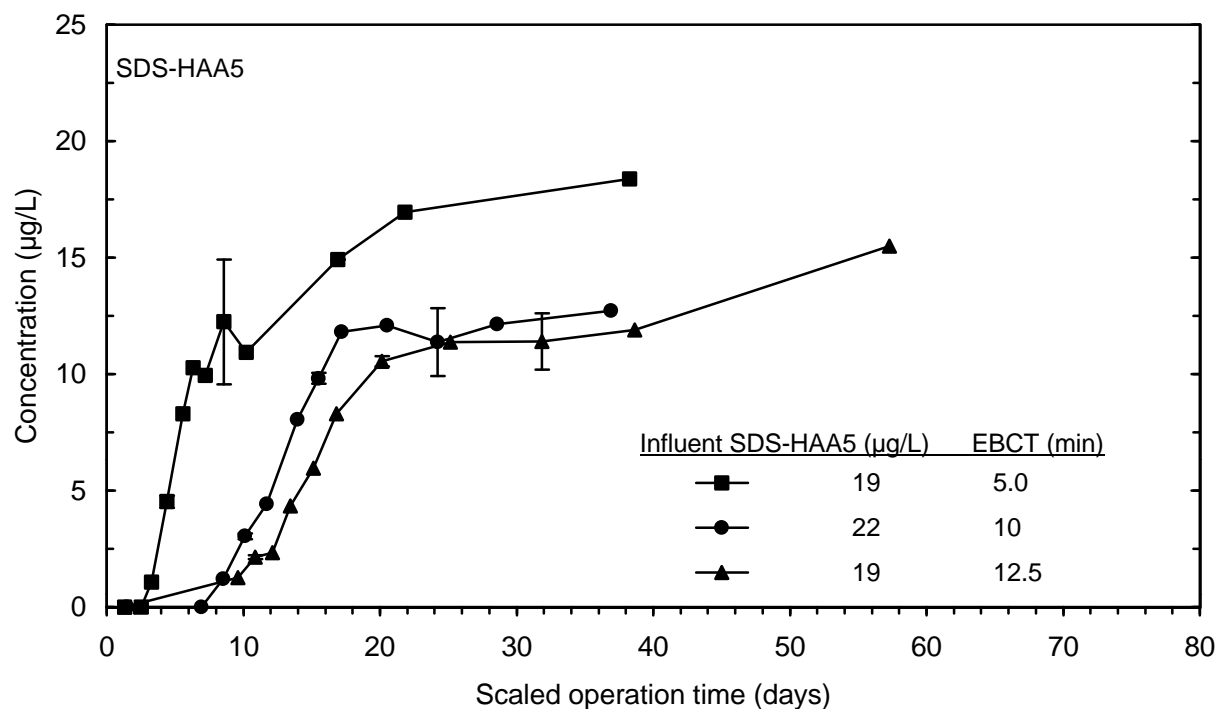


Figure 17 Impact of EBCT on SDS-HAA5 breakthrough (5.0 to 12.5 minutes)

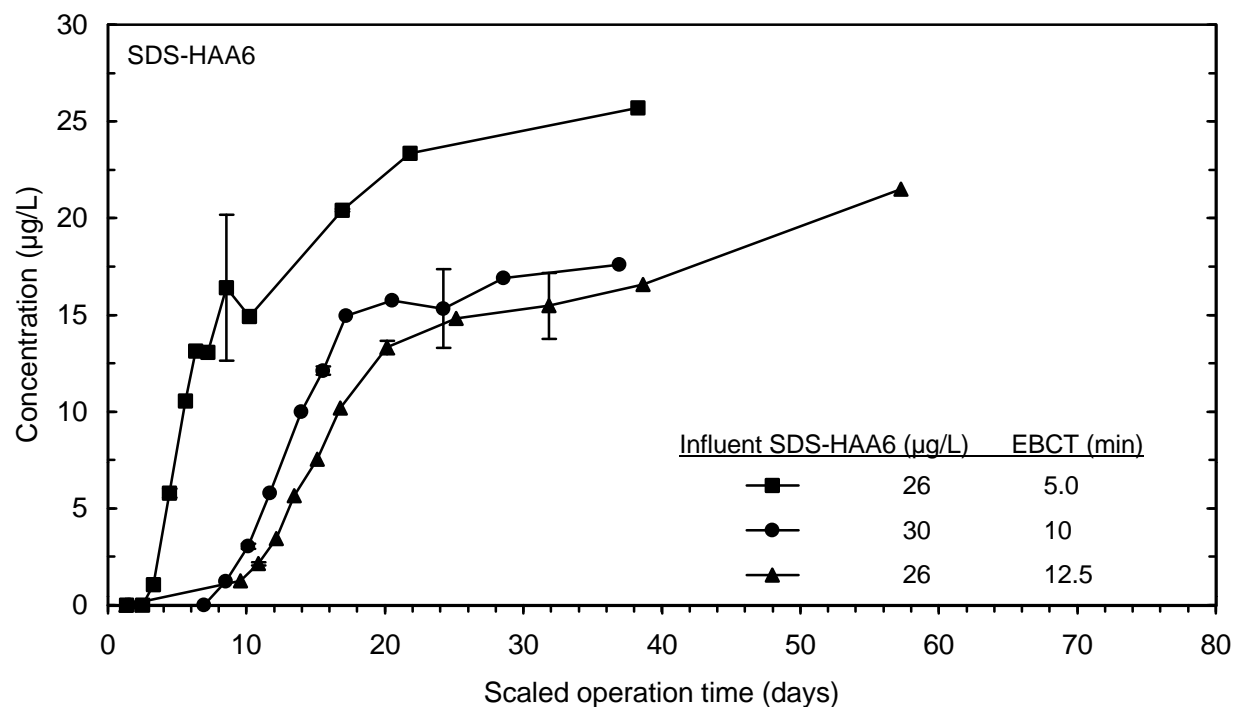


Figure 18 Impact of EBCT on SDS-HAA6 breakthrough (5.0 to 12.5 minutes)

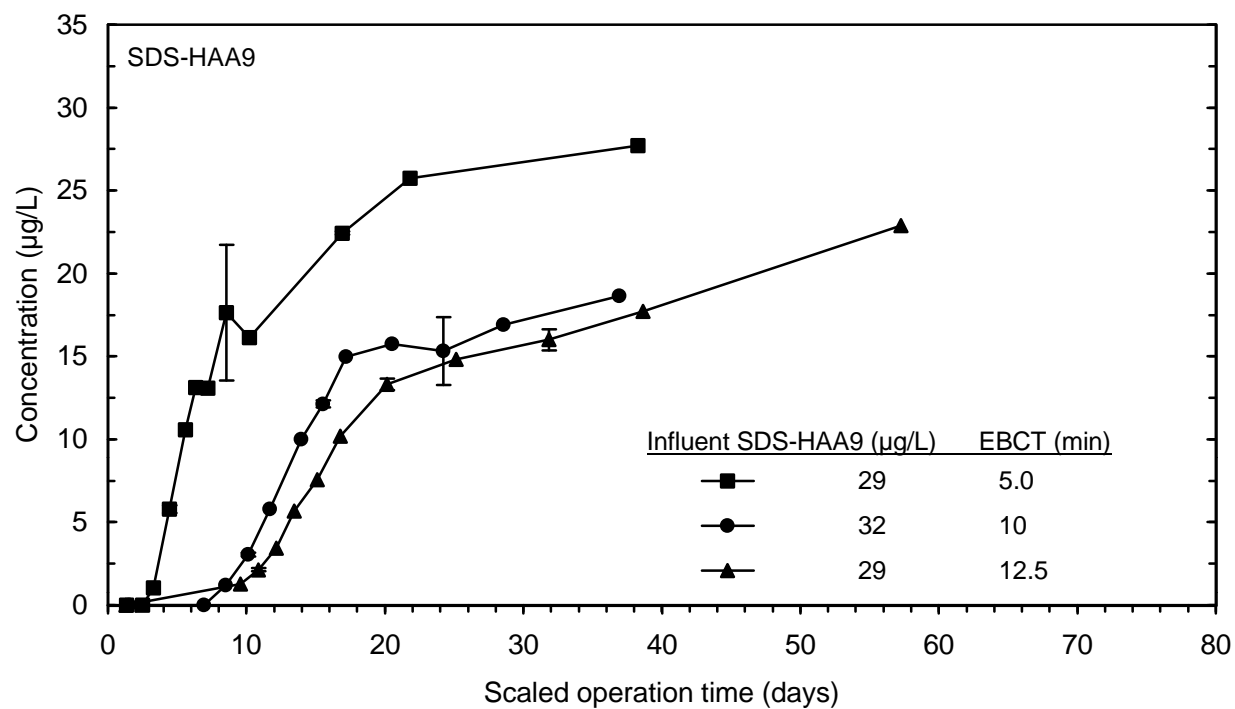


Figure 19 Impact of EBCT on SDS-HAA9 breakthrough (5.0 to 12.5 minutes)

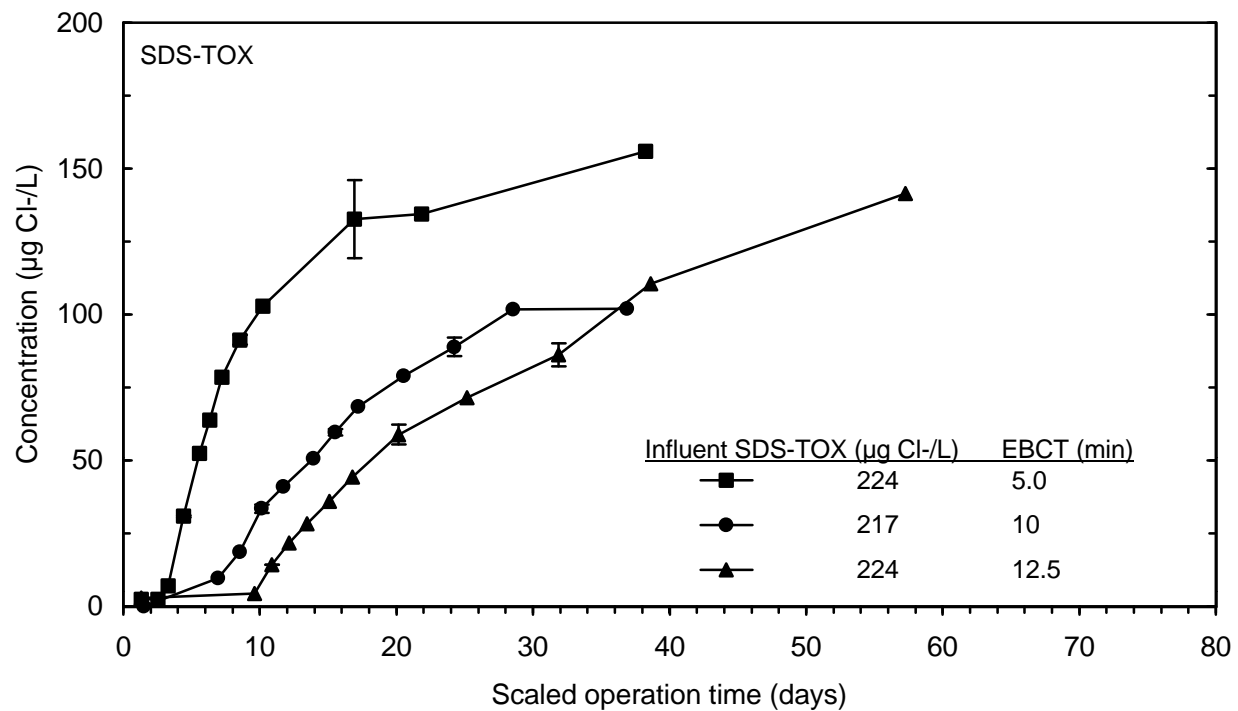


Figure 20 Impact of EBCT on SDS-TOX breakthrough (5.0 to 12.5 minutes)

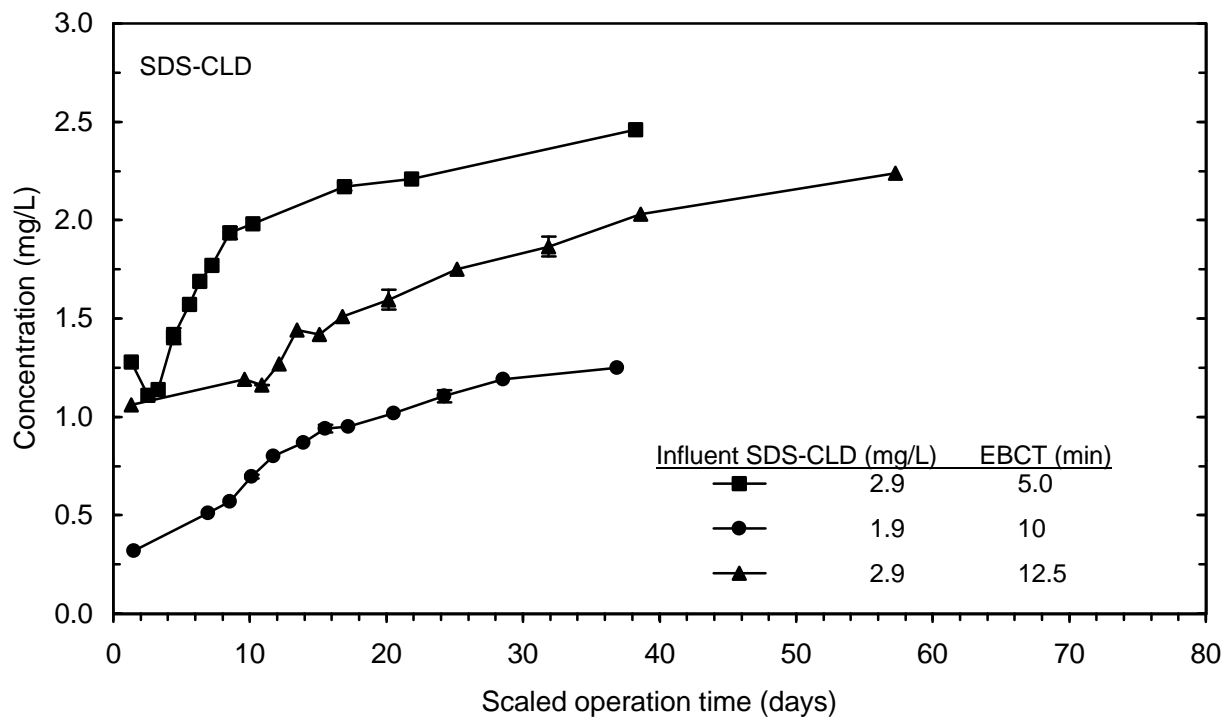


Figure 21 Impact of EBCT on SDS-CLD breakthrough (5.0 to 12.5 minutes)

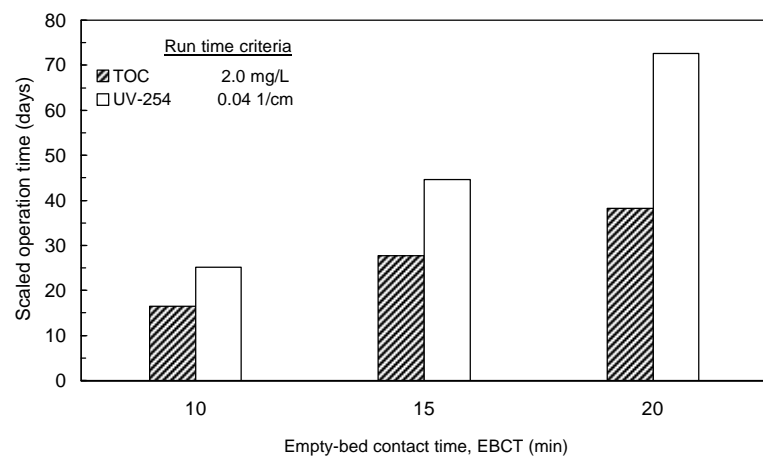


Figure 22 Impact of EBCT (10 to 20 minutes) on run times based on single contactor breakthrough curves for TOC and UV-254 effluent criteria (high)

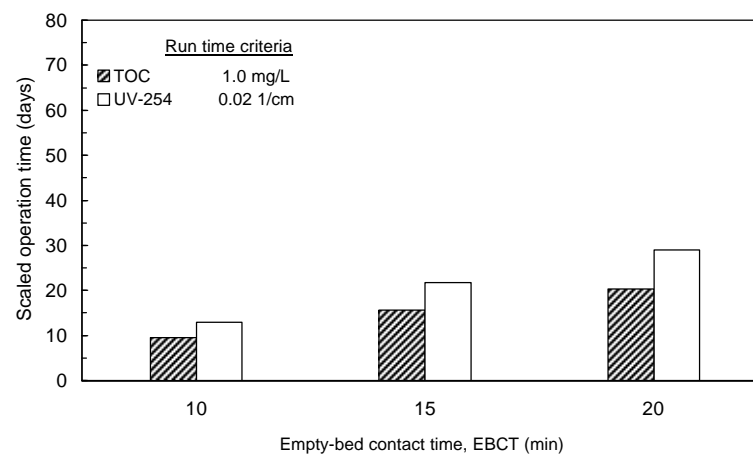


Figure 23 Impact of EBCT (10 to 20 minutes) on run times based on single contactor breakthrough curves for TOC and UV-254 effluent criteria (low)

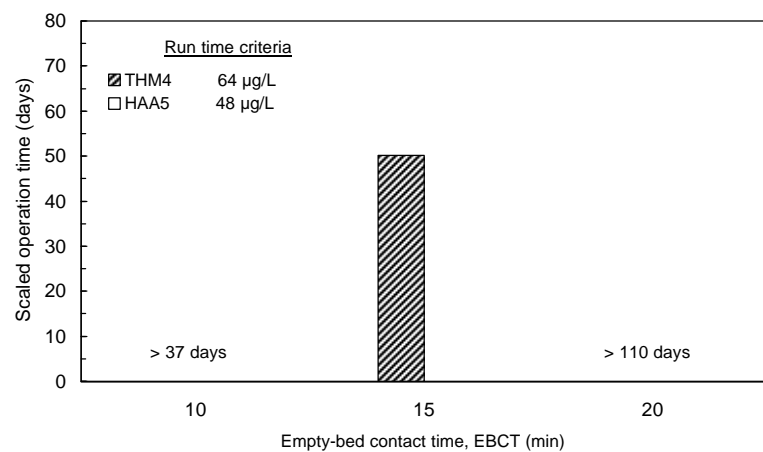


Figure 24 Impact of EBCT (10 to 20 minutes) on run times based on single contactor breakthrough curves for Stage 1 THM4 and HAA5 effluent criteria

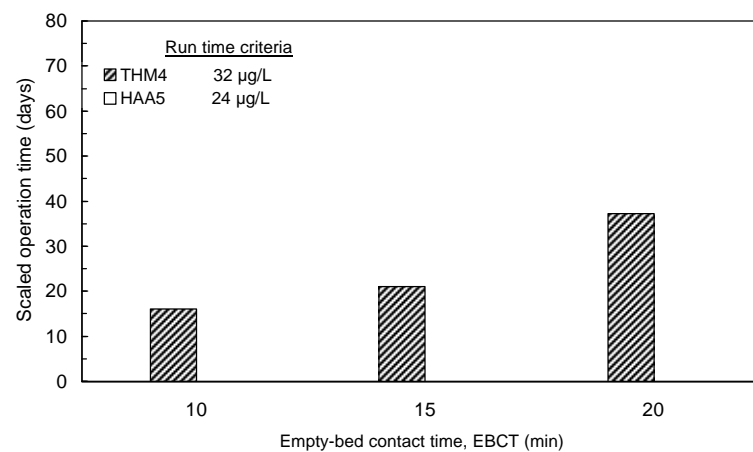


Figure 25 Impact of EBCT (10 to 20 minutes) on run times based on single contactor breakthrough curves for Stage 2 THM4 and HAA5 effluent criteria

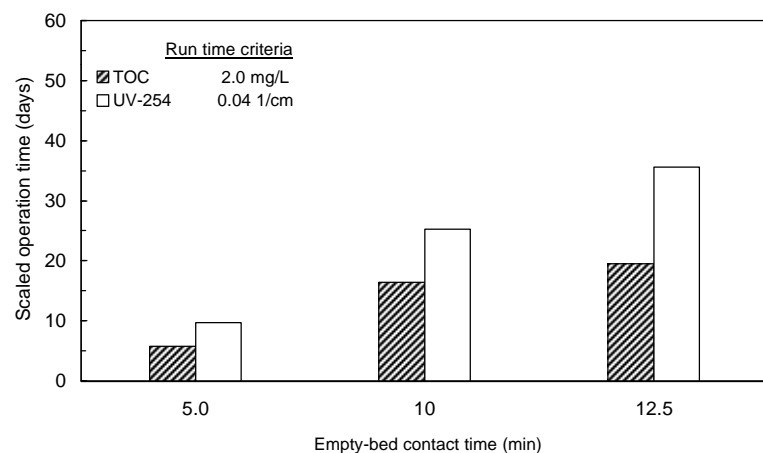


Figure 26 Impact of EBCT (5.0 to 12.5 minutes) on run times based on single breakthrough curves for TOC and UV-254 effluent criteria (high)

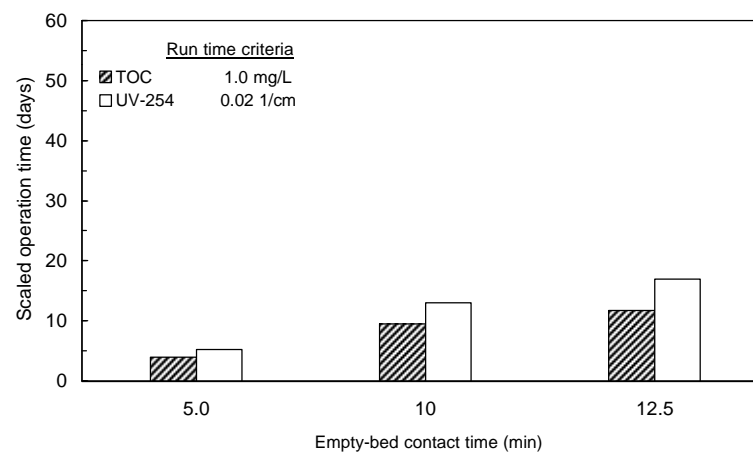


Figure 27 Impact of EBCT (5.0 to 12.5 minutes) on run times based on single breakthrough curves for TOC and UV-254 effluent criteria (low)

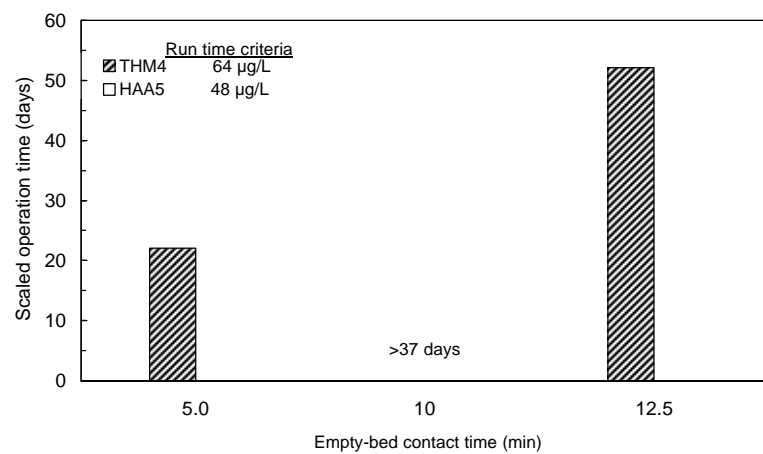


Figure 28 Impact of EBCT (5.0 to 12.5 minutes) on run times based on single breakthrough curves for Stage 1 THM4 and HAA5 effluent criteria

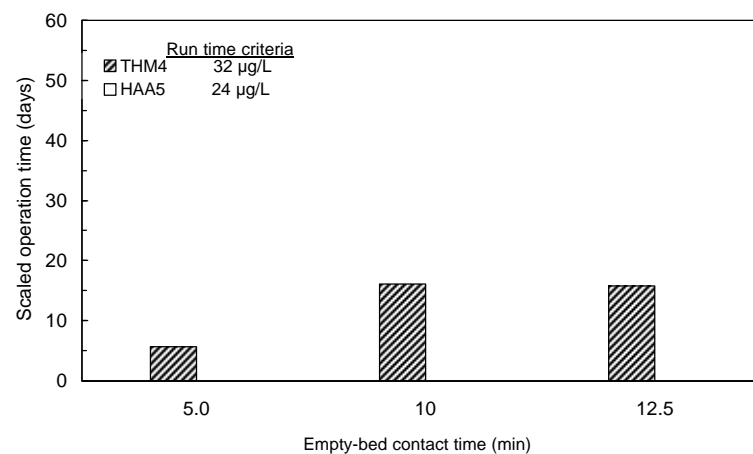


Figure 29 Impact of EBCT (5.0 to 12.5 minutes) on run times based on single breakthrough curves for Stage 2 THM4 and HAA5 effluent criteria

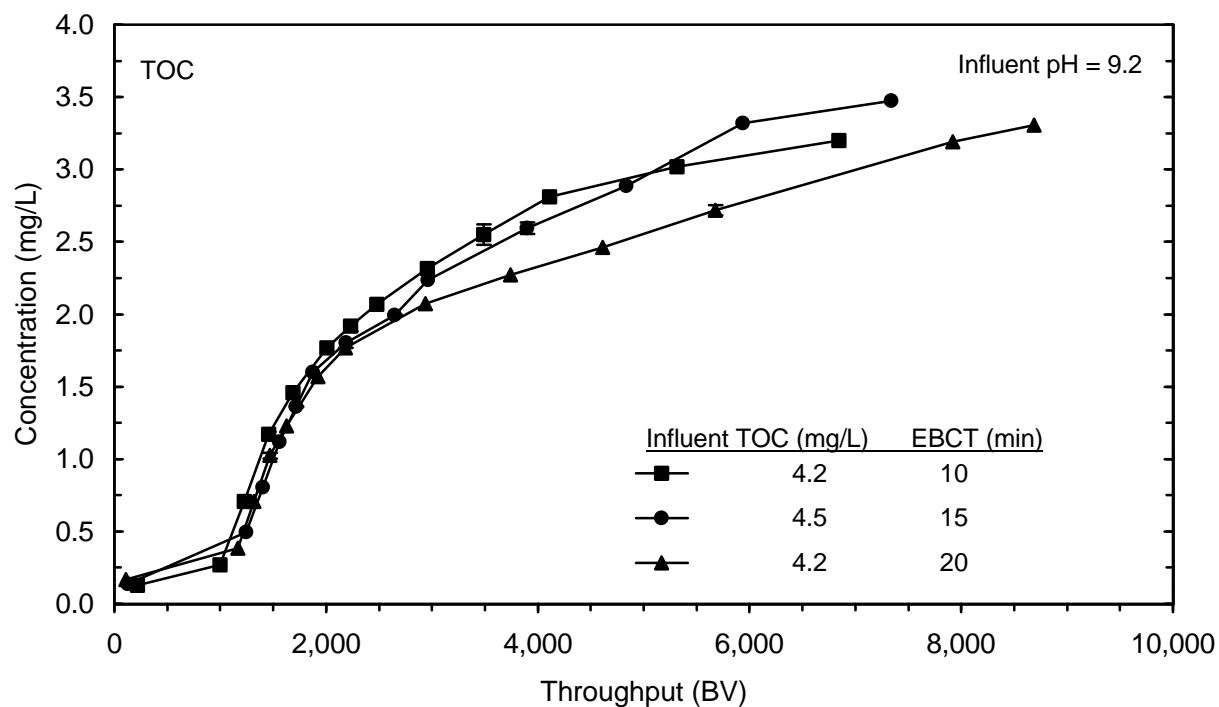


Figure 30 Impact of EBCT on TOC breakthrough (10 to 20 minutes) plotted as throughput in bed volumes treated

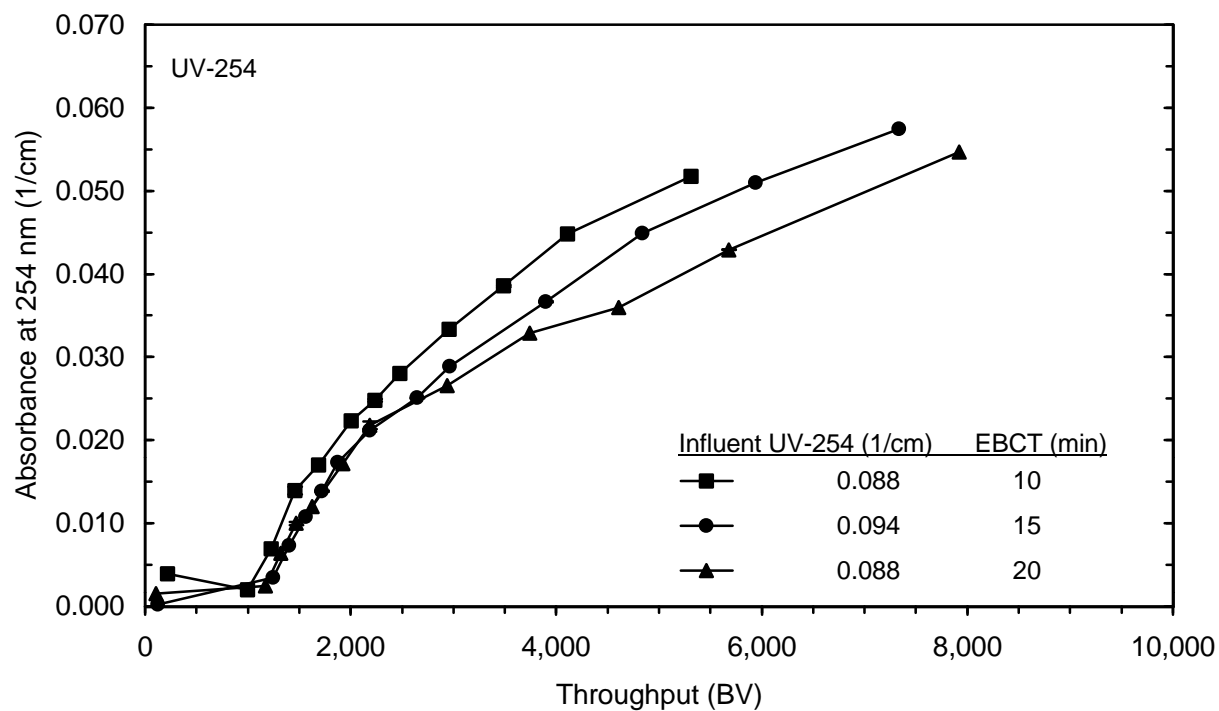


Figure 31 Impact of EBCT on UV-254 breakthrough (10 to 20 minutes) plotted as throughput in bed volumes treated

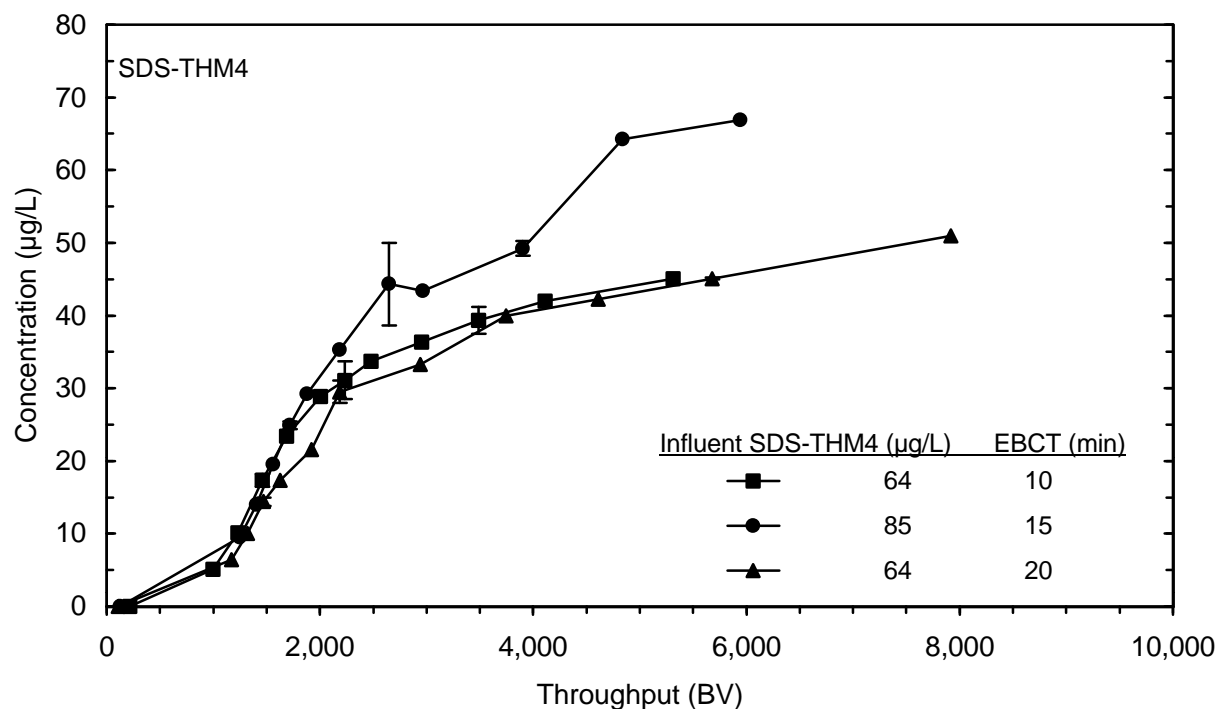


Figure 32 Impact of EBCT on SDS-THM4 breakthrough (10 to 20 minutes) plotted as throughput in bed volumes treated

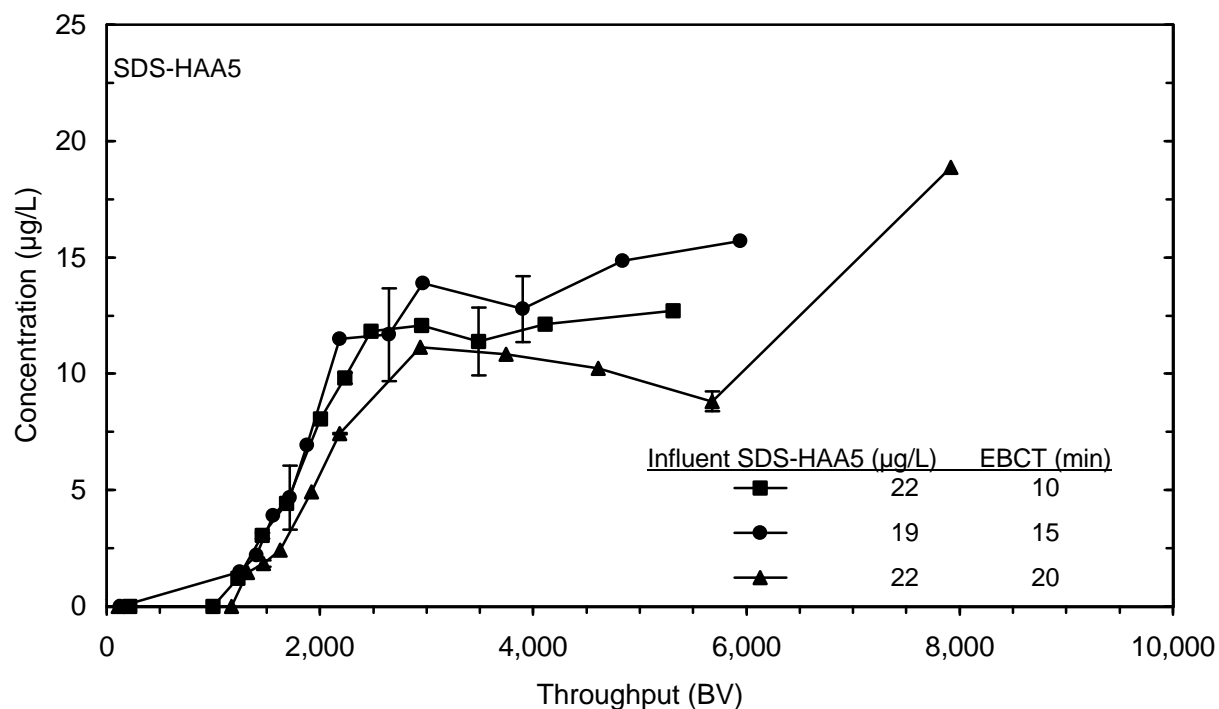


Figure 33 Impact of EBCT on SDS-HAA5 breakthrough (10 to 20 minutes) plotted as throughput in bed volumes treated

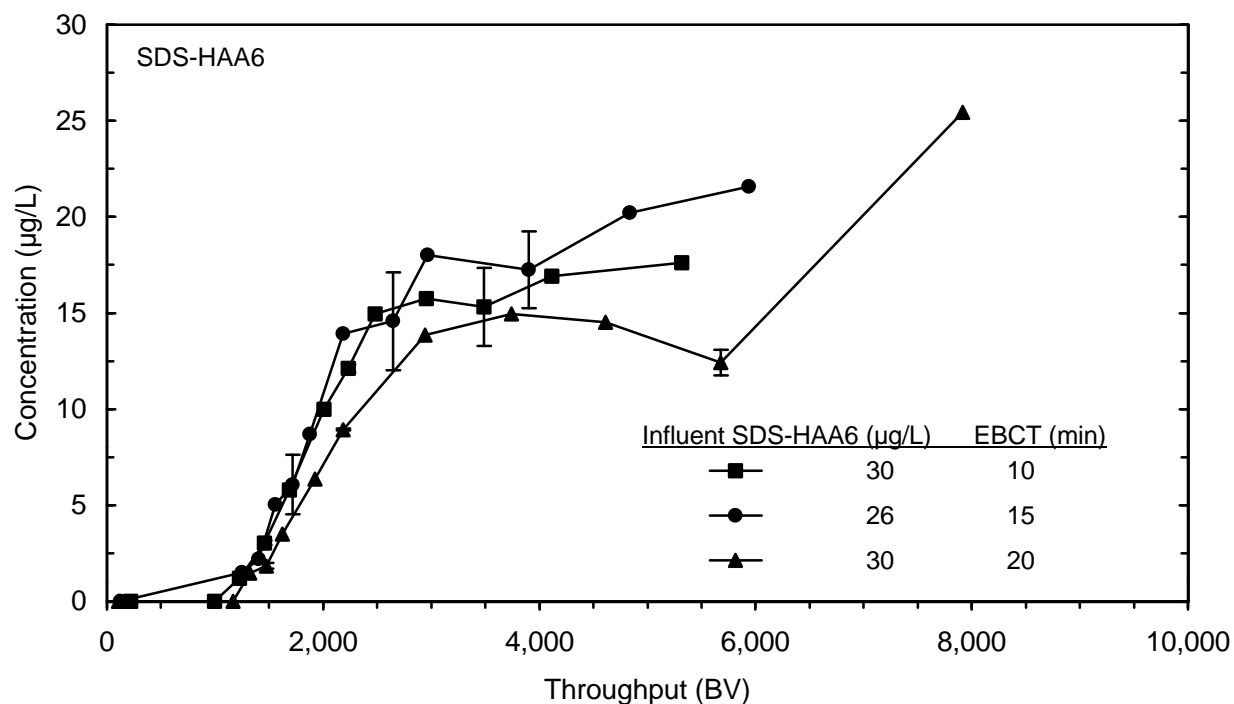


Figure 34 Impact of EBCT on SDS-HAA6 breakthrough (10 to 20 minutes) plotted as throughput in bed volumes treated

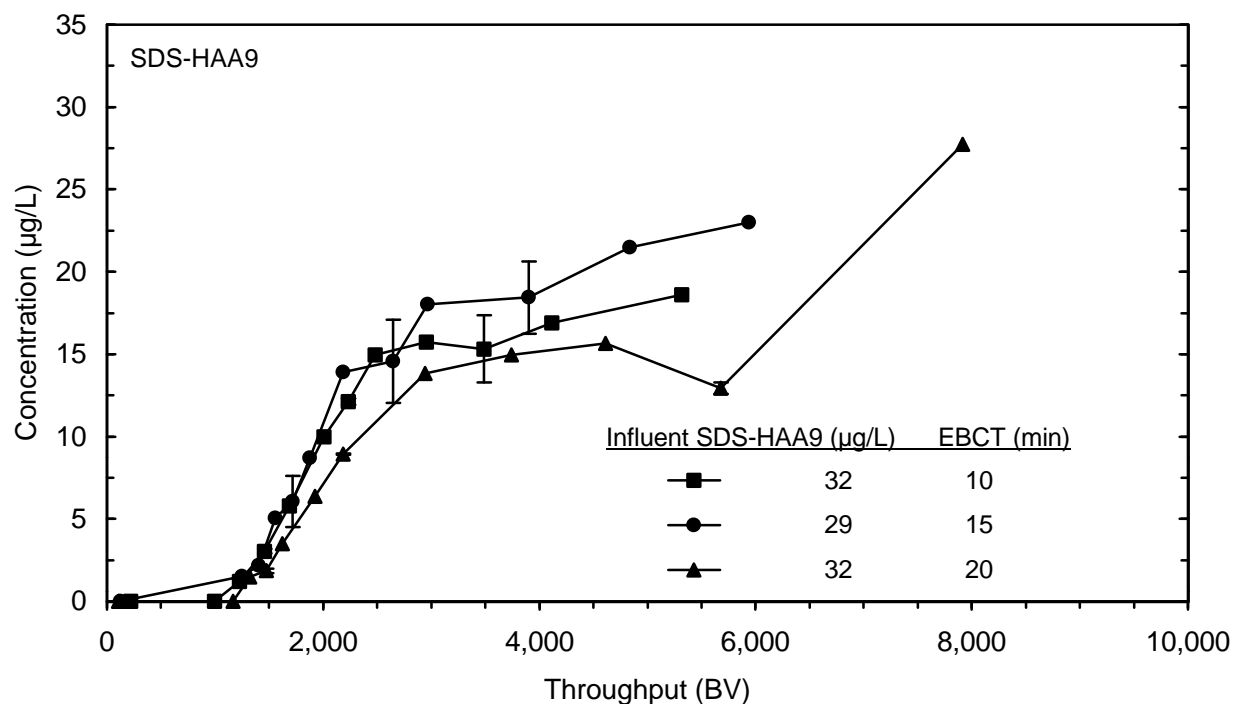


Figure 35 Impact of EBCT on SDS-HAA9 breakthrough (10 to 20 minutes) plotted as throughput in bed volumes treated

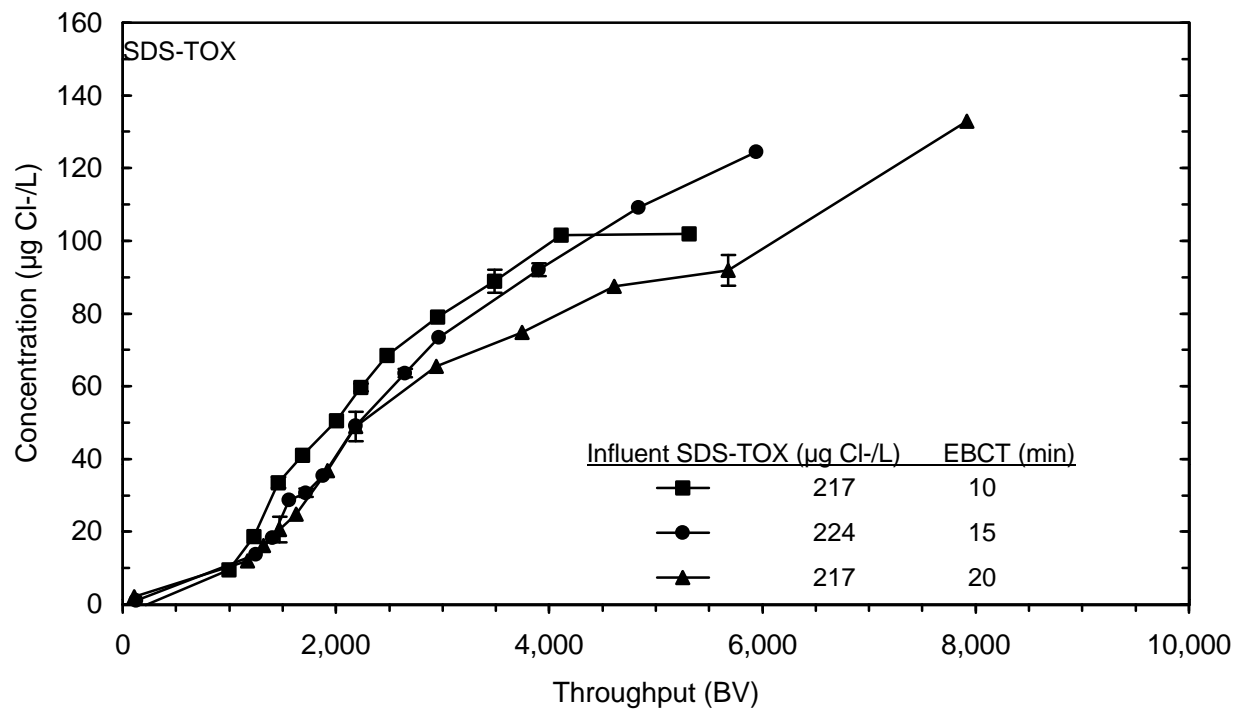


Figure 36 Impact of EBCT on SDS-TOX breakthrough (10 to 20 minutes) plotted as throughput in bed volumes treated

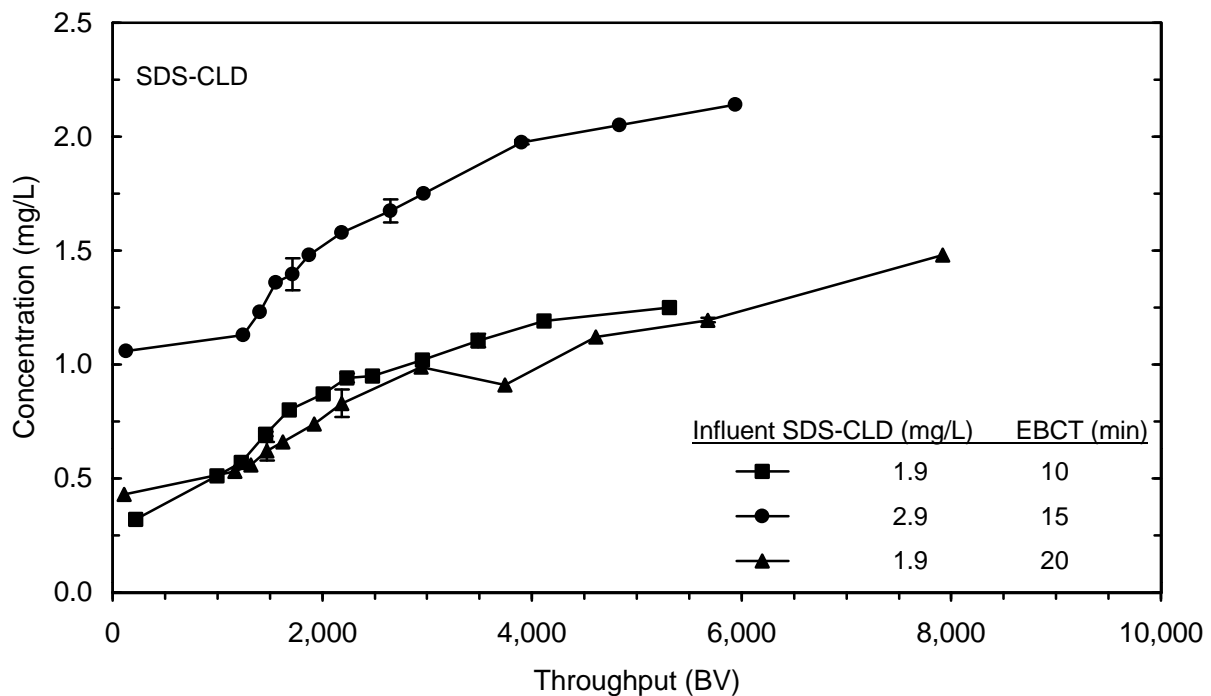


Figure 37 Impact of EBCT on SDS-CLD breakthrough (10 to 20 minutes) plotted as throughput in bed volumes treated

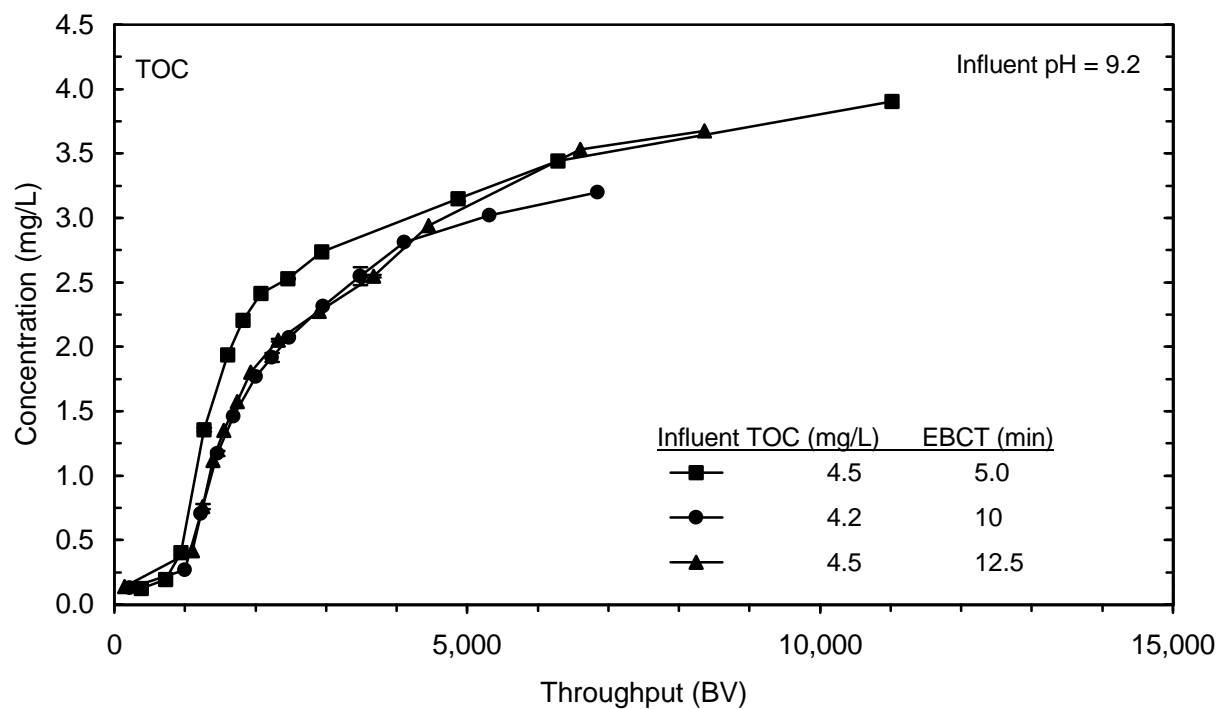


Figure 38 Impact of EBCT on TOC breakthrough (5.0 to 12.5 minutes) plotted as throughput in bed volumes treated

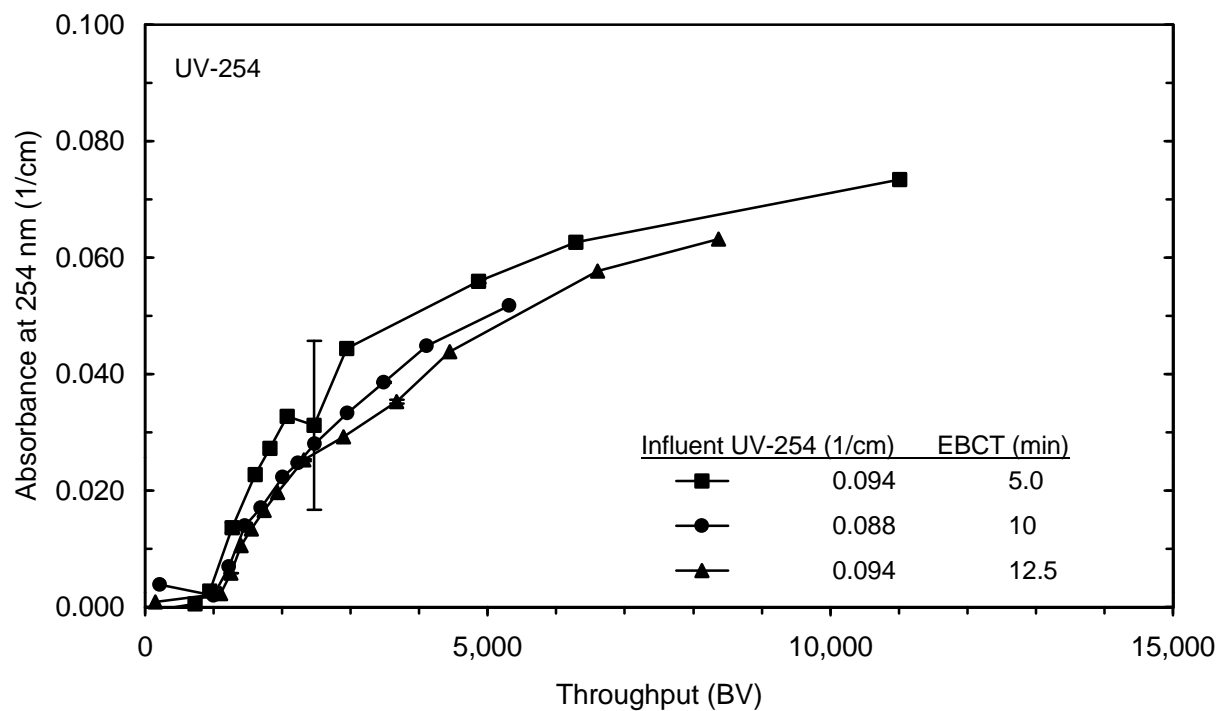


Figure 39 Impact of EBCT on UV-254 breakthrough (5.0 to 12.5 minutes) plotted as throughput in bed volumes treated

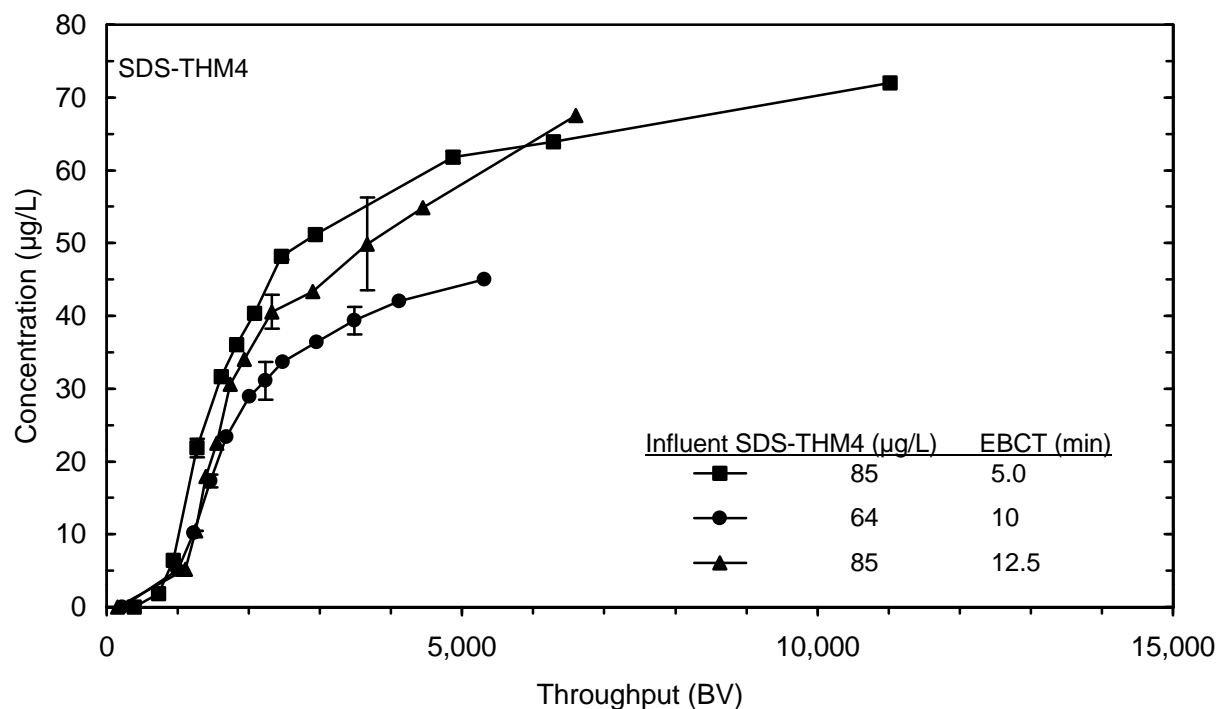


Figure 40 Impact of EBCT on SDS-THM4 breakthrough (5.0 to 12.5 minutes) plotted as throughput in bed volumes treated

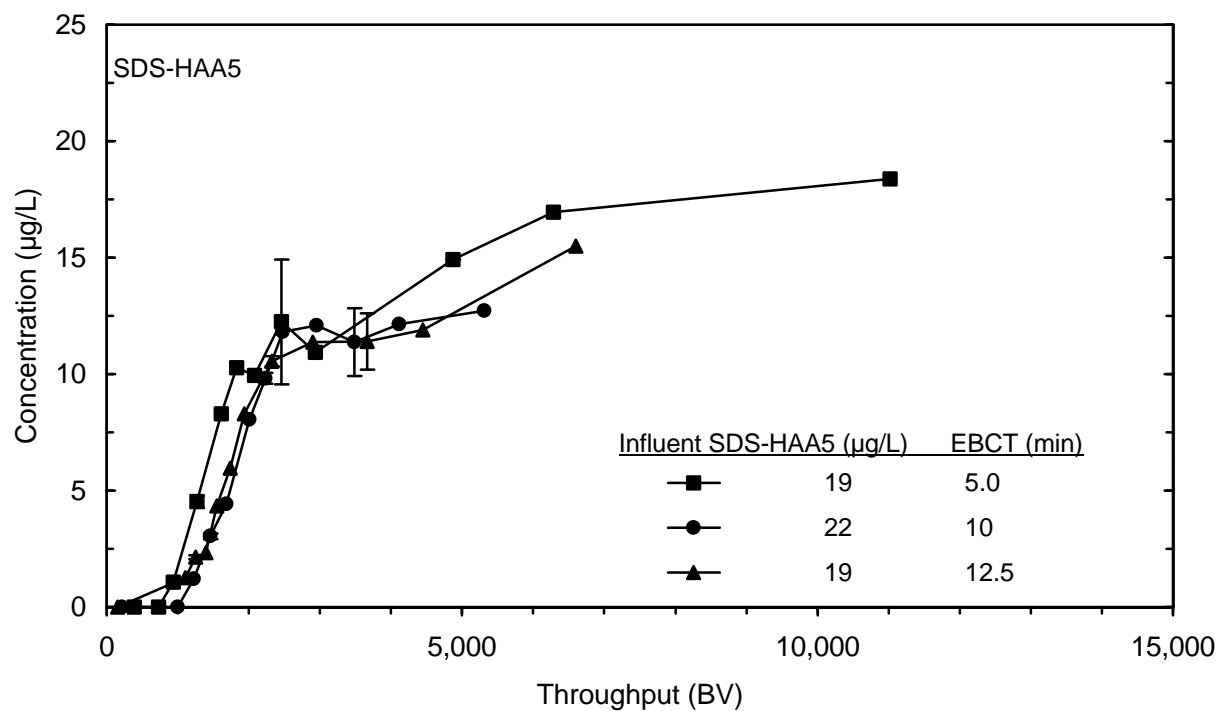


Figure 41 Impact of EBCT on SDS-HAA5 breakthrough (5.0 to 12.5 minutes) plotted as throughput in bed volumes treated

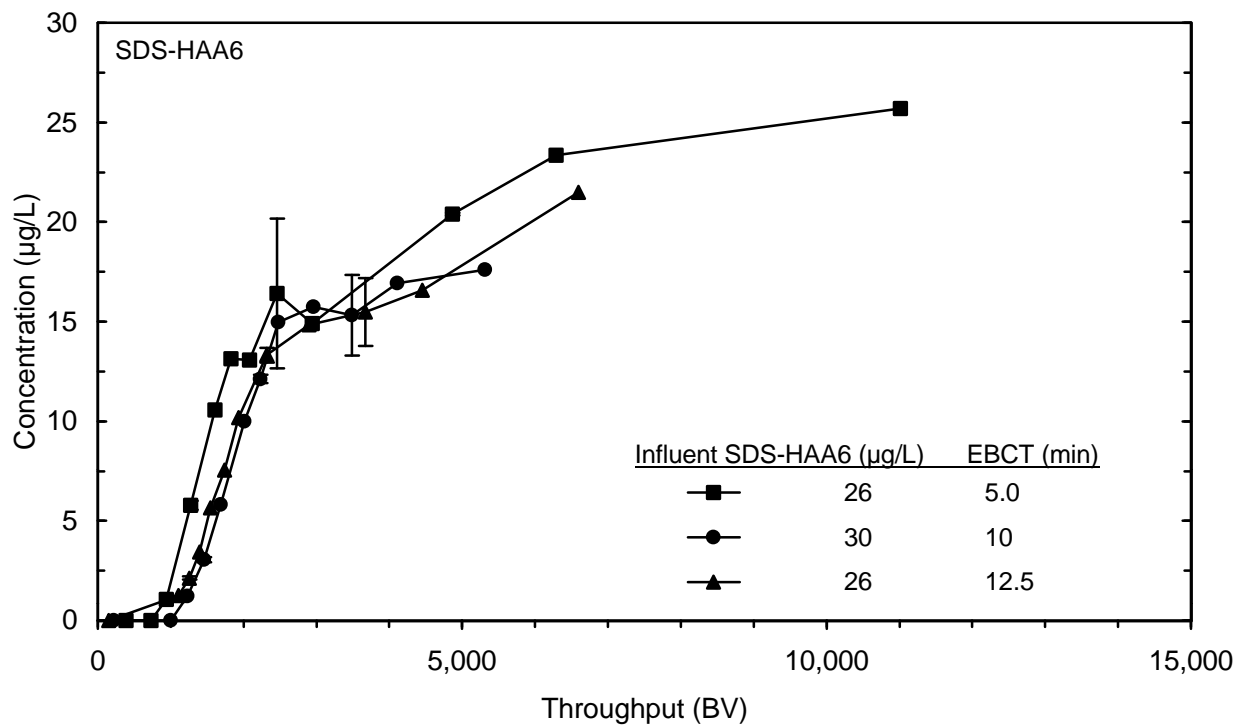


Figure 42 Impact of EBCT on SDS-HAA6 breakthrough (5.0 to 12.5 minutes) plotted as throughput in bed volumes treated

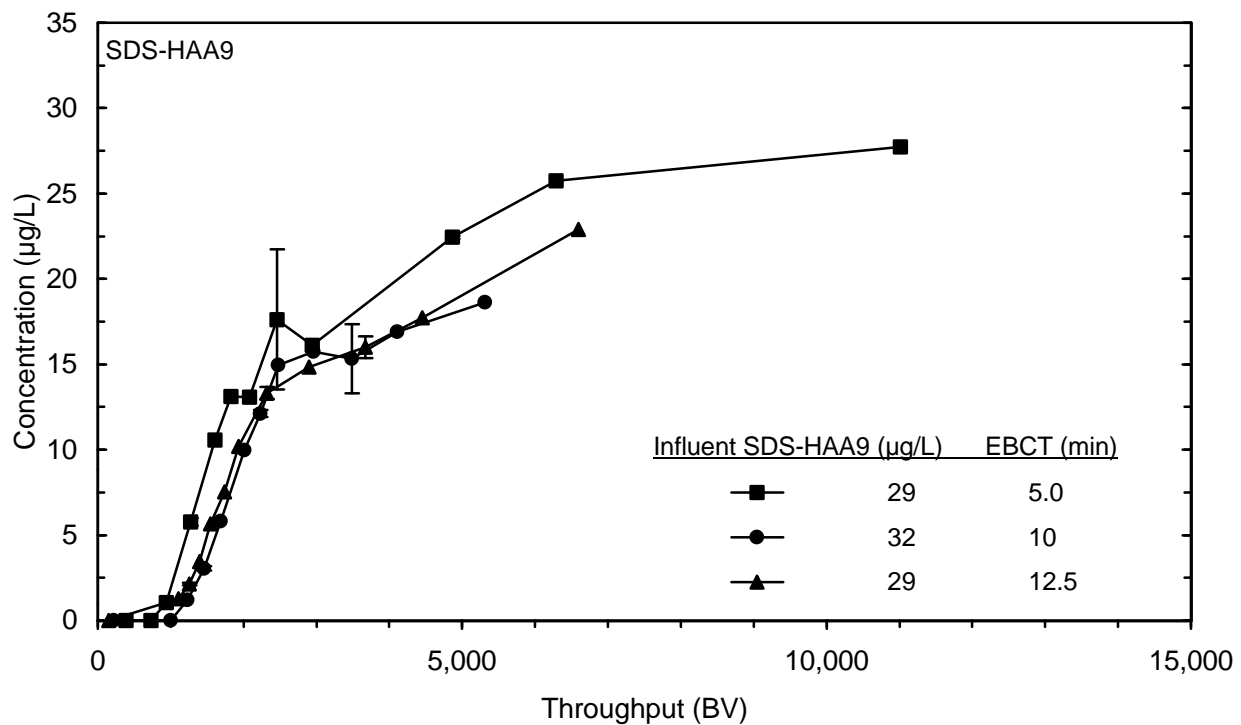


Figure 43 Impact of EBCT on SDS-HAA9 breakthrough (5.0 to 12.5 minutes) plotted as throughput in bed volumes treated

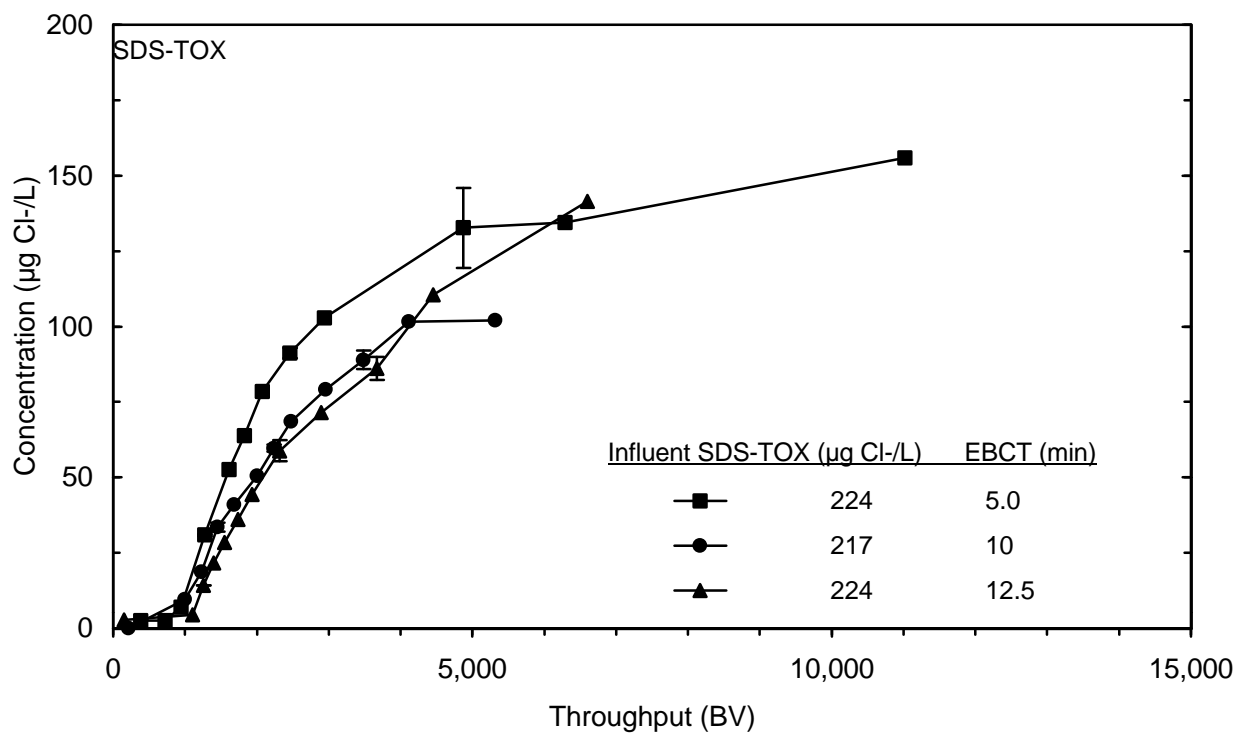


Figure 44 Impact of EBCT on SDS-TOX breakthrough (5.0 to 12.5 minutes) plotted as throughput in bed volumes treated

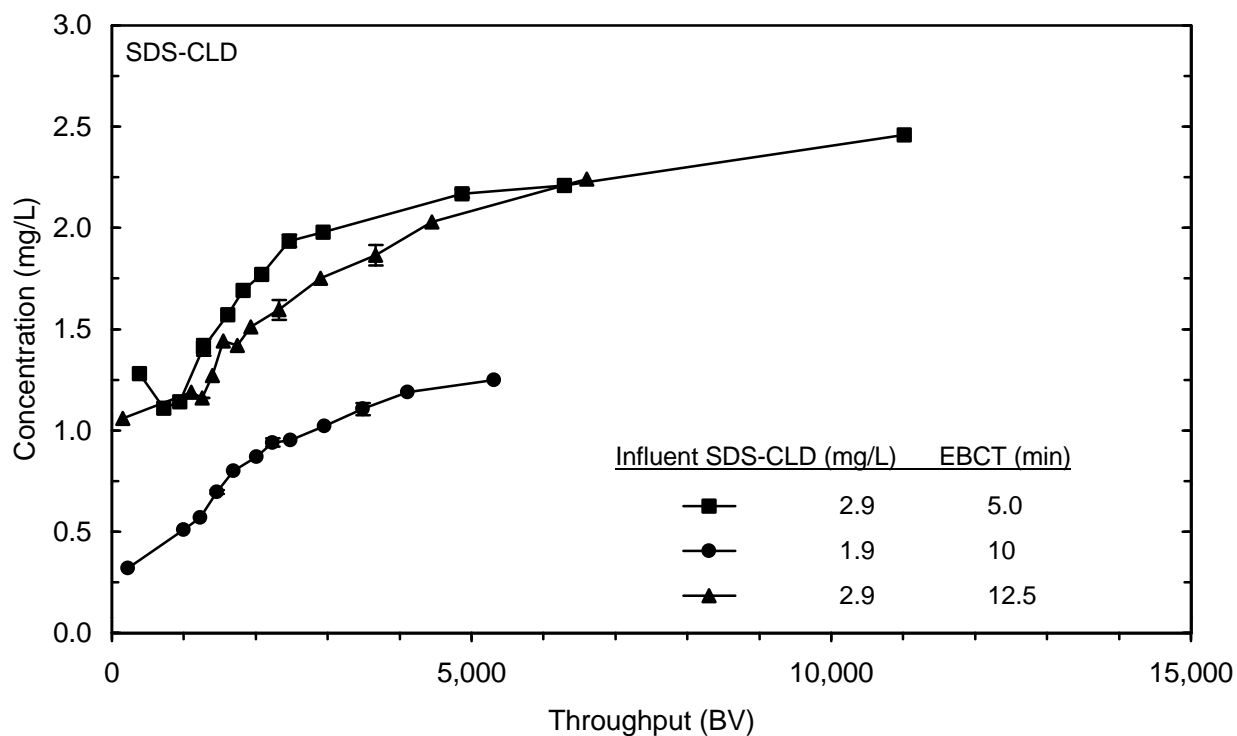


Figure 45 Impact of EBCT on SDS-CLD breakthrough (5.0 to 12.5 minutes) plotted as throughput in bed volumes treated

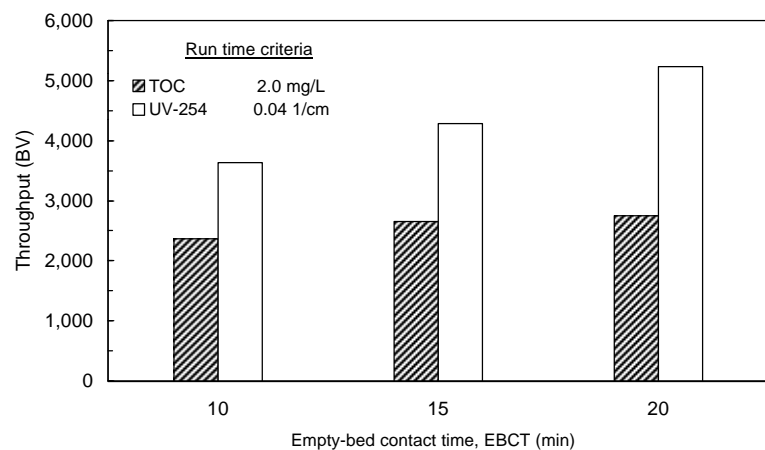


Figure 46 Impact of EBCT (10 to 20 minutes) on throughput based on single contactor breakthrough curves for TOC and UV-254 effluent criteria (high)

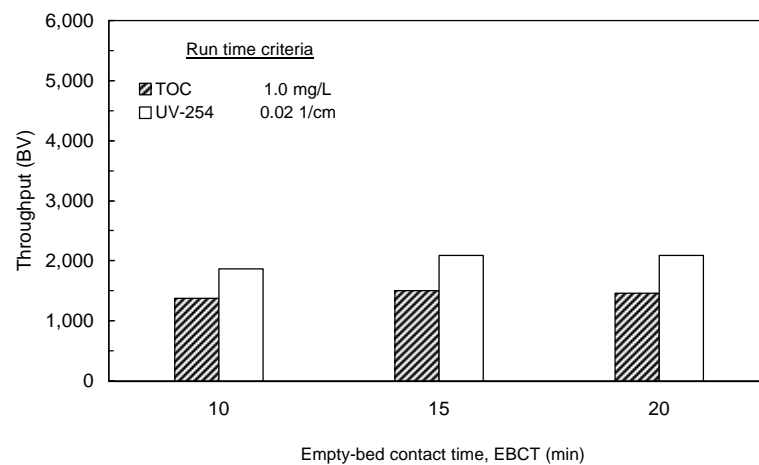


Figure 47 Impact of EBCT (10 to 20 minutes) on throughput based on single contactor breakthrough curves for TOC and UV-254 effluent criteria (low)

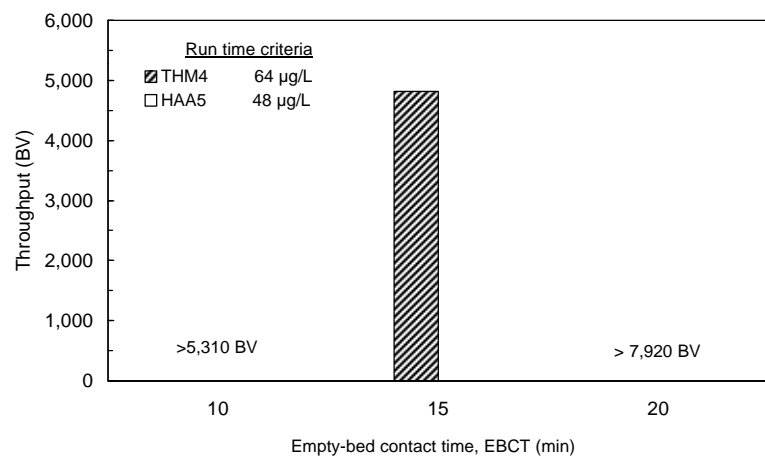


Figure 48 Impact of EBCT (10 to 20 minutes) on throughput based on single contactor breakthrough curves for Stage 1 THM4 and HAA5 effluent criteria

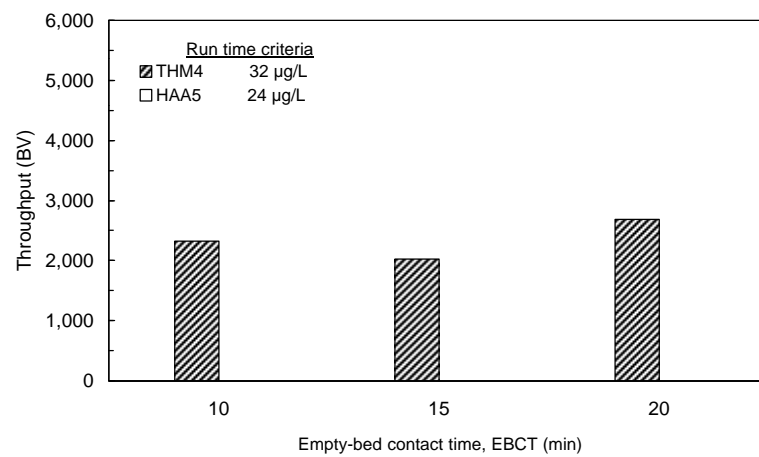


Figure 49 Impact of EBCT (10 to 20 minutes) on throughput based on single contactor breakthrough curves for Stage 2 THM4 and HAA5 effluent criteria

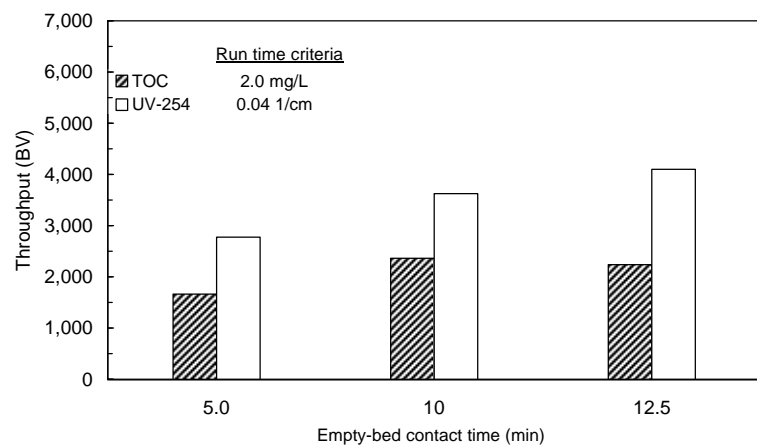


Figure 50 Impact of EBCT (5.0 to 12.5 minutes) on throughput based on single contactor breakthrough curves for TOC and UV-254 effluent criteria (high)

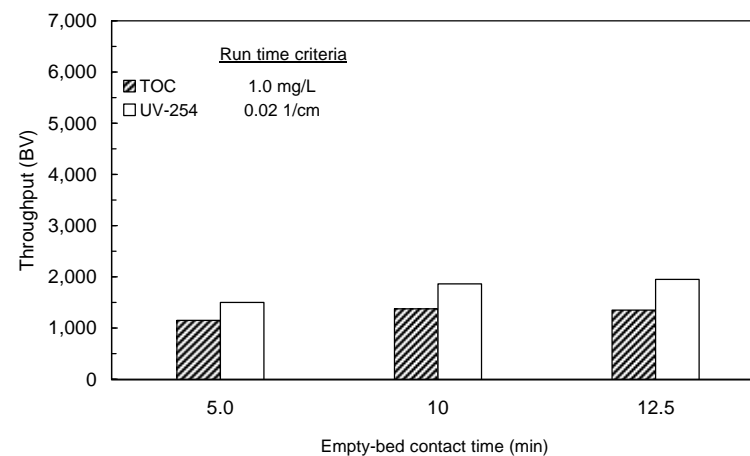


Figure 51 Impact of EBCT (5.0 to 12.5 minutes) on throughput based on single contactor breakthrough curves for TOC and UV-254 effluent criteria (low)

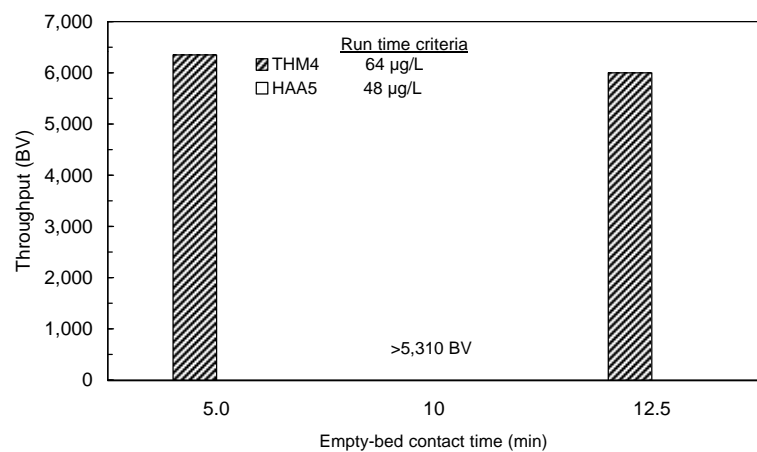


Figure 52 Impact of EBCT (5.0 to 12.5 minutes) on throughput based on single contactor breakthrough curves for Stage 1 THM4 and HAA5 effluent criteria

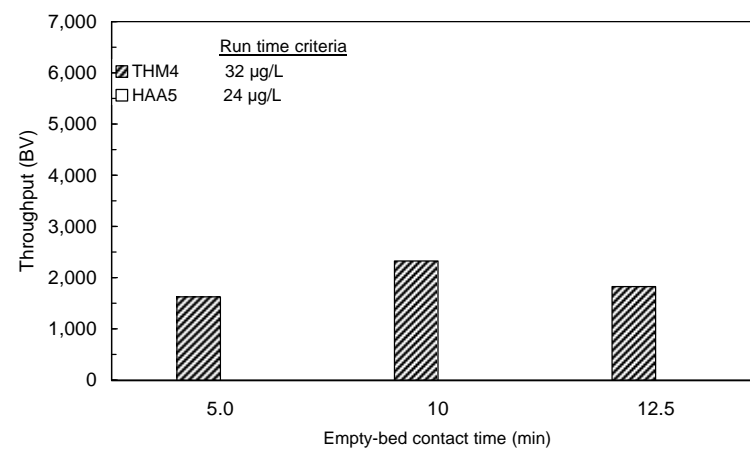


Figure 53 Impact of EBCT (5.0 to 12.5 minutes) on throughput based on single contactor breakthrough curves for Stage 2 THM4 and HAA5 effluent criteria

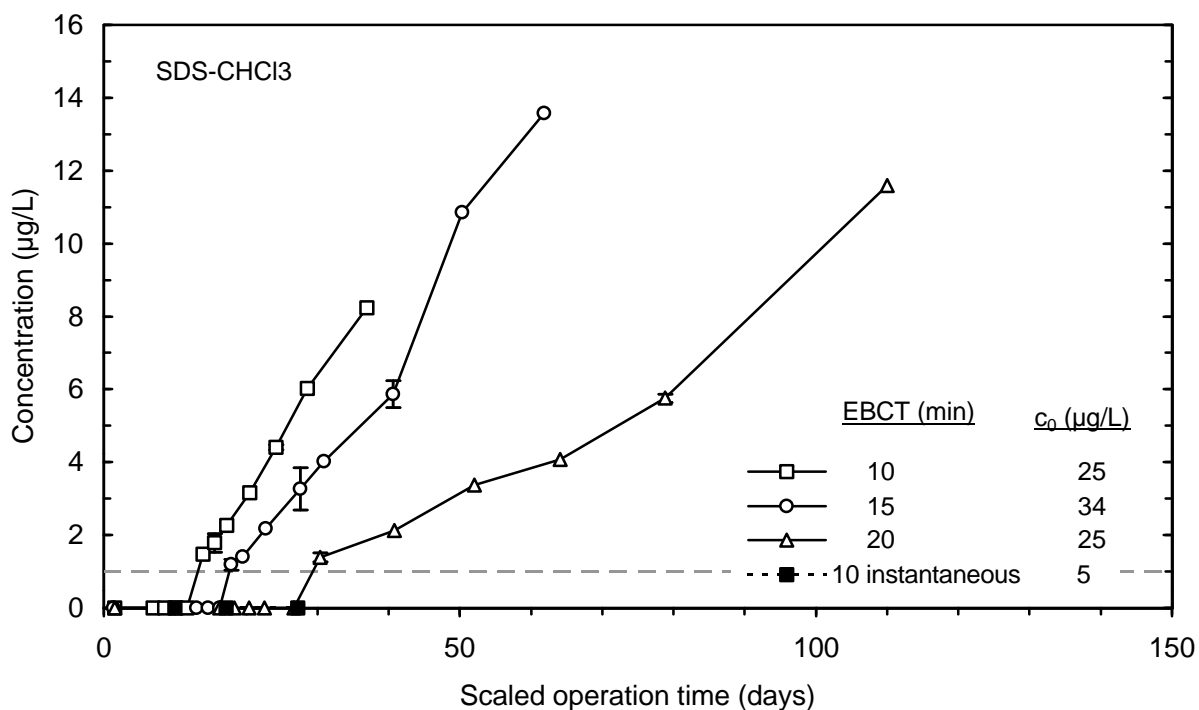


Figure 54 Impact of EBCT (10 to 20 minutes) on SDS-CHCl₃ breakthrough

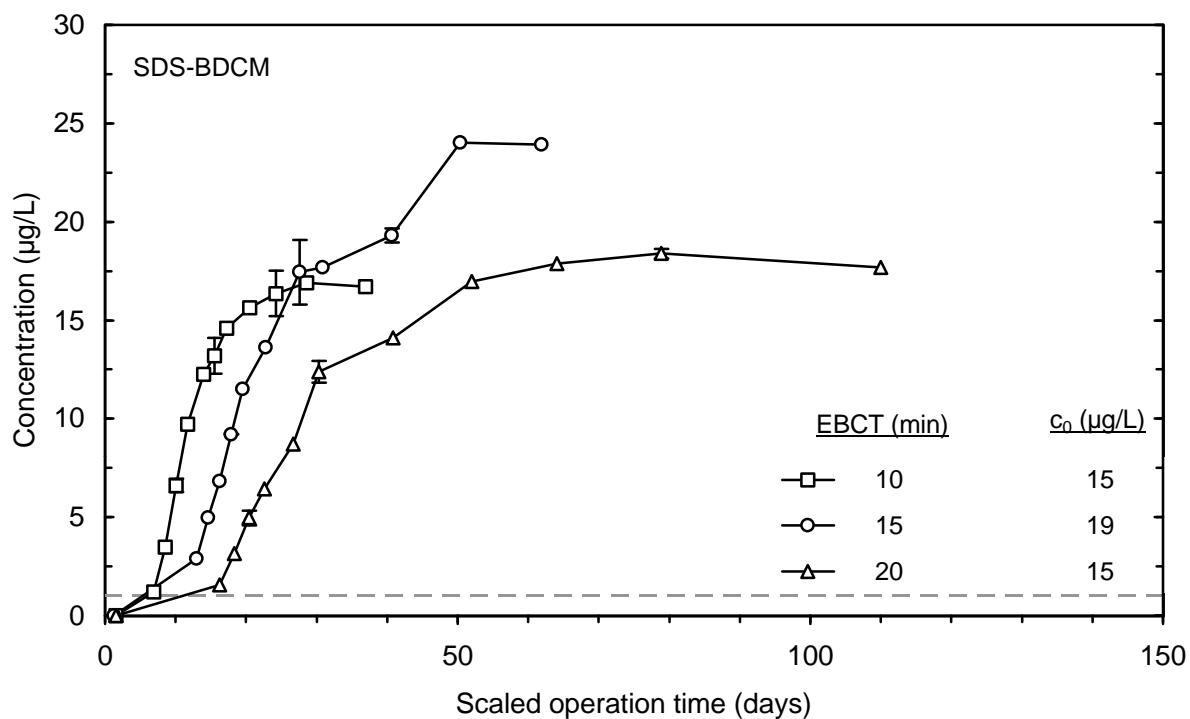


Figure 55 Impact of EBCT (10 to 20 minutes) on SDS-BDCM breakthrough

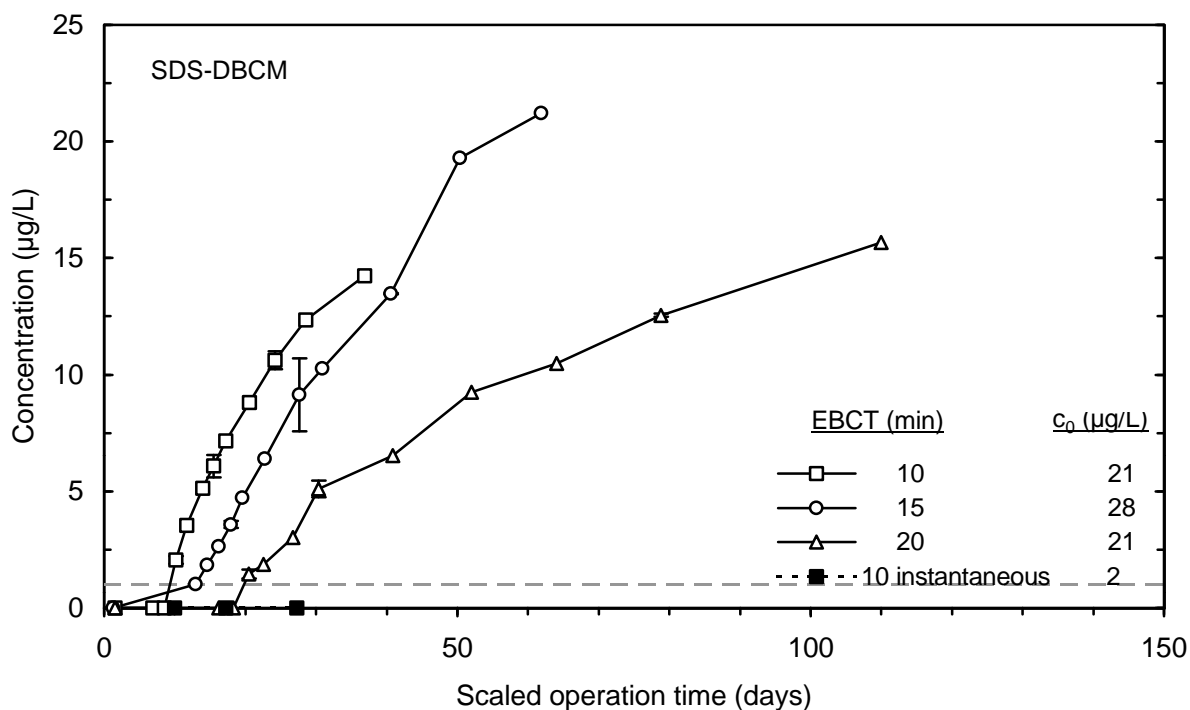


Figure 56 Impact of EBCT (10 to 20 minutes) on SDS-DBCM breakthrough

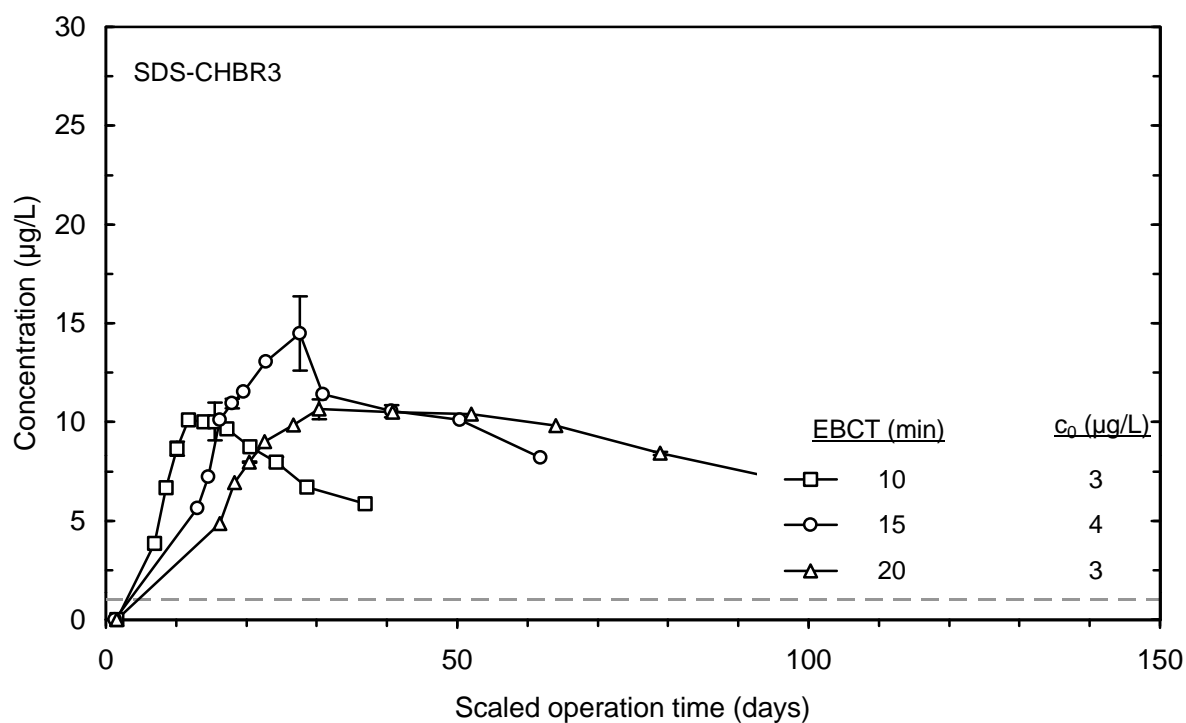


Figure 57 Impact of EBCT (10 to 20 minutes) on SDS-CHBR3 breakthrough

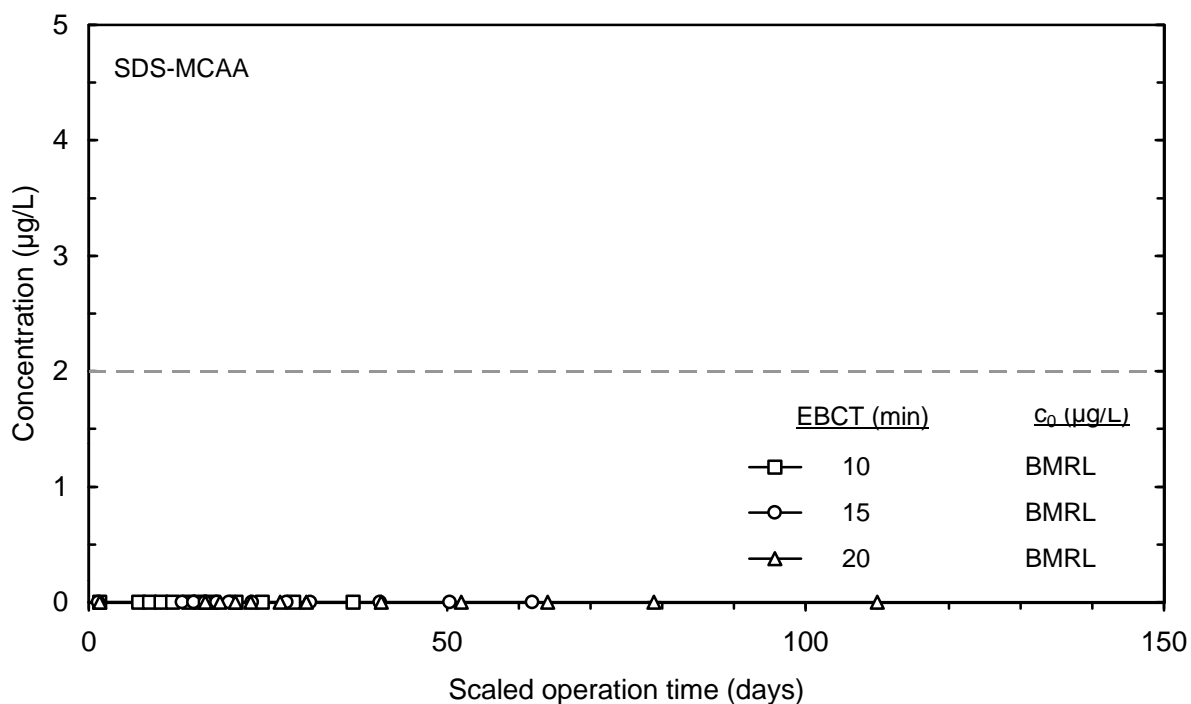


Figure 58 Impact of EBCT (10 to 20 minutes) on SDS-MCAA breakthrough

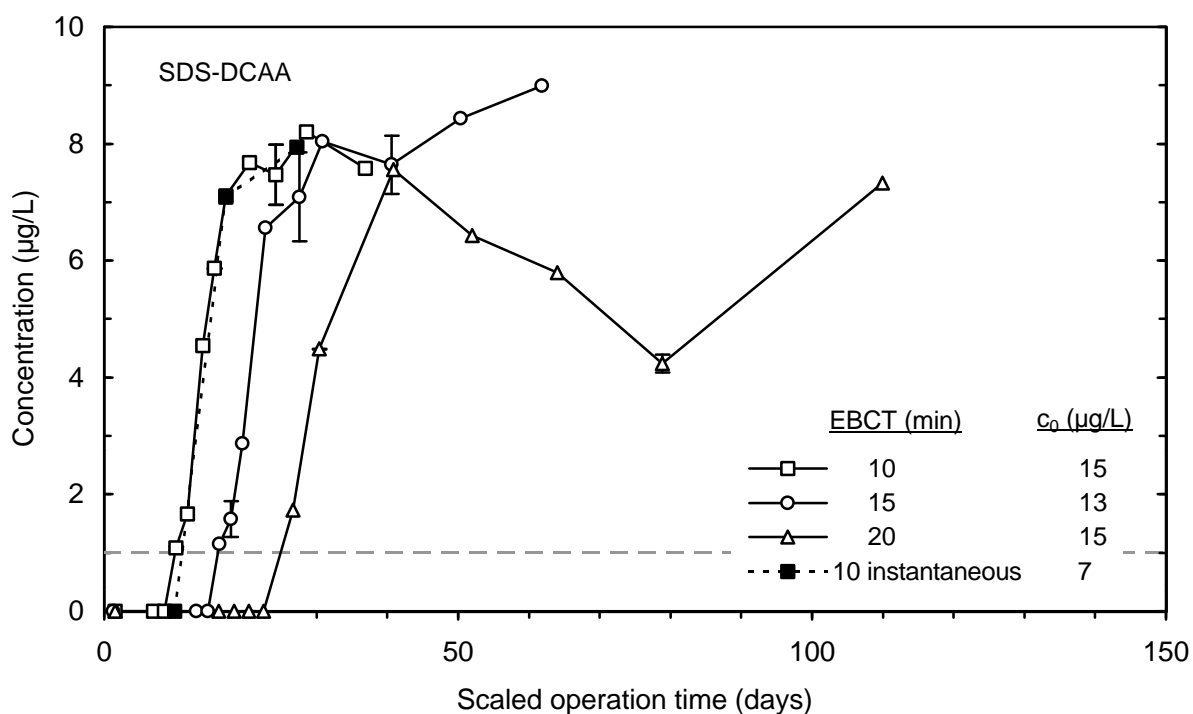


Figure 59 Impact of EBCT (10 to 20 minutes) on SDS-DCAA breakthrough

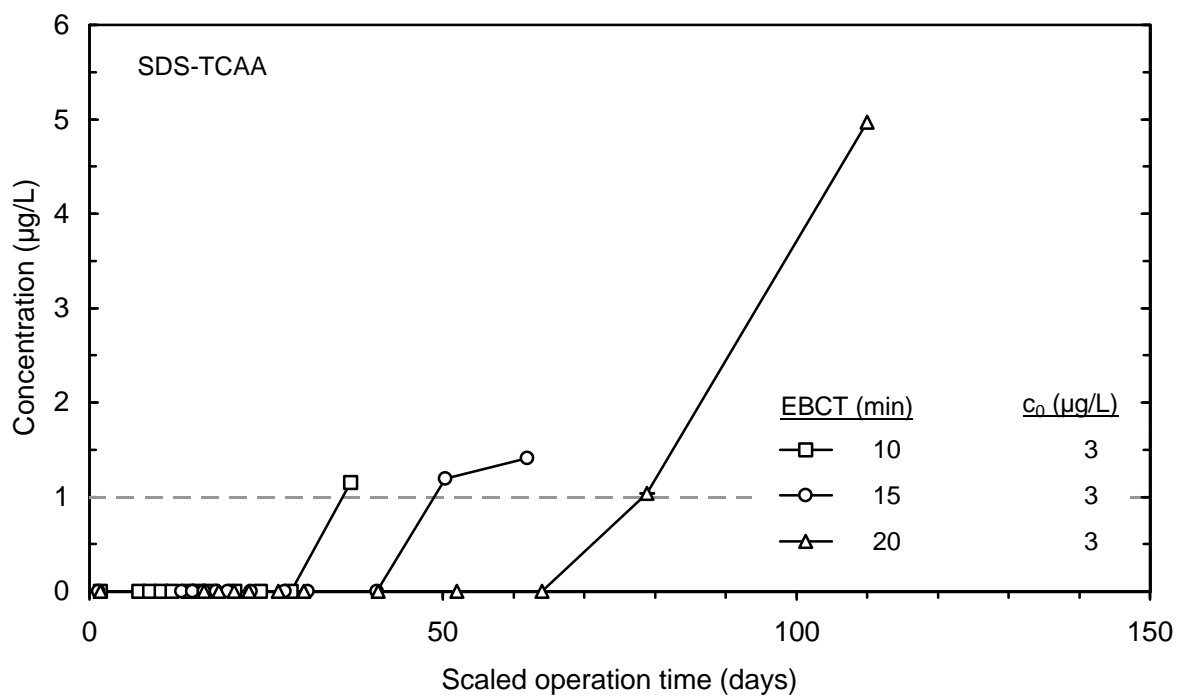


Figure 60 Impact of EBCT (10 to 20 minutes) on SDS-TCAA breakthrough

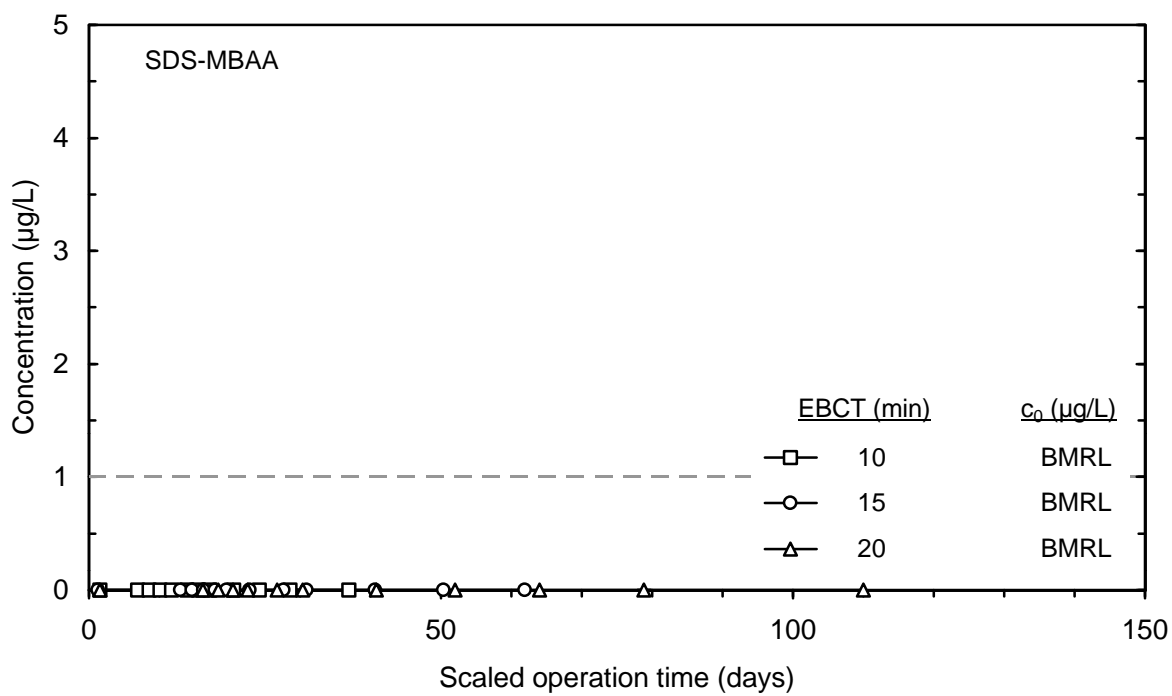


Figure 61 Impact of EBCT (10 to 20 minutes) on SDS-MBAA breakthrough

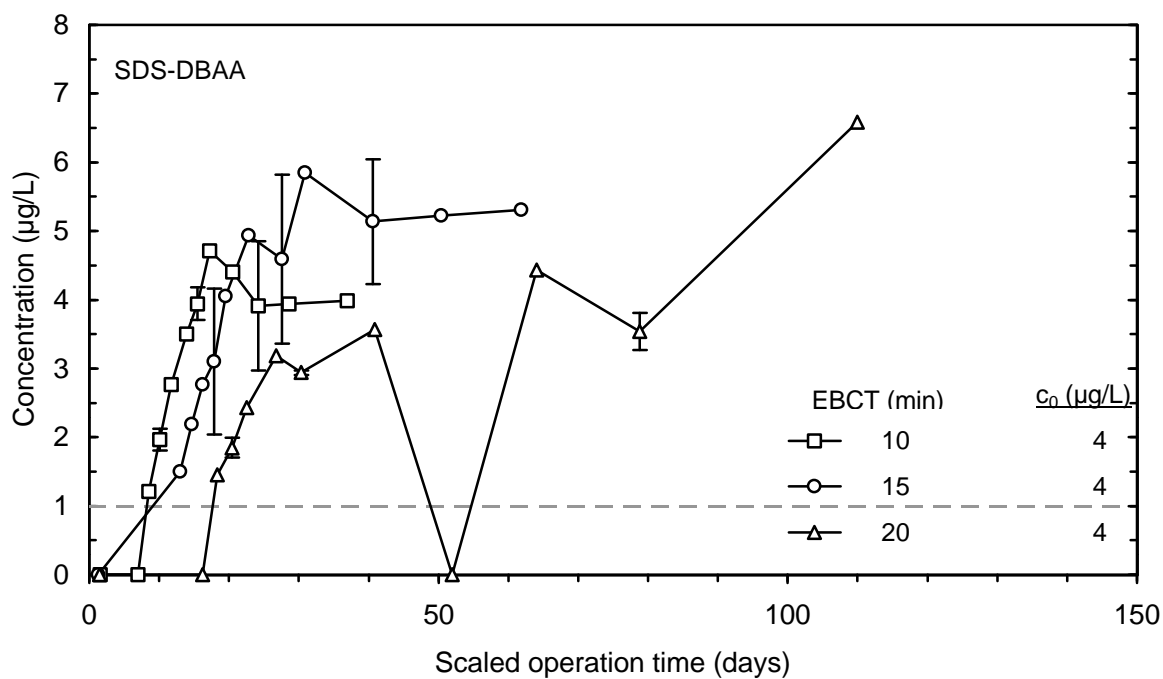


Figure 62 Impact of EBCT (10 to 20 minutes) on SDS-DBAA breakthrough

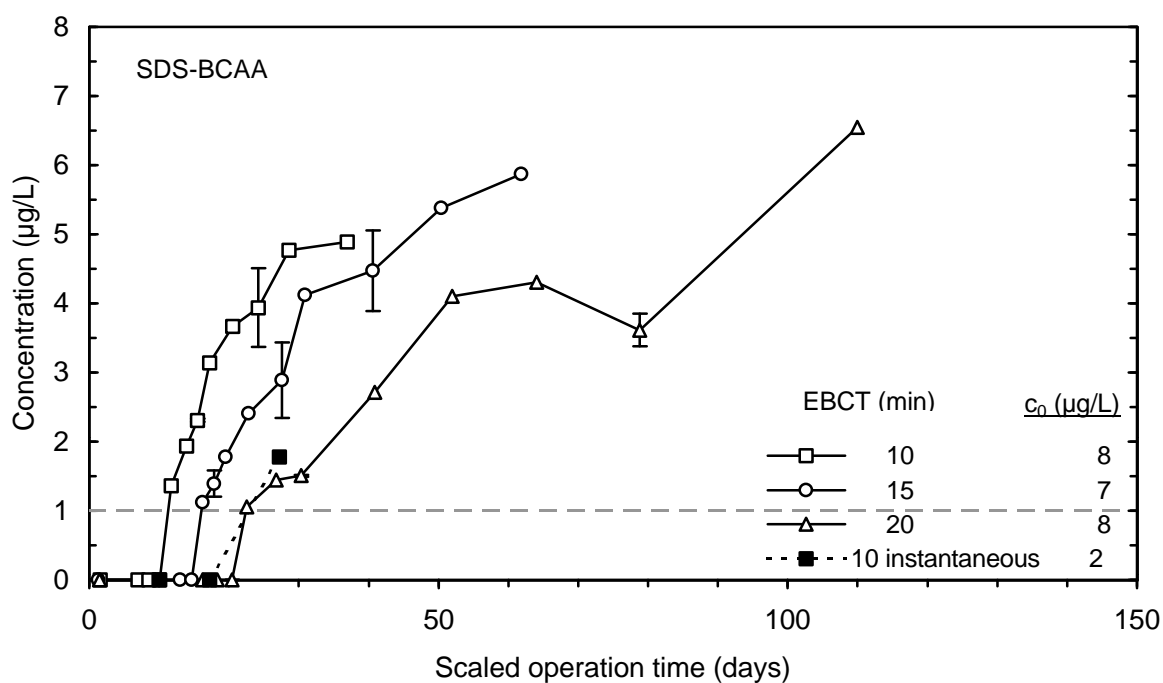


Figure 63 Impact of EBCT (10 to 20 minutes) on SDS-BCAA breakthrough

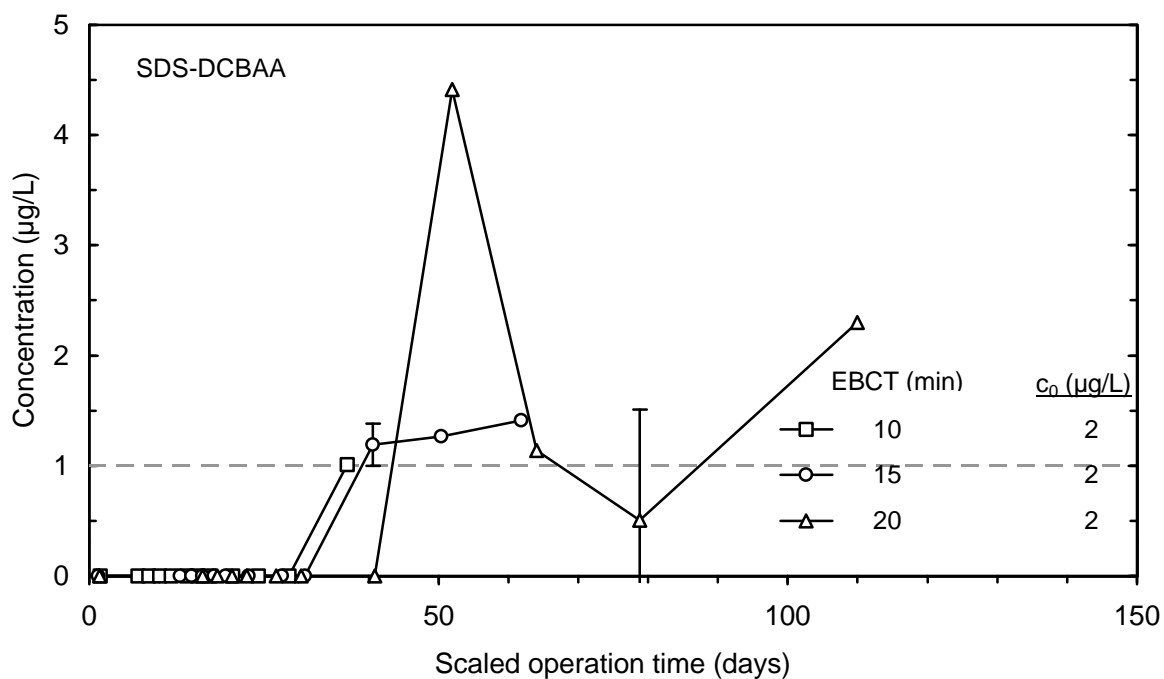


Figure 64 Impact of EBCT (10 to 20 minutes) on SDS-DCBAA breakthrough

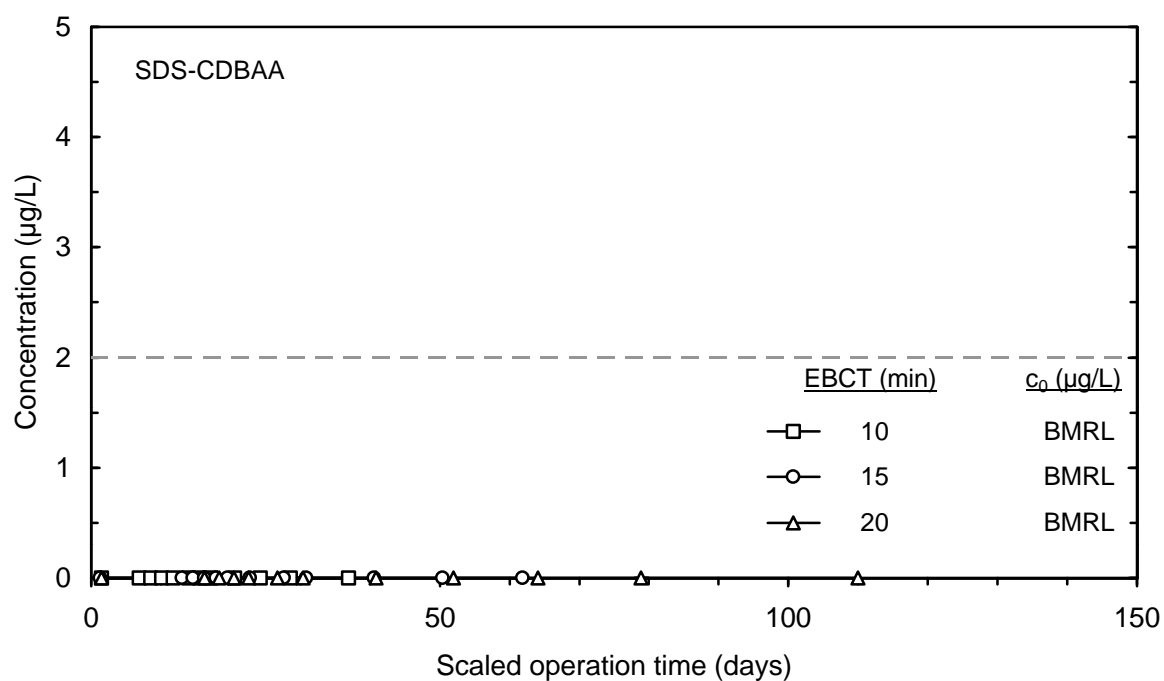


Figure 65 Impact of EBCT (10 to 20 minutes) on SDS-CDBAA breakthrough

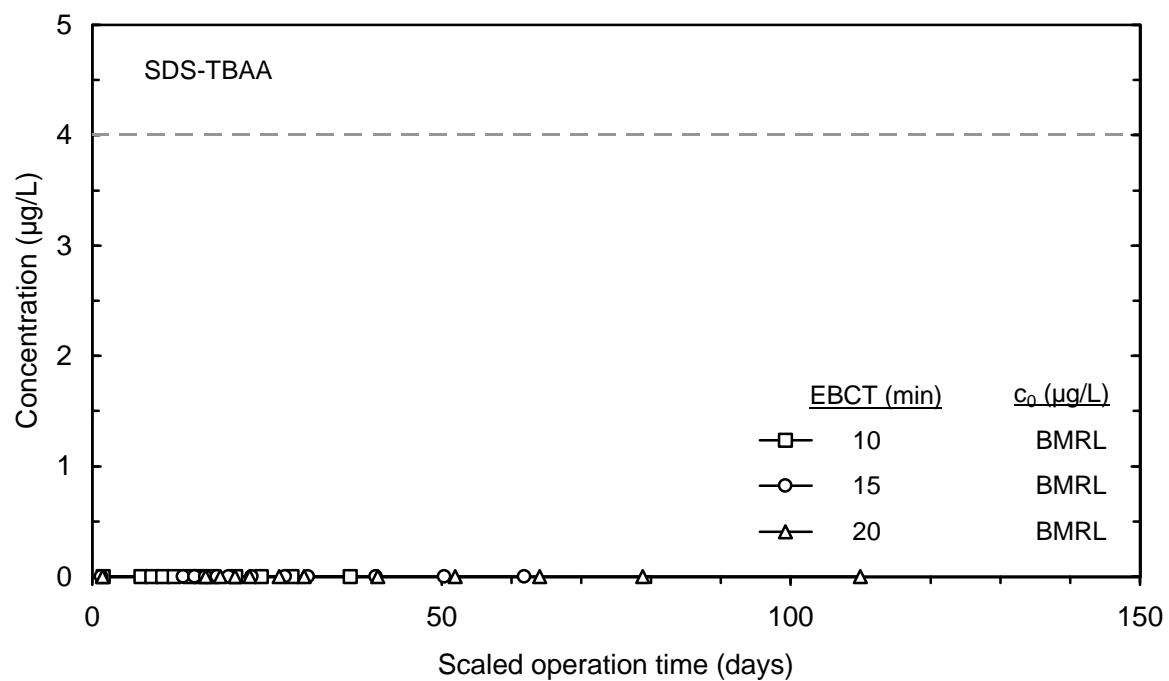


Figure 66 Impact of EBCT (10 to 20 minutes) on SDS-TBAA breakthrough

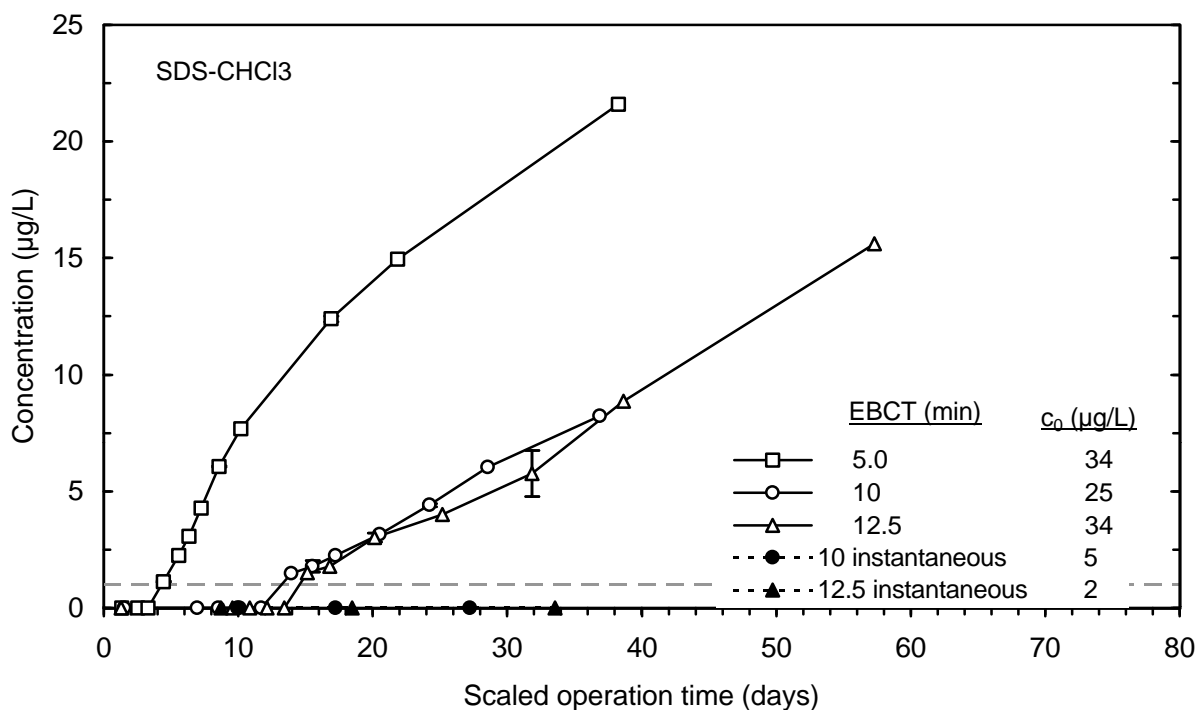


Figure 67 Impact of EBCT (5.0 to 12.5 minutes) on SDS-CHCl₃ breakthrough

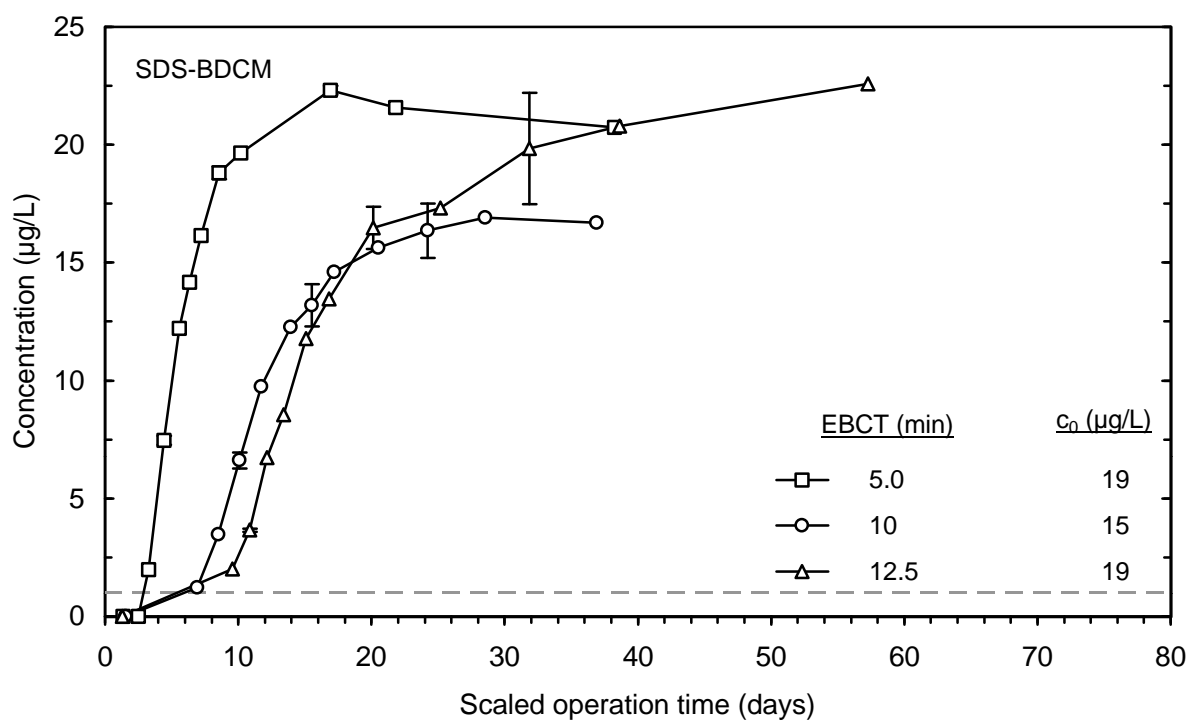


Figure 68 Impact of EBCT (5.0 to 12.5 minutes) on SDS-BDCM breakthrough

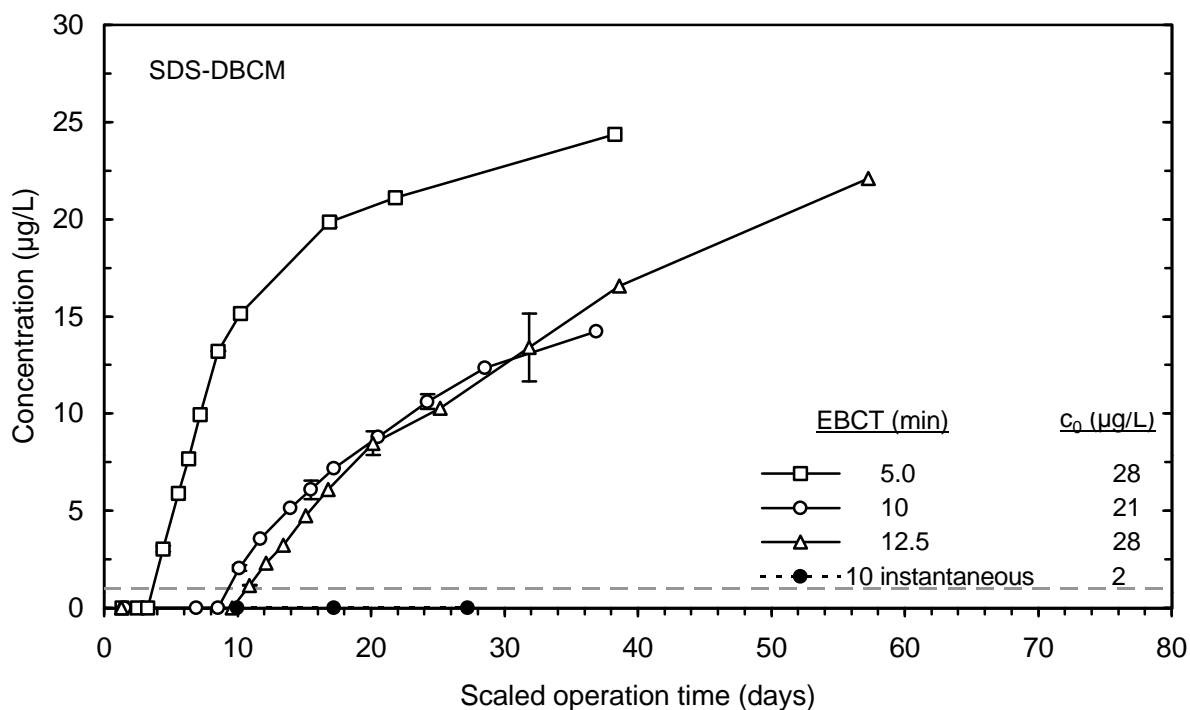


Figure 69 Impact of EBCT (5.0 to 12.5 minutes) on SDS-DBCM breakthrough

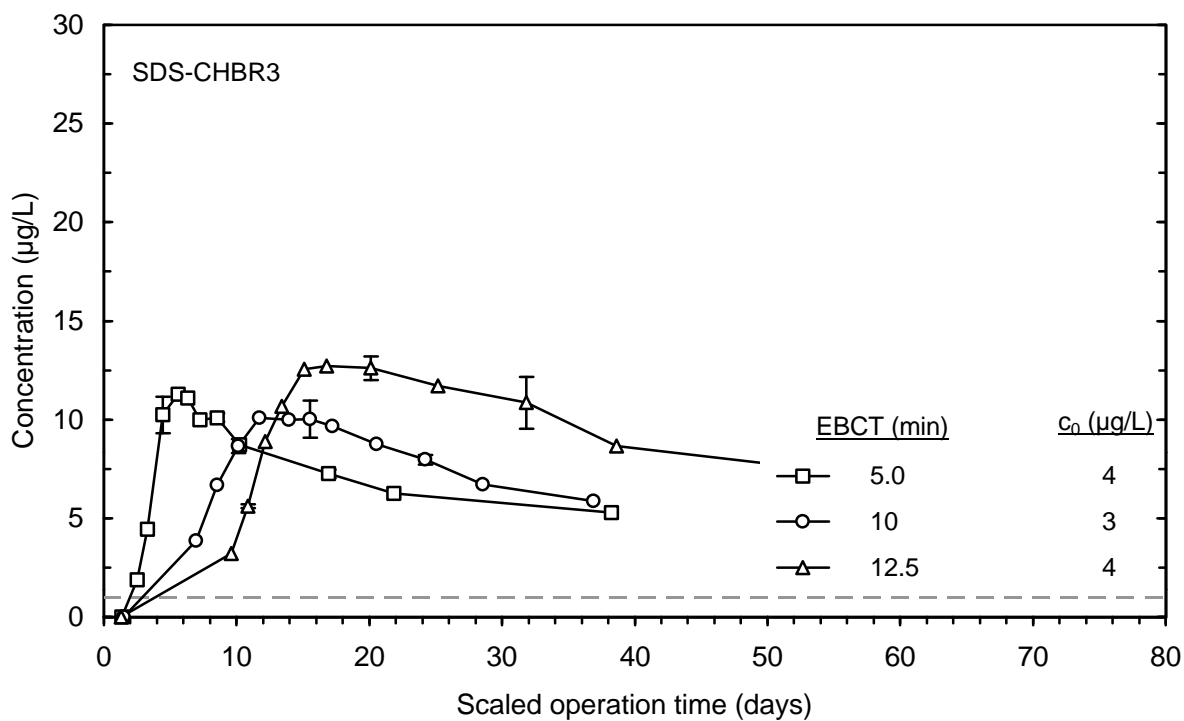


Figure 70 Impact of EBCT (5.0 to 12.5 minutes) on SDS-CHBR3 breakthrough

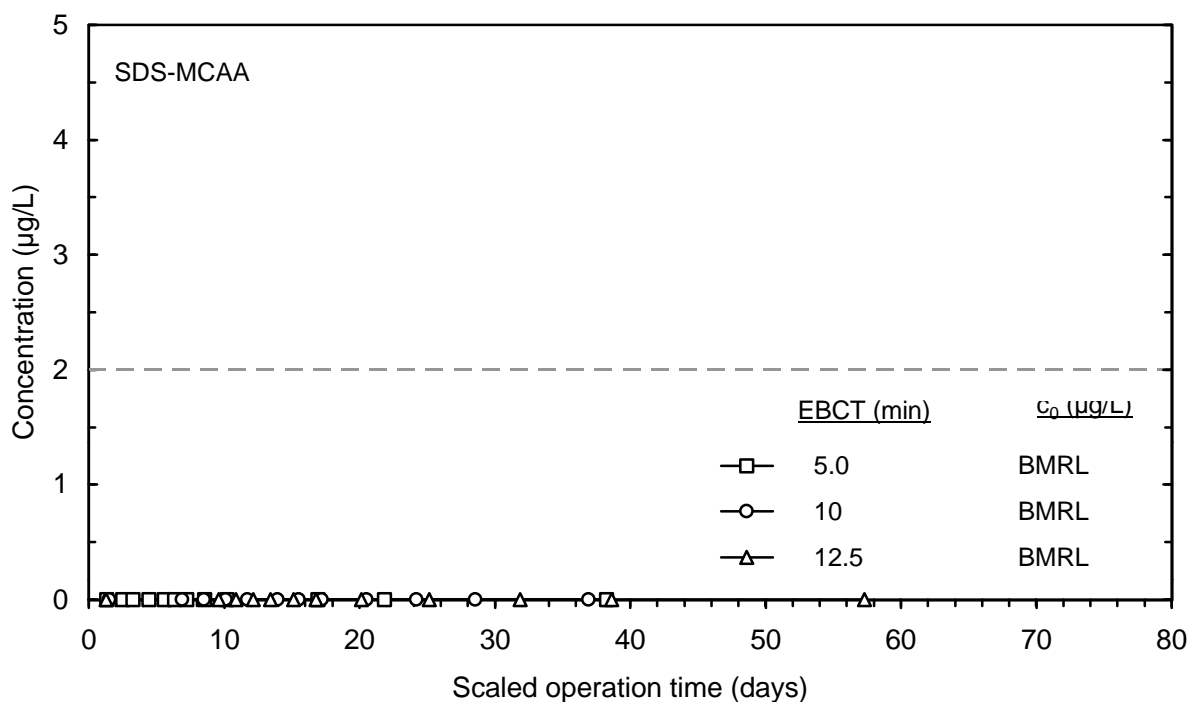


Figure 71 Impact of EBCT (5.0 to 12.5 minutes) on SDS-MCAA breakthrough

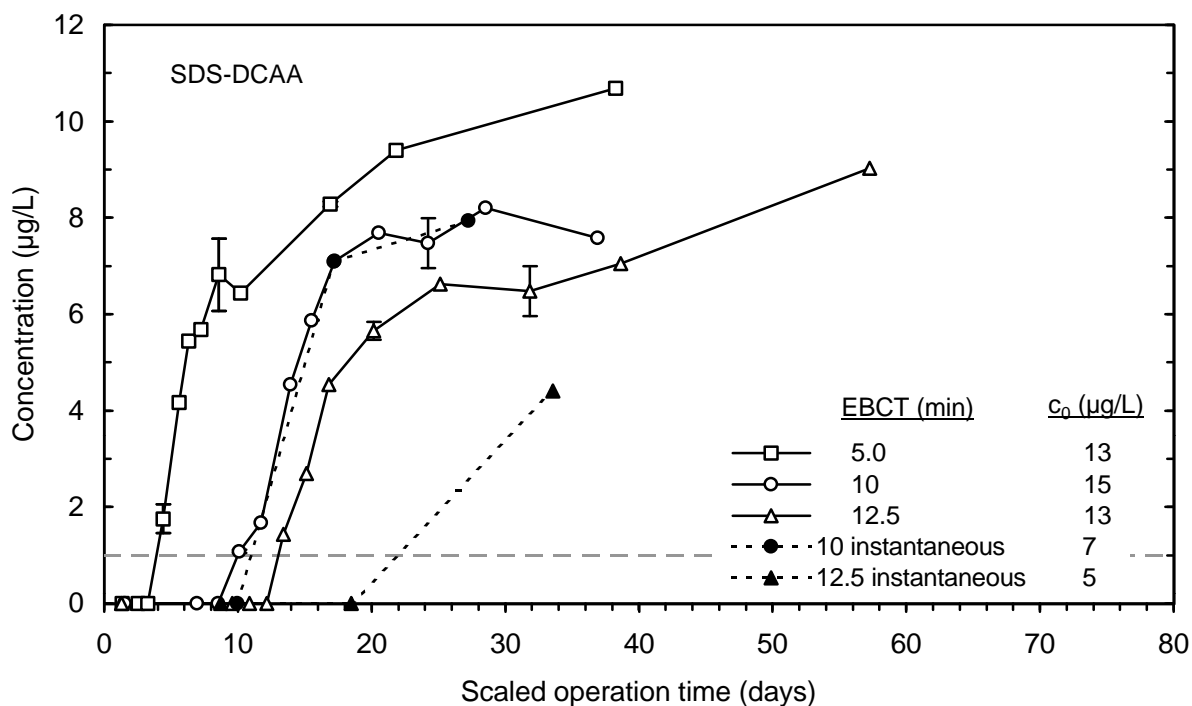


Figure 72 Impact of EBCT (5.0 to 12.5 minutes) on SDS-DCAA breakthrough

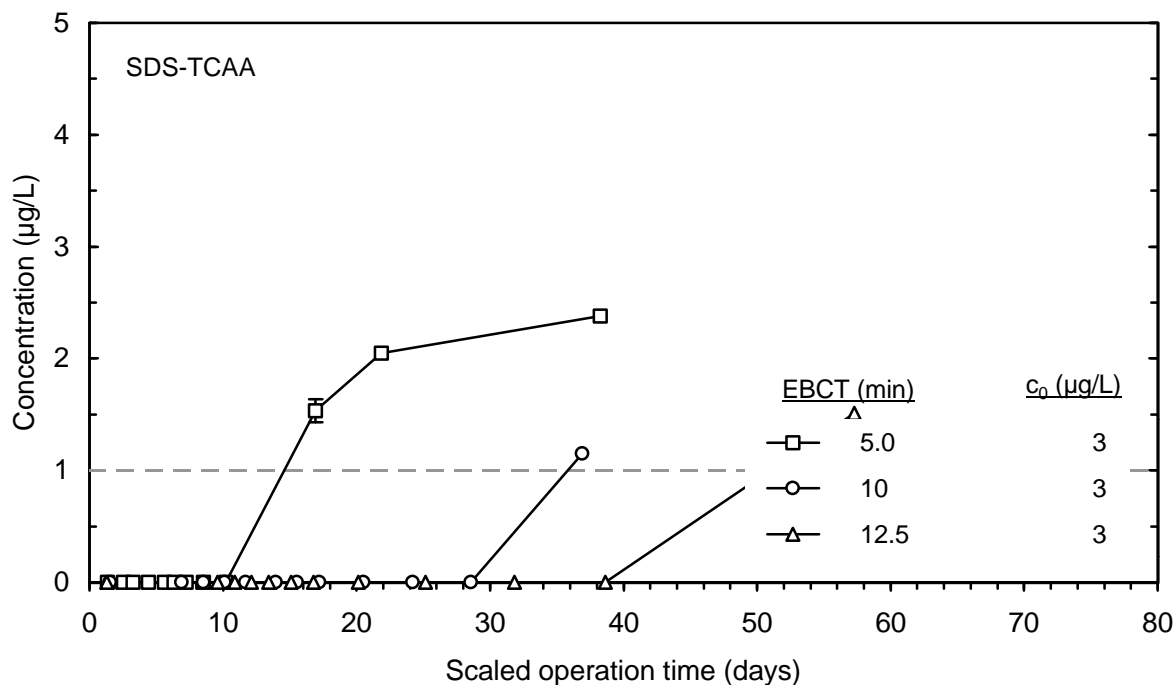


Figure 73 Impact of EBCT (5.0 to 12.5 minutes) on SDS-TCAA breakthrough

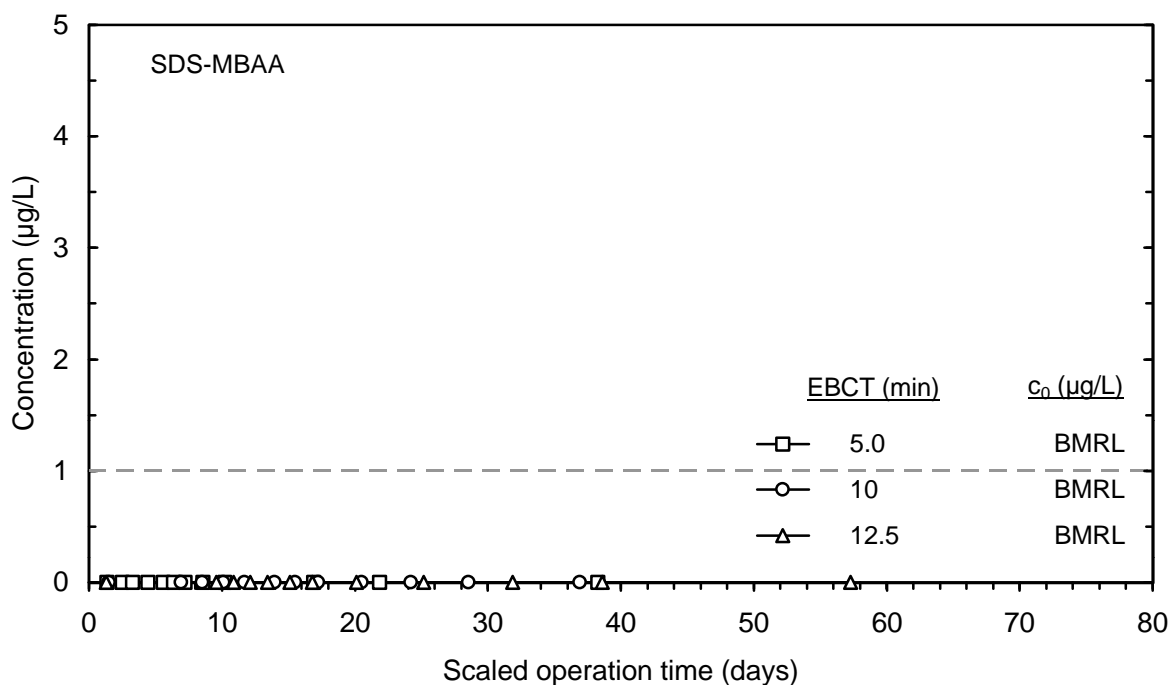


Figure 74 Impact of EBCT (5.0 to 12.5 minutes) on SDS-MBAA breakthrough

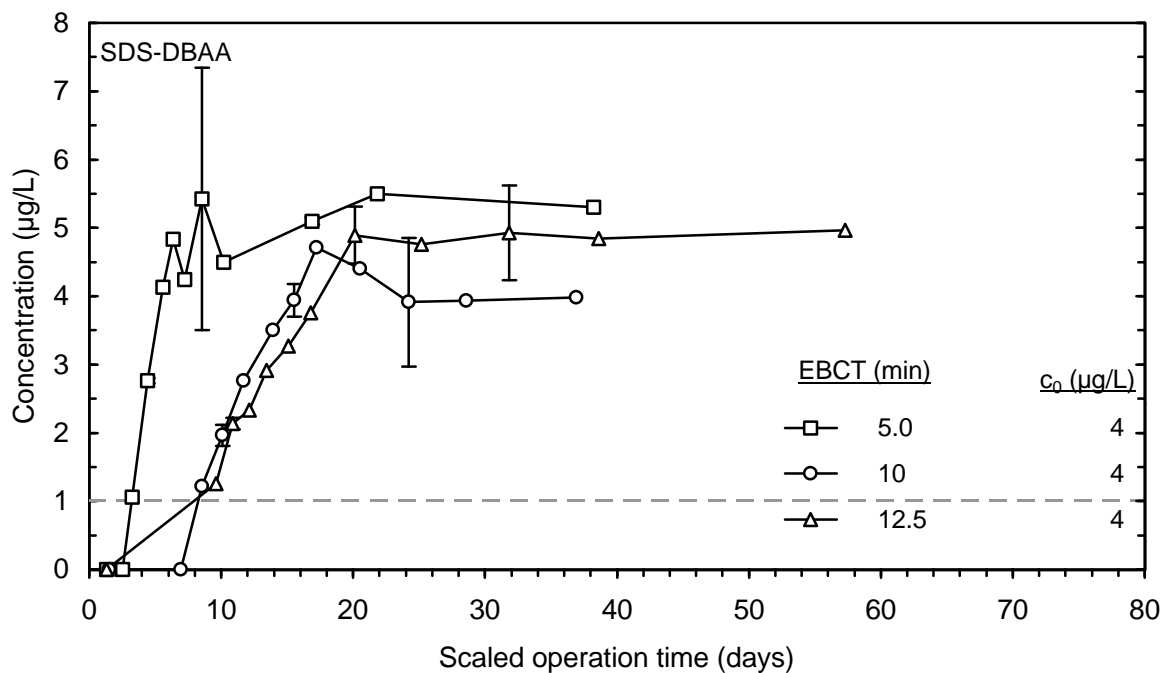


Figure 75 Impact of EBCT (5.0 to 12.5 minutes) on SDS-DBAA breakthrough

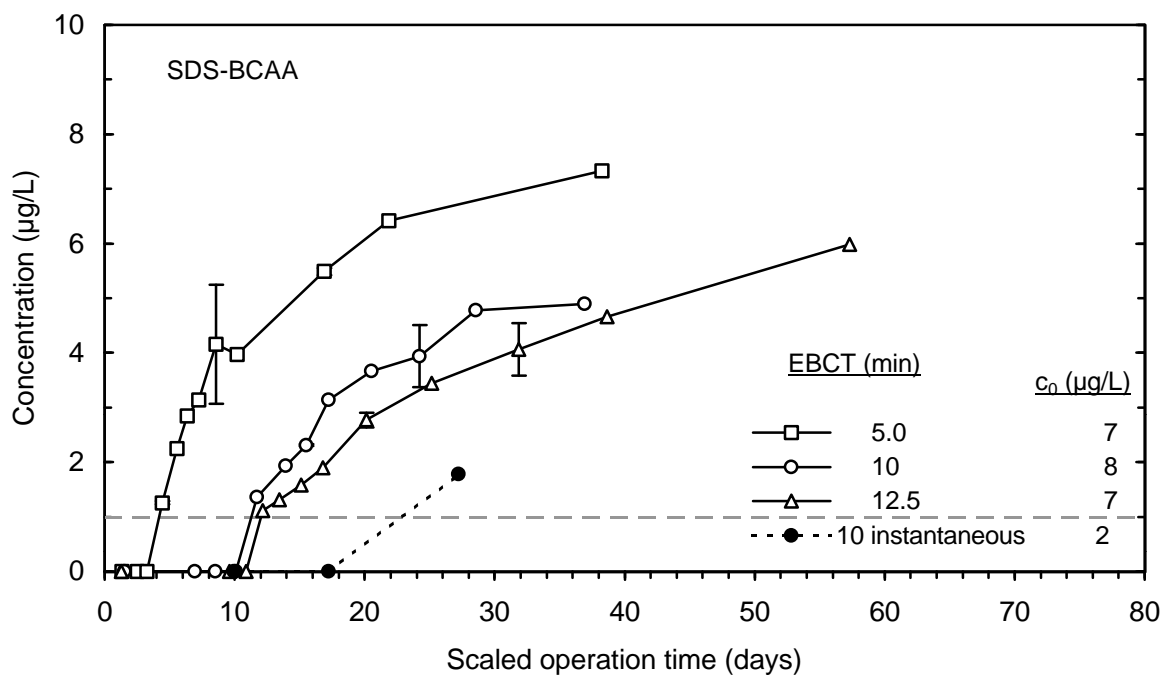


Figure 76 Impact of EBCT (5.0 to 12.5 minutes) on SDS-BCAA breakthrough

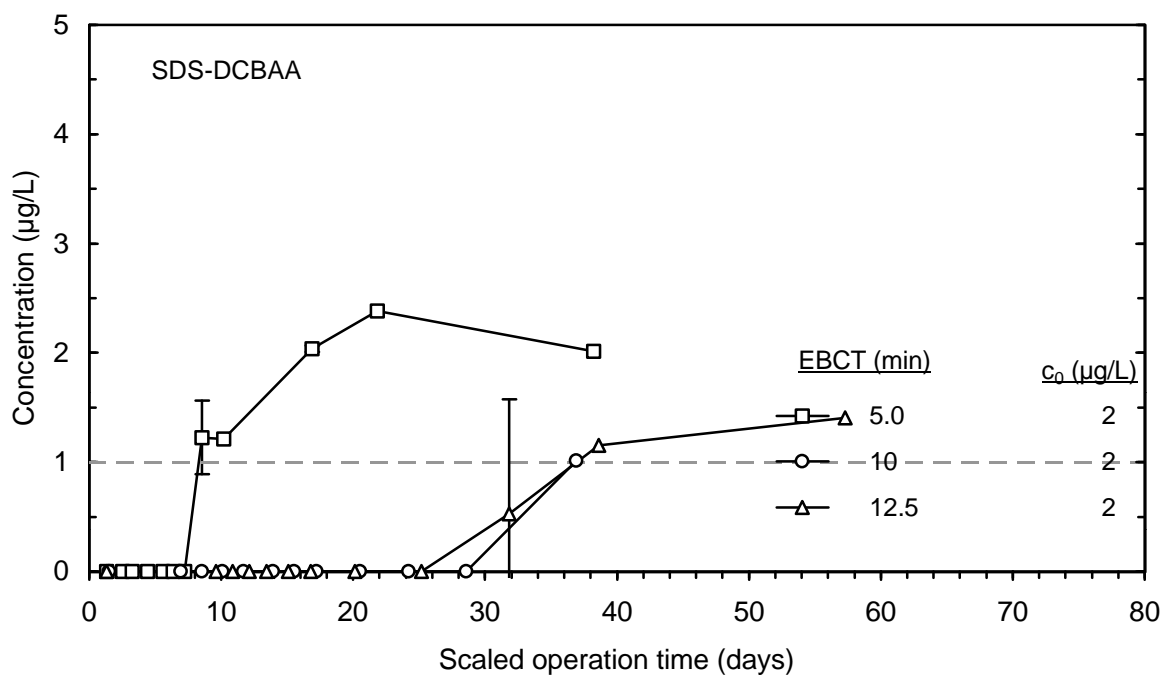


Figure 77 Impact of EBCT (5.0 to 12.5 minutes) on SDS-DCBAA breakthrough

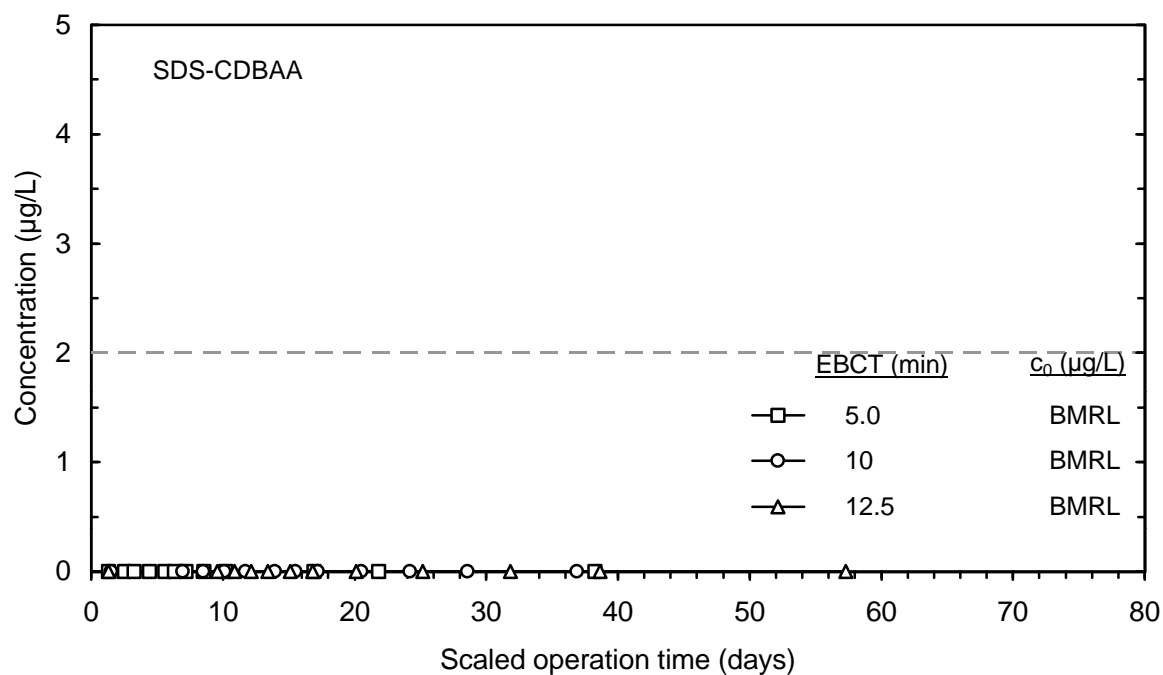


Figure 78 Impact of EBCT (5.0 to 12.5 minutes) on SDS-CDBAA breakthrough

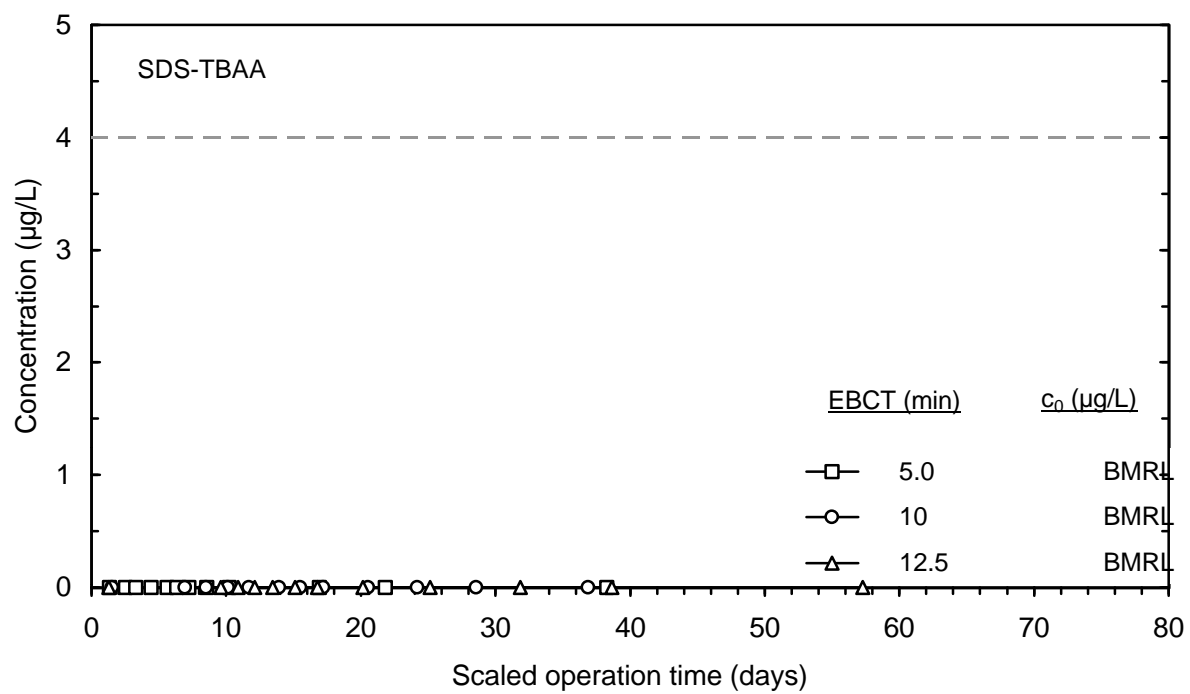


Figure 79 Impact of EBCT (5.0 to 12.5 minutes) on SDS-TBAA breakthrough

9

Impact of Influent pH

9 Impact of Influent pH

Using the batch of water sampled in June, three RSSCTs were operated at a constant EBCT (10 minutes) and three different influent pH values. One contactor received water at pH 9.2, the target influent pH used during the EBCT study. The remaining two contactors received influent water adjusted to pH values of 8.7 and 8.2. The influent water quality for each contactor is summarized in

. SDS chlorination for all three influent pH contactors was conducted under constant conditions, including pH, summarized in Table 12. Therefore, pH only affected adsorption of DBP precursors; all samples were buffered to pH 9.1 prior to SDS chlorination.

The effluent pH and temperature for the three influent pH contactors was also monitored. The results are summarized in Table 26. The variability of both effluent pH and temperature was very low during all runs. In all cases the effluent pH was lower than that in the influent and decreased more for the higher pH runs. The mean effluent pH values were 8.0, 8.3, and 8.6 for the influent pH values of 8.2, 8.7, and 9.2, respectively.

Figure 80 shows the impact of influent pH on TOC breakthrough. A range of effluent TOC breakthrough behavior was observed, with run times to an effluent concentration of 2.0 mg/L ranging from 17 to 23 days. Run times to 70 percent TOC breakthrough ranged from 34 to 42 days. To a run time of 16 days, as the influent pH was decreased, the effluent breakthrough profile shifted to the right, indicating longer run times to a given effluent criterion. However, towards the end of the run (after 35 days) there was little difference in performance between the three influent pH contactors. UV₂₅₄ performance, Figure 81, showed similar results, with performance up to 28 days improving with decreasing influent pH. After 28 days, there was little difference in performance between the influent pH 9.2 and 8.7 contactors. The influent pH 8.2 contactor outperformed the others throughout the entire run time.

A comparison of SDS-THM4 breakthrough for the three influent pH values is shown in Figure 82. As was observed for TOC and UV₂₅₄, during the first half of the run, THM4 precursor removal performance improved with decreasing influent pH. After 25 days of operation, the SDS-THM4 breakthrough curves for the influent pH 9.2 and 8.7 runs overlapped; After 35 days, little difference existed among the three influent pH runs.

The results obtained for SDS-HAA5, SDS-HAA6, and SDS-HAA9 (Figures 83, 84, and 85, respectively) showed very similar trends. Initially, up to a run time of 16 days, HAA precursor removal improved with decreasing pH. After 16 days, the influent pH 8.7 contactor outperformed the influent pH 9.2 and 8.2 contactors. Due to relatively low influent SDS-HAA levels (18 µg/L for SDS-HAA5) effluent levels were also low and did not exceed placeholders for Stage 2 MCLs.

The impact of influent pH on SDS-TOX breakthrough is shown in Figure 86. Throughout most of the run time, TOX formation control improved with decreasing influent pH. The impact of influent pH was less noticeable at higher run times, above 30 days.

Figure 87 shows the impact of influent pH on SDS-CLD. The chlorine demand for effluent sampled from the influent pH 9.2 column were slightly higher than the influent pH 8.7 and 8.2 columns. After 28 days of operation, SDS-CLD was very similar among all three contactors.

Tables 27 through 29 summarize run times to various GAC effluent criteria for the three influent pH runs. Based on the calculated run times, the corresponding concentration of other measured parameters (DBP precursor surrogates and SDS-DBPs) at that run time were also calculated.

Bar graph plots of run times to TOC, UV₂₅₄, THM4, and HAA5 criteria were generated. Figures 88 and 89 summarize run times to effluent TOC and UV₂₅₄ criteria, and Figures 90 and 91 summarize run times to effluent SDS-THM4 and SDS-HAA5 criteria. For cases where the effluent concentration did not reach the run time criterion, no bar is shown. For all influent pH contactors, neither Stage 1 or 2 HAA5 criteria were exceeded. Stage 2 THM4 criteria were also not exceeded.

Figures 92, 93, 94, and 95 show the breakthrough of formed CHCl₃, BDCM, DBCM, and CHBr₃, respectively, for all three influent pH contactors. As was observed during the EBCT runs, effluent concentrations of both BDCM and CHBr₃, effluent concentrations exceeded the chlorinated influent concentration sometime during the run for all EBCTs, due to the high bromide to TOC ratio in the GAC effluent. The impact of pH was the same as observed for TOC and SDS-DBP sums: lower influent pH yielded later breakthrough.

The breakthrough of the nine HAA species for the influent pH runs is shown in Figures 96 through 104. In all cases, the only DBAA was formed in the chlorinated GAC effluent at higher concentrations than measured in the chlorinated GAC influent water. The influent pH did not have a systematic impact on SDS-HAA breakthrough.

Figures 92 through 104 also include the breakthrough of instantaneous DBPs, for the influent pH 8.2 contactor. Instantaneous CHCl₃, BDCM, and DBCM were detected at levels above the MRL in the GAC effluent, but none showed effluent breakthrough above the MRL. Of the HAA species, preformed DCAA, TCAA, DBAA, and BCAA were detected in the GAC influent to the influent pH 8.2 contactor. Of these, only DCAA and BCAA showed significant levels of instantaneous breakthrough in the GAC effluent. Figure 97 shows the instantaneous breakthrough of DCAA. Most of the effluent DCAA measured after SDS chlorination could be accounted for by the breakthrough of preformed DCAA. Instantaneous BCAA accounted for some of the SDS-BCAA levels late in the run (Figure 101).

Effluent sample number	Effluent pH			Effluent temperature (°C)		
	Influent pH 8.2	Influent pH 8.7	Influent pH 9.2	Influent pH 8.2	Influent pH 8.7	Influent pH 9.2
1	8.0	8.5	8.7	21	24	27
2	8.2	8.1	8.6	23	24	25
3	8.1	8.3	8.8	22	24	27
4	7.7	8.3	8.5	22	23	27
5	7.8	8.3	8.6	22	22	25
6	8.1	8.2	8.6	23	22	25
7	8.1	8.0	8.6	23	22	26
8	8.2	8.1	8.4	22	23	23
9	8.3	8.3	8.9	24	22	21
10	7.6	8.5	8.5	23	23	22
11	7.7	8.2	8.7	23	22	23
12	7.7	8.2	8.6	23	23	22
13	7.9	8.5	8.7	23	22	24
Mean	8.0	8.3	8.6	23	23	24
Standard deviation	±0.2	±0.2	±0.1	±0.7	±0.6	±2.0
Percent standard deviation	3	2	1	3	2	8

Table 26 GAC effluent pH and temperature data for influent pH 8.2, 8.7, and 9.2 contactors

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (single contactor)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.1	2.0	23	3,340	2.0	0.025	37	13	17	17	65
			1.0	14	1,980	1.0	0.010	18	4	4	4	25
			2.1†	24	3,470	2.1	0.026	38	13	17	17	67
UV ₂₅₄	(1/cm)	0.083	0.040	38	5,530	2.8	0.040	50	11	16	17	102
			0.020	19	2,790	1.7	0.020	31	10	12	12	53
			0.041†	40	5,790	2.9	0.041	51	12	17	19	105
SDS-THM4	(µg/L)	77	80	*	*							
			64	*	*							
			32	20	2,890	1.8	0.021	32	11	13	13	56
SDS-HAA5	(µg/L)	18	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	30	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	204	120	*	*							
			70	25	3,620	2.1	0.027	39	13	17	17	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time, value of listed parameter is left blank.

#Data not available for listed parameter at given breakthrough criterion.

Table 27 Run times to selected GAC effluent criteria (influent pH 8.2)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (single contactor)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.1	2.0	18	2,520	2.0	0.020	37	8	10	11	52
			1.0	11	1,590	1.0	0.007	18	3	3	3	18
			2.1†	18	2,590	2.1	0.021	39	8	10	10	54
UV ₂₅₄	(1/cm)	0.083	0.040	34	4,930	2.9	0.040	50	8	11	12	100
			0.020	18	2,520	2.0	0.020	37	8	10	11	52
			0.041†	36	5,120	3.0	0.041	50	8	11	12	103
SDS-THM4	(µg/L)	77	80	*	*							
			64	*	*							
			32	16	2,290	1.8	0.017	32	8	10	11	43
SDS-HAA5	(µg/L)	18	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	30	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	204	120	*	*							
			70	23	3,370	2.3	0.027	45	8	11	12	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time, value of listed parameter is left blank.

#Data not available for listed parameter at given breakthrough criterion.

Table 28 Run times to selected GAC effluent criteria (influent pH 8.7)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (single contactor)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.1	2.0	17	2,450	2.0	0.023	40	9	12	12	66
			1.0	9	1,340	1.0	0.010	19	2	2	2	25
			2.1†	18	2,570	2.1	0.025	42	9	12	12	71
UV ₂₅₄	(1/cm)	0.083	0.040	34	4,890	2.6	0.040	51	13	17	19	103
			0.020	14	2,050	1.7	0.020	36	9	11	11	59
			0.041†	36	5,110	2.7	0.041	52	14	19	20	103
SDS-THM4	(µg/L)	77	80	*	*							
			64	*	*							
			32	13	1,830	1.6	0.018	32	7	9	9	52
SDS-HAA5	(µg/L)	18	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	30	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	204	120	51	7,330	3.1	0.051	57	15	20	22	120
			70	18	2,550	2.1	0.025	41	9	12	12	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time, value of listed parameter is left blank.

#Data not available for listed parameter at given breakthrough criterion.

Table 29 Run times to selected GAC effluent criteria (influent pH 9.2)

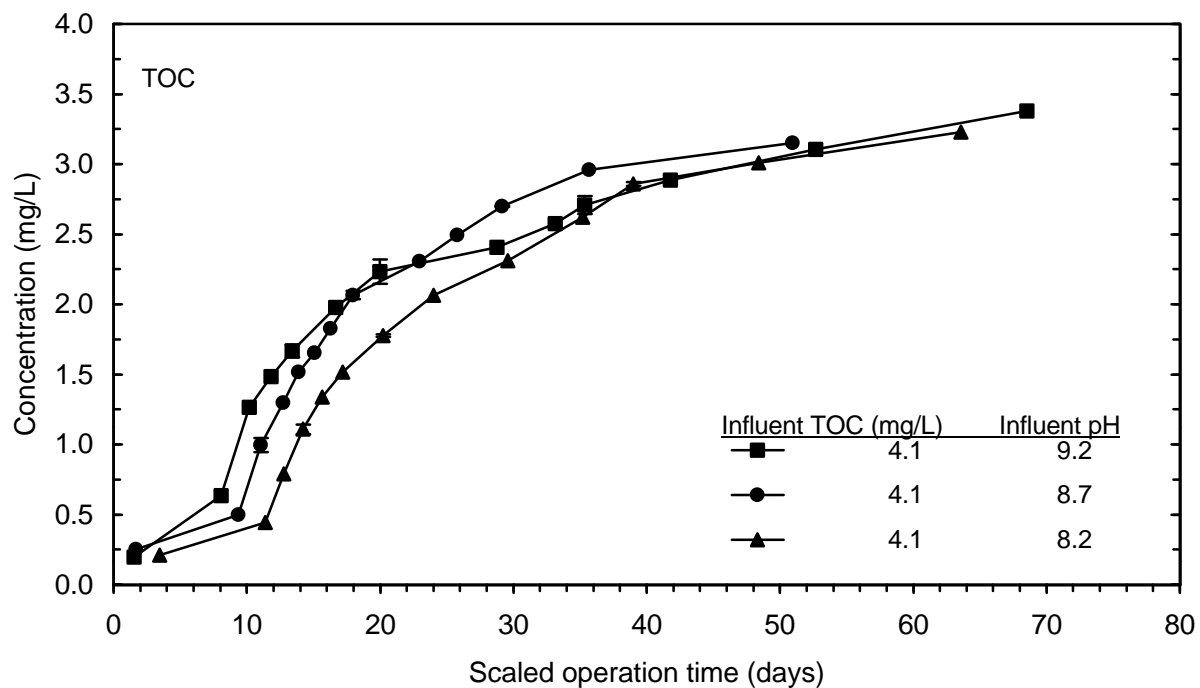


Figure 80 Impact of influent pH on TOC breakthrough for 10 minute EBCT contactors

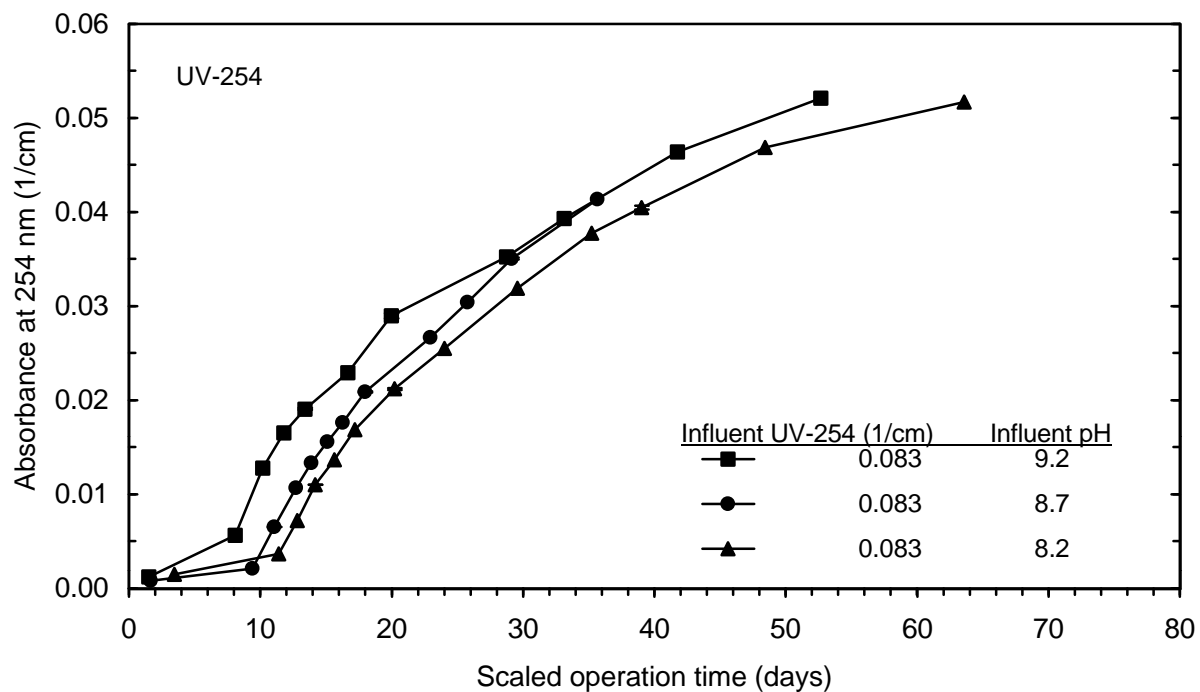


Figure 81 Impact of influent pH on UV-254 breakthrough for 10 minute EBCT contactors

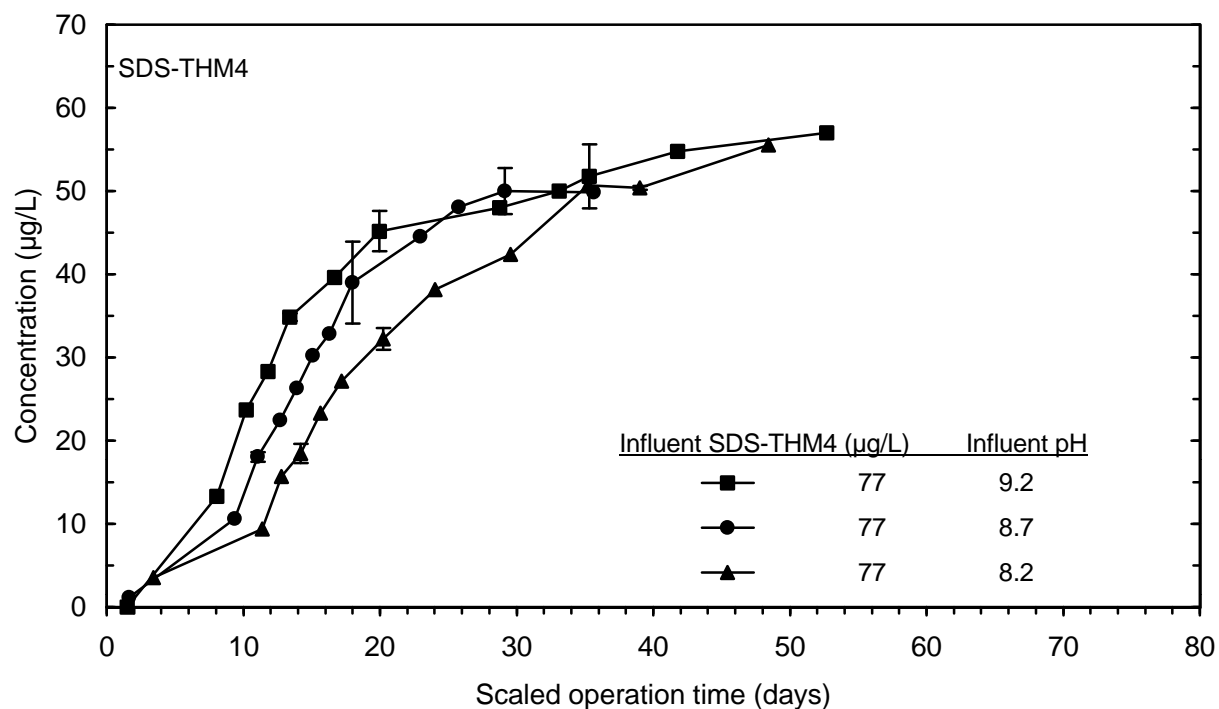


Figure 82 Impact of influent pH on SDS-THM4 breakthrough for 10 minute EBCT contactors

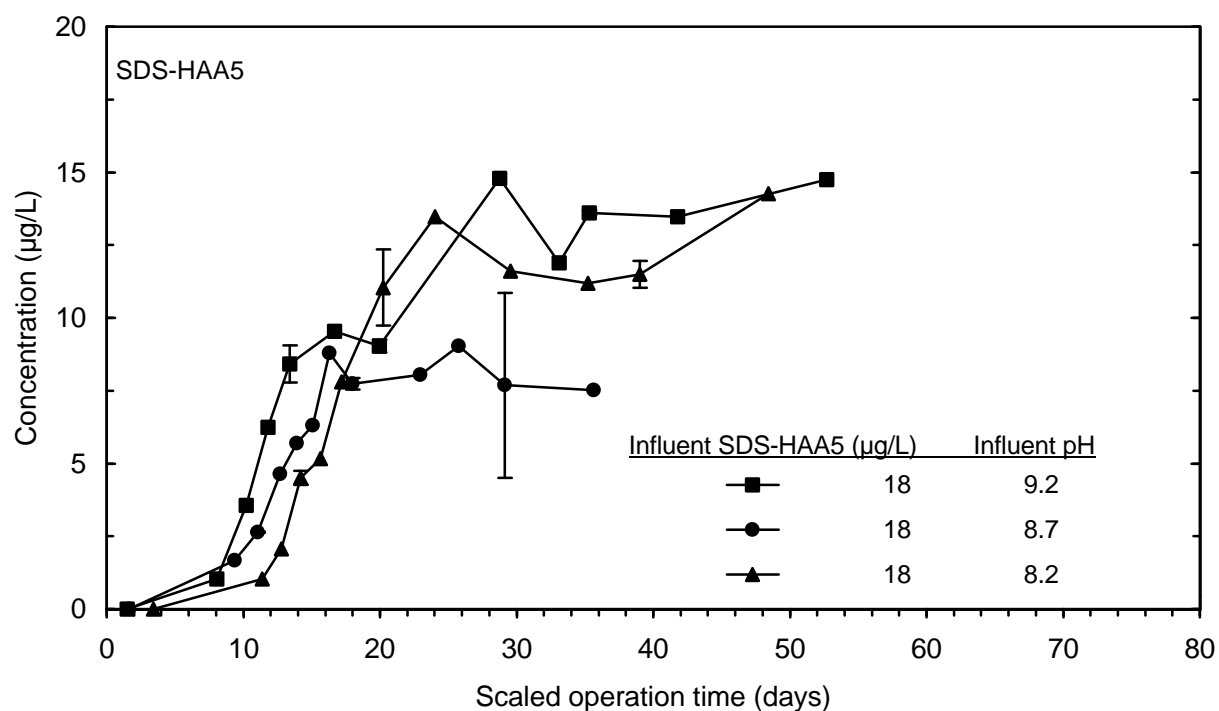


Figure 83 Impact of influent pH on SDS-HAA5 breakthrough for 10 minute EBCT contactors

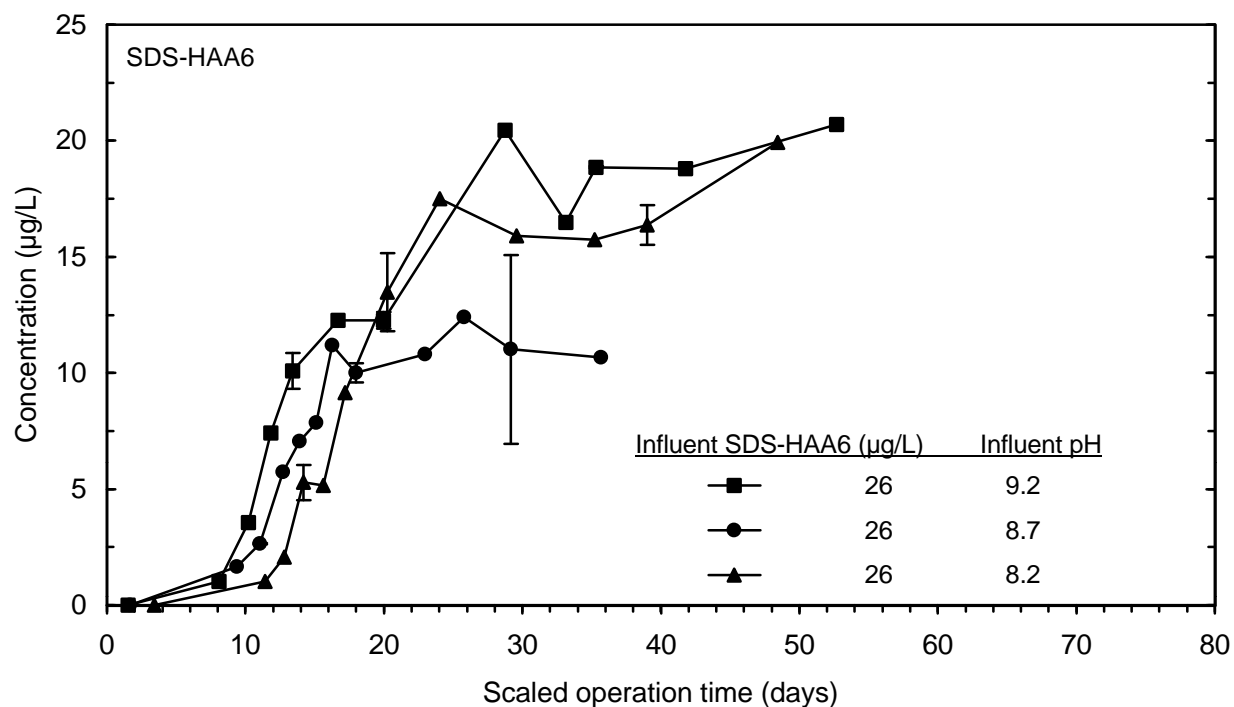


Figure 84 Impact of influent pH on SDS-HAA6 breakthrough for 10 minute EBCT contactors

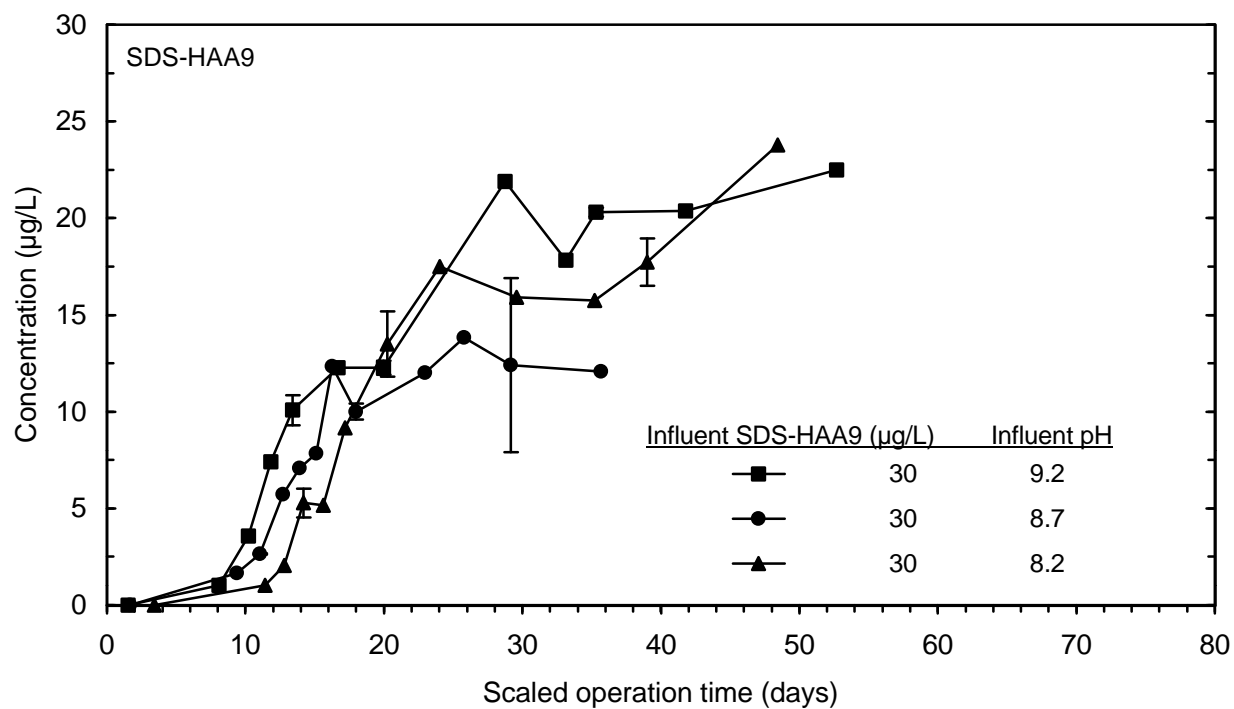


Figure 85 Impact of influent pH on SDS-HAA9 breakthrough for 10 minute EBCT contactors

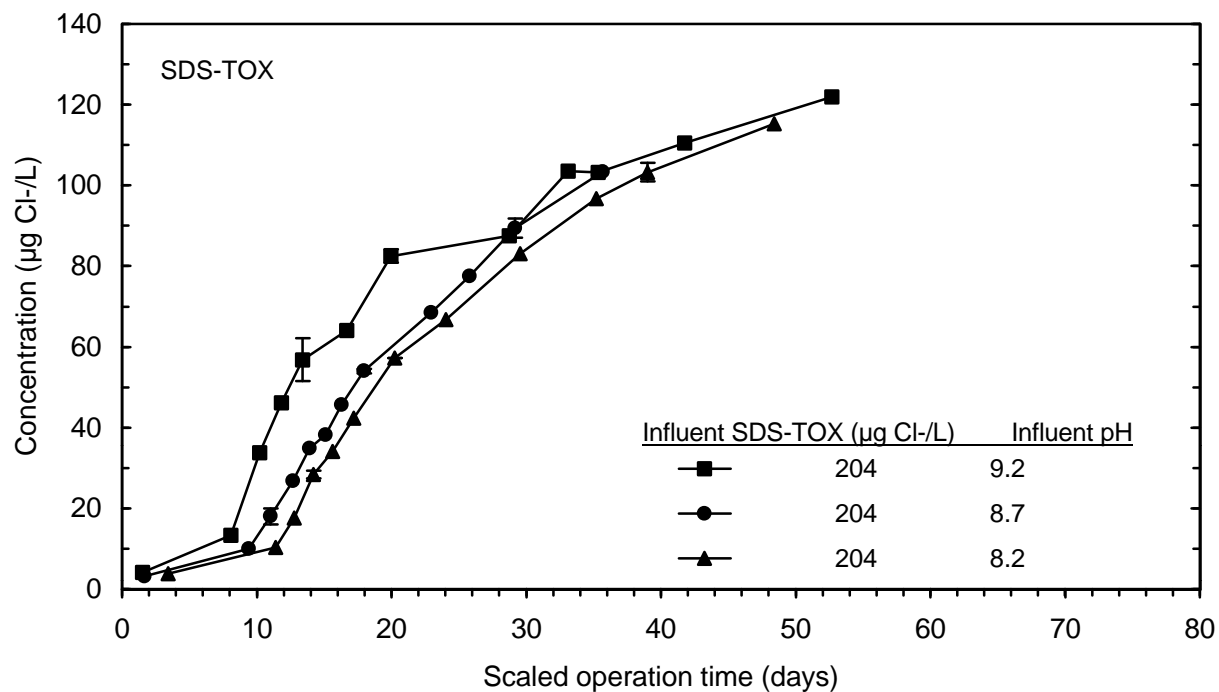


Figure 86 Impact of influent pH on SDS-TOX breakthrough for 10 minute EBCT contactors

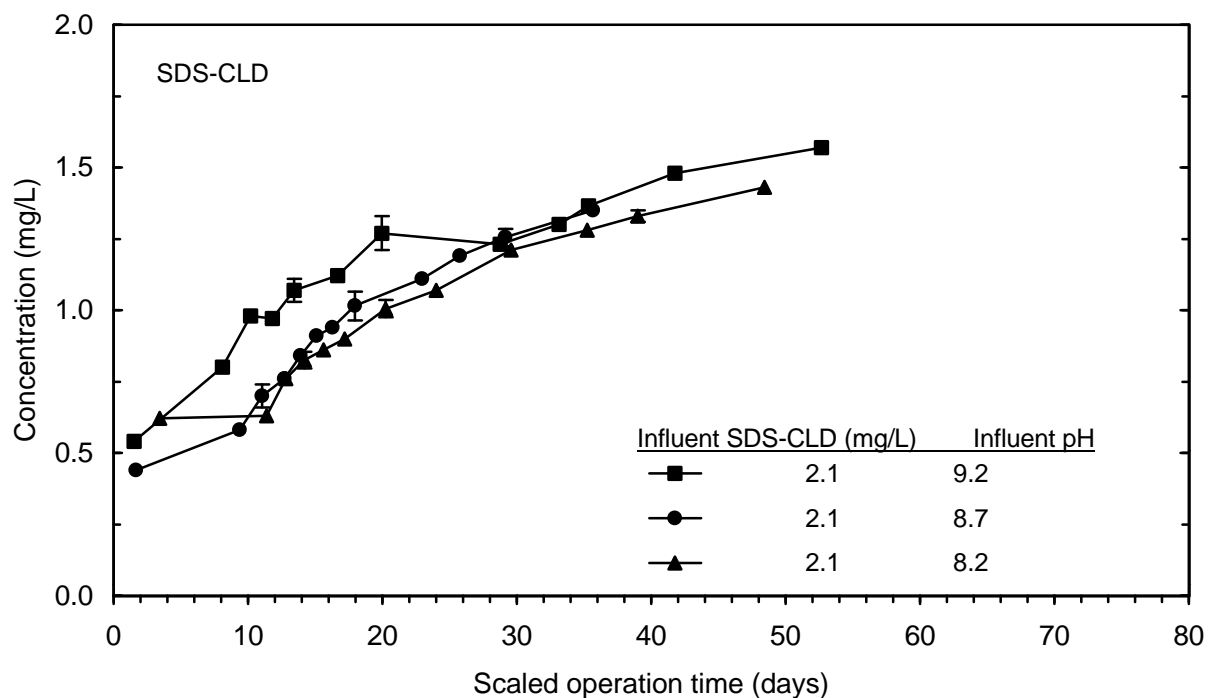


Figure 87 Impact of influent pH on SDS-CLD breakthrough for 10 minute EBCT contactors

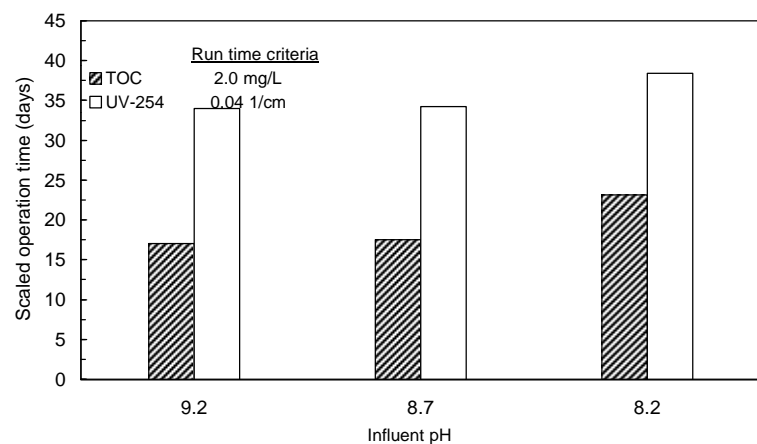


Figure 88 Impact of influent pH on run times based on single breakthrough curves for TOC and UV-254 effluent criteria (high)

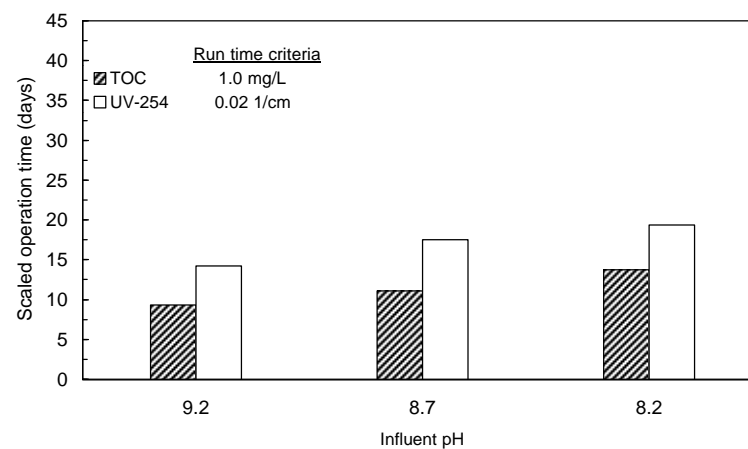


Figure 89 Impact of influent pH on run times based on single breakthrough curves for TOC and UV-254 effluent criteria (low)

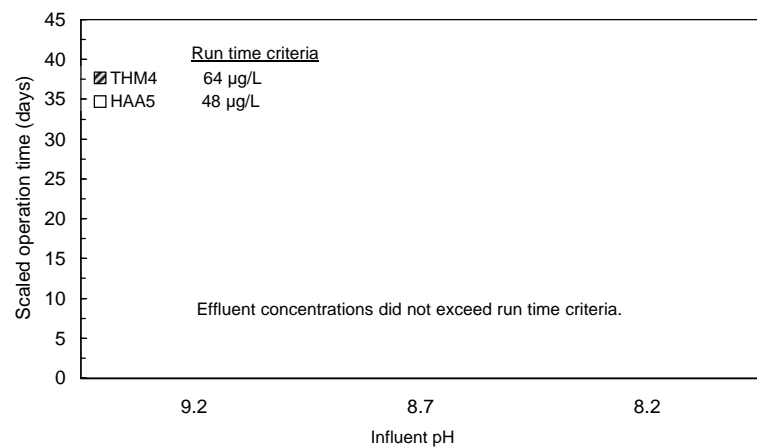


Figure 90 Impact of influent pH on run times based on single breakthrough curves for Stage 1 THM4 and HAA5 effluent criteria

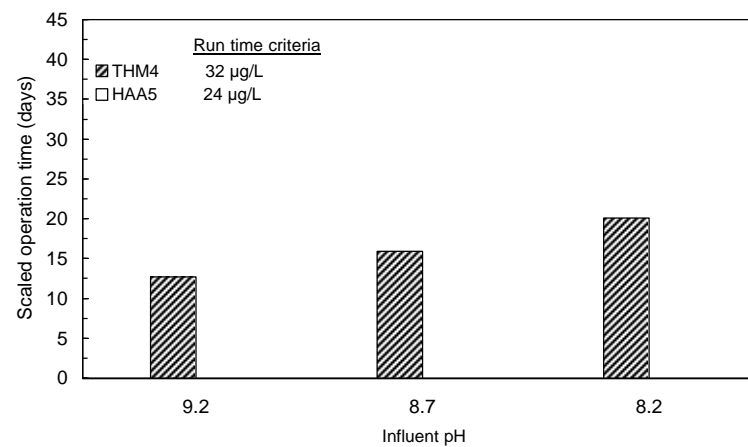


Figure 91 Impact of influent pH on run times based on single breakthrough curves for Stage 2 THM4 and HAA5 effluent criteria

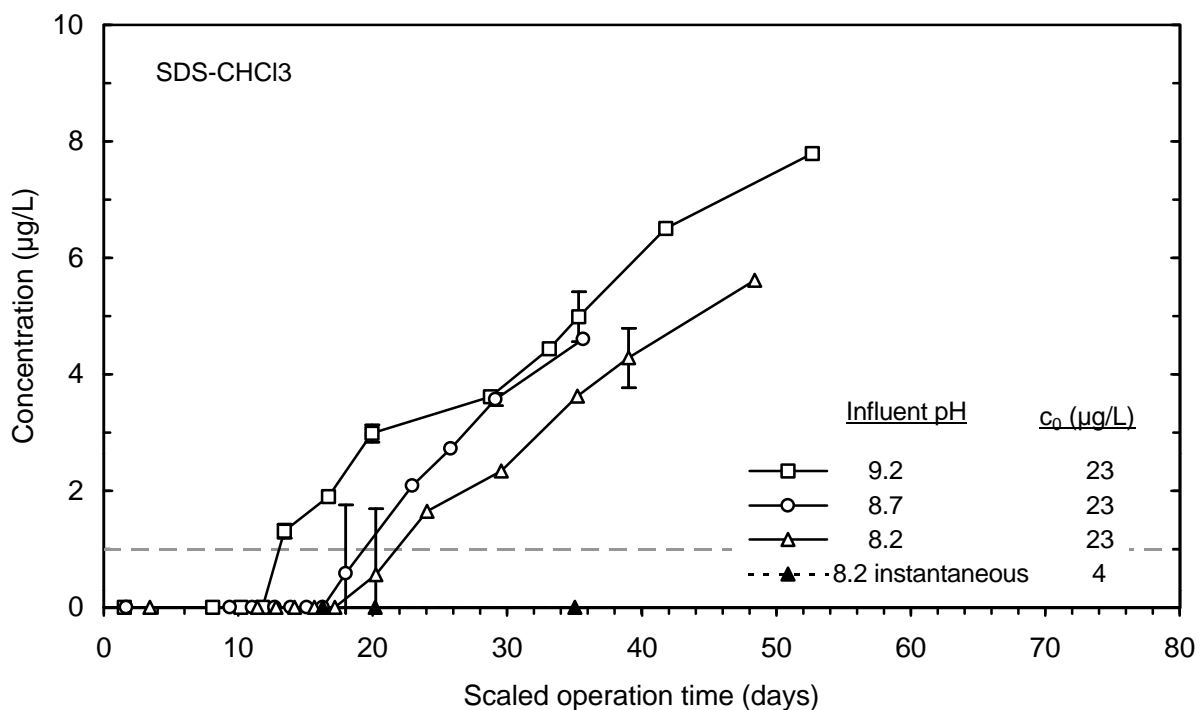


Figure 92 Impact of influent pH on SDS-CHCl₃ breakthrough for 10 minute EBCT contactors

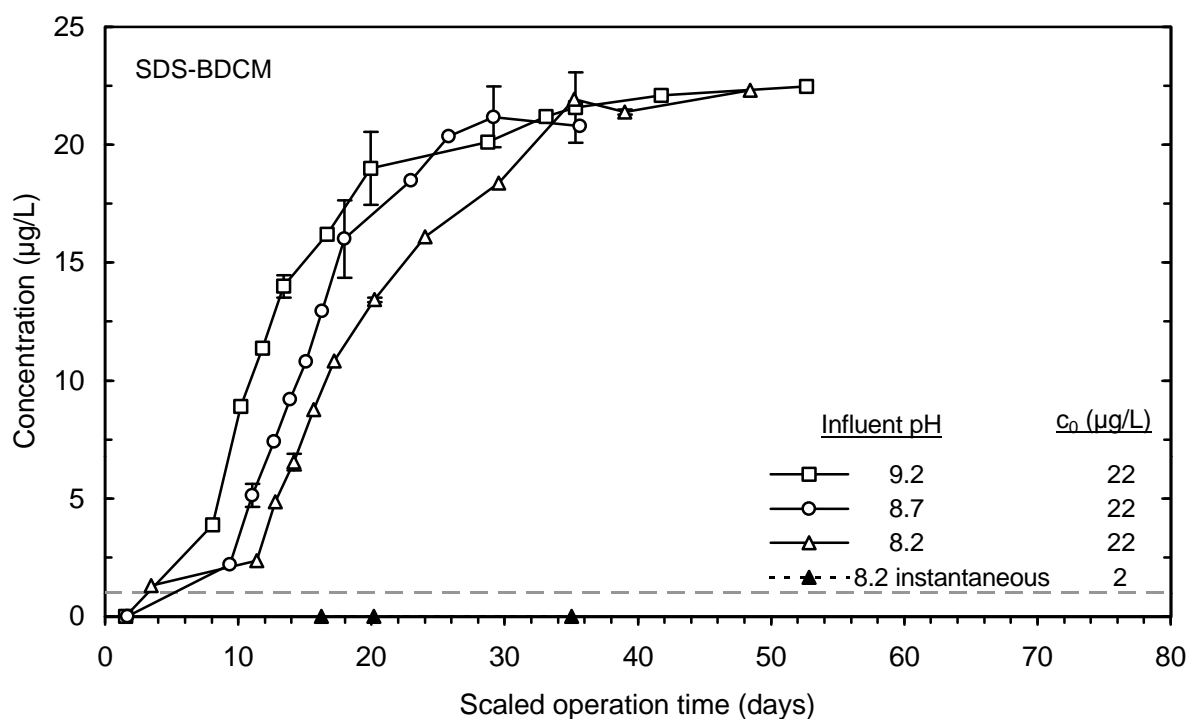


Figure 93 Impact of influent pH on SDS-BDCM breakthrough for 10 minute EBCT contactors

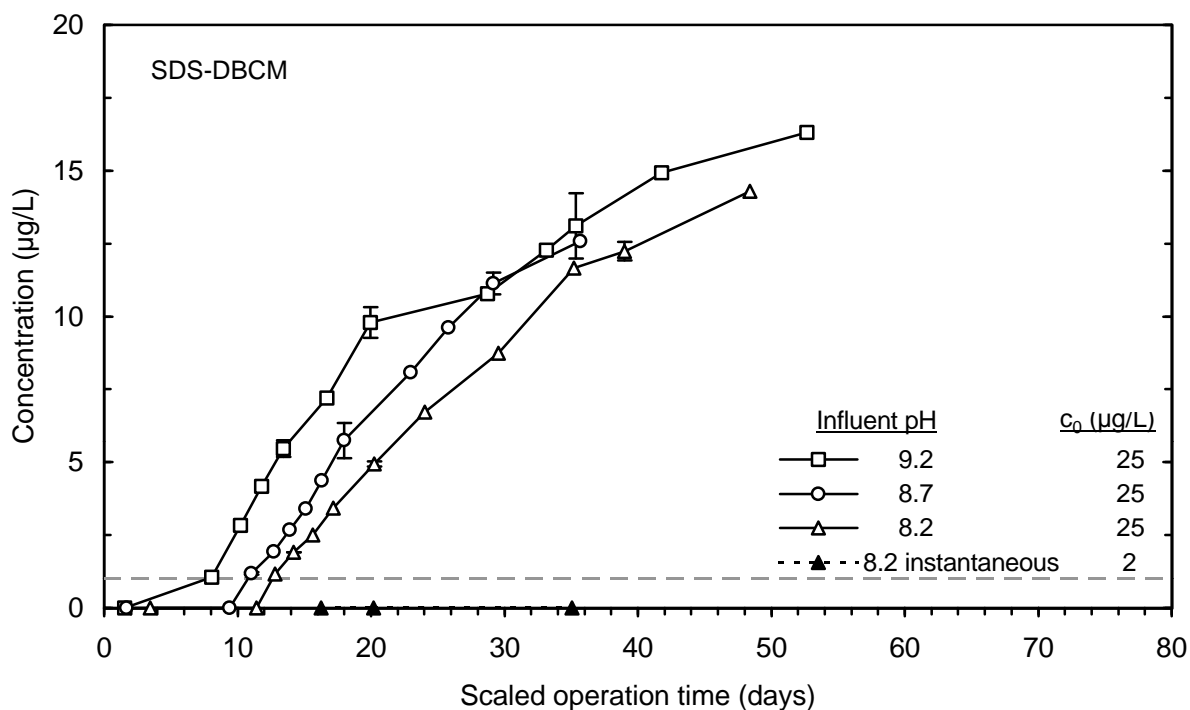


Figure 94 Impact of influent pH on SDS-DBCM breakthrough for 10 minute EBCT contactors

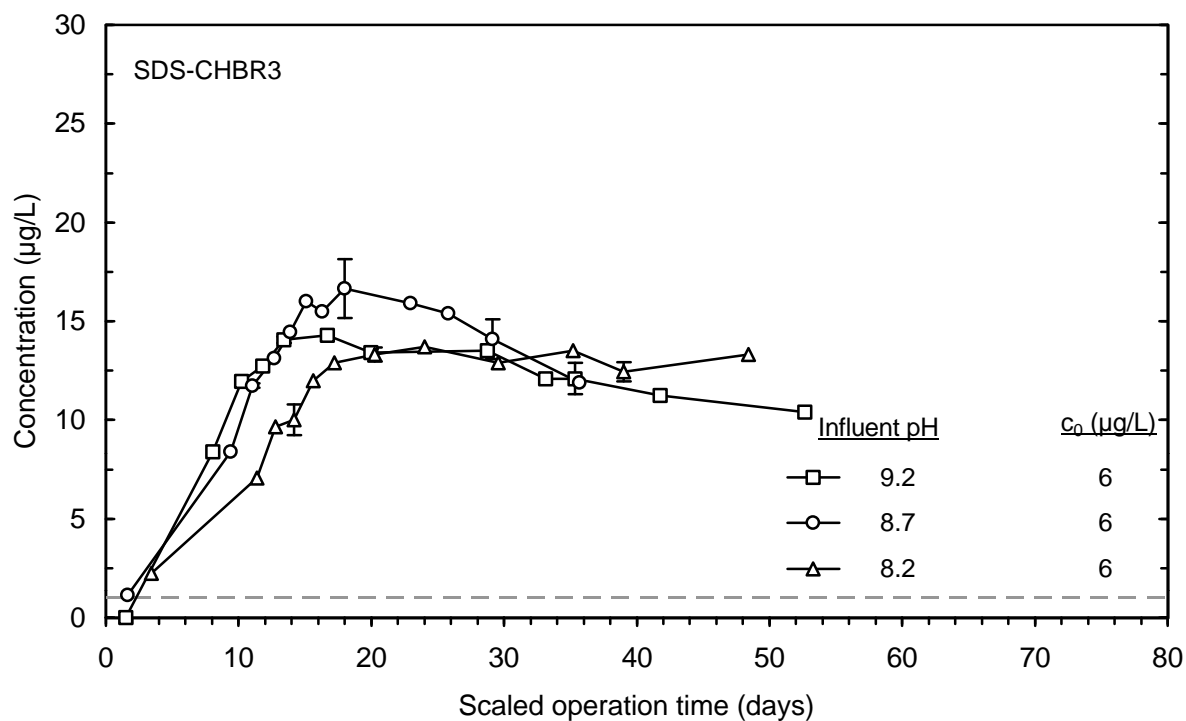


Figure 95 Impact of influent pH on SDS-CHBR3 breakthrough for 10 minute EBCT contactors

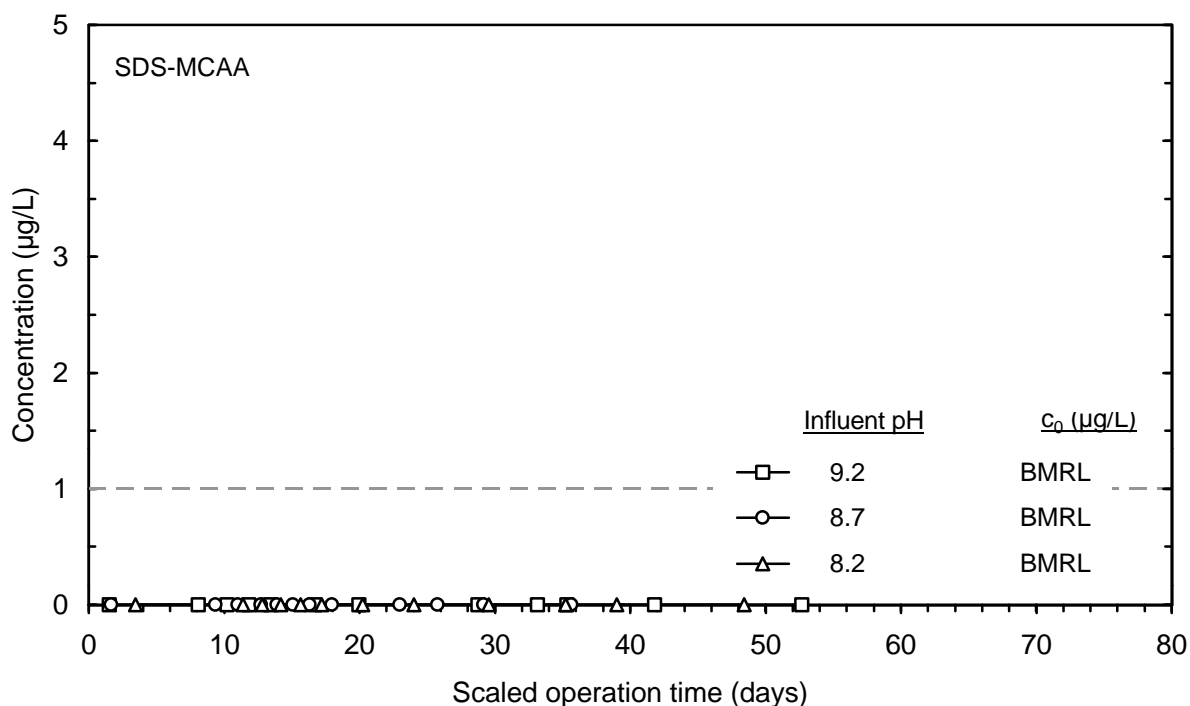


Figure 96 Impact of influent pH on SDS-MCAA breakthrough for 10 minute EBCT contactors

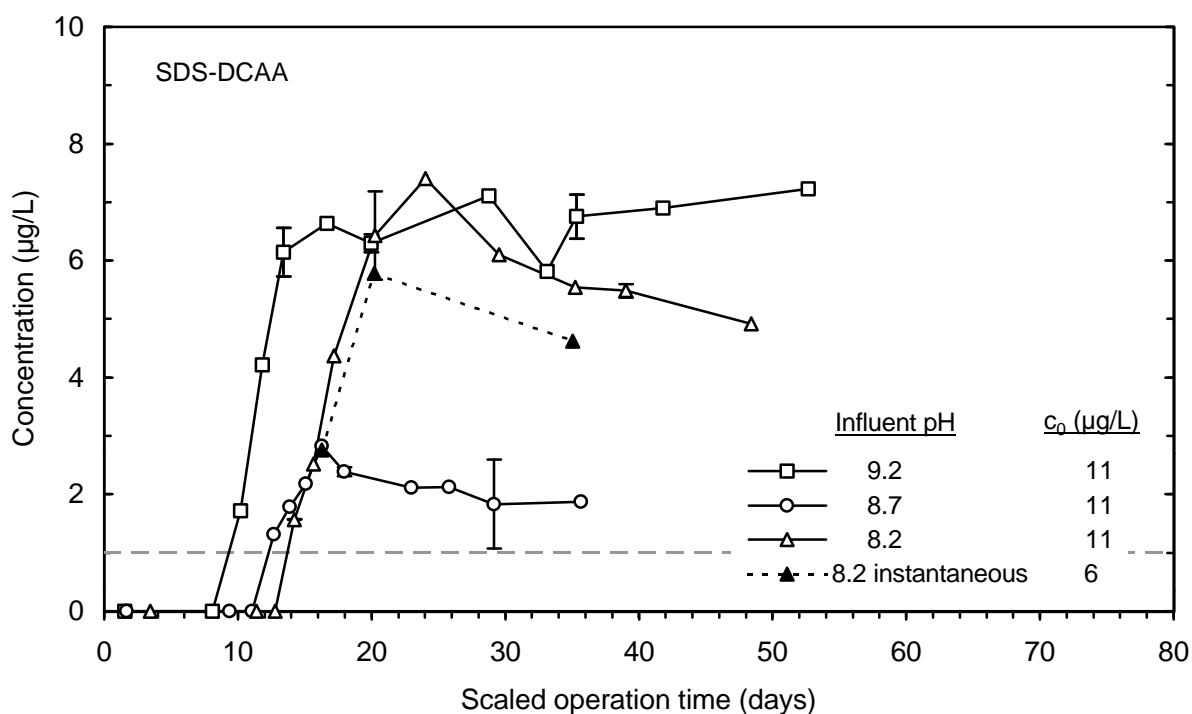


Figure 97 Impact of influent pH on SDS-DCAA breakthrough for 10 minute EBCT contactors

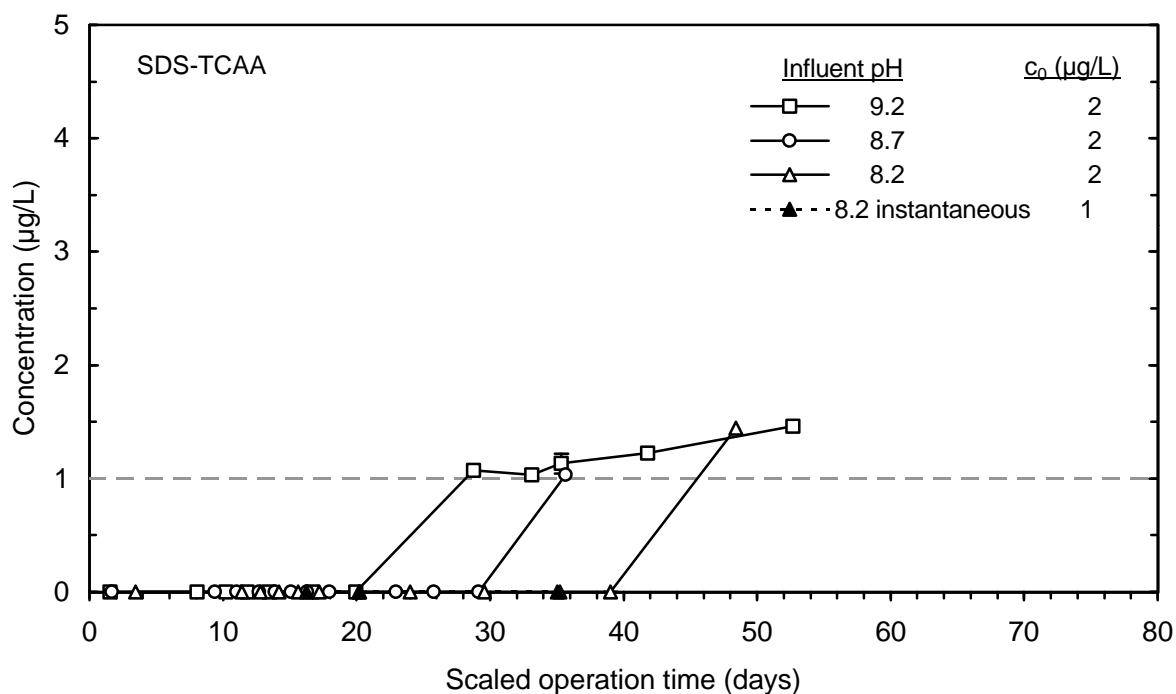


Figure 98 Impact of influent pH on SDS-TCAA breakthrough for 10 minute EBCT contactors

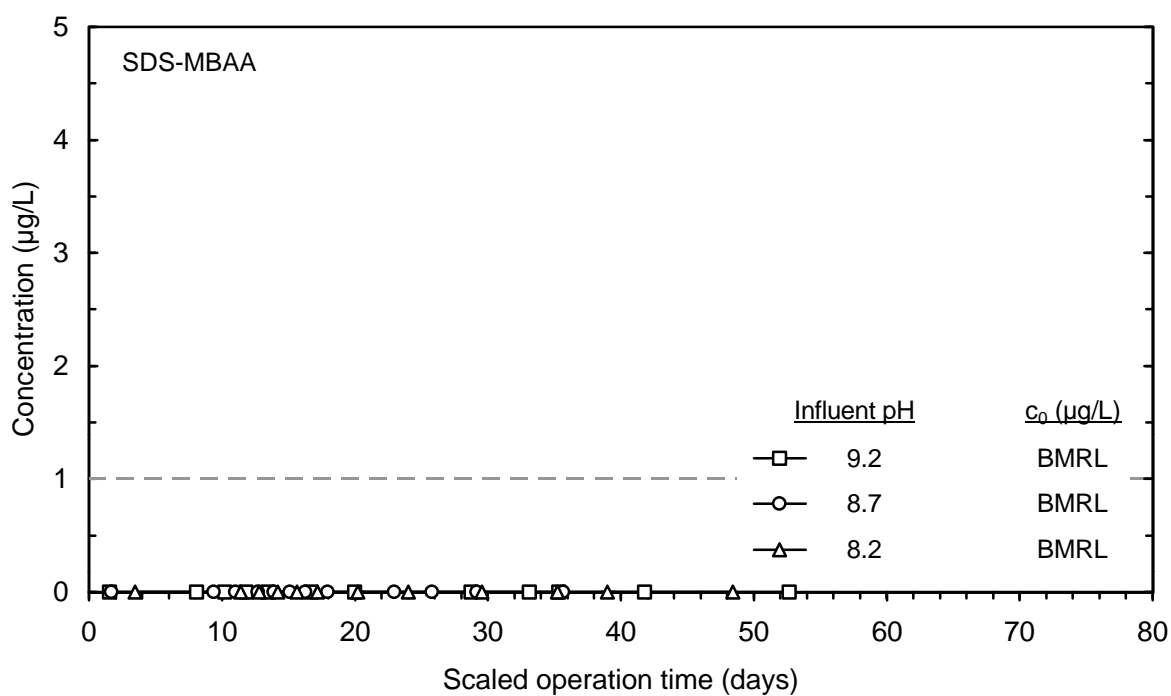


Figure 99 Impact of influent pH on SDS-MBAA breakthrough for 10 minute EBCT contactors

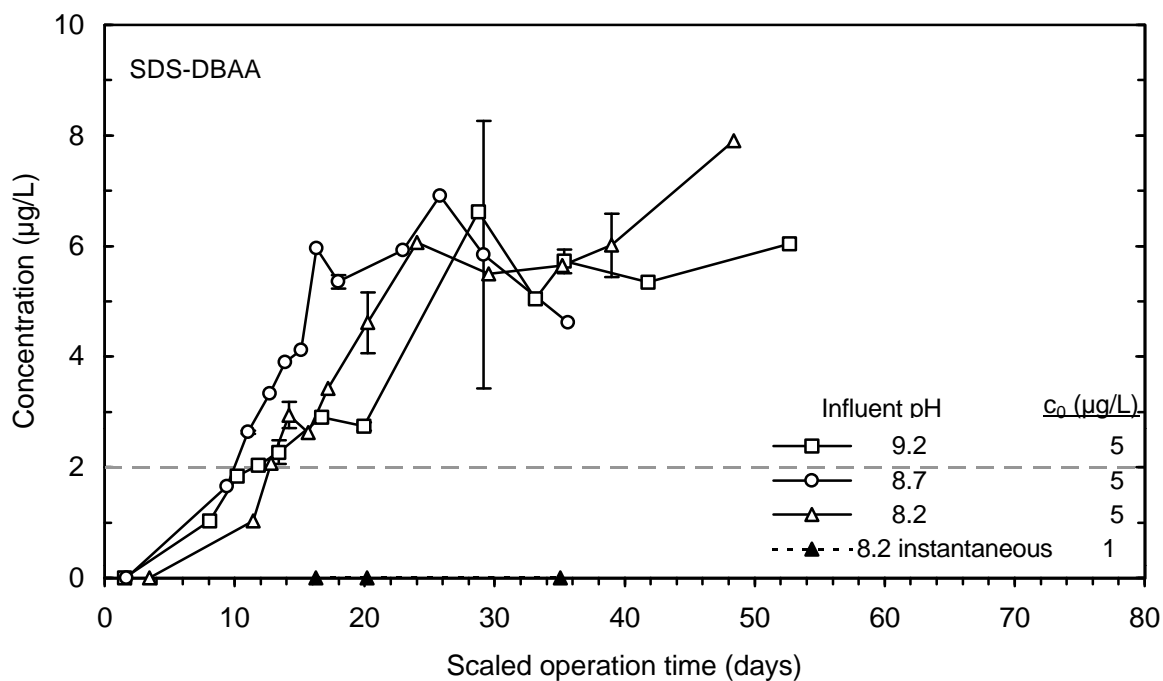


Figure 100 Impact of influent pH on SDS-DBAA breakthrough for 10 minute EBCT contactors

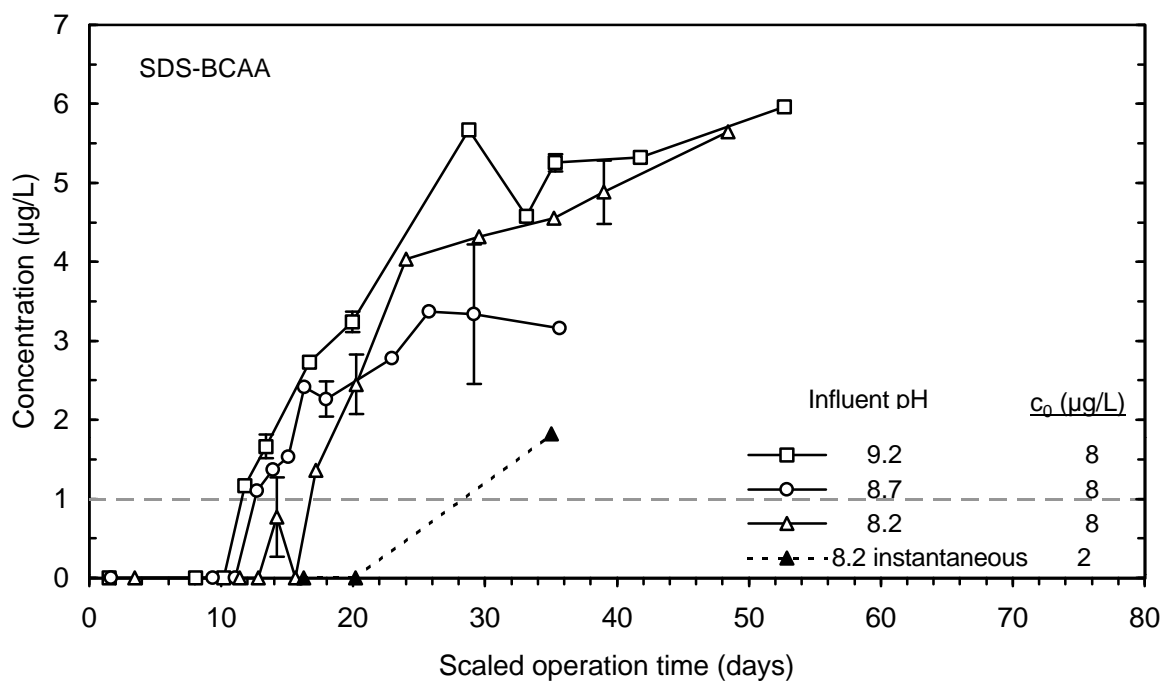


Figure 101 Impact of influent pH on SDS-BCAA breakthrough for 10 minute EBCT contactors

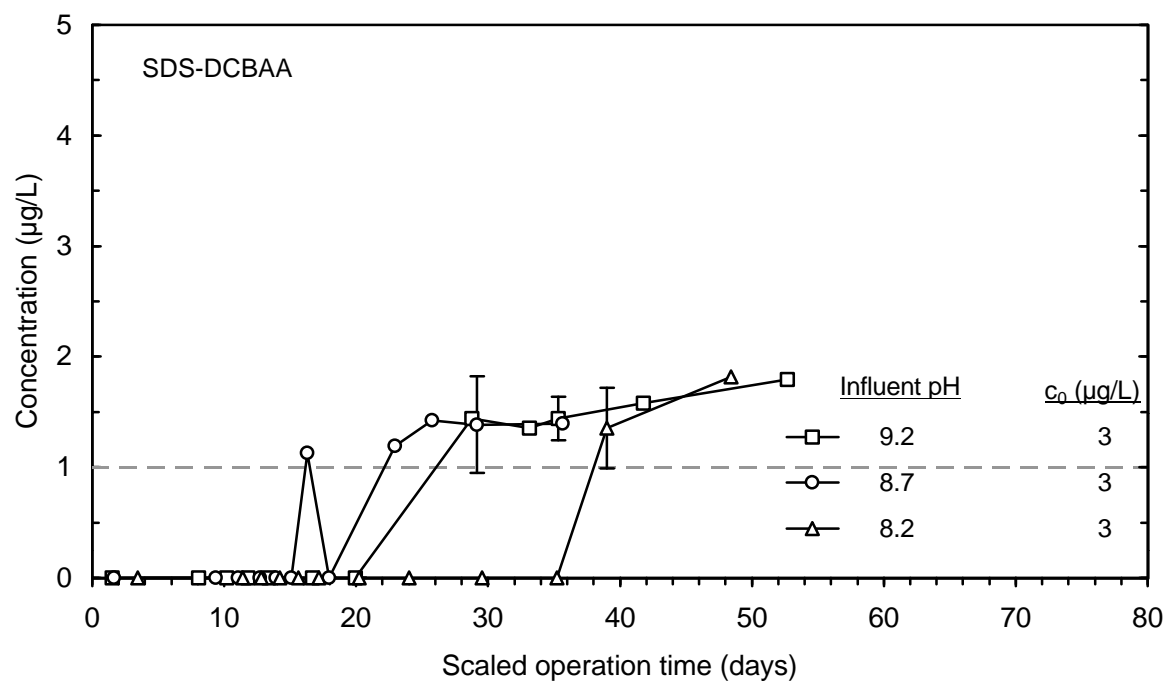


Figure 102 Impact of influent pH on SDS-DCBAA breakthrough for 10 minute EBCT contactors

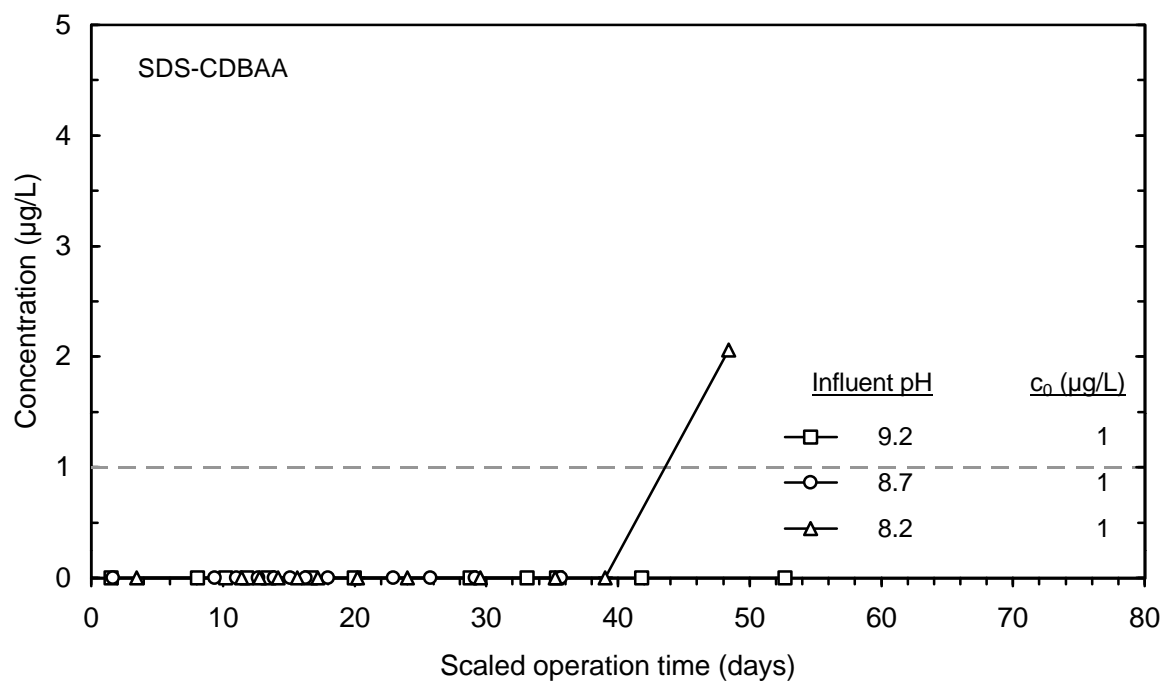


Figure 103 Impact of influent pH on SDS-CDBAA breakthrough for 10 minute EBCT contactors

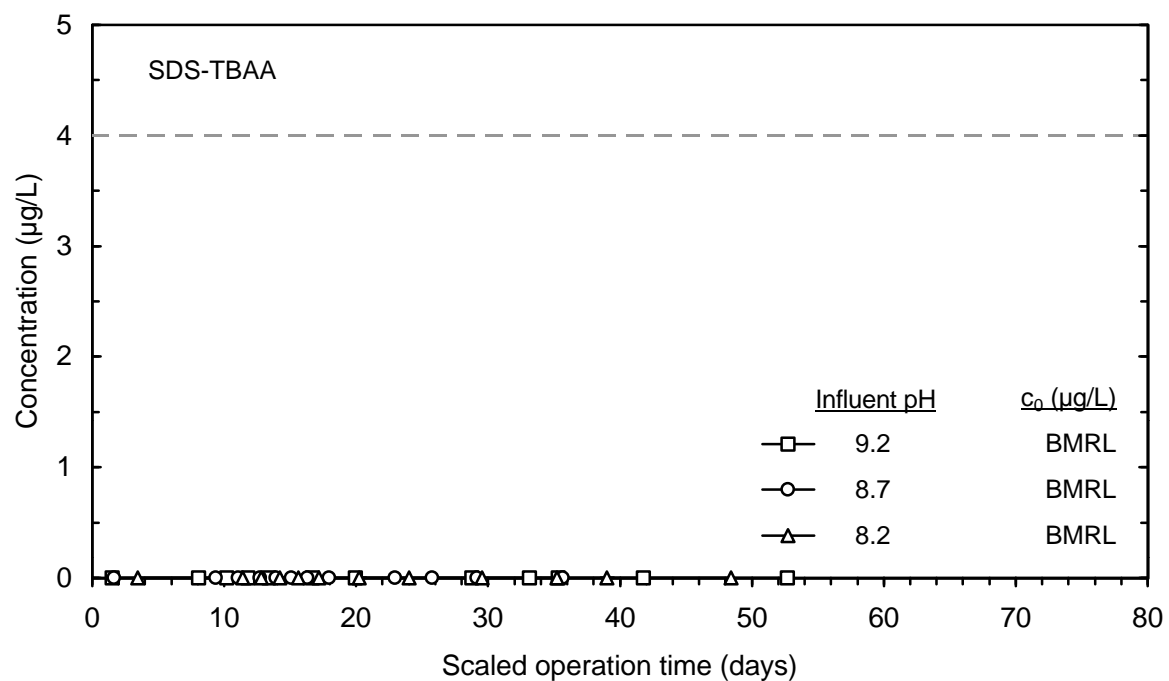


Figure 104 Impact of influent pH on SDS-TBAA breakthrough for 10 minute EBCT contactors

10

Blended Effluent Simulation and Breakthrough Curve Extrapolation

10 Blended Effluent Simulation and Breakthrough Curve Extrapolation

The data generated by an RSSCT simulates the performance of a single GAC contactor for DBP precursor control. For single contactor operation, when the effluent water quality exceeds levels set as run time criteria, the GAC must be replaced with reactivated or virgin GAC. In practice, multiple GAC contactors in parallel are used, and GAC run times are lengthened significantly by operating the contactors in a staggered mode: the GAC in each contactor is replaced with reactivated or virgin GAC at regular intervals (Westrick and Cohen, 1976; Roberts and Summers, 1982). The effluent from all contactors is blended prior to disinfection. Since only the blended effluent must meet a given water quality objective, each contactor can be operated longer and produce a water quality in excess of the system water quality objective. As a prelude to any type of cost analysis, the impact of blended GAC contactor effluents should be considered.

It is possible to model the performance of contactors operated in parallel staggered mode using the data produced by a single RSSCT. The breakthrough curve data are first fit to the logistic function, a function that results in a characteristic S-shape curve typical of breakthrough curves:

$$C(t) = \frac{A_f - A_0}{1 + Be^{-Dt}} + A_0 \quad (2)$$

This form of the logistic function is a variation of that presented in Chowdhury et al. (1996). The parameters A_f , A_0 , B , and D are varied for a best-fit of the data by a sum of squares minimization algorithm. An equation that simulates a blended effluent scenario can be derived by the following integration of the logistic function:

$$\bar{C}(t) = \frac{1}{t} \int_0^t C(t) dt \quad (3)$$

For applications involving 10 or more staggered contactors operated in parallel, Equation 3 provides a good approximation of blended effluent water quality (Roberts and Summers, 1982). Integration of Equation 2 and substitution into Equation 3 yields:

$$\bar{C}(t) = A_f + \frac{A_f - A_0}{Dt} \ln \frac{1 + Be^{-Dt}}{1 + B} \quad (4)$$

After a best fit of the breakthrough data to Equation 2 was determined (using a least squares minimization approach), the parameter values were input into Equation 4. A plot of Equation 4, therefore, gives the blended effluent concentration for any contactor run time. A summary of the best fit parameter values and r^2 values for fits to all 64 breakthrough data sets is given in Table 30. As can be seen by the high r^2 (mean: 0.96, 25th percentile: 0.95, 75th percentile: 0.98), the model well fit the data.

Figures 105 through 112 contain single column and blended effluent breakthrough curves the 10 and 20 minute EBCT contactors for TOC, UV₂₅₄, SDS-THM4, SDS-HAA5, SDS-HAA6, SDS-HAA9, SDS-TOX, and SDS-CLD. The analysis summarized in these plots demonstrates the significant impact on overall costs of accounting for a blended effluent situation. For instance, the 20-minute EBCT contactor TOC breakthrough curve plotted in Figure 105 exceeds an effluent concentration of 2.0 mg/L after 38 days. However, the multiple contactor blended effluent breakthrough curve does not reach an effluent TOC concentration of 2.0 mg/L until after 95 days of single contactor operation time. Thus, for multiple GAC contactors operated in staggered mode, each individual contactor can be operated a factor of 2.5 times longer, prior to reaching a treated water target effluent TOC concentration of 2.0 mg/L. A similar analysis can be made for SDS-THM4 and SDS-HAA5.

The single contactor and blended effluent (multiple contactors) comparisons are presented for the 5.0 and 12.5 minute EBCT contactors in Figures 113 through 120, and for the 15 minute EBCT contactor in Figures 121 through 128. For the influent pH study, Figures 129 through 136 compare single contactor data to blended effluent data for the contactors with influent pH values of 9.2 and 8.2. For the influent pH 8.7 contactor, the comparisons are made in Figures 137 through 144.

Tables 31 through 35 summarize multiple contactor blended effluent run times for EBCTs between 5.0 and 20 minutes. For each parameter and criterion, the value of other parameters is given when the run time criterion is met. When applicable, run time calculations based on effluent blending of extrapolated breakthrough curves are included (described below). Tables 35 through 37 contain the same information for the three influent pH runs.

Bar graph summaries of run times to effluent criteria for single and multiple contactor configurations for 10- and 20-minute EBCTs are shown in Figures 145 through 148. Run times are calculated and compared based on TOC, UV₂₅₄, SDS-THM4, and SDS-HAA5 criteria, as described in Section 8.1. Run time comparisons for the 5.0 and 12.5 minute EBCT contactors are shown in Figures 149 through 152. Figures 153 through 156 show the same data for the 15 minute EBCT contactors. A similar analysis was performed on the influent pH runs: bar graph summaries of run times to effluent criteria for single and multiple contactor configurations for runs with influent pH values of 8.2 and 9.2 are shown in Figures 157 through 160. For the influent pH 8.7 run, the same data are shown in Figures 161 through 164.

In some cases, the blended effluent simulation results did not exceed run time criteria. To increase the benefit of the data set, a breakthrough curve extrapolation procedure was developed to allow reasonable and conservative run time estimates to be made, when blended effluent levels did not exceed the reactivation criteria. To the original breakthrough curve data set for each parameter, three points were added at 150, 200, and 250 percent of the run time at which the last sample point was reported (t_{\max}), based on the following set of equations:

Point	Run time	Concentration	
A	$1.5t_{\max}$	$C(t_{\max}) + 0.5[C_{\text{inf}} - C(t_{\max})]$	(5)
B	$2.0t_{\max}$	$C(t_{\max}) + 0.6[C_{\text{inf}} - C(t_{\max})]$	(6)
C	$2.5t_{\max}$	$C(t_{\max}) + 0.7[C_{\text{inf}} - C(t_{\max})]$	(7)

where C_{inf} is the influent concentration for each parameter, and $C(t_{\max})$ is the effluent concentration of the parameter at t_{\max} .

The logistic function curve was fit to the data set including the three extrapolation points. The integrated form of the logistic function (Equation 4) was again used to estimate blended effluent water quality for the extrapolation. The run time and CUR data contained in the figures and tables presented earlier in this section include the estimates derived by the extrapolation procedure, when necessary. No breakthrough curves were extrapolated beyond 250 percent of the maximum run time. Figures 165 through 220 contain the extrapolated breakthrough curves for all parameters, EBCTs, and quarters. Table 39 summarizes the best fit parameter values and r^2 values for all curve fits.

Parameter	Coefficient	EBCT study, EBCT (min)					Influent pH study, influent pH		
		5.0	10	12.5	15	20	8.2	8.7	9.2
TOC	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	3.36	2.98	3.48	3.28	3.04	3.05	2.97	2.97
	B	24.7	17.4	9.3	11.2	8.5	14.7	15.5	7.3
	D	0.573	0.218	0.117	0.104	0.069	0.142	0.189	0.151
	r^2	0.949	0.973	0.955	0.966	0.946	0.975	0.976	0.947
UV ₂₅₄	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	0.065	0.051	0.062	0.055	0.052	0.050	0.041	0.050
	B	22.9	20.0	15.1	17.2	12.6	20.0	30.9	10.0
	D	0.395	0.183	0.099	0.092	0.058	0.122	0.183	0.120
	r^2	0.955	0.976	0.972	0.977	0.957	0.983	0.978	0.970
SDS-THM4	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	64.3	41.5	57.6	63.4	45.7	53.2	49.8	52.1
	B	28.6	38.2	28.8	17.9	21.2	19.0	39.5	20.6
	D	0.542	0.312	0.207	0.128	0.108	0.163	0.272	0.265
	r^2	0.968	0.982	0.944	0.963	0.972	0.985	0.997	0.978
SDS-HAA5	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	16.0	12.2	12.7	14.2	12.2	12.4	8.2	13.6
	B	30.4	880.9	262.9	538.5	518.7	2325.0	928.1	31.9
	D	0.553	0.537	0.361	0.320	0.219	0.485	0.559	0.256
	r^2	0.929	0.993	0.959	0.976	0.829	0.967	0.962	0.938
SDS-HAA6	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	22.4	16.5	17.5	19.4	16.9	17.2	11.2	19.0
	B	27.2	662.4	134.9	225.5	196.9	1668.2	1238.2	37.4
	D	0.501	0.494	0.301	0.262	0.173	0.436	0.553	0.245
	r^2	0.934	0.993	0.954	0.972	0.847	0.972	0.973	0.950
SDS-HAA9	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	24.8	16.8	18.9	20.9	27.3	18.4	12.6	20.8
	B	26.4	588.5	71.6	121.8	13.2	838.6	743.9	32.3
	D	0.468	0.481	0.248	0.221	0.045	0.385	0.497	0.221
	r^2	0.945	0.988	0.948	0.971	0.839	0.933	0.960	0.953
SDS-TOX	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	139	101	141	121	126	111	104	109
	B	33.3	28.2	19.6	23.2	12.1	30.5	28.0	15.3
	D	0.496	0.238	0.116	0.115	0.054	0.161	0.180	0.188
	r^2	0.974	0.989	0.973	0.989	0.951	0.986	0.986	0.962
SDS-CLD	A_o	1.02	-0.01	1.03	0.97	-0.70	0.38	0.38	-0.68
	A_f	2.28	1.25	2.17	2.11	1.75	1.30	1.30	1.51
	B	16.7	3.6	19.5	16.4	1.2	20.0	20.0	0.8
	D	0.438	0.149	0.143	0.123	0.020	0.209	0.209	0.080
	r^2	0.949	0.990	0.965	0.983	0.966	0.986	0.986	0.952

Table 30 Summary of logistic function curve fit parameters and r^2 values

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (blended effluent)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.5	2.0	14	4,040	2.0	0.029	36	9	12	12	69
			1.0	7	2,090	1.0	0.012	16	4	5	5	28
			2.3†	18	5,040	2.3	0.035	41	10	14	15	83
UV ₂₅₄	(1/cm)	0.094	0.040	21	6,070	2.5	0.040	45	11	15	16	92
			0.020	11	3,030	1.6	0.020	27	7	9	9	49
			0.047†	29	8,450	2.7	0.047	51	13	17	19	105
SDS-THM4	(µg/L)	85	80	*	*							
			64	70#	20,250	3.4	0.065	64	15	21	23	148
			32	12	3,560	1.8	0.025	32	8	10	11	60
SDS-HAA5	(µg/L)	19	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	29	48	*	*							
			24	91#	26,320	3.5	0.068	66	16	22	24	152
SDS-TOX	(µg Cl ⁻ /L)	224	120	30#	8,740	3.0	0.050	55	13	18	20	120
			70	14	4,100	2.0	0.029	36	9	12	13	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time (including extrapolation procedure). Value of listed parameter is left blank.

#Run time estimated from breakthrough curve extrapolation procedure.

Table 31 Run times to selected GAC effluent criteria based on effluent blending (5.0 minute EBCT)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (blended effluent)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.2	2.0	41	5,850	2.0	0.029	31	9	12	12	66
			1.0	18	2,610	1.0	0.013	16	4	5	5	29
			2.1†	44	6,400	2.1	0.031	32	10	13	13	70
UV ₂₅₄	(1/cm)	0.088	0.040	54#	7,710	2.4	0.040	37	11	15	16	90
			0.020	26	3,750	1.5	0.020	23	6	8	8	47
			0.044†	62#	8,920	2.6	0.044	39	12	16	17	100
SDS-THM4	(µg/L)	64	80	*	*							
			64	*	*							
			32	39#	5,670	2.1	0.031	32	10	13	13	69
SDS-HAA5	(µg/L)	22	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	30	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	32	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	217	120	87#	12,560	2.8	0.052	43	13	18	19	120
			70	40#	5,800	2.1	0.031	32	10	13	13	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time (including extrapolation procedure). Value of listed parameter is left blank.

#Run time estimated from breakthrough curve extrapolation procedure.

Table 32 Run times to selected GAC effluent criteria based on effluent blending (10 minute EBCT)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (blended effluent)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.5	2.0	46	5,300	2.0	0.026	37	8	11	12	63
			1.0	21	2,400	1.0	0.011	17	3	4	4	23
			2.3†	57	6,570	2.3	0.032	41	9	13	13	77
UV ₂₅₄	(1/cm)	0.094	0.040	77#	8,850	2.7	0.040	51	12	16	17	101
			0.020	36	4,180	1.7	0.020	32	7	10	10	48
			0.047†	96#	11,000	2.9	0.047	55	12	17	18	118
SDS-THM4	(µg/L)	85	80	*	*							
			64	*	*							
			32	37	4,230	1.7	0.020	32	7	10	10	49
SDS-HAA5	(µg/L)	19	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	29	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	224	120	99#	11,410	3.0	0.048	55	12	17	18	120
			70	51	5,900	2.1	0.029	39	9	12	12	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time (including extrapolation procedure). Value of listed parameter is left blank.

#Run time estimated from breakthrough curve extrapolation procedure.

Table 33 Run times to selected GAC effluent criteria based on effluent blending (12.5 minute EBCT)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (blended effluent)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.5	2.0	61	5,850	2.0	0.027	39	10	13	13	66
			1.0	28	2,680	1.0	0.011	18	4	5	5	26
			2.3†	74#	7,070	2.3	0.031	46	11	15	16	79
UV ₂₅₄	(1/cm)	0.094	0.040	97#	9,280	2.6	0.040	53	12	17	18	101
			0.020	46	4,370	1.6	0.020	32	8	11	11	50
			0.047†	121#	11,600	2.9	0.047	57	13	18	19	116
SDS-THM4	(µg/L)	85	80	*	*							
			64	*	*							
			32	46	4,390	1.6	0.020	32	8	11	11	50
SDS-HAA5	(µg/L)	19	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	29	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	224	120	128#	12,280	2.9	0.049	58	13	18	19	120
			70	65#	6,260	2.1	0.028	43	11	14	15	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time (including extrapolation procedure). Value of listed parameter is left blank.

#Run time estimated from breakthrough curve extrapolation procedure.

Table 34 Run times to selected GAC effluent criteria based on effluent blending (15 minute EBCT)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (blended effluent)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.2	2.0	95	6,860	2.0	0.028	32	9	11	11	65
			1.0	39	2,780	1.0	0.011	15	3	4	4	26
			2.1†	104	7,490	2.1	0.030	33	9	12	12	69
UV ₂₅₄	(1/cm)	0.088	0.040	149#	10,730	2.5	0.040	40	11	15	17	94
			0.020	67	4,790	1.6	0.020	26	7	9	8	46
			0.044†	172#	12,410	2.6	0.044	42	12	17	18	104
SDS-THM4	(µg/L)	64	80	*	*							
			64	*	*							
			32	96	6,910	2.0	0.028	32	9	12	11	65
SDS-HAA5	(µg/L)	22	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	30	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	32	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	217	120	220#	15,820	2.8	0.050	45	13	18	21	120
			70	106	7,600	2.1	0.030	33	9	12	13	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time (including extrapolation procedure). Value of listed parameter is left blank.

#Run time estimated from breakthrough curve extrapolation procedure.

Table 35 Run times to selected GAC effluent criteria based on effluent blending (20 minute EBCT)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (blended effluent)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.1	2.0	56	8,120	2.0	0.028	37	10	13	13	70
			1.0	25	3,650	1.0	0.011	18	5	6	6	28
			2.1†	60	8,680	2.1	0.029	38	10	13	14	74
UV ₂₅₄	(1/cm)	0.083	0.040	86#	12,440	2.6	0.040	47	11	15	17	103
			0.020	40	5,720	1.6	0.020	29	7	10	10	52
			0.041†	91#	13,060	2.6	0.041	48	11	16	18	106
SDS-THM4	(µg/L)	77	80	*	*							
			64	*	*							
			32	46	6,630	1.8	0.023	32	8	11	11	59
SDS-HAA5	(µg/L)	18	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	30	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	204	120	118#	17,060	2.8	0.047	52	12	17	19	120
			70	54#	7,740	2.0	0.027	37	10	13	13	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time (including extrapolation procedure). Value of listed parameter is left blank.

#Run time estimated from breakthrough curve extrapolation procedure.

Table 36 Run times to selected GAC effluent criteria based on effluent blending (influent pH 8.2; 10 minute EBCT)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (blended effluent)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.1	2.0	45	6,530	2.0	0.024	37	7	9	10	62
			1.0	20	2,870	1.0	0.009	17	3	4	4	23
			2.1†	49	7,010	2.1	0.026	38	7	9	10	66
UV ₂₅₄	(1/cm)	0.083	0.040	72#	10,310	2.6	0.040	48	10	13	15	100
			0.020	36#	5,150	1.8	0.020	33	6	8	9	51
			0.041†	75#	10,830	2.7	0.041	49	10	13	15	103
SDS-THM4	(µg/L)	77	80	*	*							
			64	*	*							
			32	34#	4,970	1.7	0.019	32	6	8	8	49
SDS-HAA5	(µg/L)	18	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	30	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	204	120	*	*							
			70	47#	6,750	2.1	0.028	40	7	10	11	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time (including extrapolation procedure). Value of listed parameter is left blank.

#Run time estimated from breakthrough curve extrapolation procedure.

Table 37 Run times to selected GAC effluent criteria based on effluent blending (influent pH 8.7; 10 minute EBCT)

Parameter	Units	Influent concentration	Breakthrough criterion	Value of listed parameter when breakthrough criterion is met (blended effluent)								
				Run time (days)	Throughput (bed volumes)	TOC (mg/L)	UV ₂₅₄ (1/cm)	SDS-THM4 (µg/L)	SDS-HAA5 (µg/L)	SDS-HAA6 (µg/L)	SDS-HAA9 (µg/L)	SDS-TOX (µg Cl ⁻ /L)
TOC	(mg/L)	4.1	2.0	43	6,160	2.0	0.027	38	9	12	13	71
			1.0	16	2,350	1.0	0.011	18	4	4	4	29
			2.1†	46	6,640	2.1	0.029	39	10	13	14	74
UV ₂₅₄	(1/cm)	0.083	0.040	73#	10,580	2.5	0.040	48	12	16	18	99
			0.020	30	4,310	1.6	0.020	32	7	10	10	56
			0.041†	77#	11,120	2.6	0.041	49	12	17	18	102
SDS-THM4	(µg/L)	77	80	*	*							
			64	*	*							
			32	30	4,320	1.6	0.020	32	7	10	10	56
SDS-HAA5	(µg/L)	18	48	*	*							
			24	*	*							
SDS-HAA6	(µg/L)	26	48	*	*							
			24	*	*							
SDS-HAA9	(µg/L)	30	48	*	*							
			24	*	*							
SDS-TOX	(µg Cl ⁻ /L)	204	120	109#	15,760	2.9	0.049	52	13	18	20	120
			70	42	5,980	2.0	0.027	38	9	12	13	70

†GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time (including extrapolation procedure). Value of listed parameter is left blank.

#Run time estimated from breakthrough curve extrapolation procedure.

Table 38 Run times to selected GAC effluent criteria based on effluent blending (influent pH 9.2; 10 minute EBCT)

Parameter	Coefficient	EBCT study, EBCT (min)					Influent pH study, influent pH		
		5.0	10	12.5	15	20	8.2	8.7	9.2
TOC	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	3.74	3.47	3.94	3.89	3.56	3.54	3.51	3.52
	B	16.6	10.3	7.5	7.3	6.0	9.3	8.6	4.4
	D	0.449	0.149	0.089	0.067	0.044	0.098	0.123	0.081
	r^2	0.935	0.948	0.940	0.942	0.924	0.954	0.949	0.920
UV ₂₅₄	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	0.077	0.073	0.079	0.078	0.073	0.068	0.067	0.069
	B	11.3	11.8	10.8	11.1	10.1	11.8	17.3	7.7
	D	0.234	0.104	0.063	0.052	0.035	0.072	0.100	0.068
	r^2	0.924	0.933	0.937	0.936	0.921	0.935	0.943	0.933
SDS-THM4	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	70.9	51.4	71.4	74.2	53.5	65.6	63.4	60.8
	B	21.4	12.3	10.7	11.1	10.5	9.8	10.5	6.6
	D	0.452	0.173	0.111	0.088	0.067	0.099	0.138	0.135
	r^2	0.957	0.932	0.916	0.945	0.948	0.954	0.934	0.924
SDS-HAA5	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	17.1	15.1	15.3	15.8	17.8	13.8	14.8	15.0
	B	22.1	90.0	26.8	138.4	10.5	811.0	5.3	16.9
	D	0.466	0.316	0.178	0.235	0.045	0.402	0.071	0.187
	r^2	0.924	0.942	0.917	0.965	0.787	0.959	0.575	0.924
SDS-HAA6	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	23.8	21.8	21.7	21.8	24.5	19.5	20.8	21.3
	B	22.0	33.1	18.6	75.3	12.2	421.2	6.7	17.9
	D	0.442	0.217	0.141	0.192	0.047	0.335	0.076	0.172
	r^2	0.929	0.902	0.918	0.960	0.824	0.959	0.643	0.934
SDS-HAA9	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	26.1	24.3	23.9	23.8	29.3	24.2	23.5	24.3
	B	22.7	17.1	15.8	46.2	13.0	18.3	7.7	13.2
	D	0.424	0.153	0.121	0.159	0.041	0.123	0.079	0.134
	r^2	0.942	0.850	0.920	0.955	0.838	0.863	0.679	0.924
SDS-TOX	A_o	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	A_f	168	173	187	184	181	167	167	165
	B	17.5	9.5	14.4	12.6	10.3	13.4	15.9	6.1
	D	0.335	0.088	0.077	0.059	0.033	0.080	0.099	0.065
	r^2	0.940	0.861	0.940	0.941	0.922	0.933	0.950	0.883

Table 39 Summary of logistic function curve fit parameters and r^2 values for curve fits after breakthrough curve extrapolation

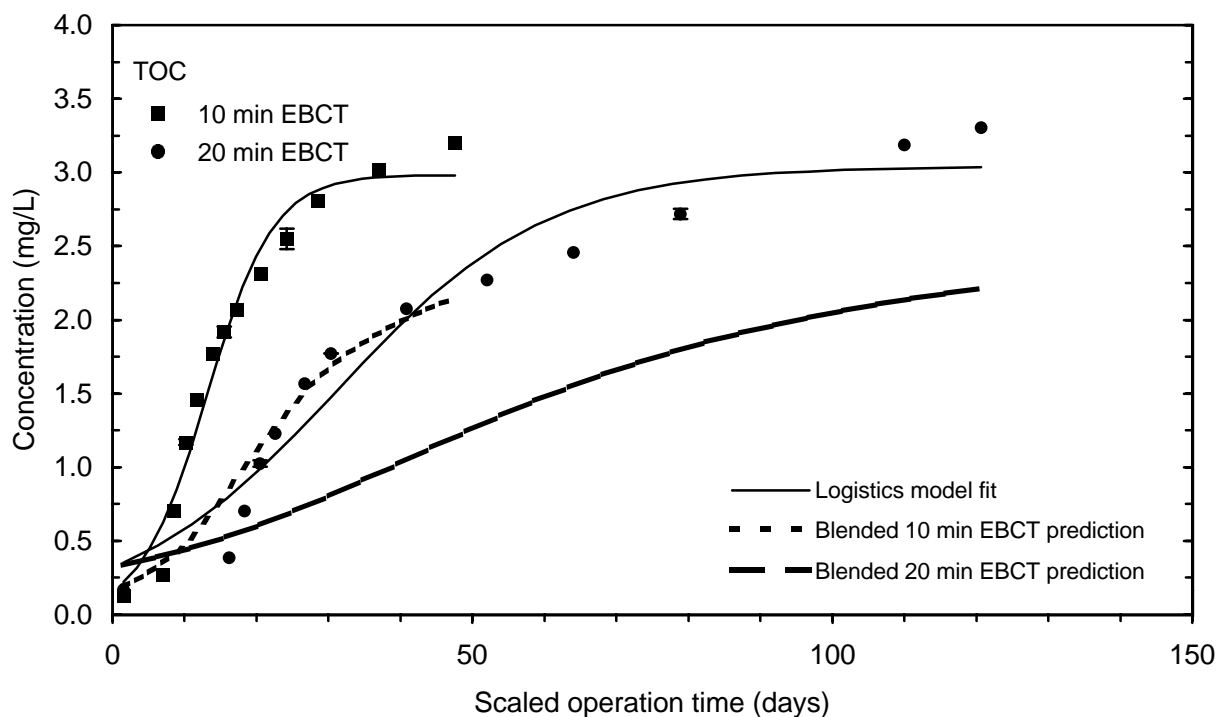


Figure 105 TOC breakthrough and effluent blending for 10 and 20 minute EBCT contactors

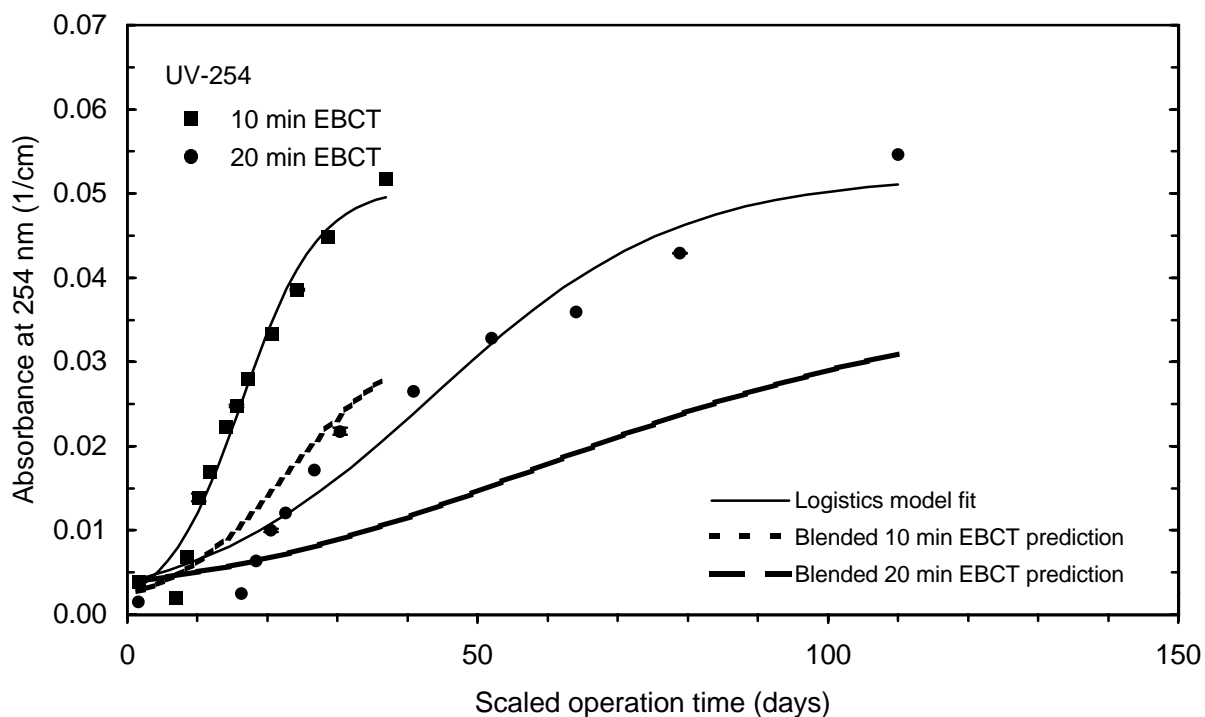


Figure 106 UV-254 breakthrough and effluent blending for 10 and 20 minute EBCT contactors

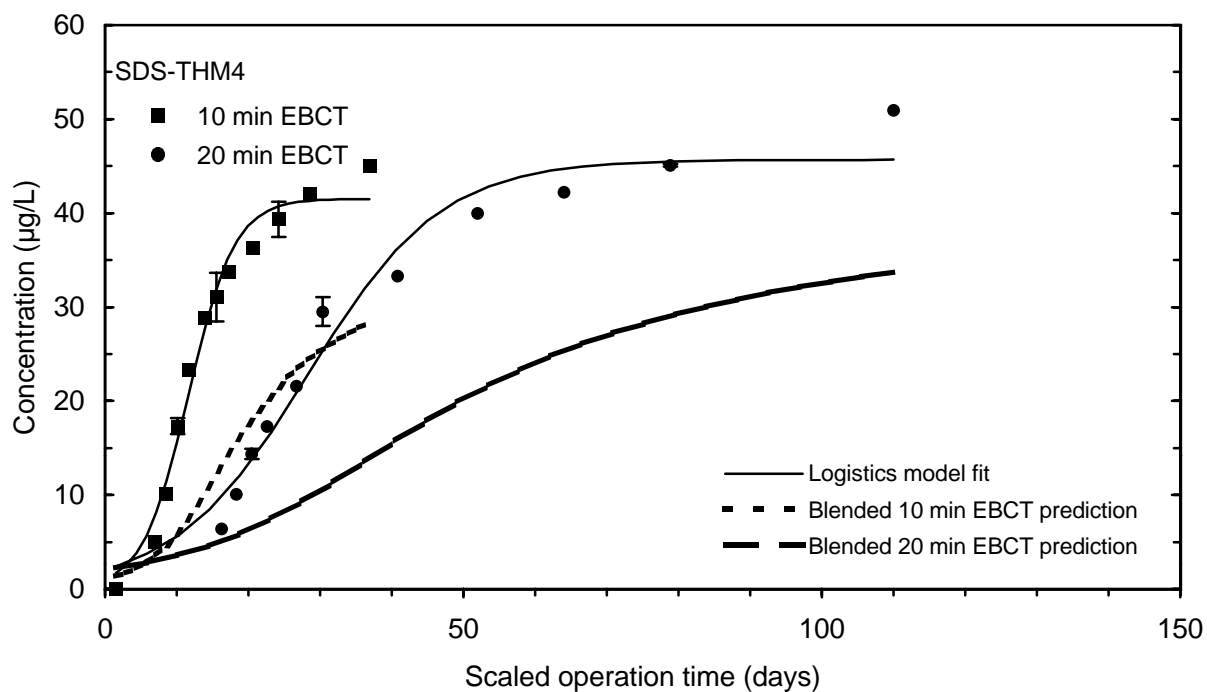


Figure 107 SDS-THM4 breakthrough and effluent blending for 10 and 20 minute EBCT contactors

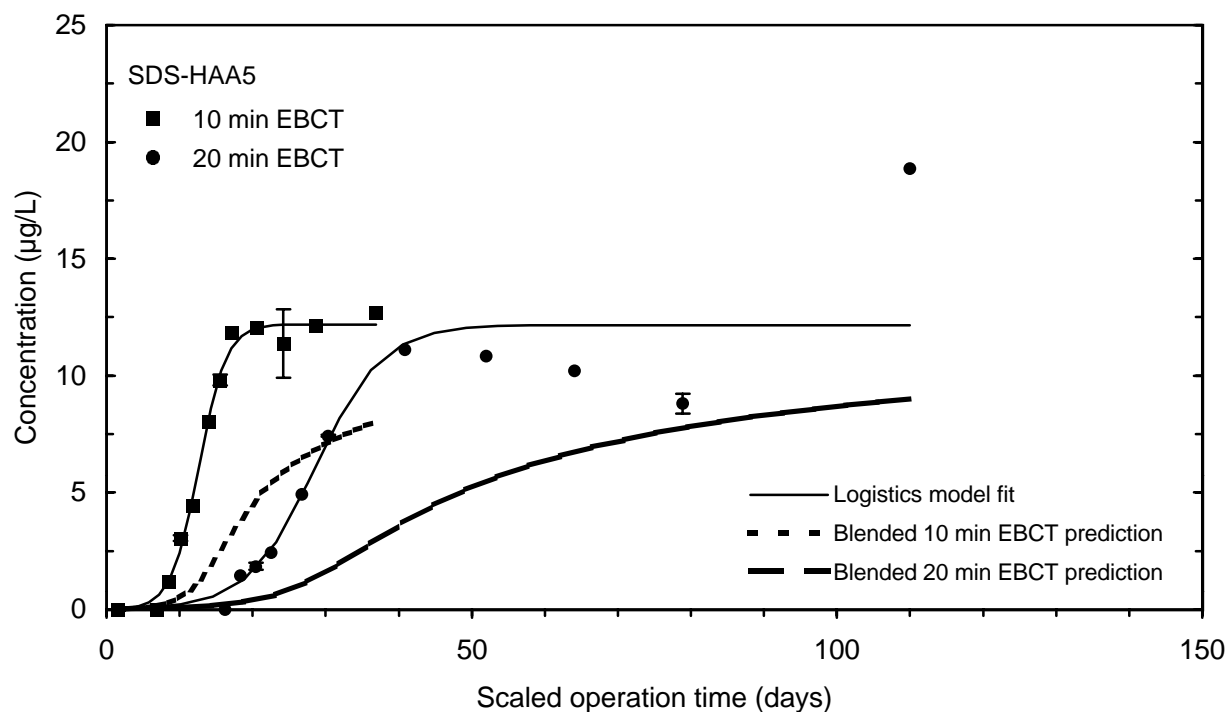


Figure 108 SDS-HAA5 breakthrough and effluent blending for 10 and 20 minute EBCT contactors

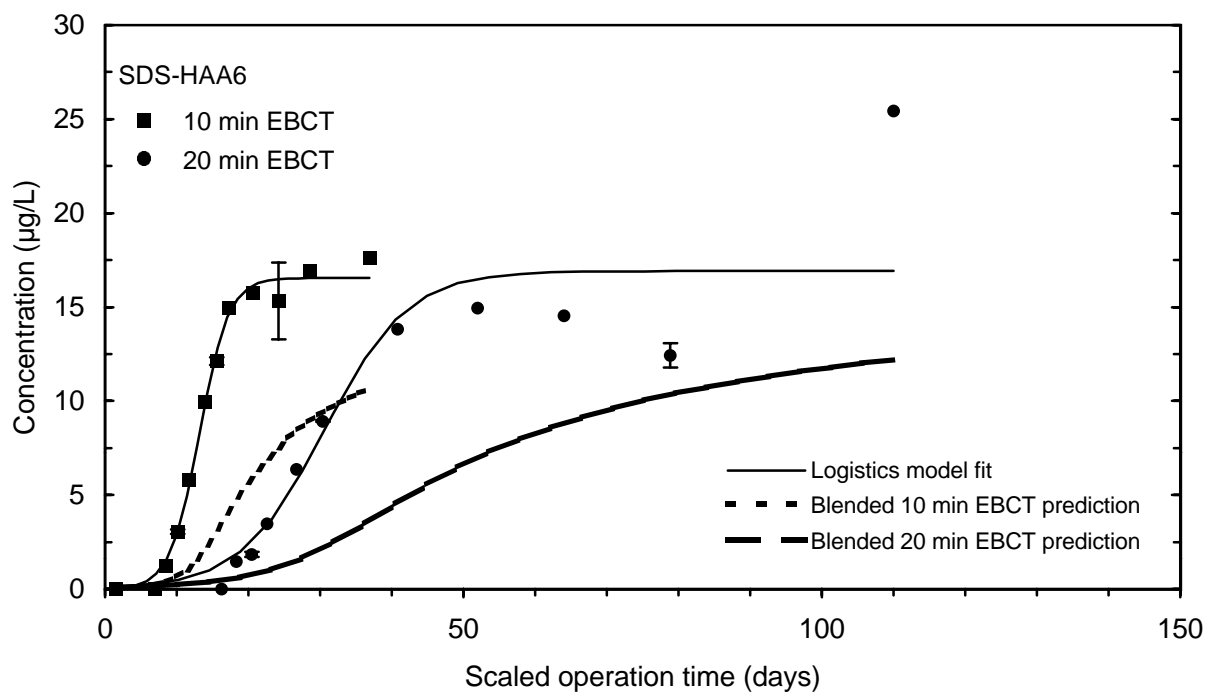


Figure 109 SDS-HAA6 breakthrough and effluent blending for 10 and 20 minute EBCT contactors

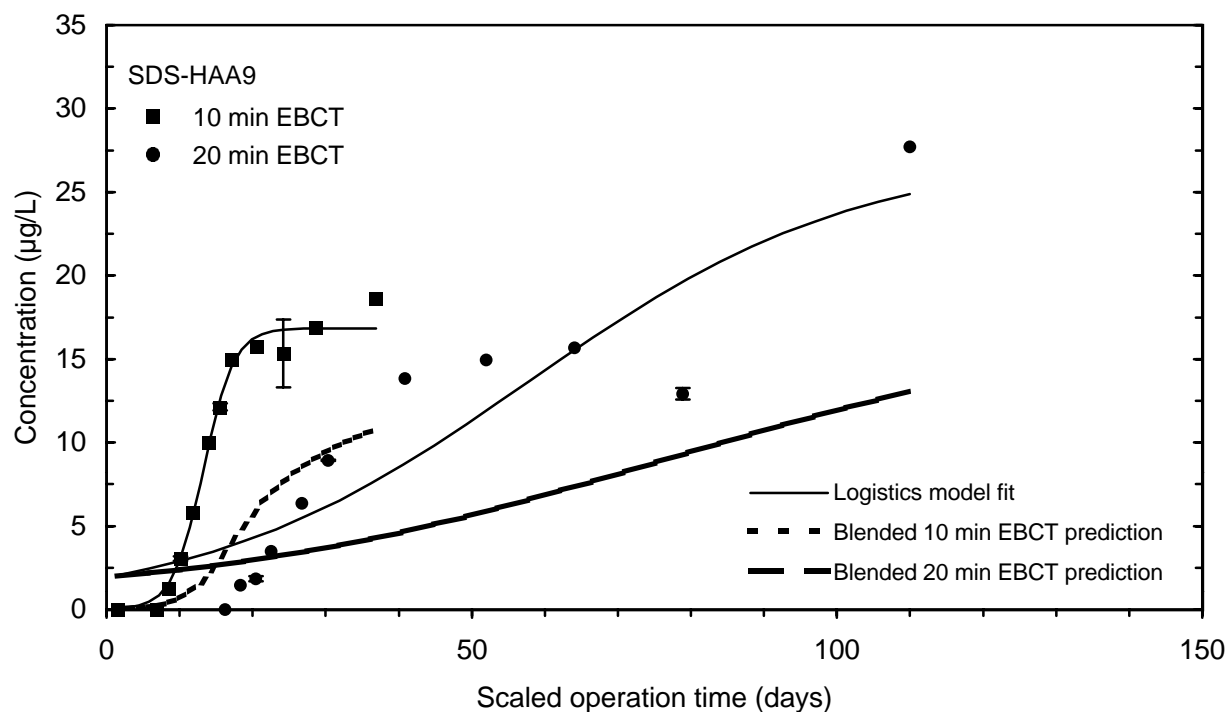


Figure 110 SDS-HAA9 breakthrough and effluent blending for 10 and 20 minute EBCT contactors

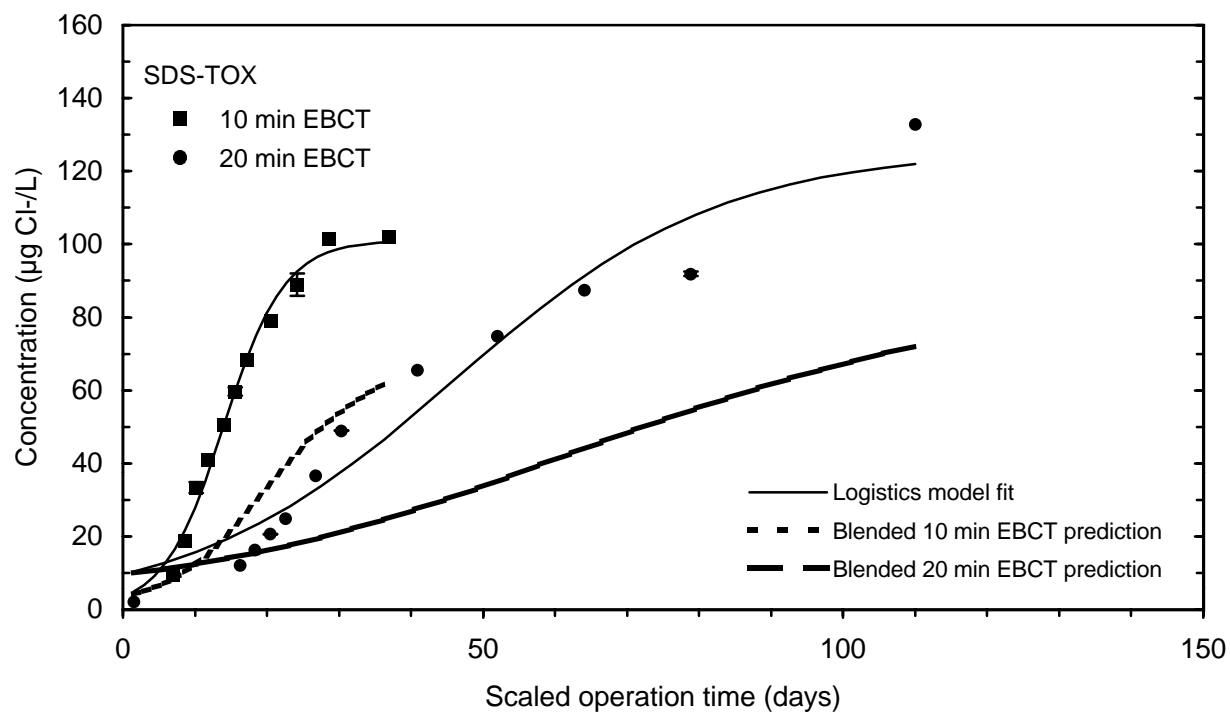


Figure 111 SDS-TOX breakthrough and effluent blending for 10 and 20 minute EBCT contactors

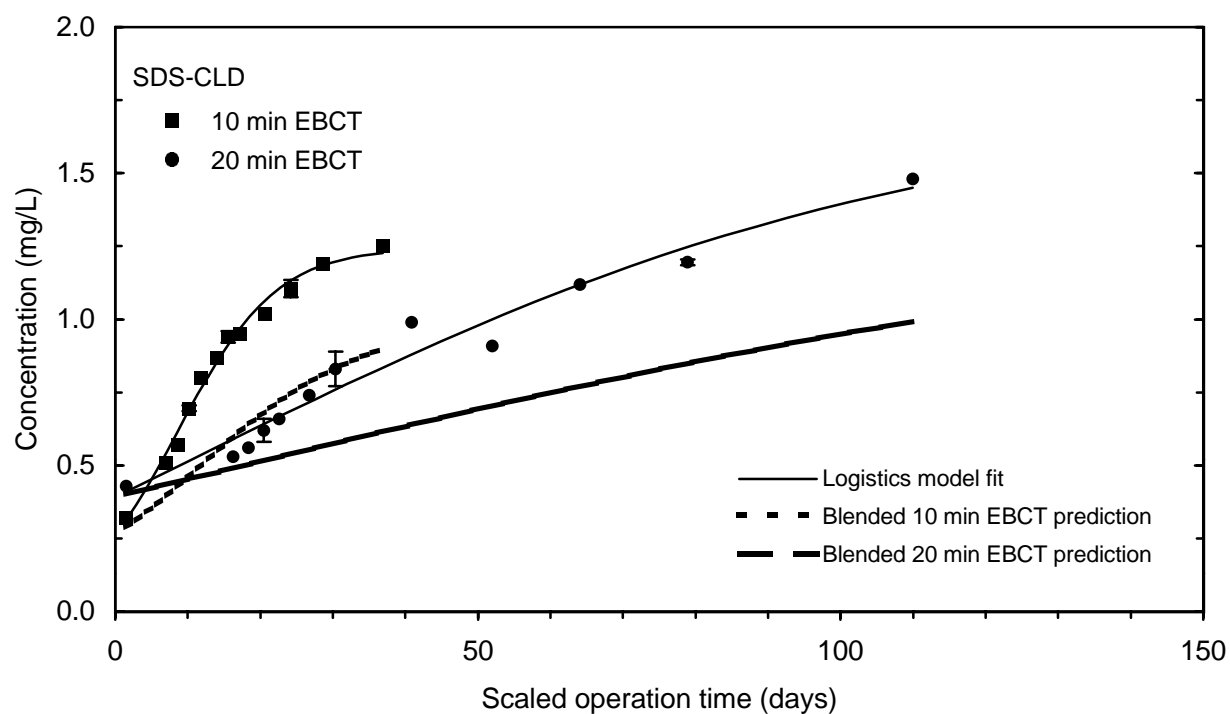


Figure 112 SDS-CLD breakthrough and effluent blending for 10 and 20 minute EBCT contactors

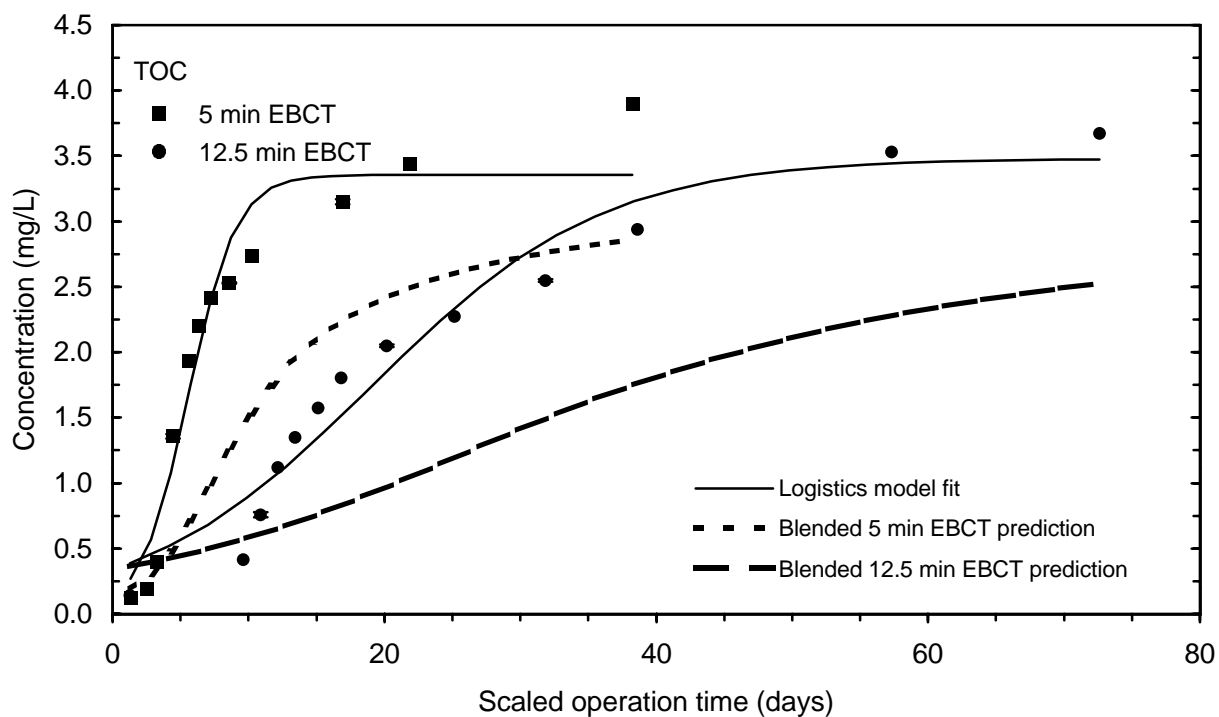


Figure 113 TOC breakthrough and effluent blending for 5 and 12.5 minute EBCT contactors

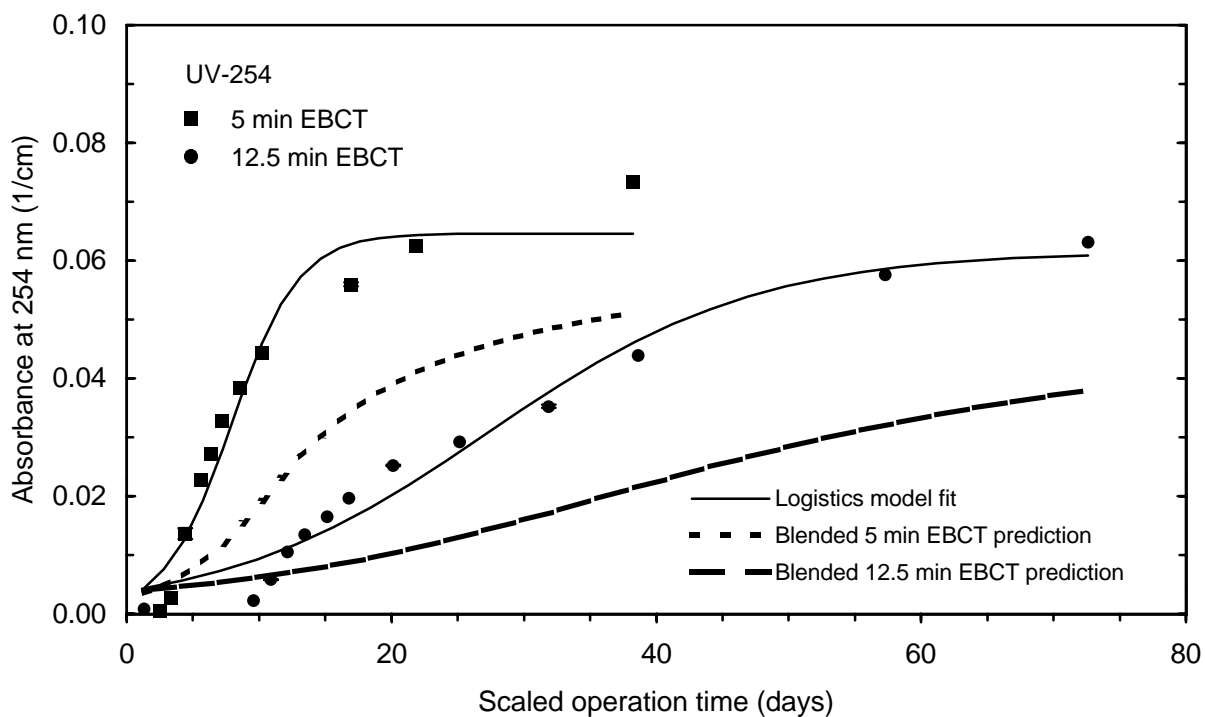


Figure 114 UV-254 breakthrough and effluent blending for 5 and 12.5 minute EBCT contactors

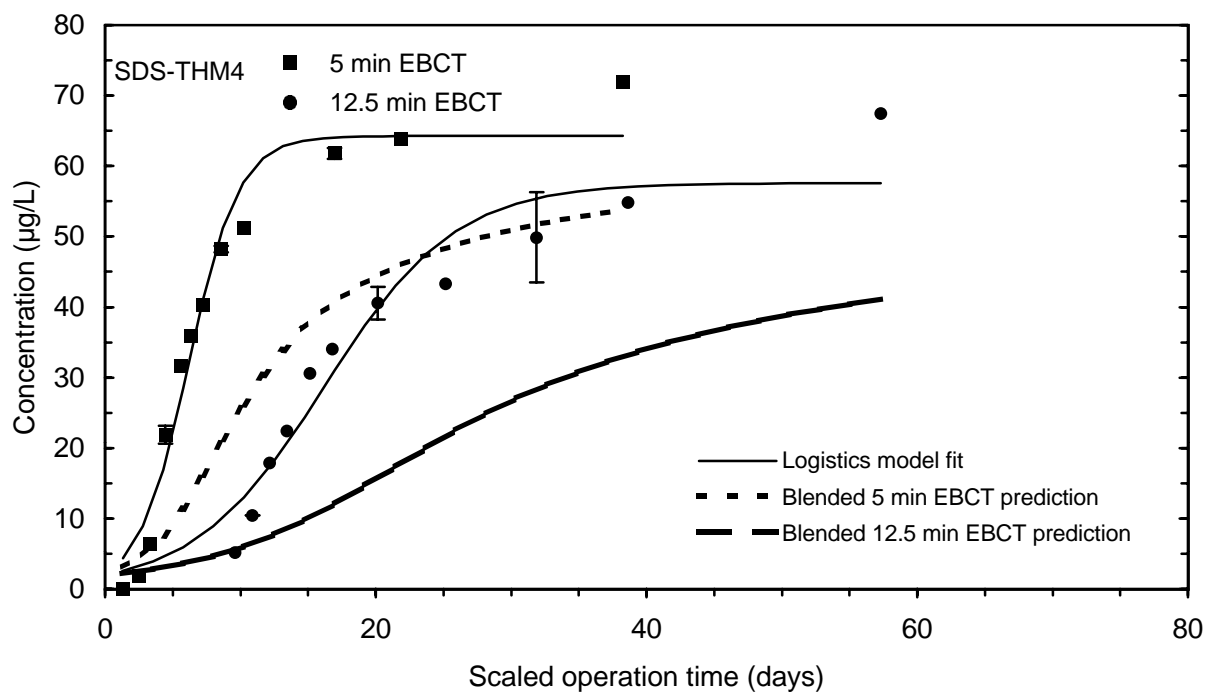


Figure 115 SDS-THM4 breakthrough and effluent blending for 5 and 12.5 minute EBCT contactors

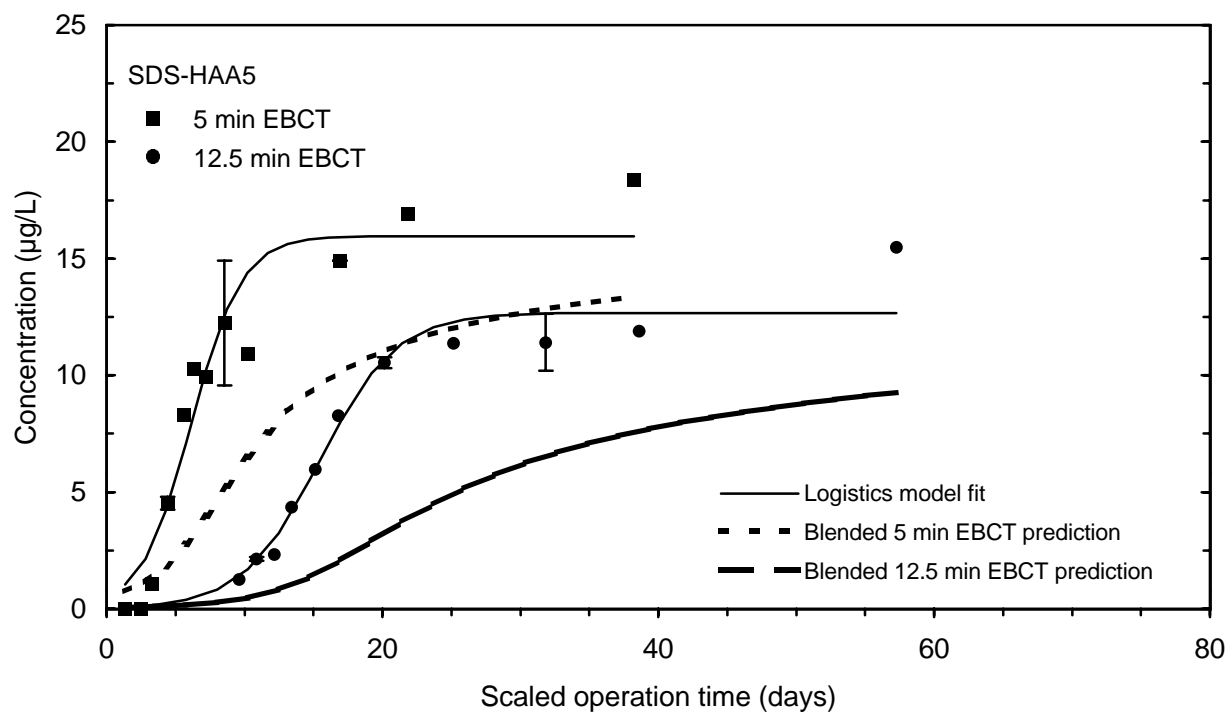


Figure 116 SDS-HAA5 breakthrough and effluent blending for 5 and 12.5 minute EBCT contactors

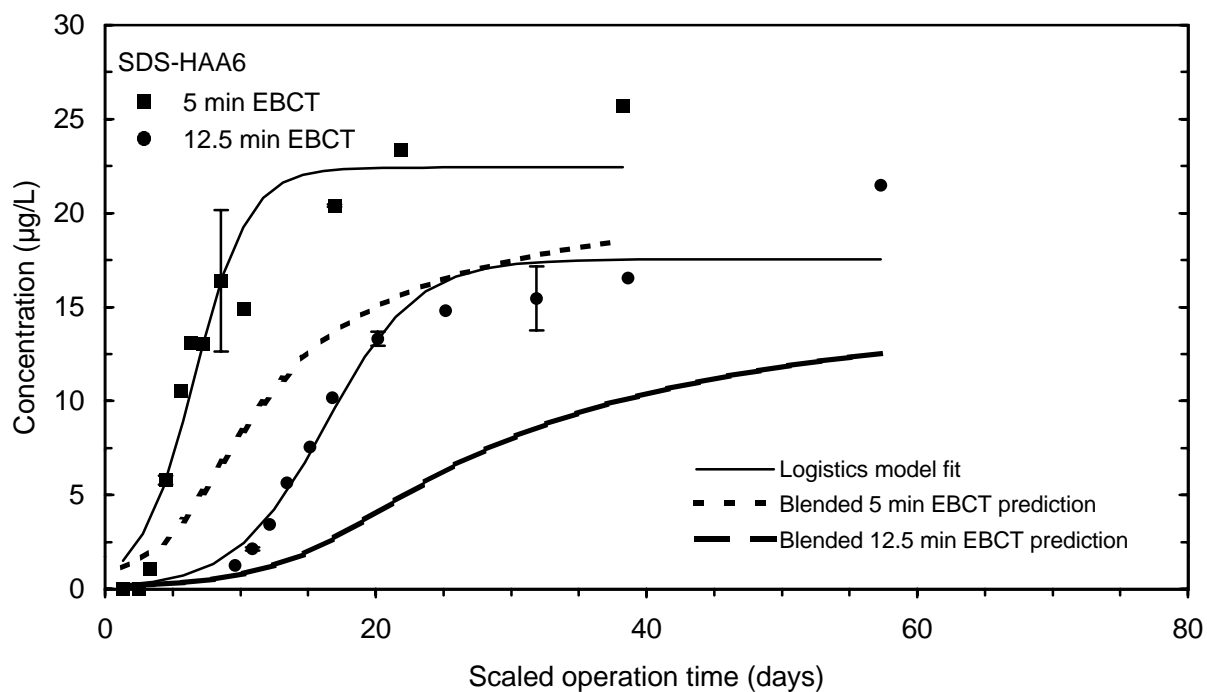


Figure 117 SDS-HAA6 breakthrough and effluent blending for 5 and 12.5 minute EBCT contactors

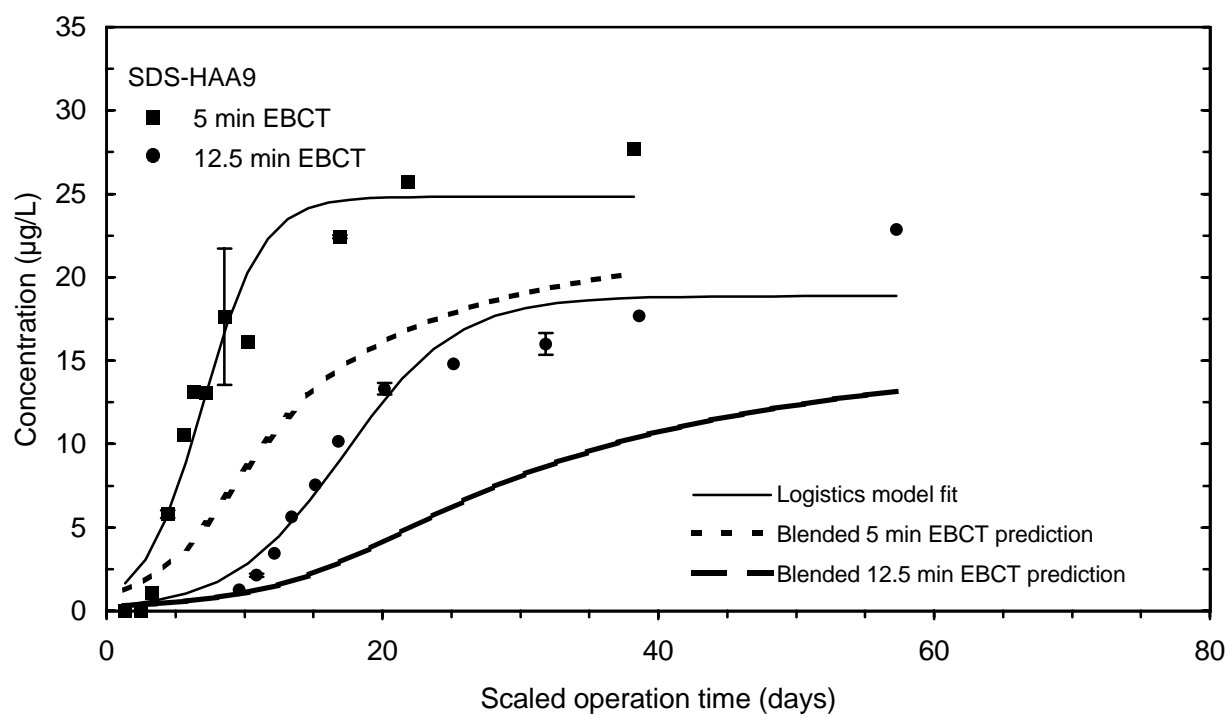


Figure 118 SDS-HAA9 breakthrough and effluent blending for 5 and 12.5 minute EBCT contactors

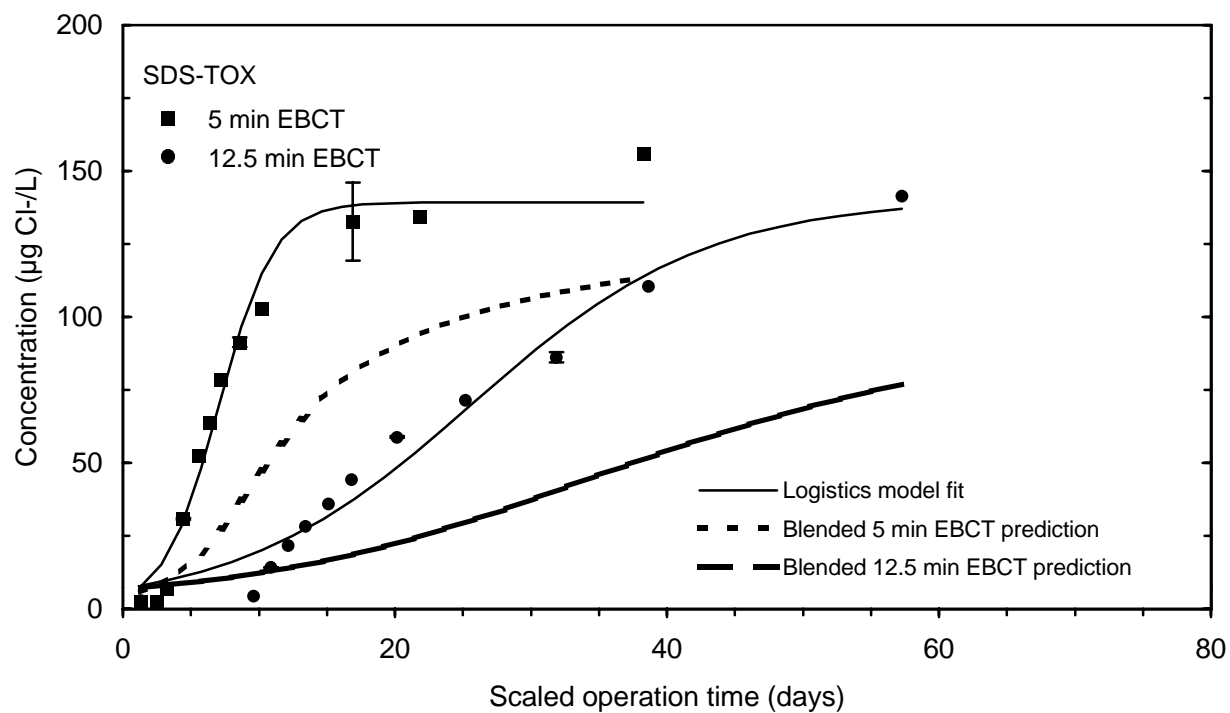


Figure 119 SDS-TOX breakthrough and effluent blending for 5 and 12.5 minute EBCT contactors

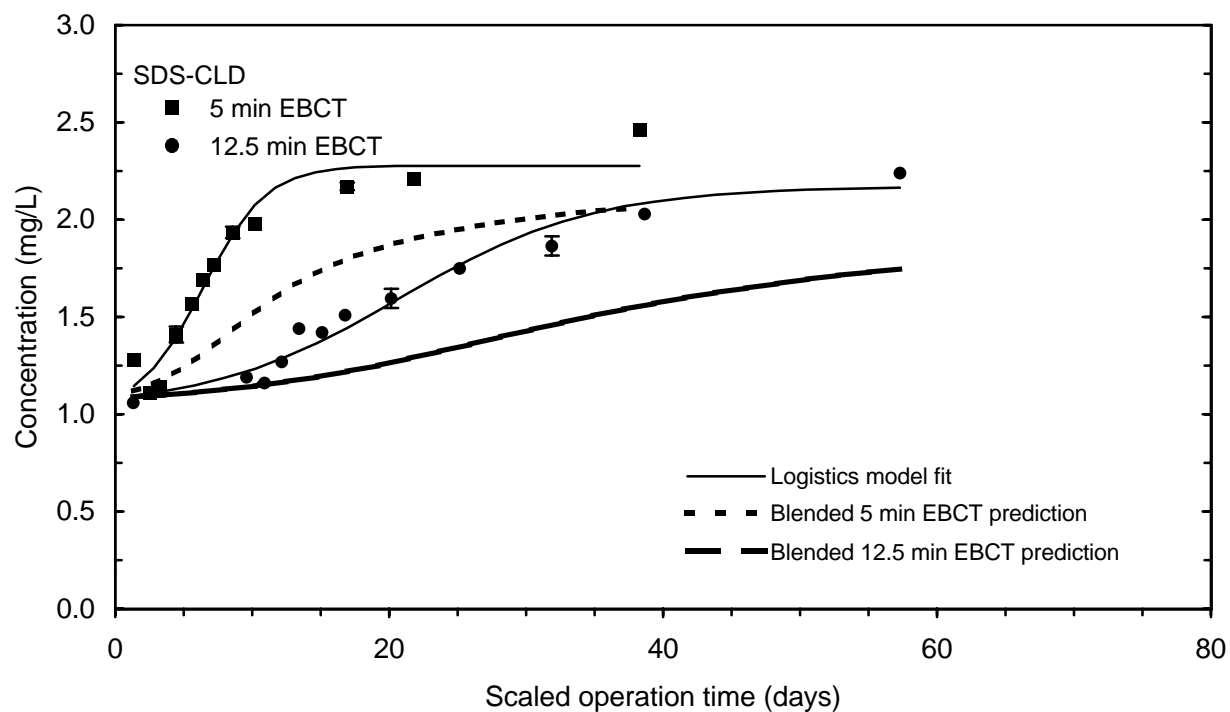


Figure 120 SDS-CLD breakthrough and effluent blending for 5 and 12.5 minute EBCT contactors

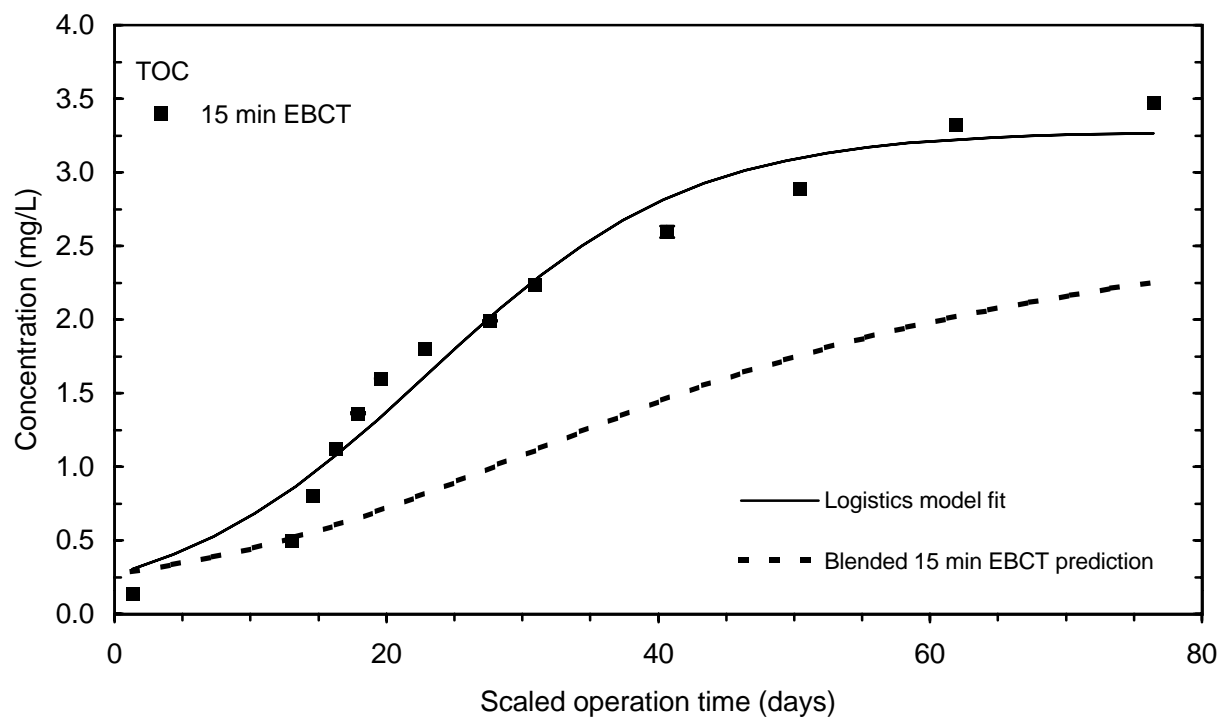


Figure 121 TOC breakthrough and effluent blending for 15 minute EBCT contactor

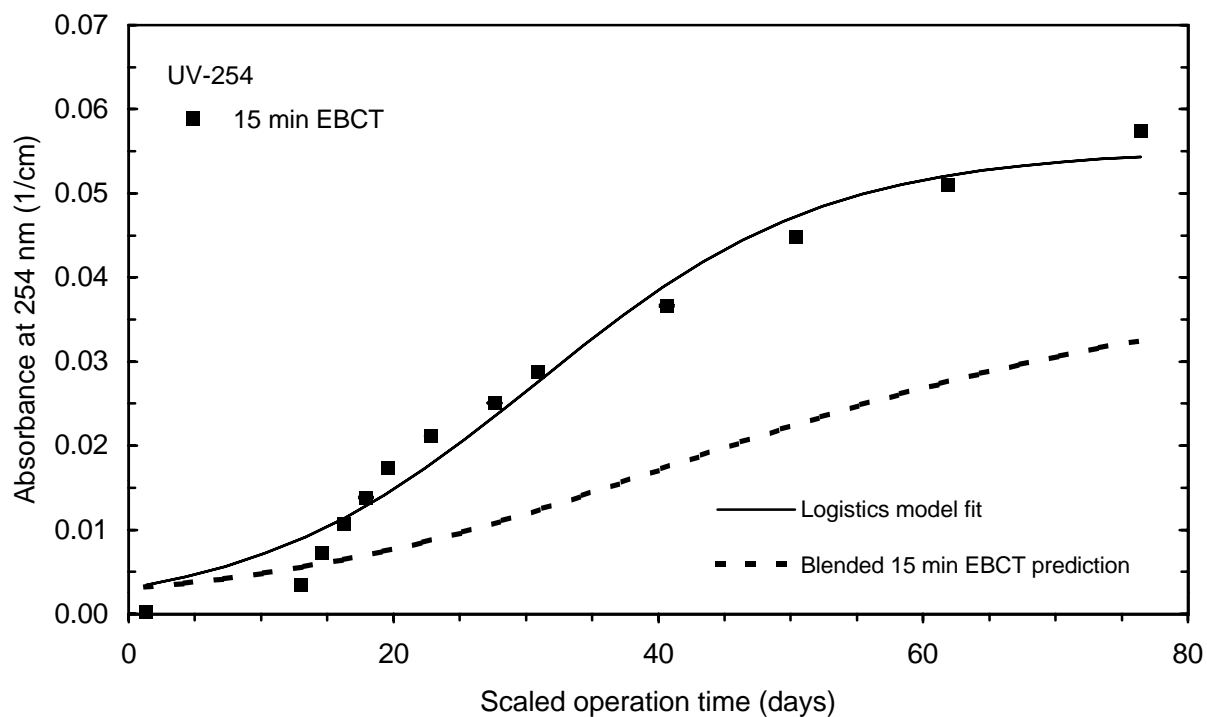


Figure 122 UV-254 breakthrough and effluent blending for 15 minute EBCT contactor

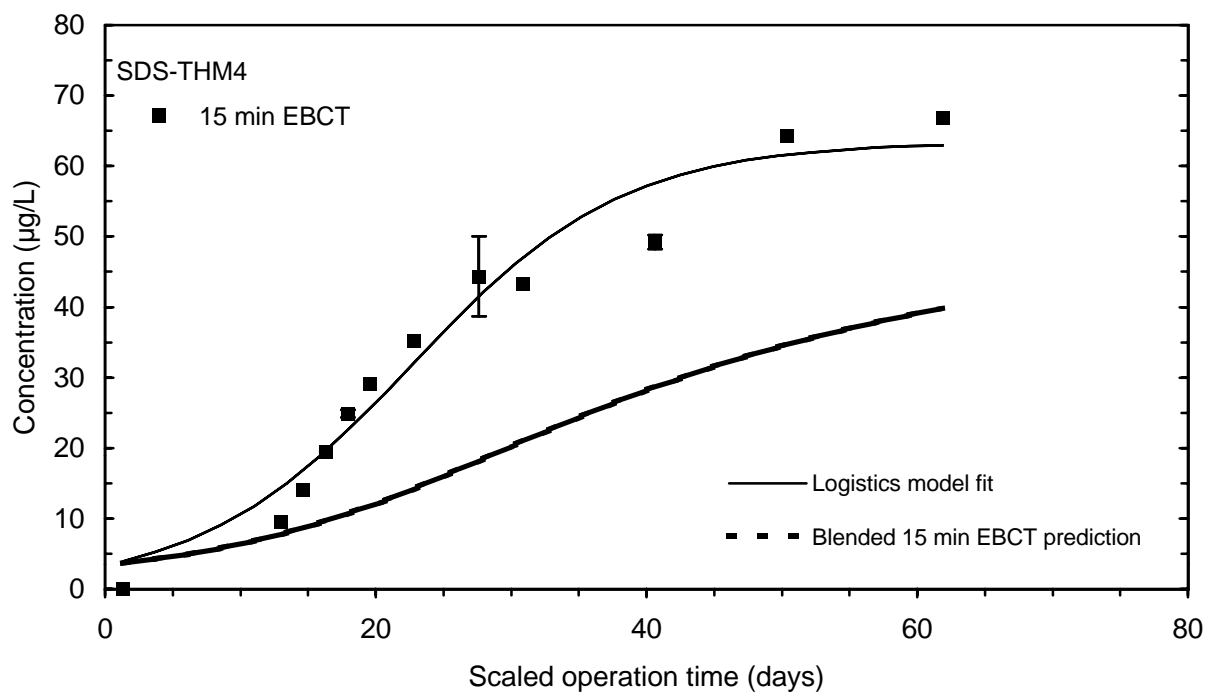


Figure 123 SDS-THM4 breakthrough and effluent blending for 15 minute EBCT contactor

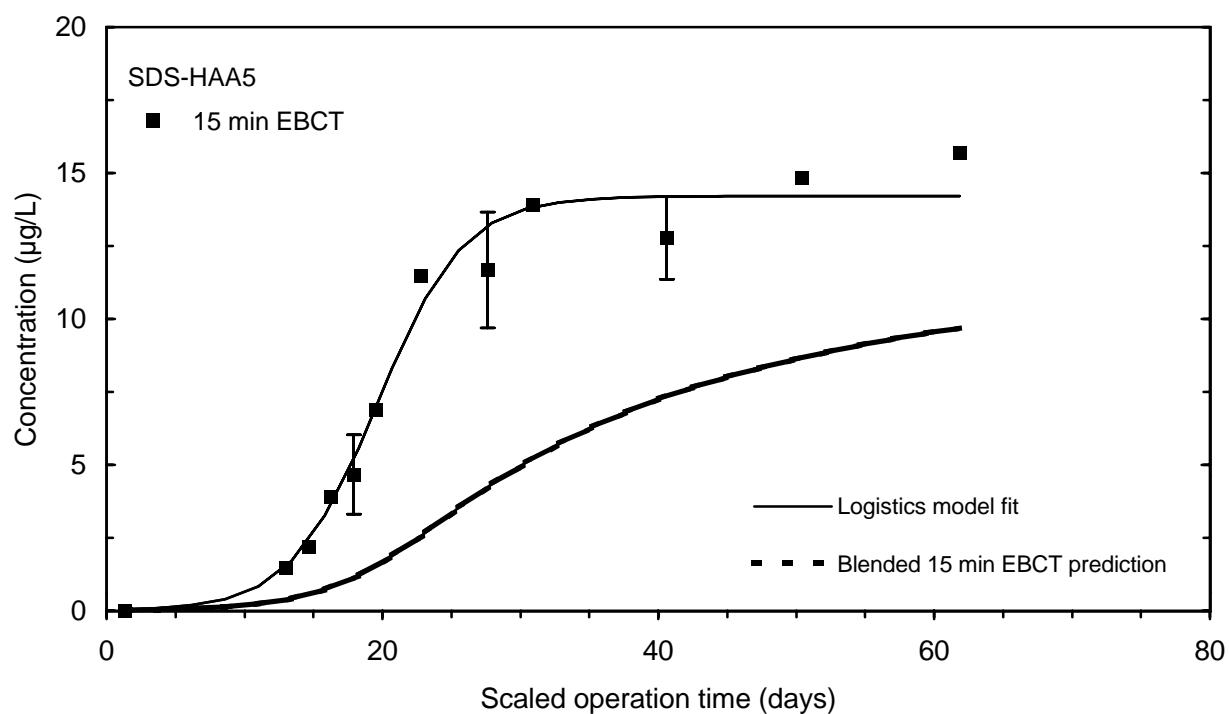


Figure 124 SDS-HAA5 breakthrough and effluent blending for 15 minute EBCT contactor

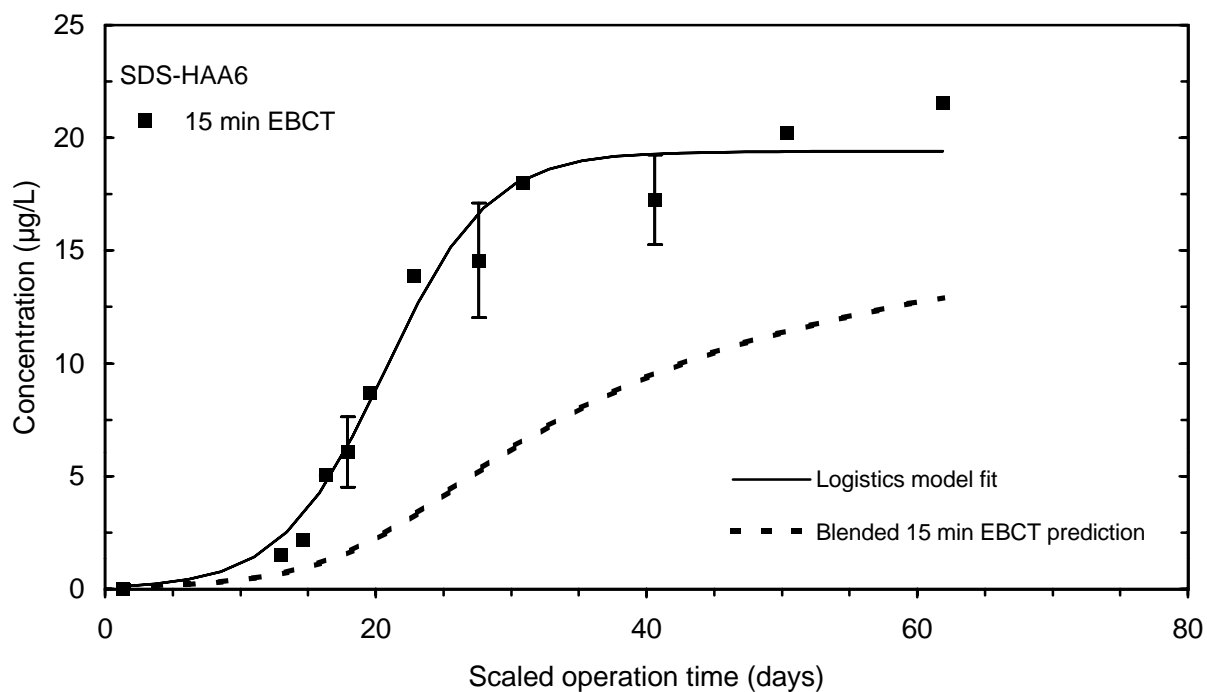


Figure 125 SDS-HAA6 breakthrough and effluent blending for 15 minute EBCT contactor

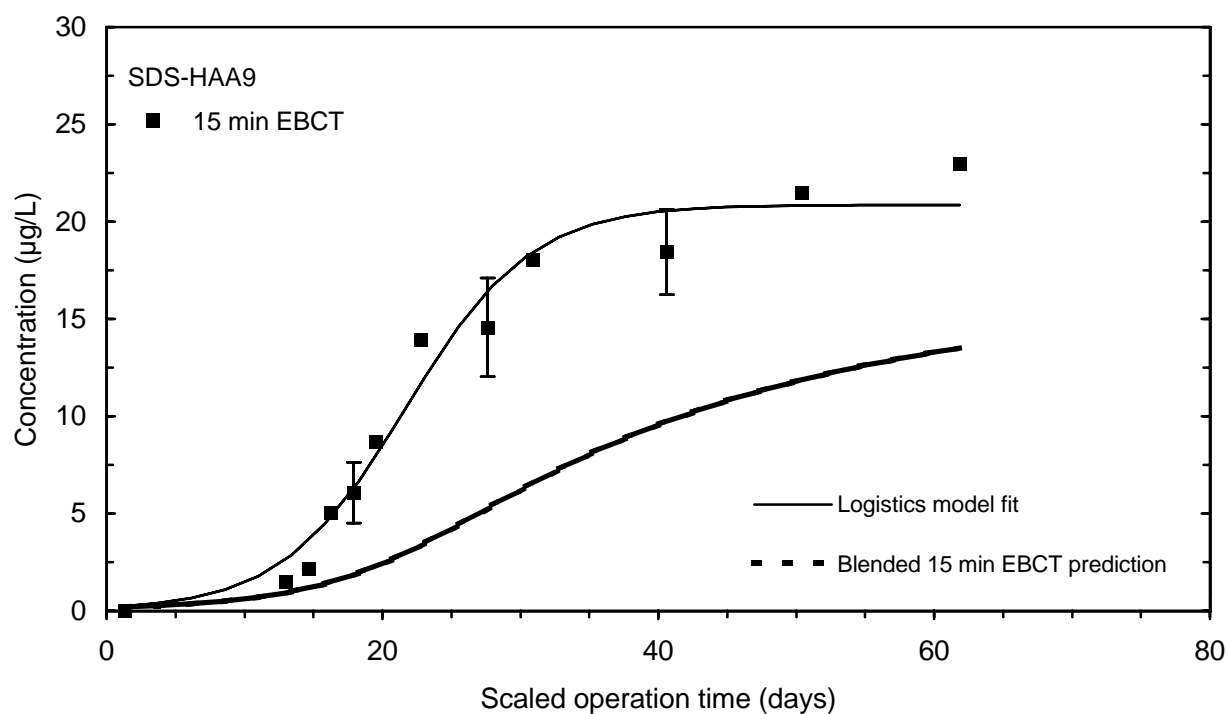


Figure 126 SDS-HAA9 breakthrough and effluent blending for 15 minute EBCT contactor

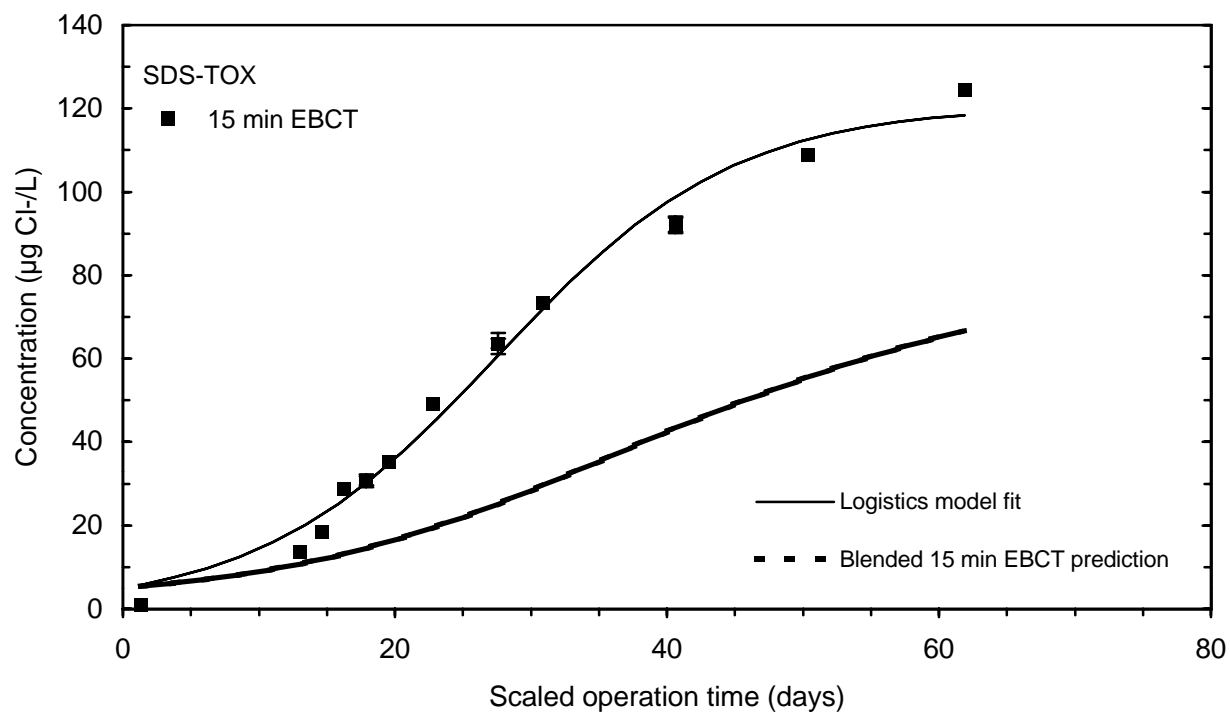


Figure 127 SDS-TOX breakthrough and effluent blending for 15 minute EBCT contactor

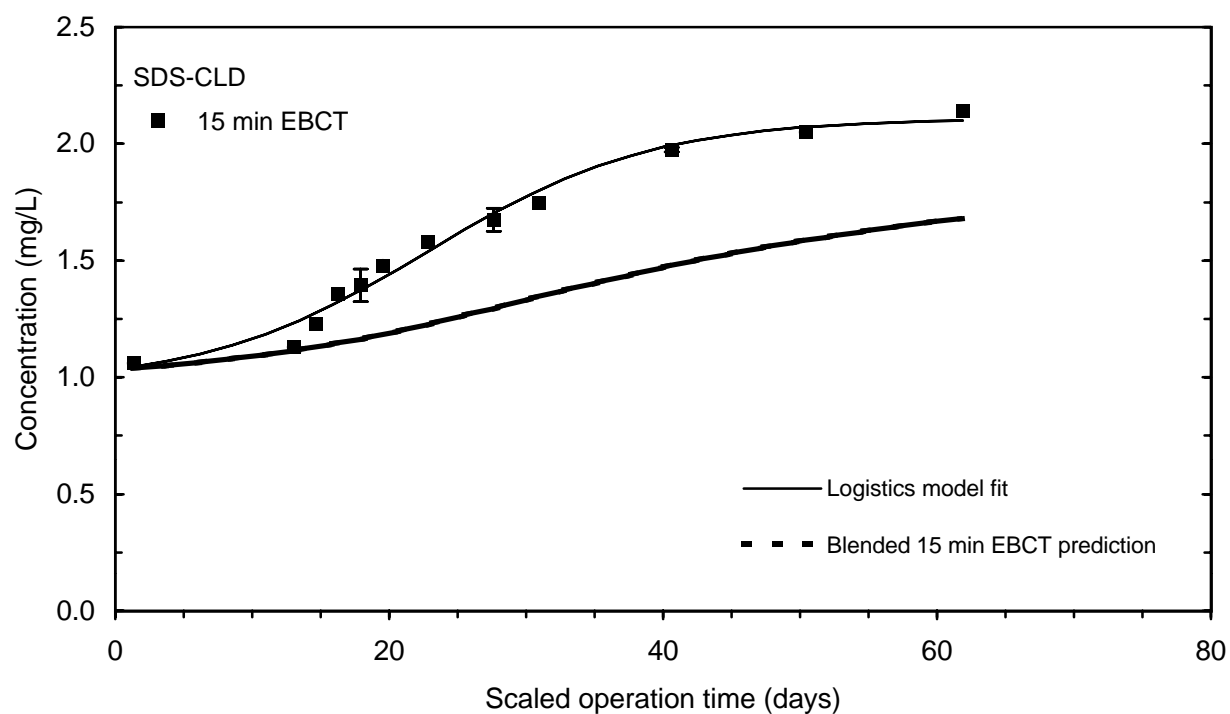


Figure 128 SDS-CLD breakthrough and effluent blending for 15 minute EBCT contactor

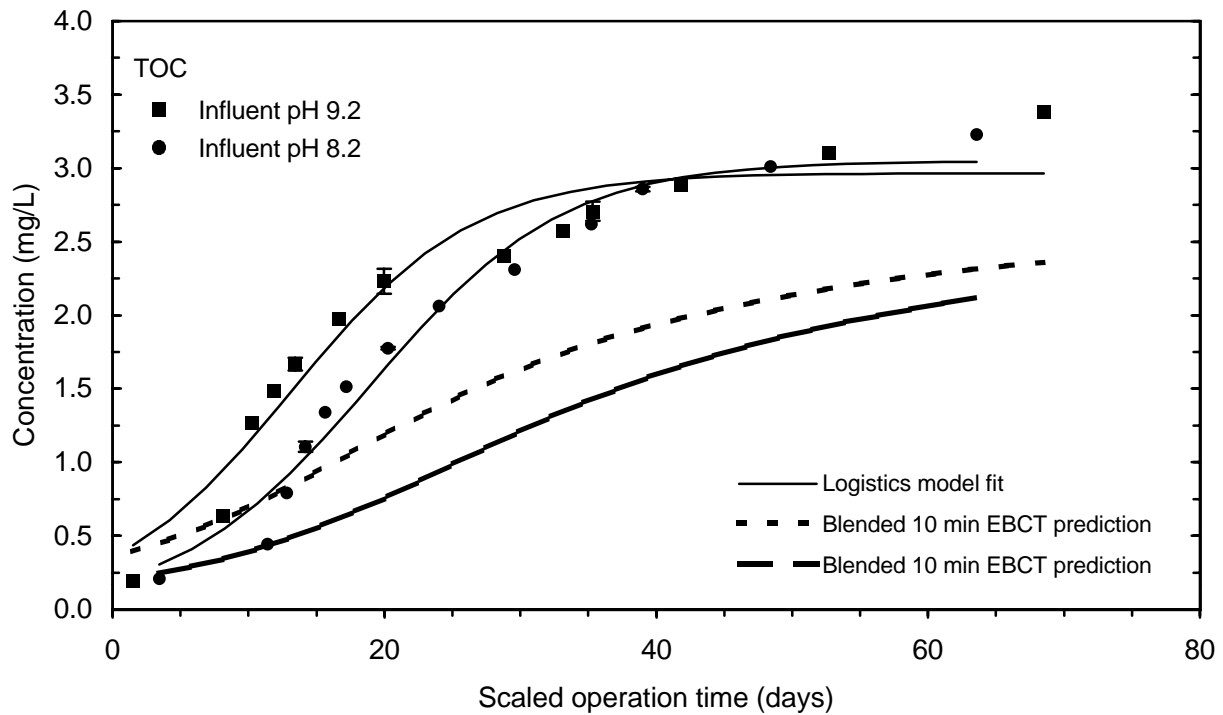


Figure 129 TOC breakthrough and effluent blending for influent pH 8.2 and 9.2 contactors (10 minute EBCT)

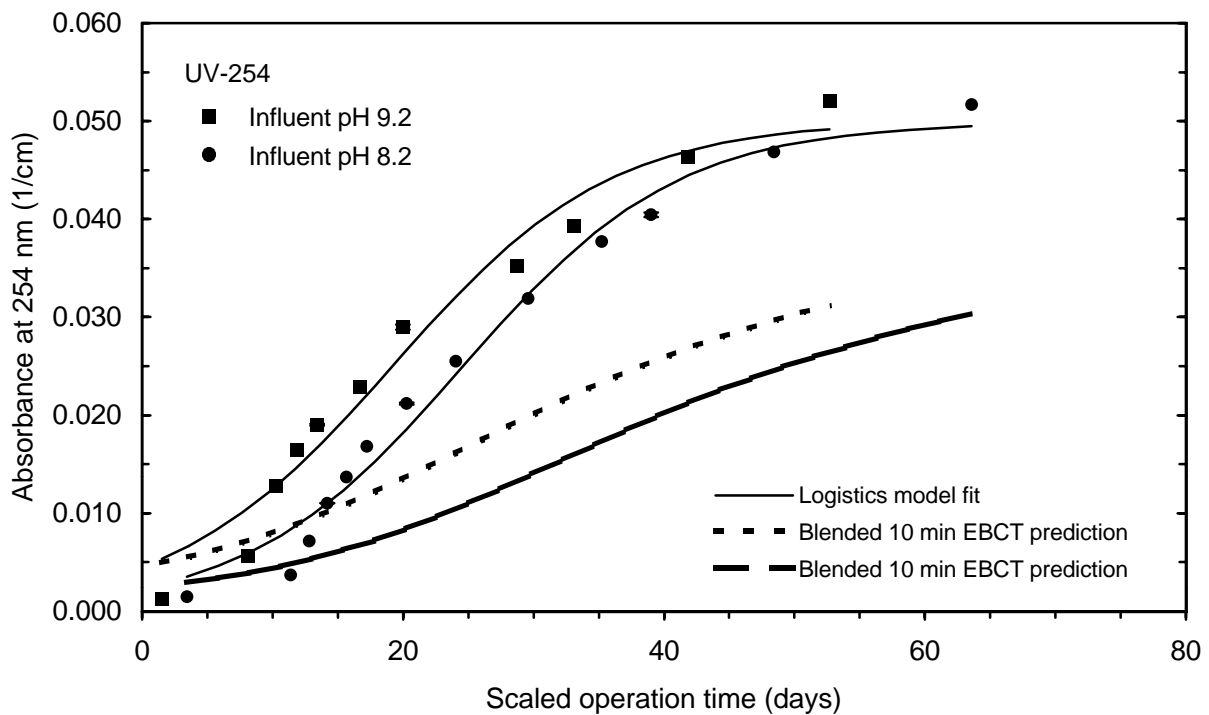


Figure 130 UV-254 breakthrough and effluent blending for influent pH 8.2 and 9.2 contactors (10 minute EBCT)

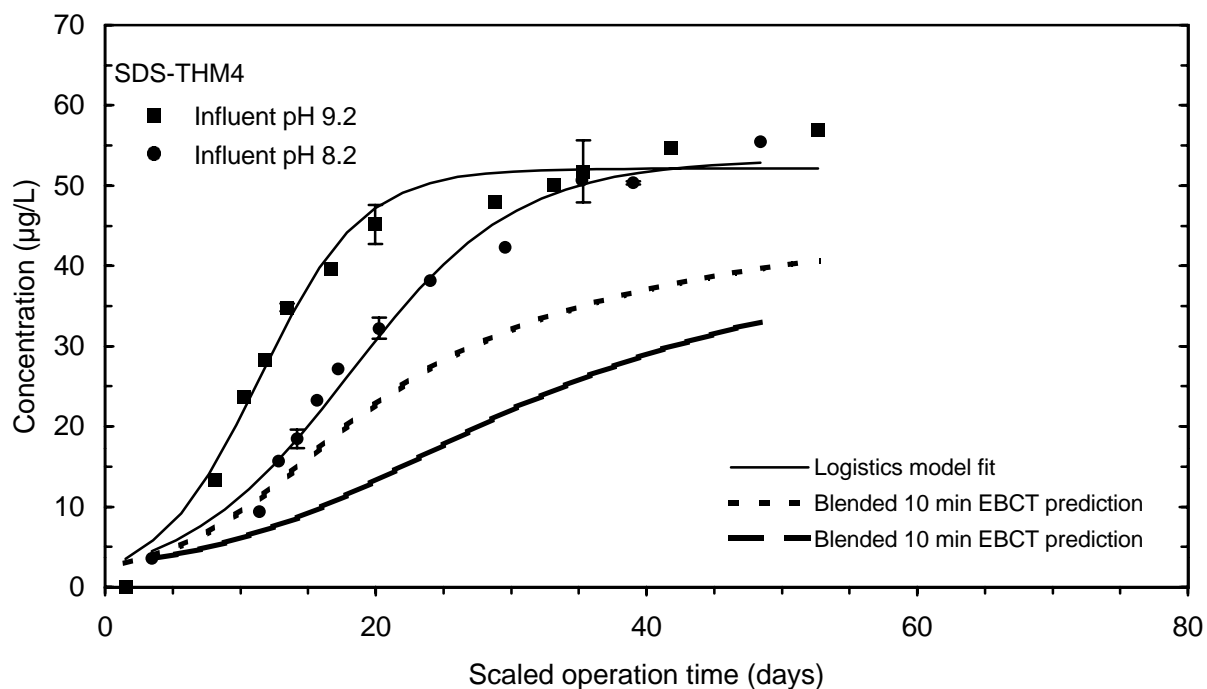


Figure 131 SDS-THM4 breakthrough and effluent blending for influent pH 8.2 and 9.2 contactors (10 minute EBCT)

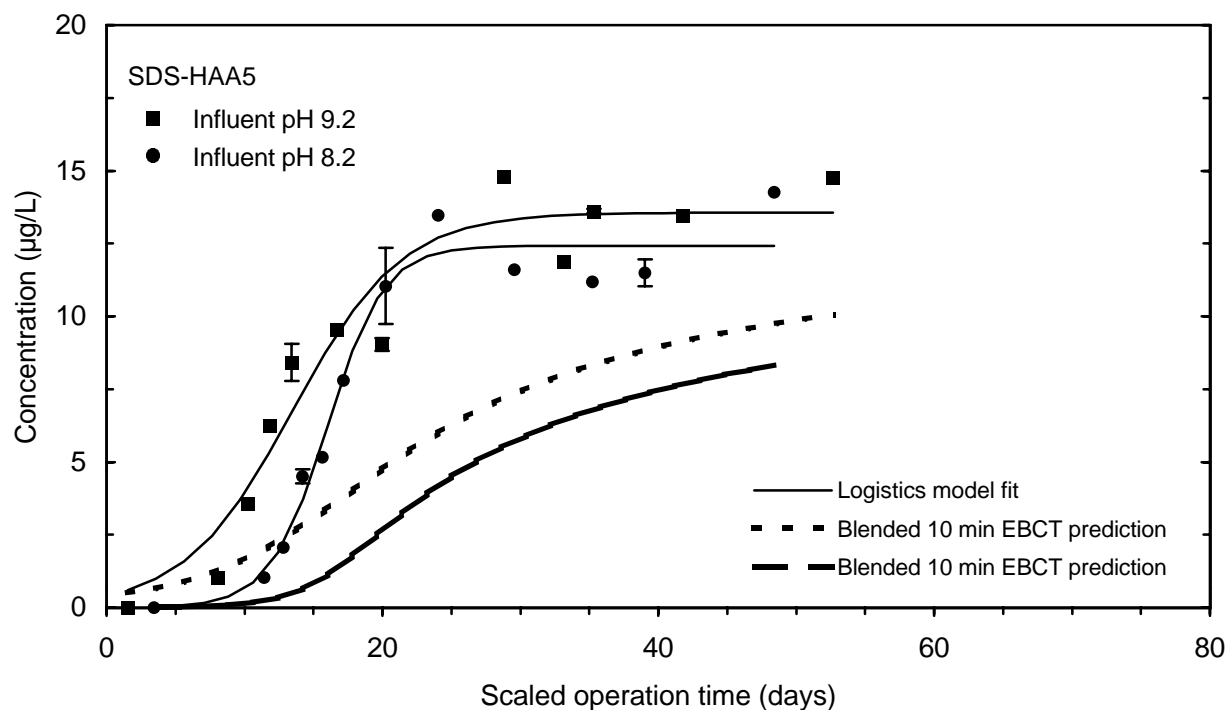


Figure 132 SDS-HAA5 breakthrough and effluent blending for influent pH 8.2 and 9.2 contactors (10 minute EBCT)

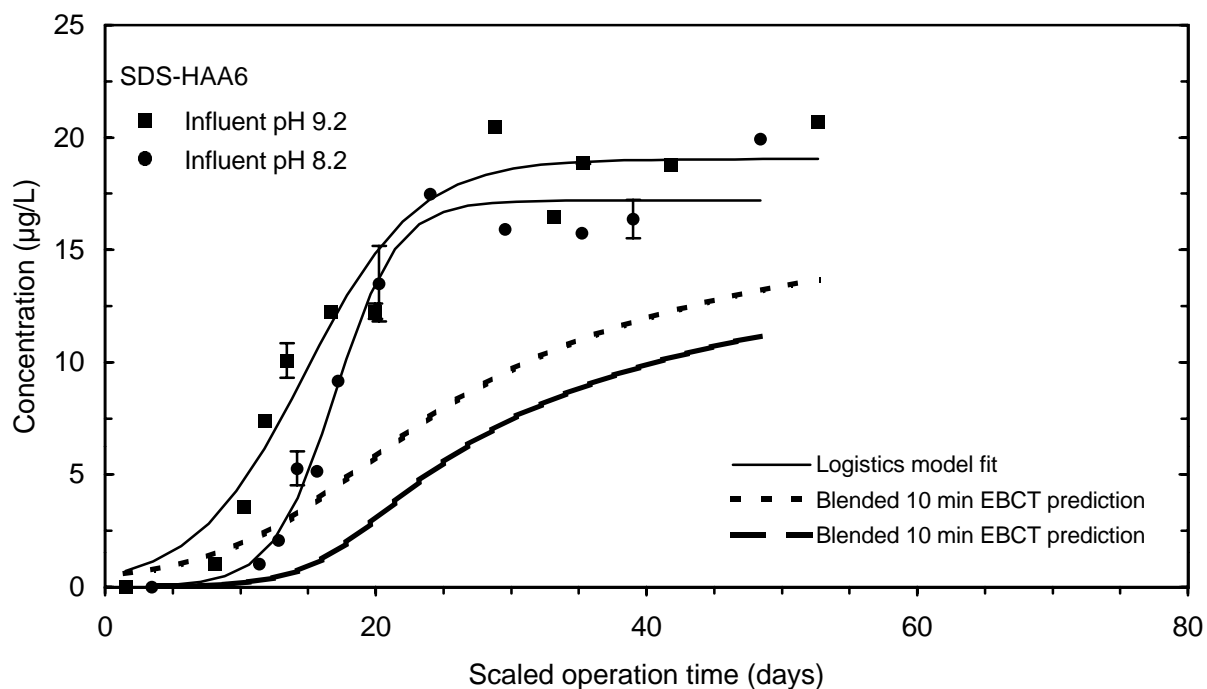


Figure 133 SDS-HAA6 breakthrough and effluent blending for influent pH 8.2 and 9.2 contactors (10 minute EBCT)

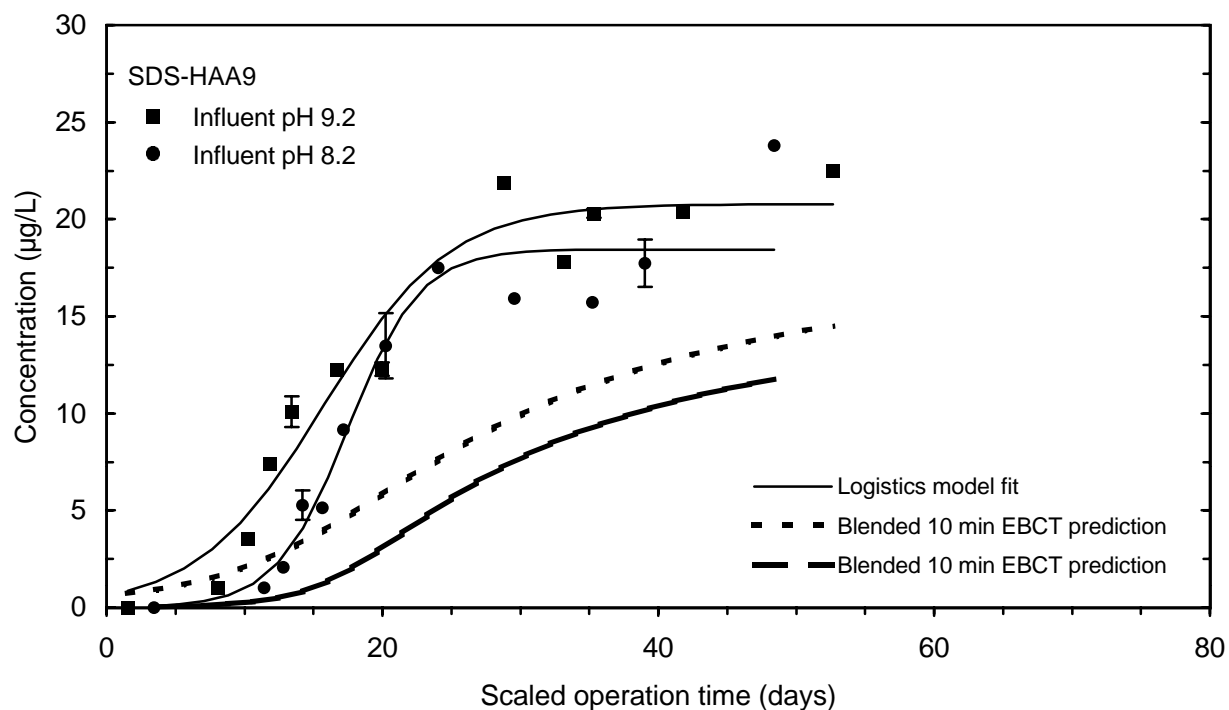


Figure 134 SDS-HAA9 breakthrough and effluent blending for influent pH 8.2 and 9.2 contactors (10 minute EBCT)

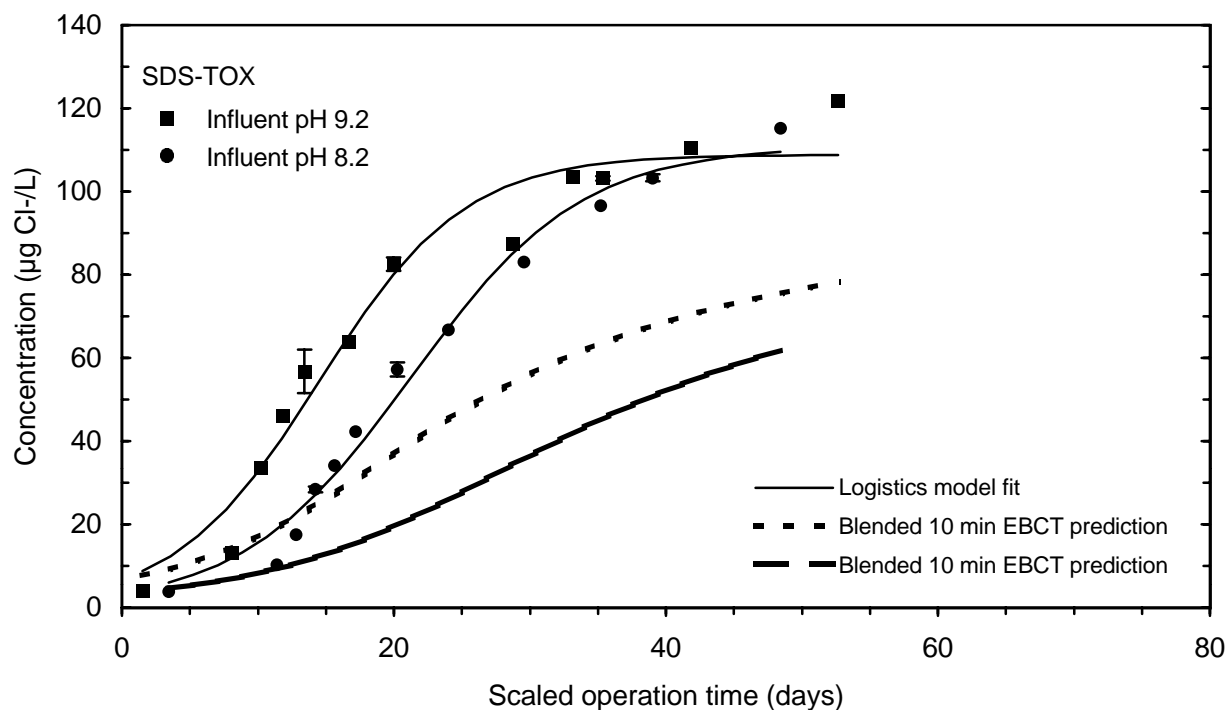


Figure 135 SDS-TOX breakthrough and effluent blending for influent pH 8.2 and 9.2 contactors (10 minute EBCT)

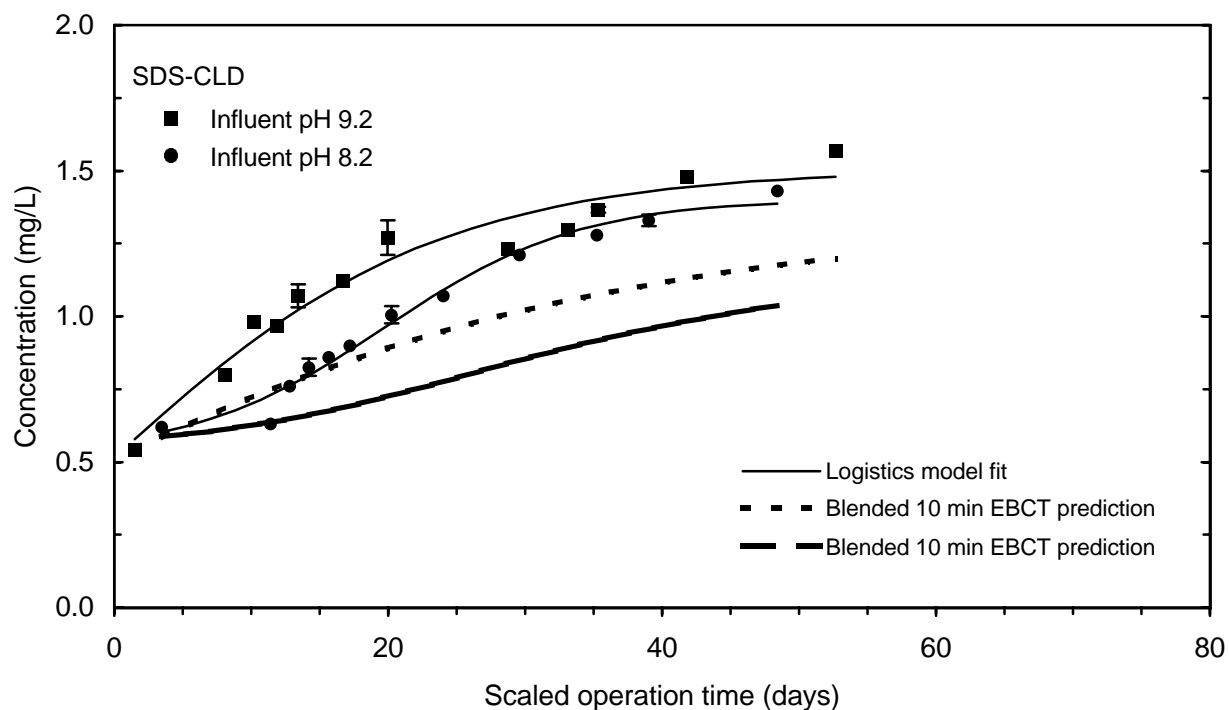


Figure 136 SDS-CLD breakthrough and effluent blending for influent pH 8.2 and 9.2 contactors (10 minute EBCT)

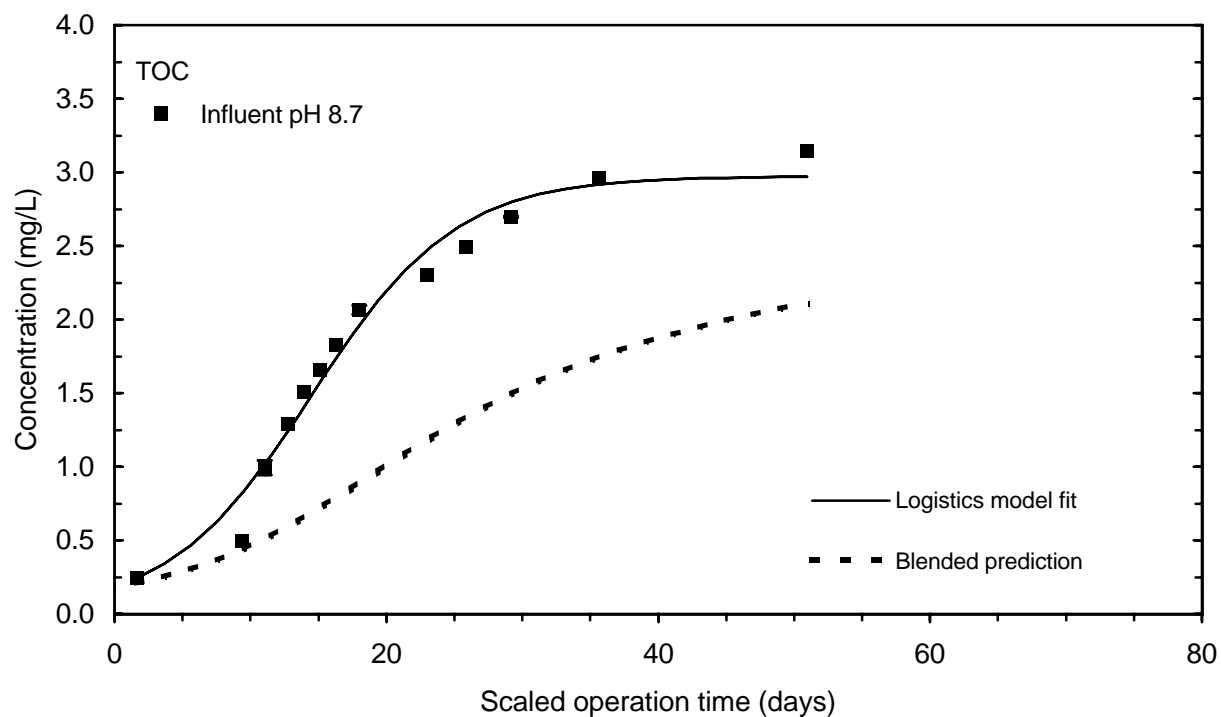


Figure 137 TOC breakthrough and effluent blending for influent pH 8.7 contactor (10 minute EBCT)

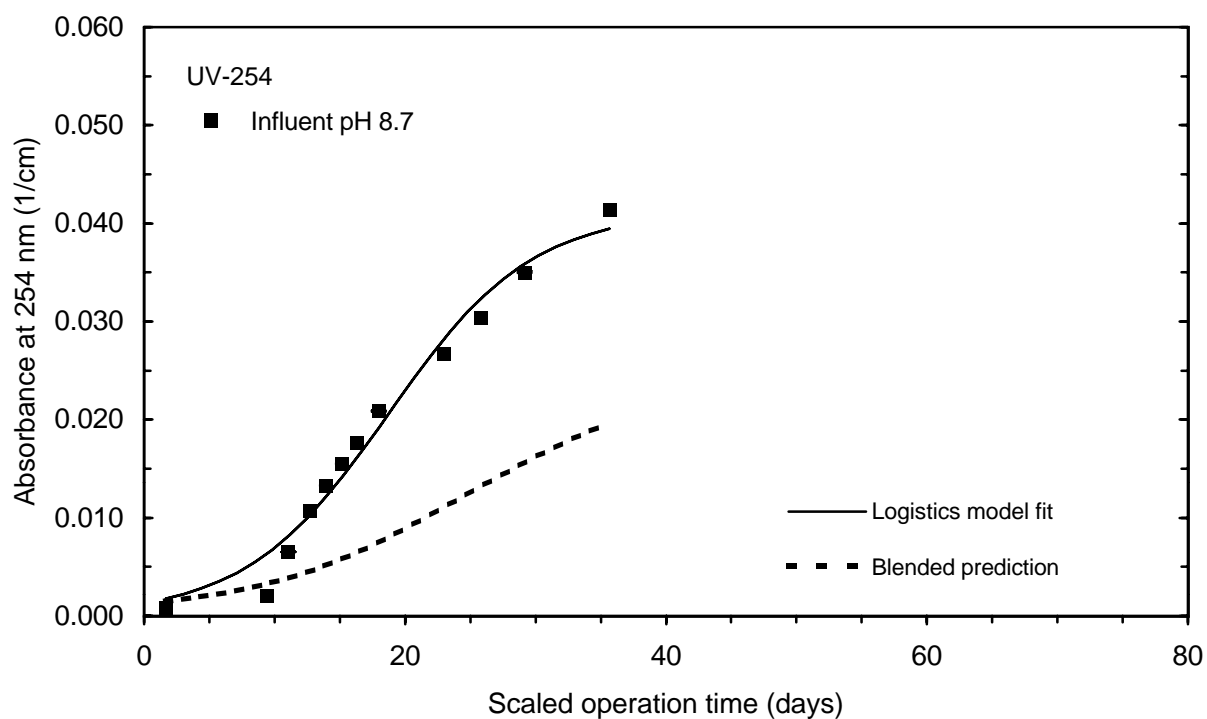


Figure 138 UV-254 breakthrough and effluent blending for influent pH 8.7 contactor (10 minute EBCT)

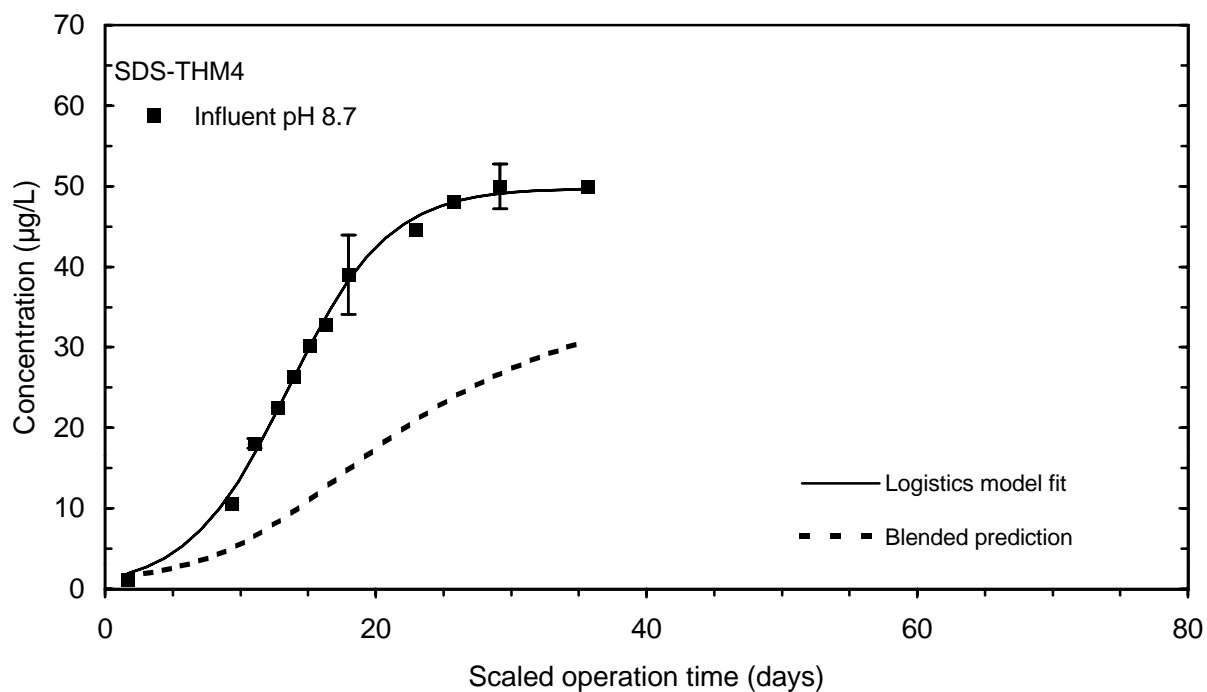


Figure 139 SDS-THM4 breakthrough and effluent blending for influent pH 8.7 contactor (10 minute EBCT)

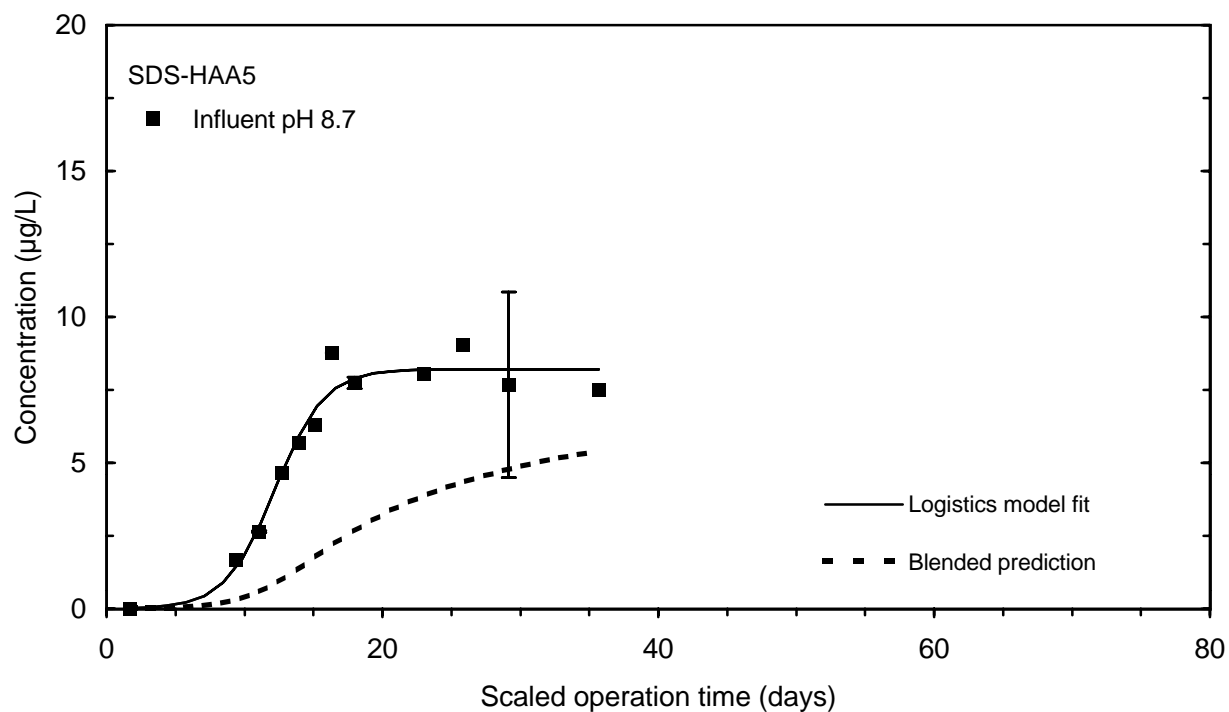


Figure 140 SDS-HAA5 breakthrough and effluent blending for influent pH 8.7 contactor (10 minute EBCT)

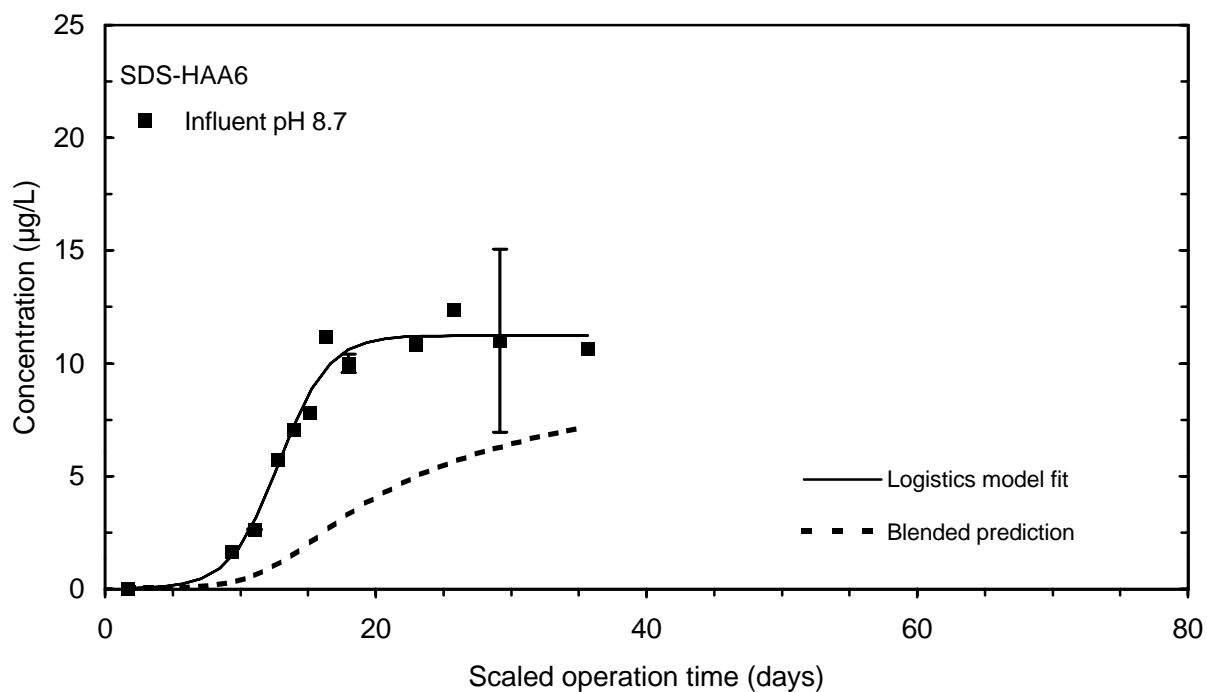


Figure 141 SDS-HAA6 breakthrough and effluent blending for influent pH 8.7 contactor (10 minute EBCT)

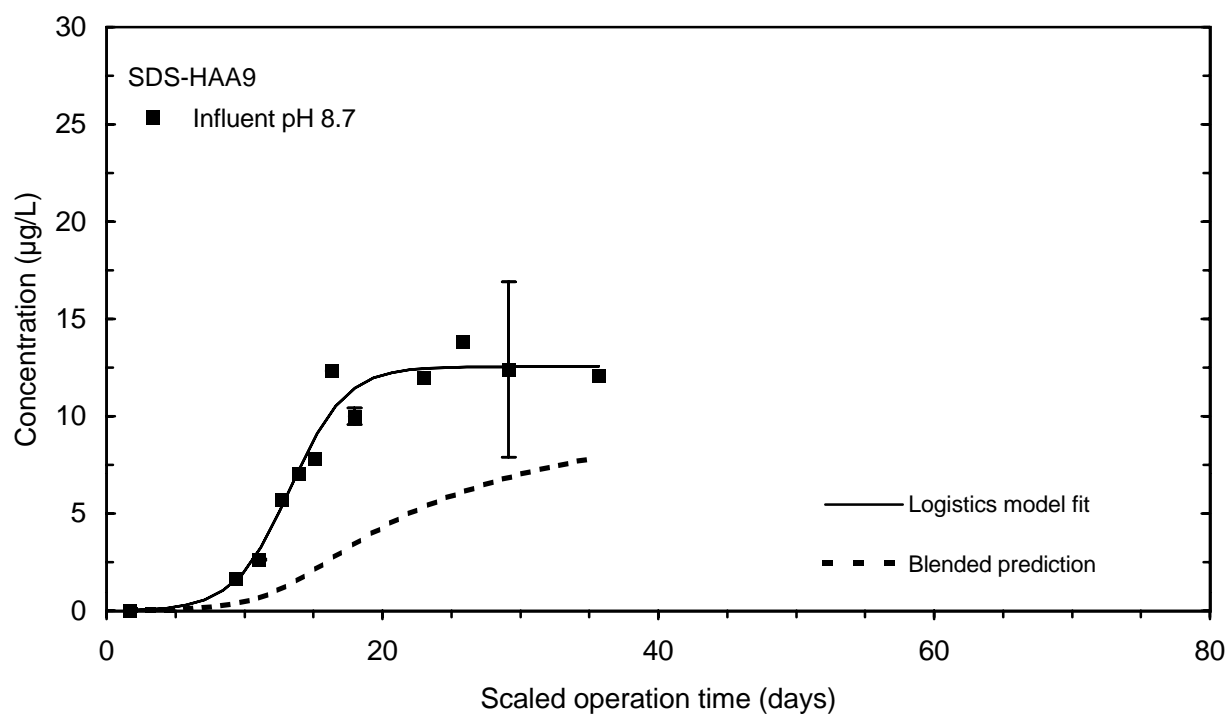


Figure 142 SDS-HAA9 breakthrough and effluent blending for influent pH 8.7 contactor (10 minute EBCT)

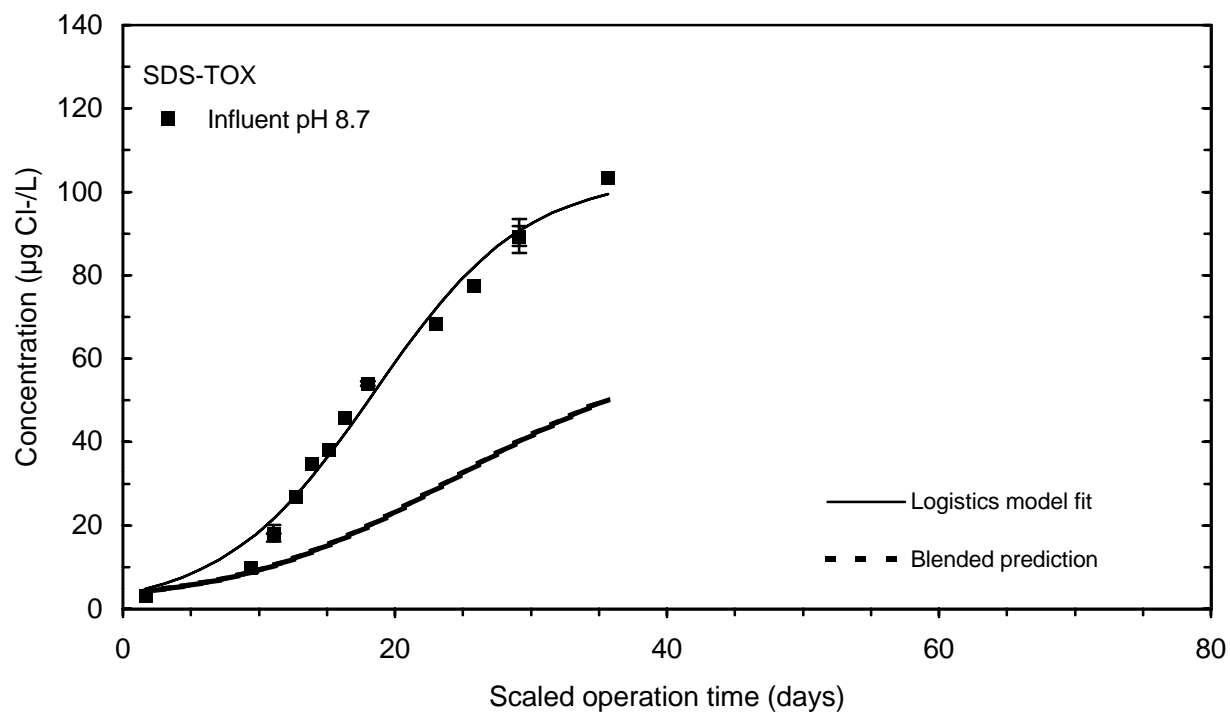


Figure 143 SDS-TOX breakthrough and effluent blending for influent pH 8.7 contactor (10 minute EBCT)

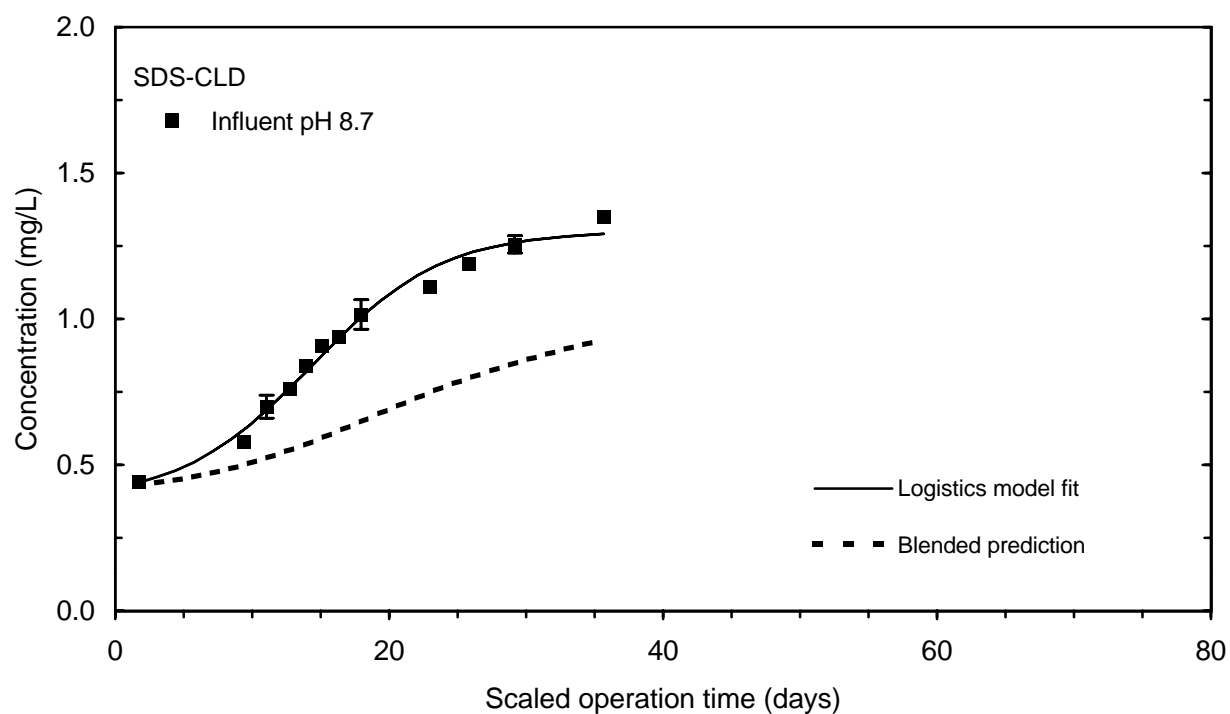


Figure 144 SDS-CLD breakthrough and effluent blending for influent pH 8.7 contactor (10 minute EBCT)

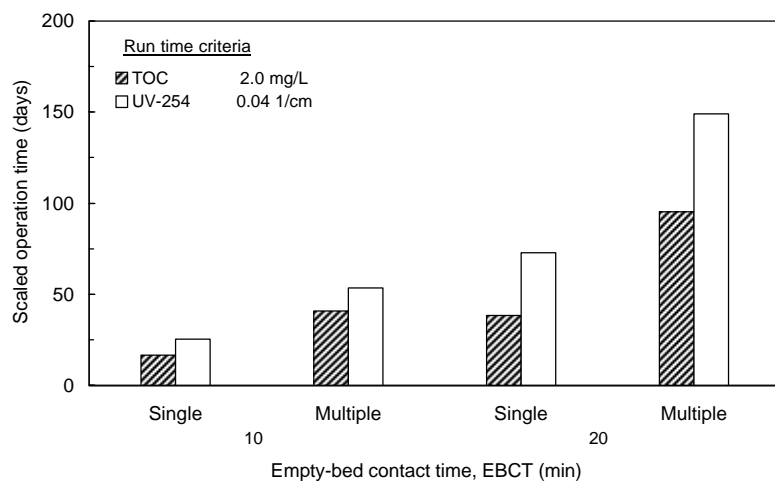


Figure 145 Run times based on single contactors and effluent blending for TOC and UV-254 effluent criteria (high) for 10 and 20 minute EBCT contactors

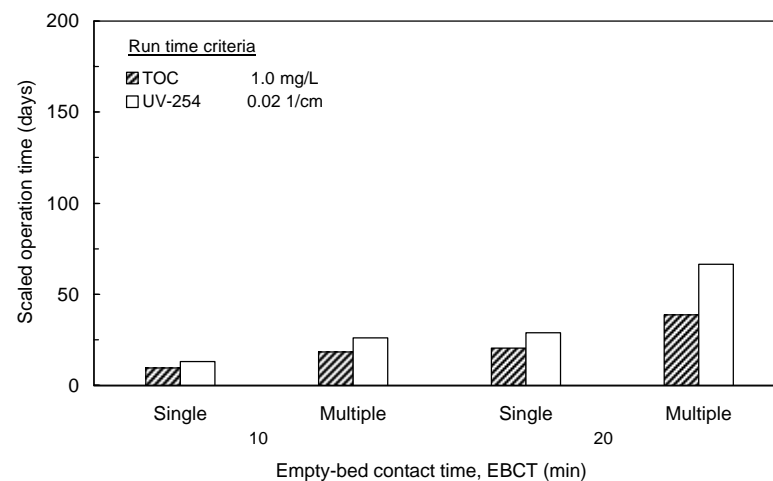


Figure 146 Run times based on single contactors and effluent blending for TOC and UV-254 effluent criteria (low) for 10 and 20 minute EBCT contactors

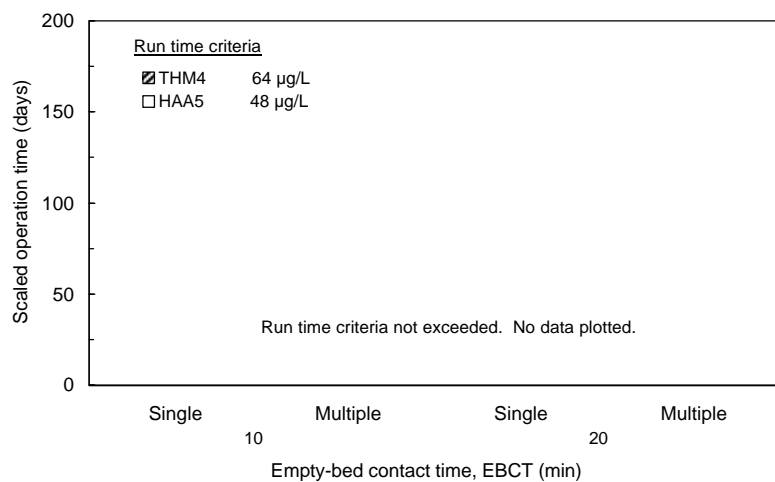


Figure 147 Run times based on single contactors and effluent blending for Stage 1 THM4 and HAA5 effluent criteria for 10 and 20 minute EBCT contactors

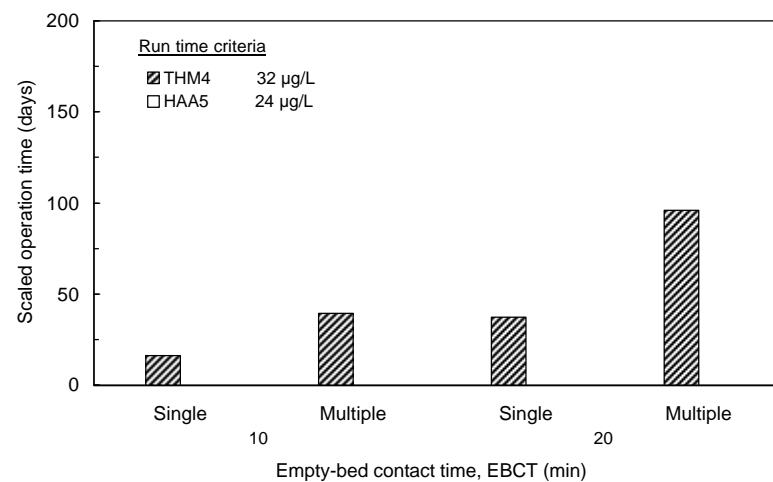


Figure 148 Run times based on single contactors and effluent blending for Stage 2 THM4 and HAA5 effluent criteria for 10 and 20 minute EBCT contactors

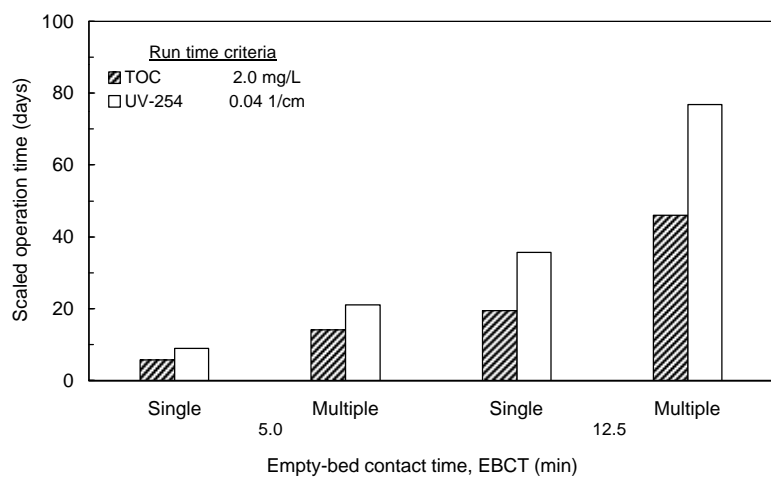


Figure 149 Run times based on single contactors and effluent blending for TOC and UV-254 effluent criteria (high) for 5 and 12.5 minute EBCT contactors

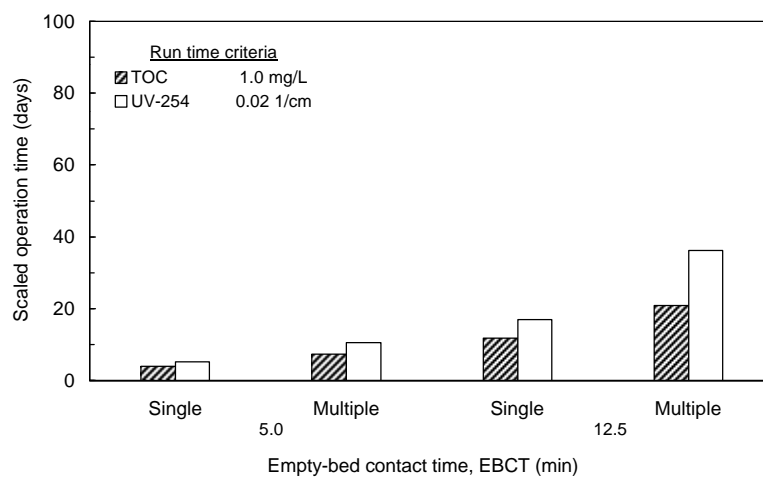


Figure 150 Run times based on single contactors and effluent blending for TOC and UV-254 effluent criteria (low) for 5 and 12.5 minute EBCT contactors

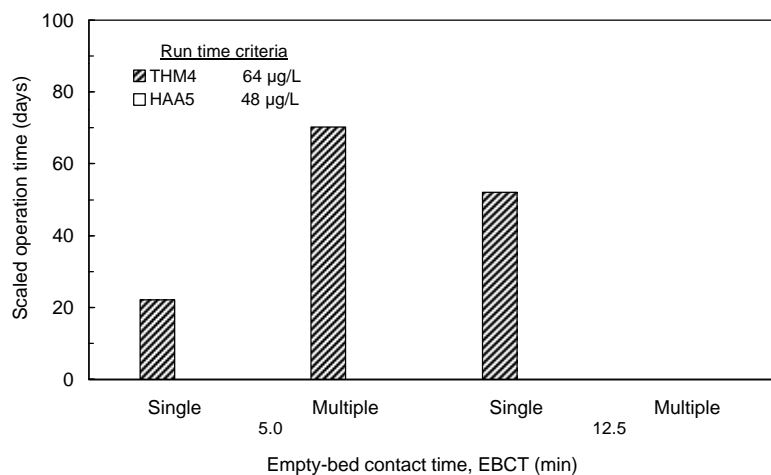


Figure 151 Run times based on single contactors and effluent blending for Stage 1 THM4 and HAA5 effluent criteria for 5 and 12.5 minute EBCT contactors

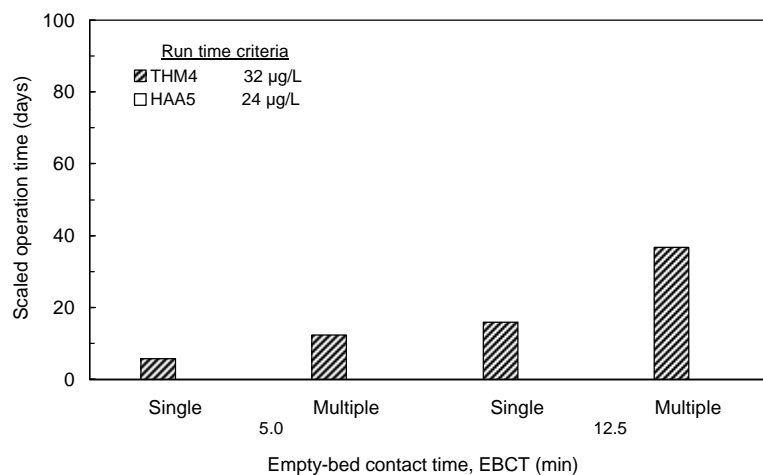


Figure 152 Run times based on single contactors and effluent blending for Stage 2 THM4 and HAA5 effluent criteria for 5 and 12.5 minute EBCT contactors

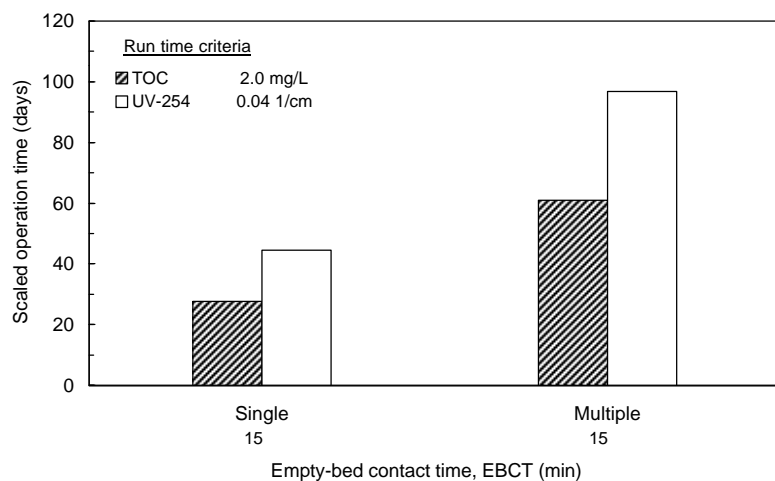


Figure 153 Run times based on single contactors and effluent blending for TOC and UV-254 effluent criteria (high) for 15 and minute EBCT contactor

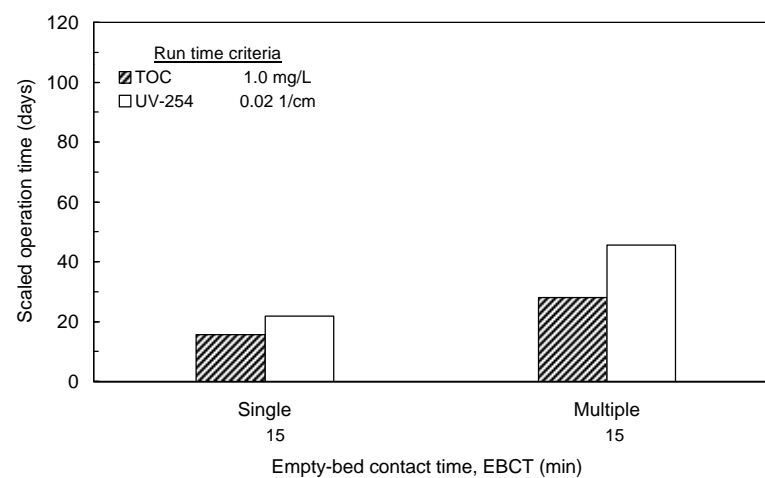


Figure 154 Run times based on single contactors and effluent blending for TOC and UV-254 effluent criteria (low) for 15 minute EBCT contactor

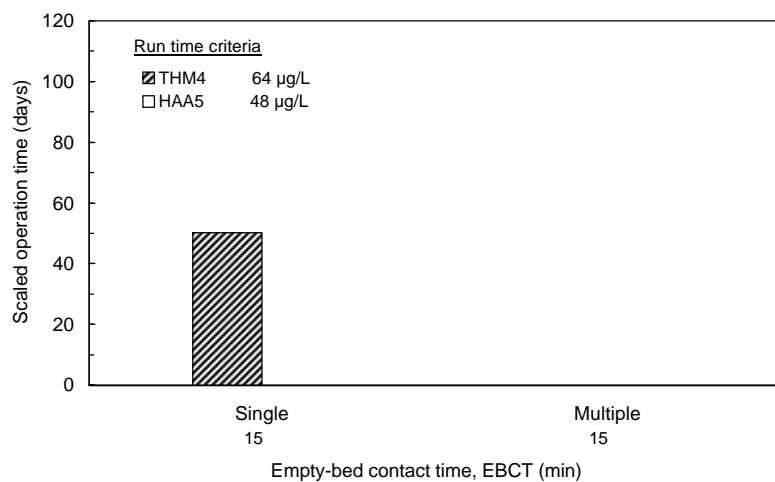


Figure 155 Run times based on single contactors and effluent blending for Stage 1 THM4 and HAA5 effluent criteria for 15 minute EBCT contactor

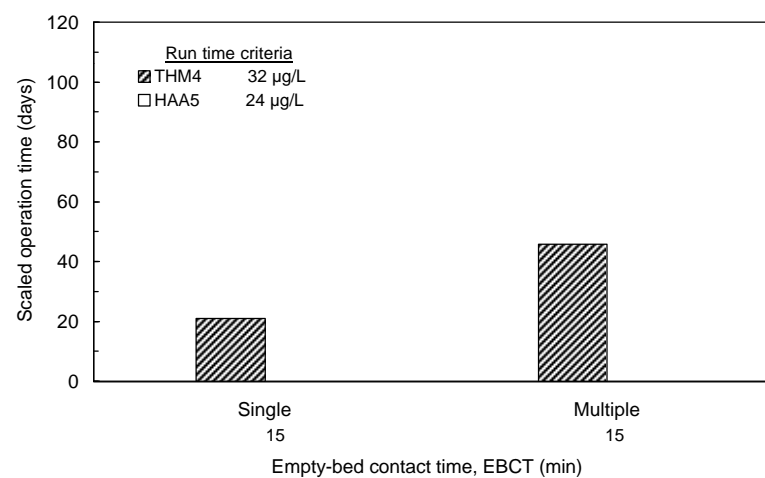


Figure 156 Run times based on single contactors and effluent blending for Stage 2 THM4 and HAA5 effluent criteria for 15 minute EBCT contactor

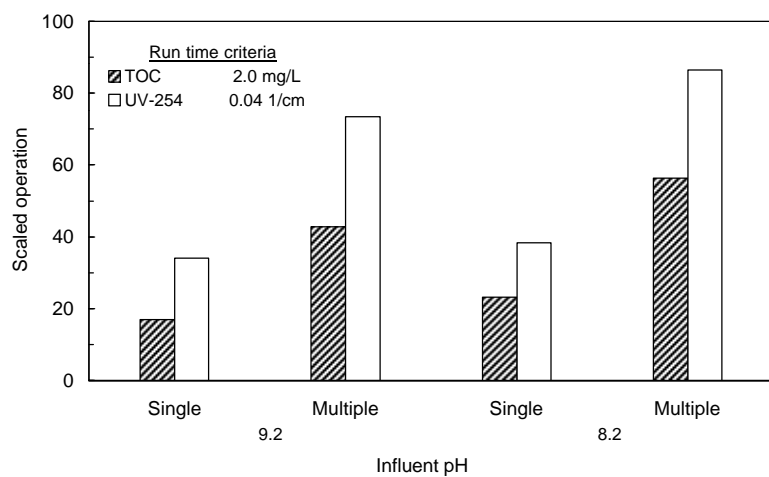


Figure 157 Run times based on single contactors and effluent blending for TOC and UV-254 effluent criteria (high), influent pH 8.2 and 9.2 contactors (10 min EBCT)

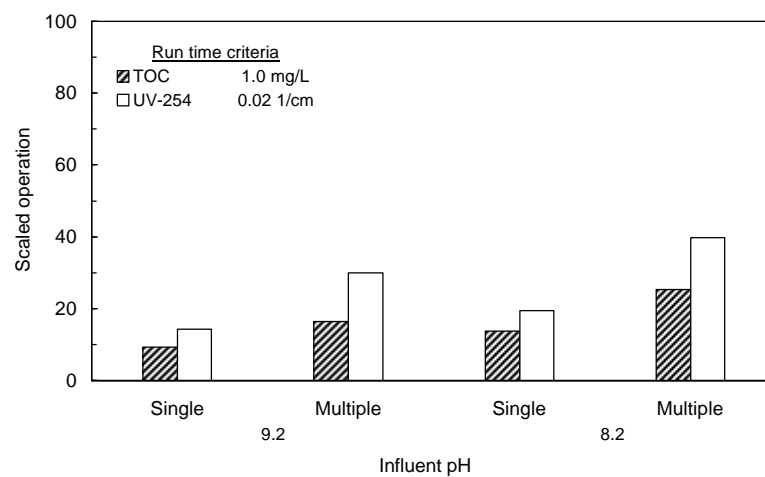


Figure 158 Run times based on single contactors and effluent blending for TOC and UV-254 effluent criteria (low), influent pH 8.2 and 9.2 contactors (10 min EBCT)

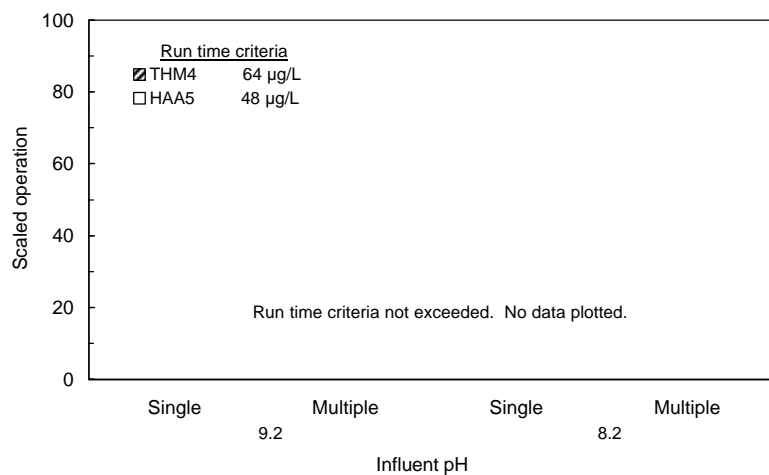


Figure 159 Run times based on single contactors and effluent blending for Stage 1 THM4 and HAA5 effluent criteria, influent pH 8.2 and 9.2 (10 minute EBCT)

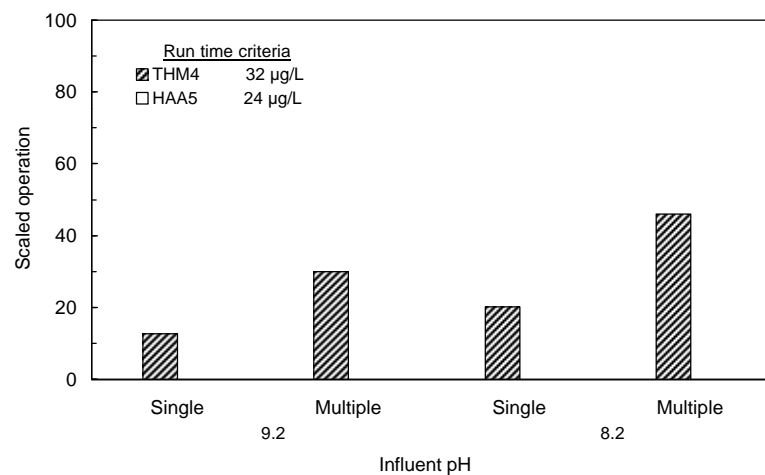


Figure 160 Run times based on single contactors and effluent blending for Stage 2 THM4 and HAA5 effluent criteria, influent pH 8.2 and 9.2 (10 minute EBCT)

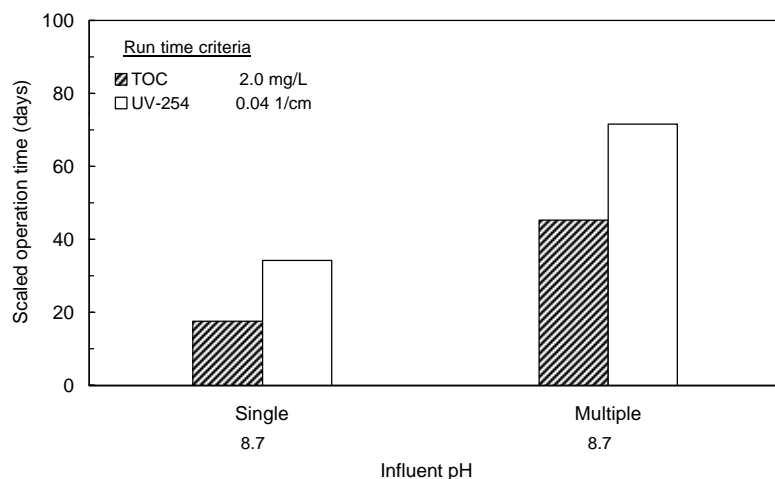


Figure 161 Run times based on single contactors and effluent blending for TOC and UV-254 effluent criteria (high) for influent pH 8.7 contactor (10 minute EBCT)

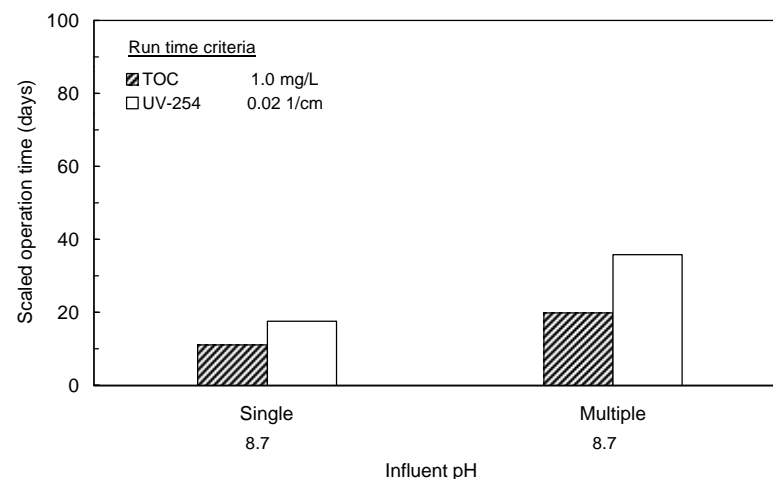


Figure 162 Run times based on single contactors and effluent blending for TOC and UV-254 effluent criteria (low) for influent pH 8.7 contactor (10 minute EBCT)

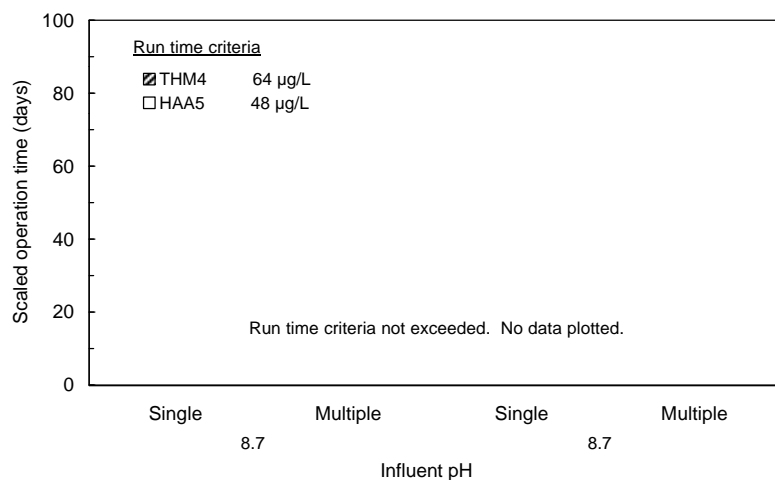


Figure 163 Run times based on single contactors and effluent blending for Stage 1 THM4 and HAA5 effluent criteria for influent pH 8.7 contactor (10 minute EBCT)

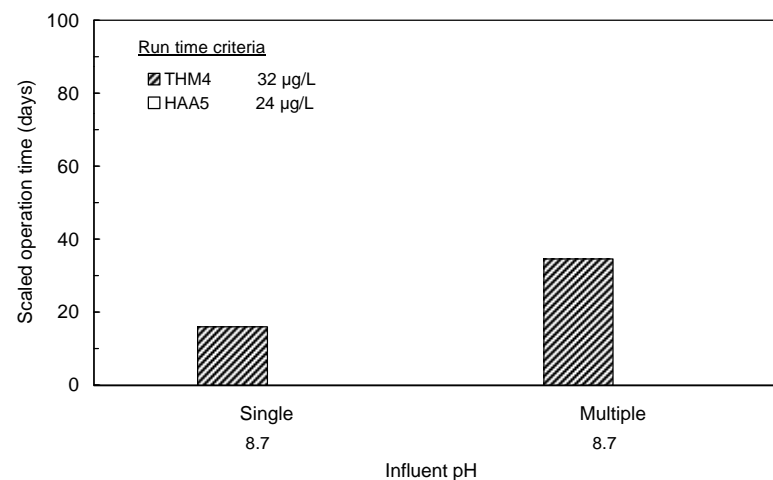


Figure 164 Run times based on single contactors and effluent blending for Stage 2 THM4 and HAA5 effluent criteria for influent pH 8.7 contactor (10 minute EBCT)

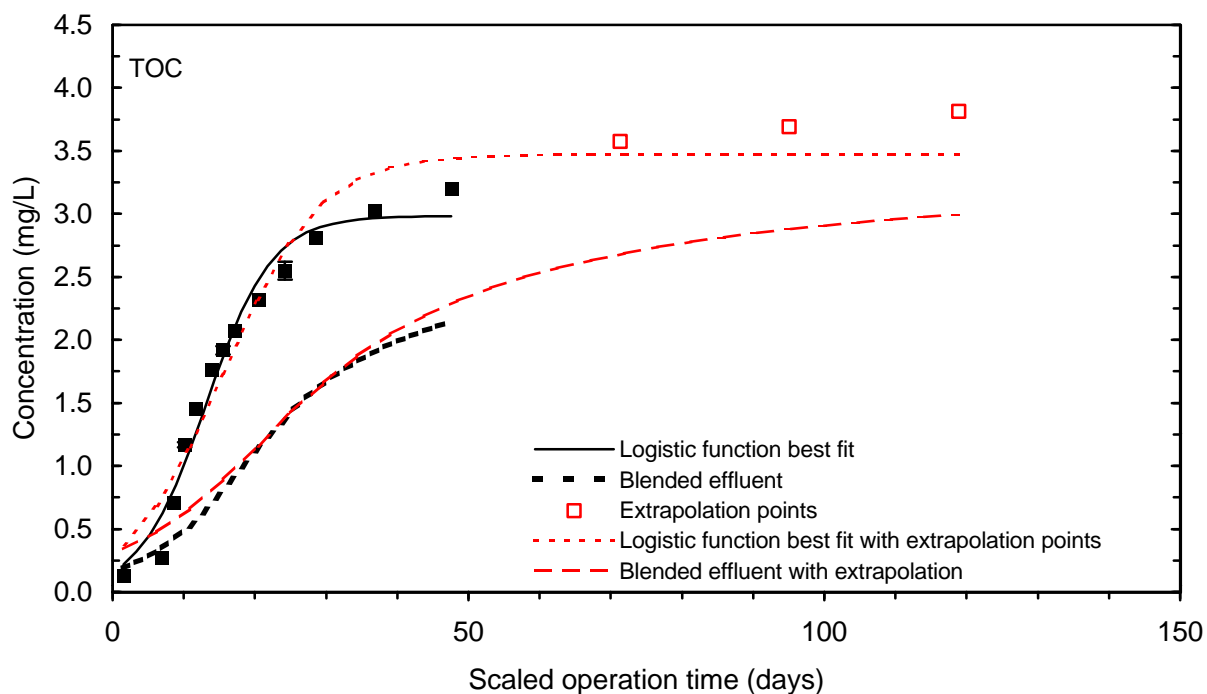


Figure 165 Single contactor and blended effluent extrapolated TOC breakthrough curve (10 minute EBCT)

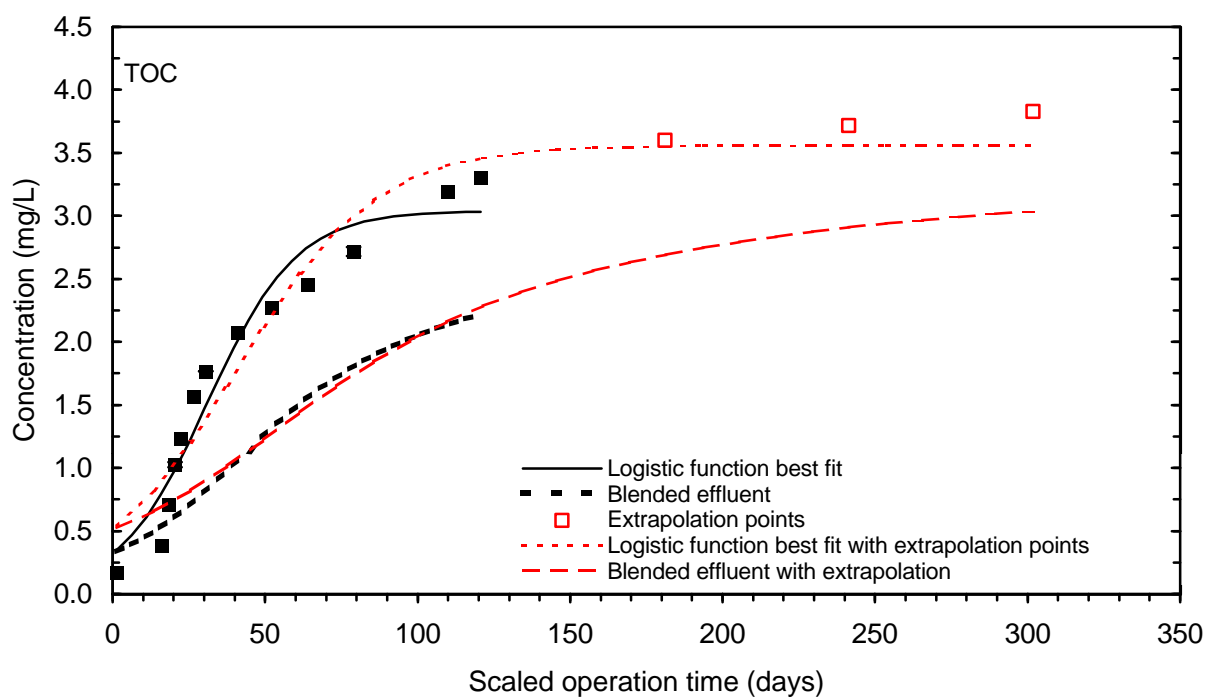


Figure 166 Single contactor and blended effluent extrapolated TOC breakthrough curve (20 minute EBCT)

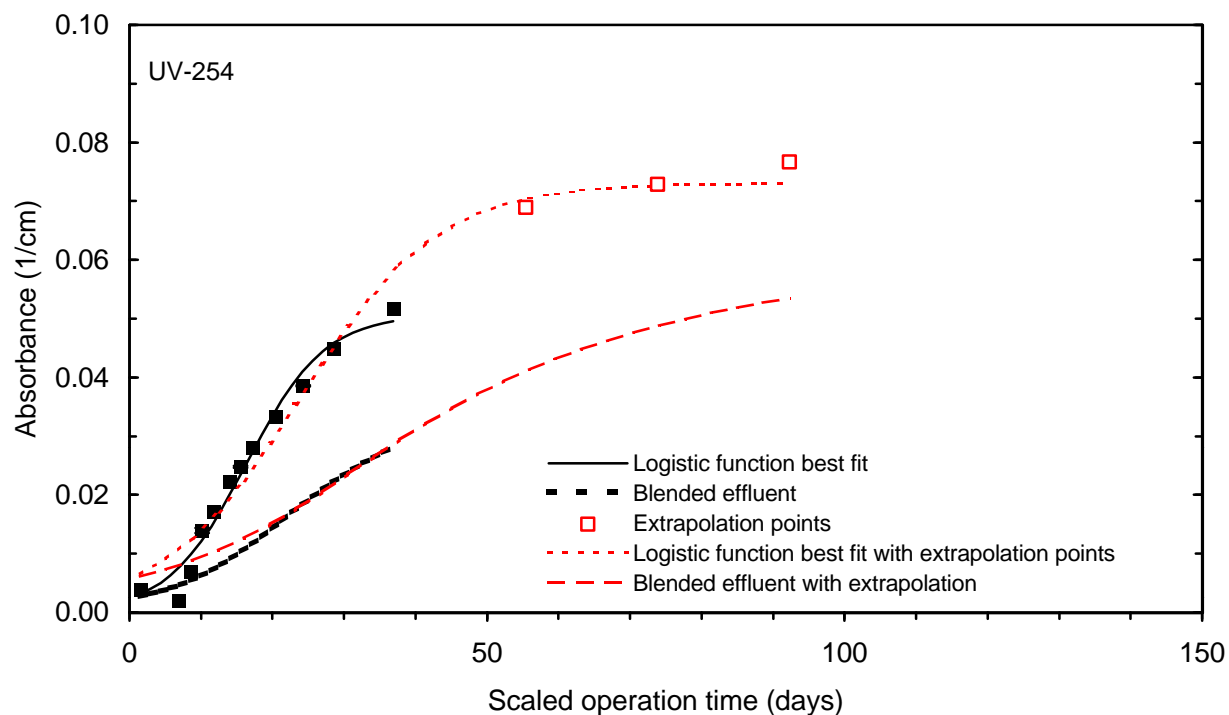


Figure 167 Single contactor and blended effluent extrapolated UV-254 breakthrough curve (10 minute EBCT)

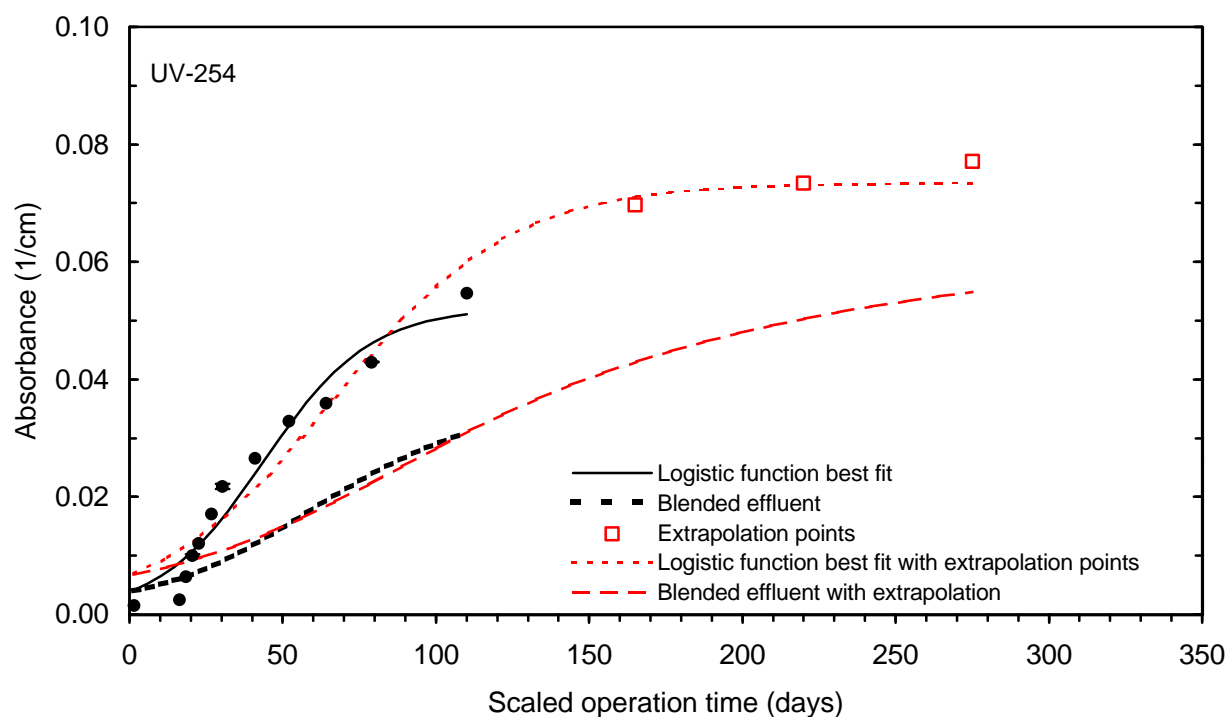


Figure 168 Single contactor and blended effluent extrapolated UV-254 breakthrough curve (20 minute EBCT)

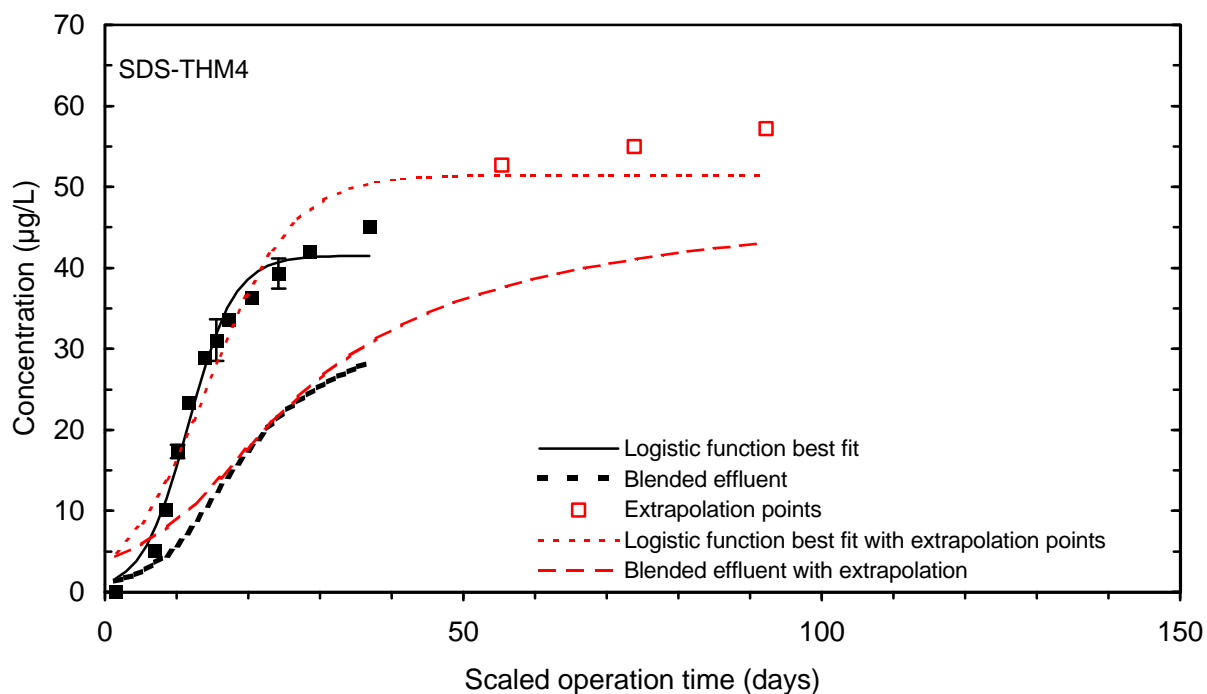


Figure 169 Single contactor and blended effluent extrapolated SDS-THM4 breakthrough curve (10 minute EBCT)

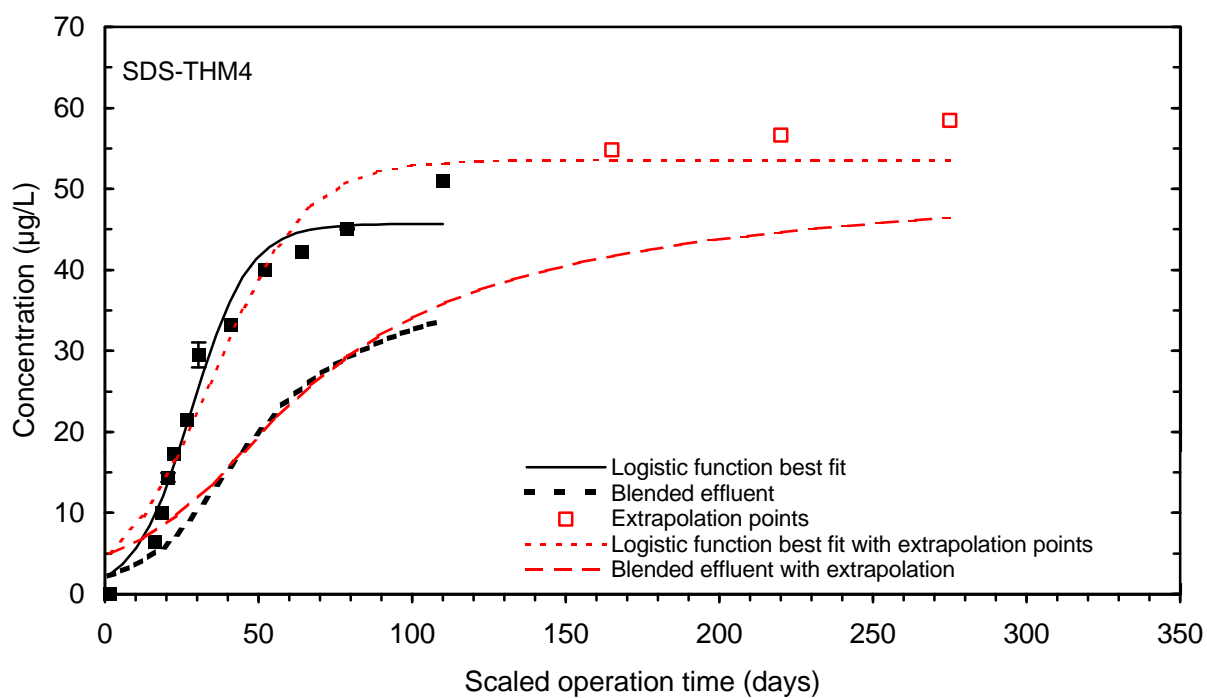


Figure 170 Single contactor and blended effluent extrapolated SDS-THM4 breakthrough curve (20 minute EBCT)

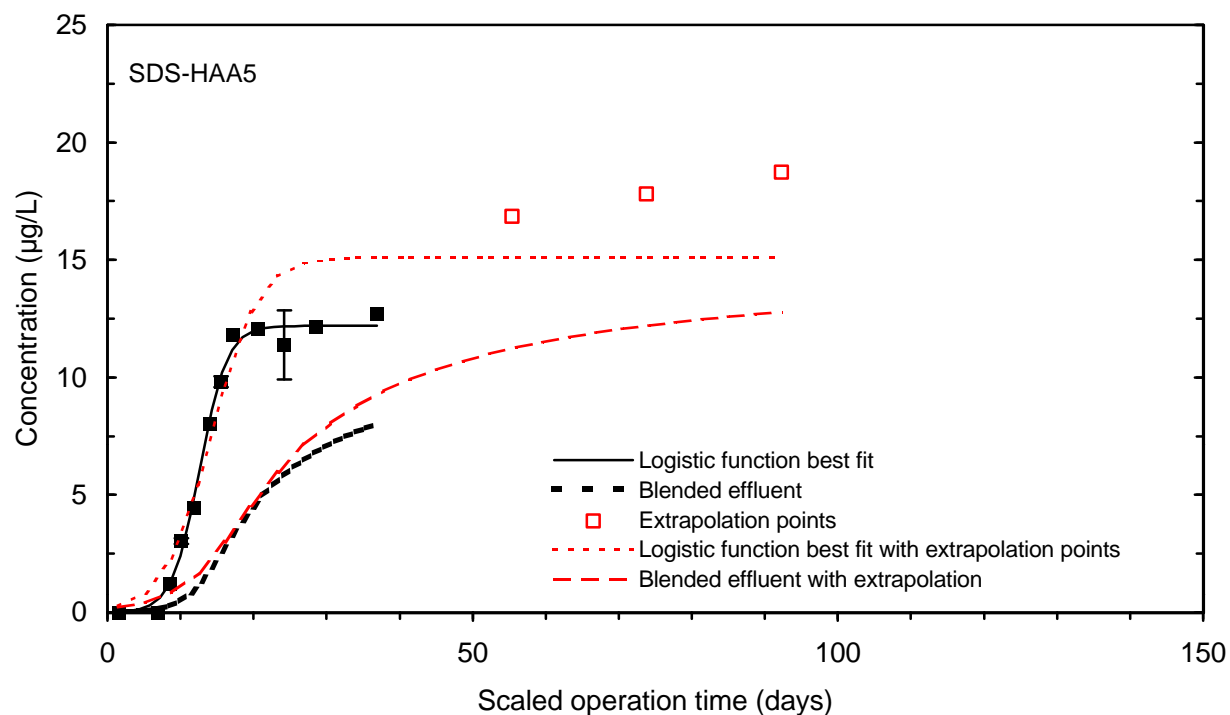


Figure 171 Single contactor and blended effluent extrapolated SDS-HAA5 breakthrough curve (10 minute EBCT)

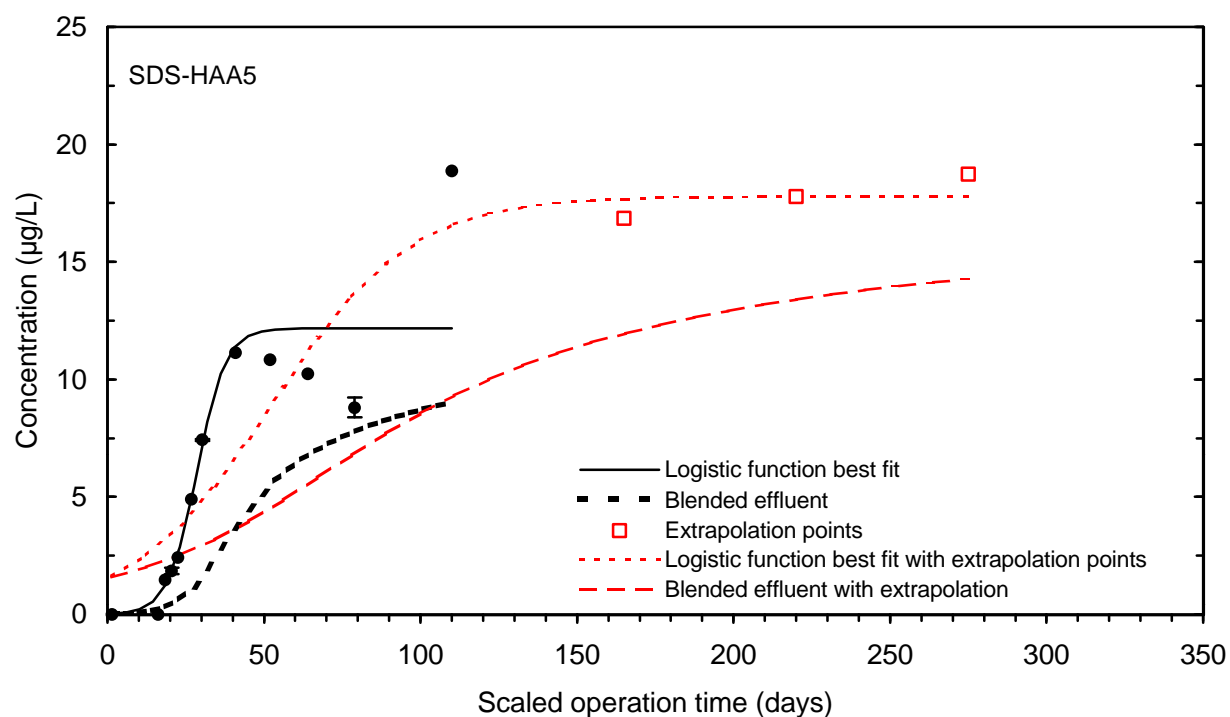


Figure 172 Single contactor and blended effluent extrapolated SDS-HAA5 breakthrough curve (20 minute EBCT)

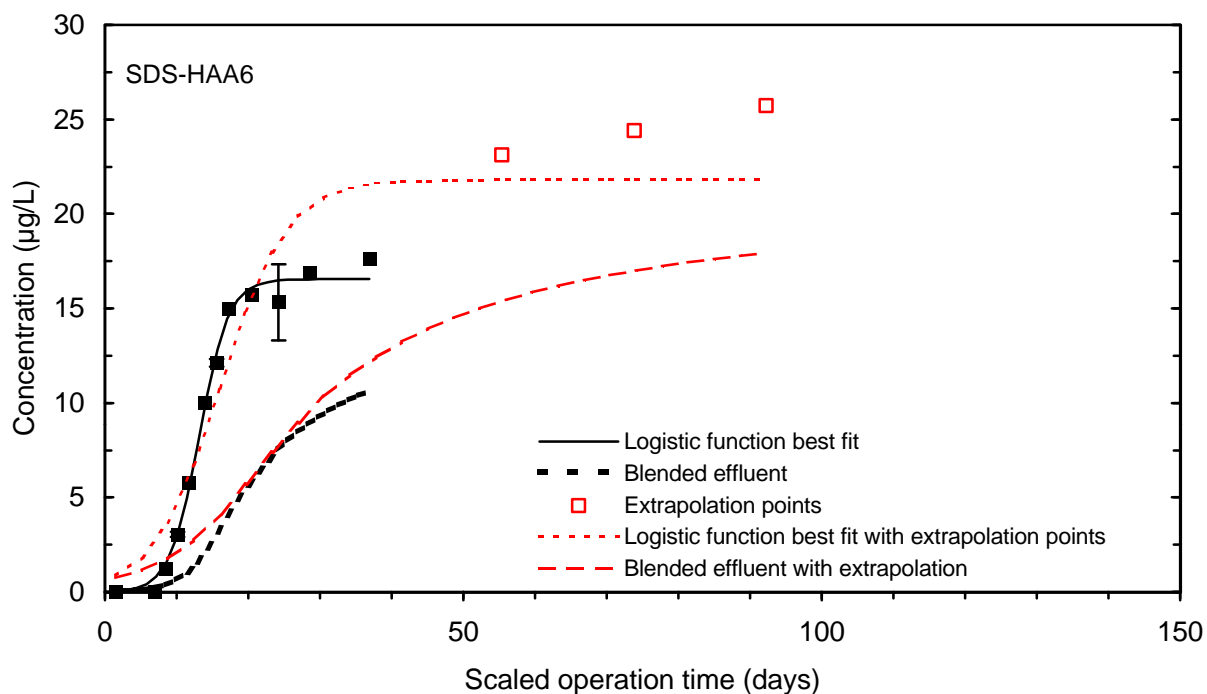


Figure 173 Single contactor and blended effluent extrapolated SDS-HAA6 breakthrough curve (10 minute EBCT)

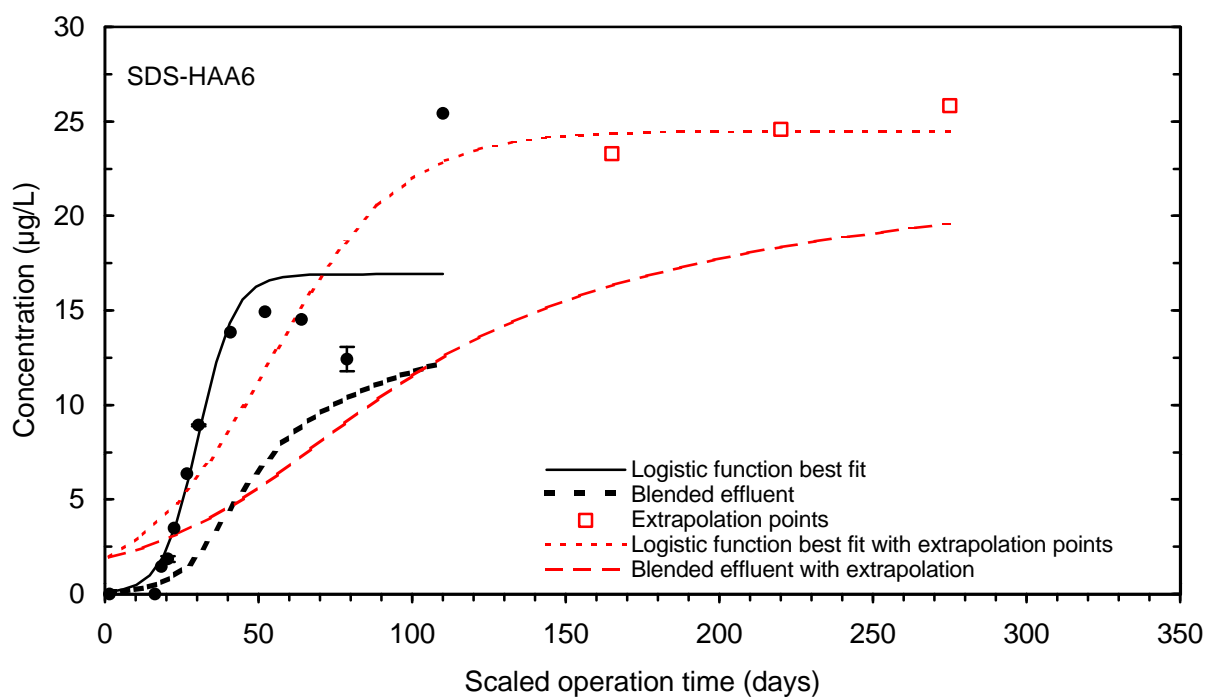


Figure 174 Single contactor and blended effluent extrapolated SDS-HAA6 breakthrough curve (20 minute EBCT)

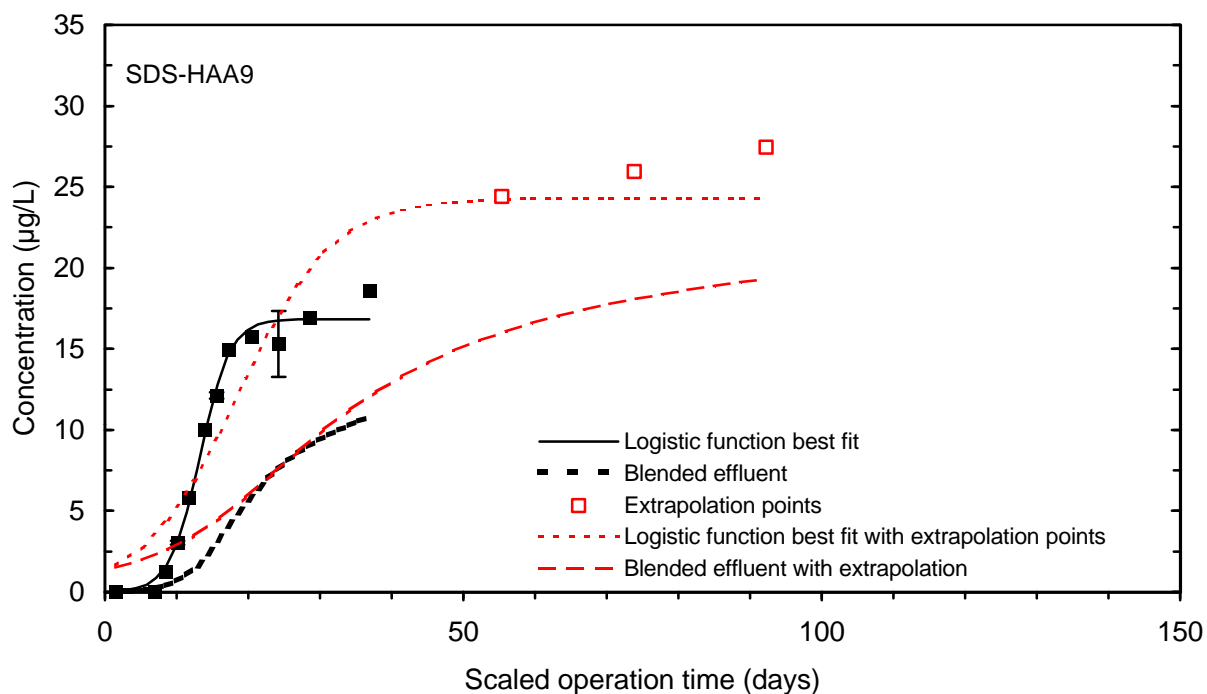


Figure 175 Single contactor and blended effluent extrapolated SDS-HAA9 breakthrough curve (10 minute EBCT)

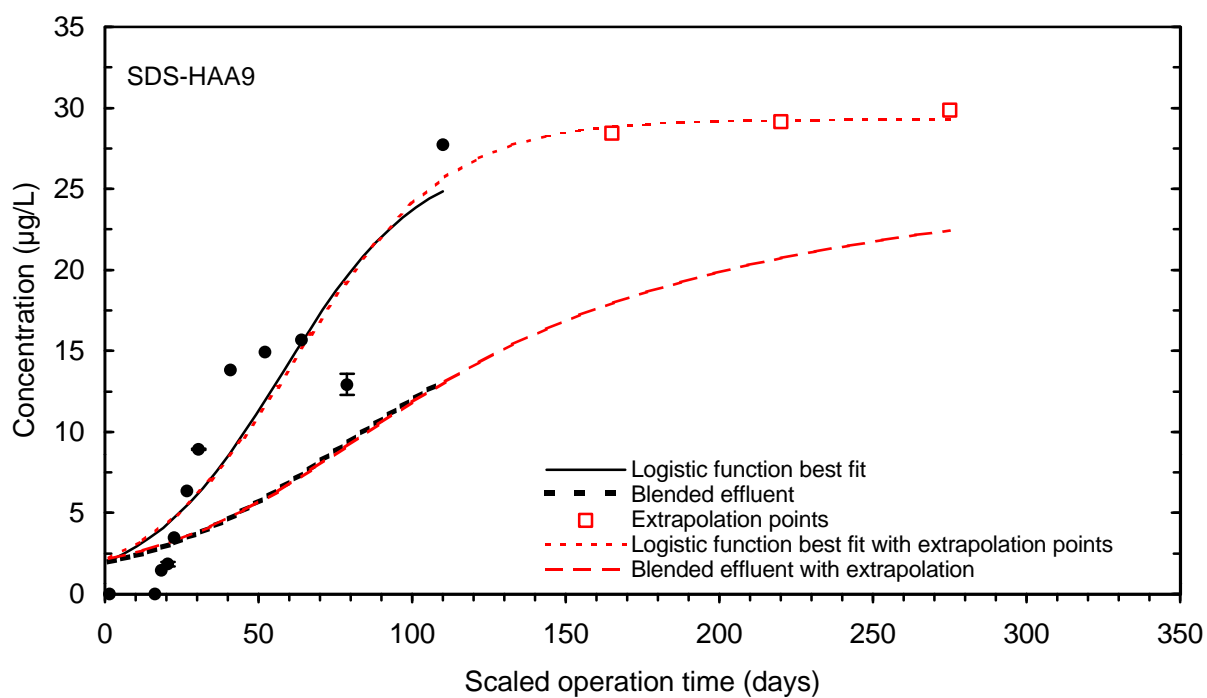


Figure 176 Single contactor and blended effluent extrapolated SDS-HAA9 breakthrough curve (20 minute EBCT)

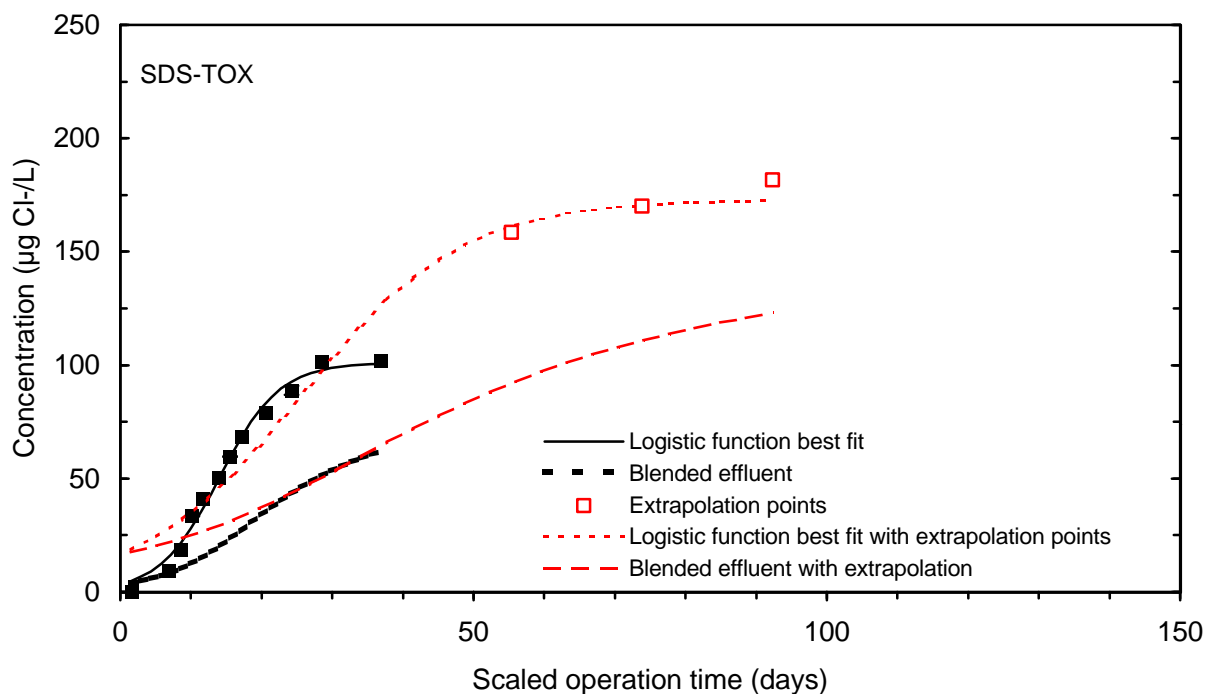


Figure 177 Single contactor and blended effluent extrapolated SDS-TOX breakthrough curve (10 minute EBCT)

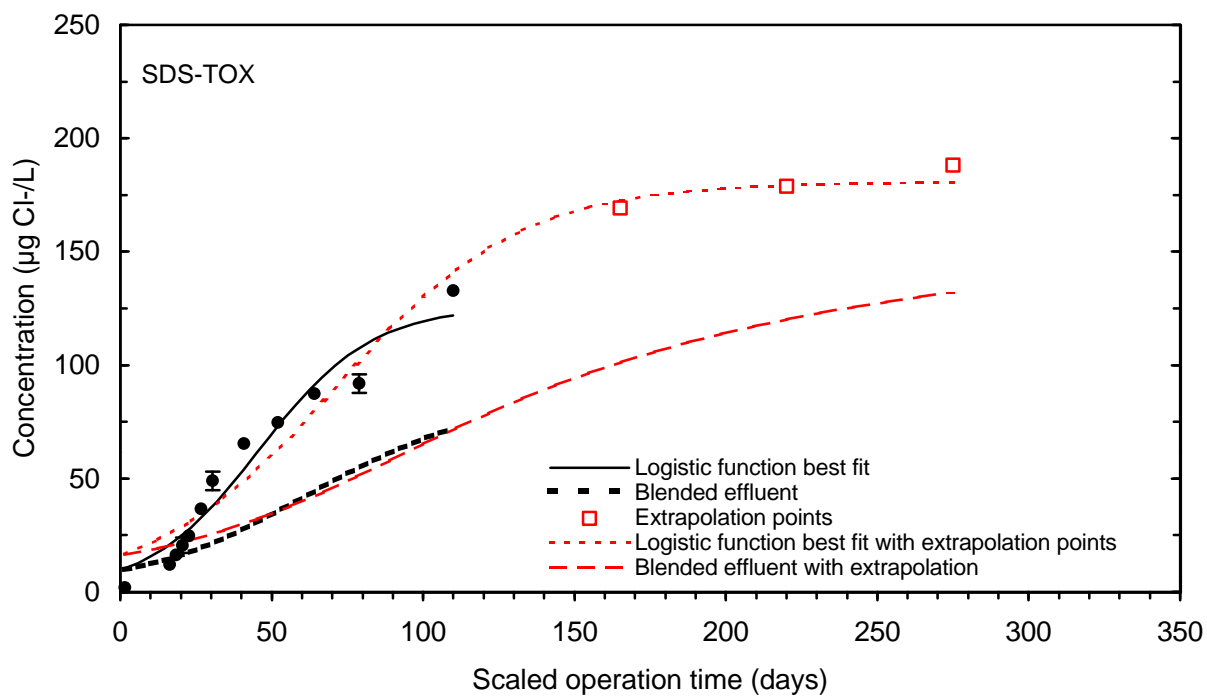


Figure 178 Single contactor and blended effluent extrapolated SDS-TOX breakthrough curve (20 minute EBCT)

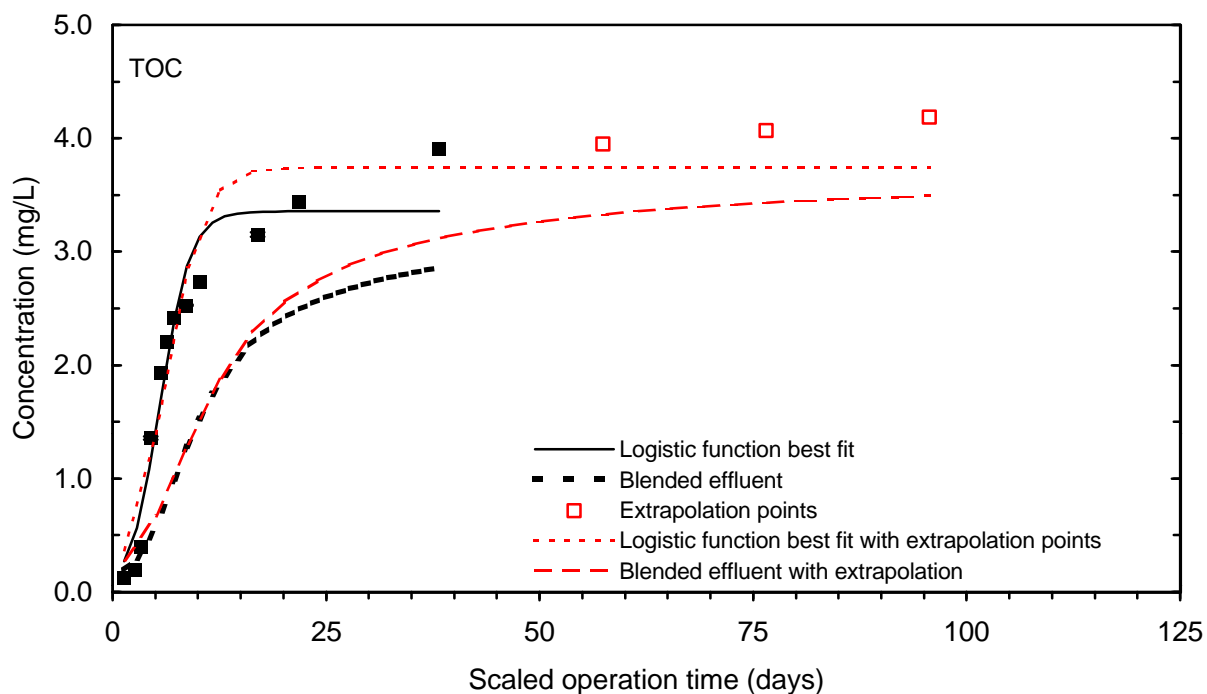


Figure 179 Single contactor and blended effluent extrapolated TOC breakthrough curve (5 minute EBCT)

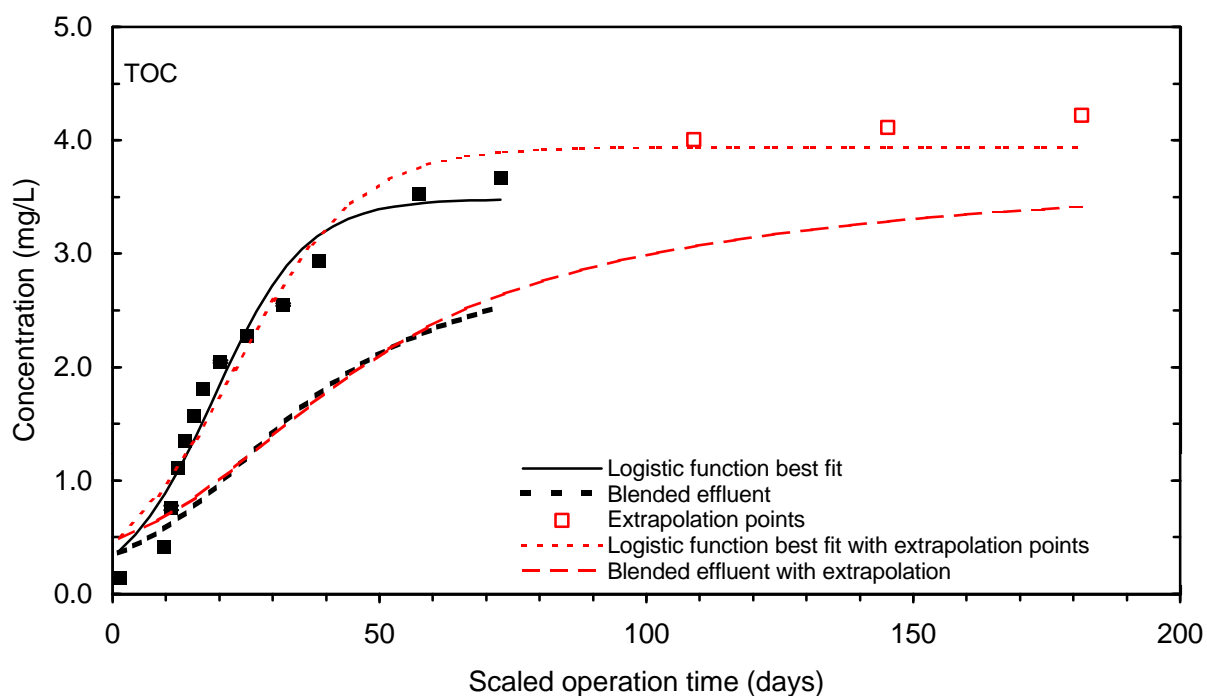


Figure 180 Single contactor and blended effluent extrapolated TOC breakthrough curve (12.5 minute EBCT)

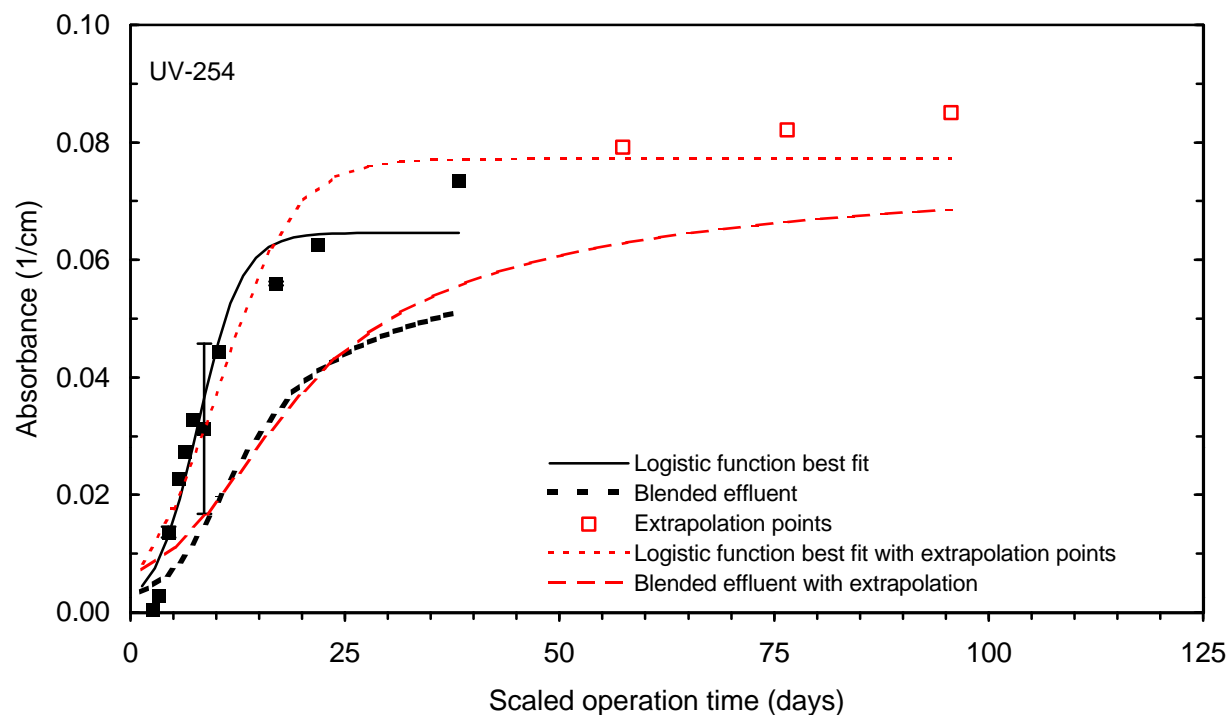


Figure 181 Single contactor and blended effluent extrapolated UV-254 breakthrough curve (5 minute EBCT)

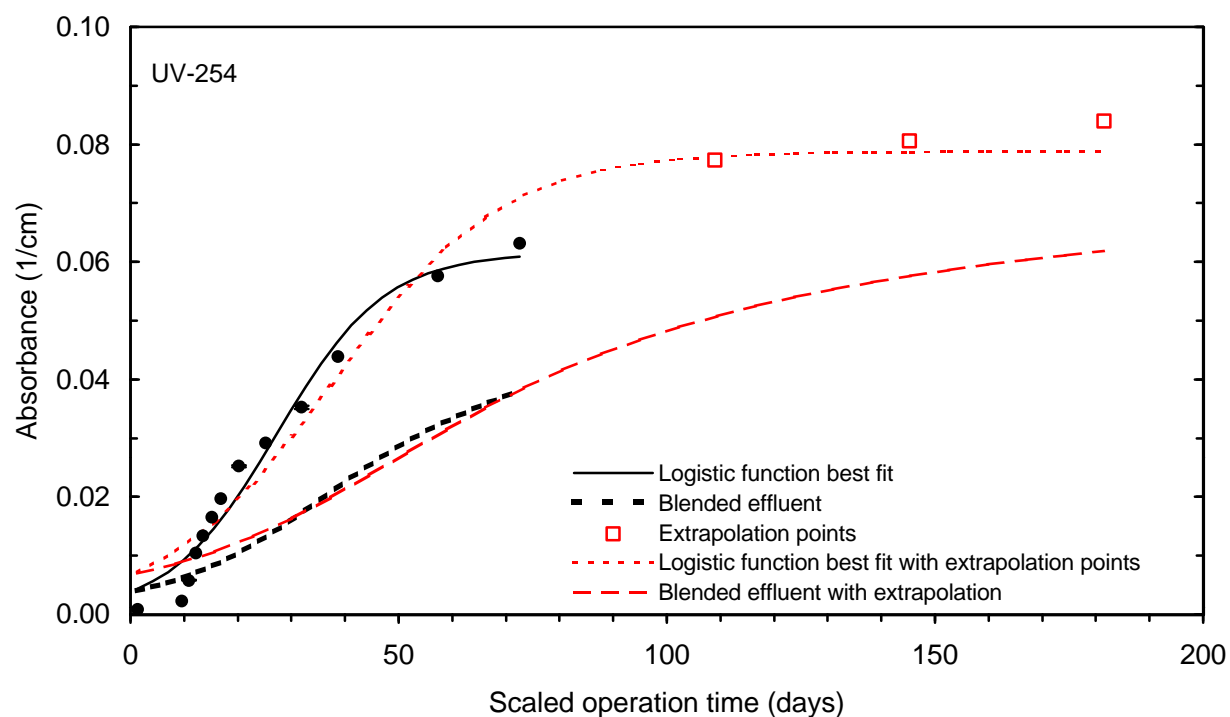


Figure 182 Single contactor and blended effluent extrapolated UV-254 breakthrough curve (12.5 minute EBCT)

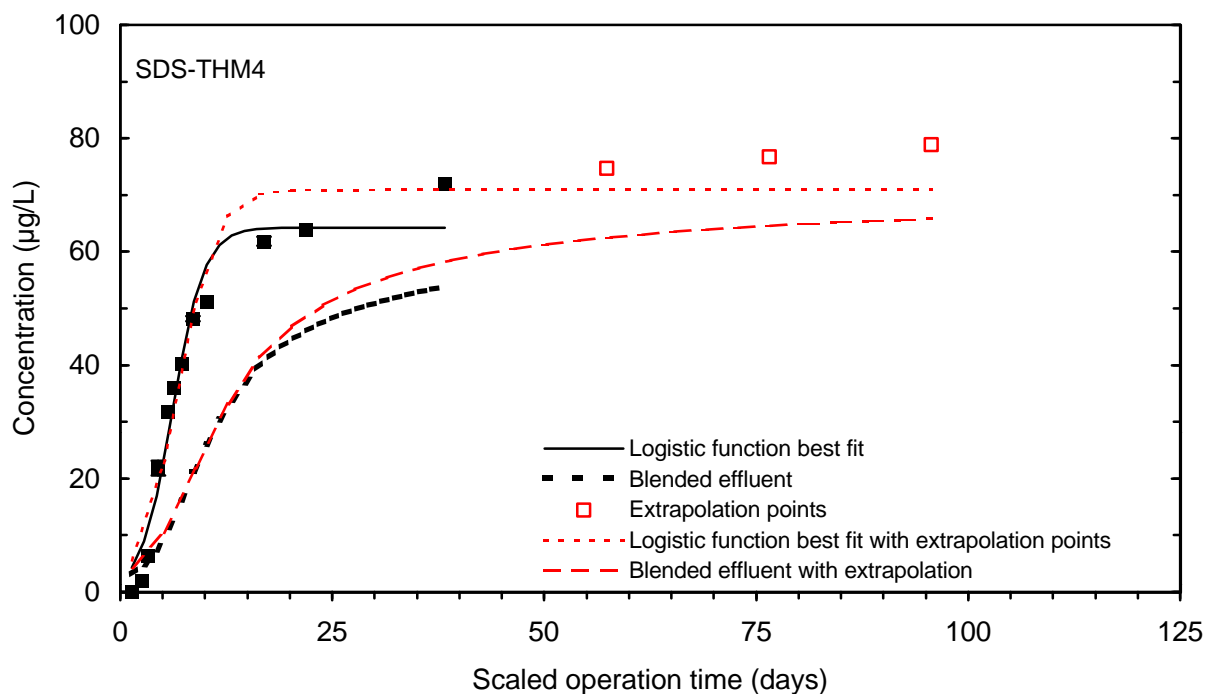


Figure 183 Single contactor and blended effluent extrapolated SDS-THM4 breakthrough curve (5 minute EBCT)

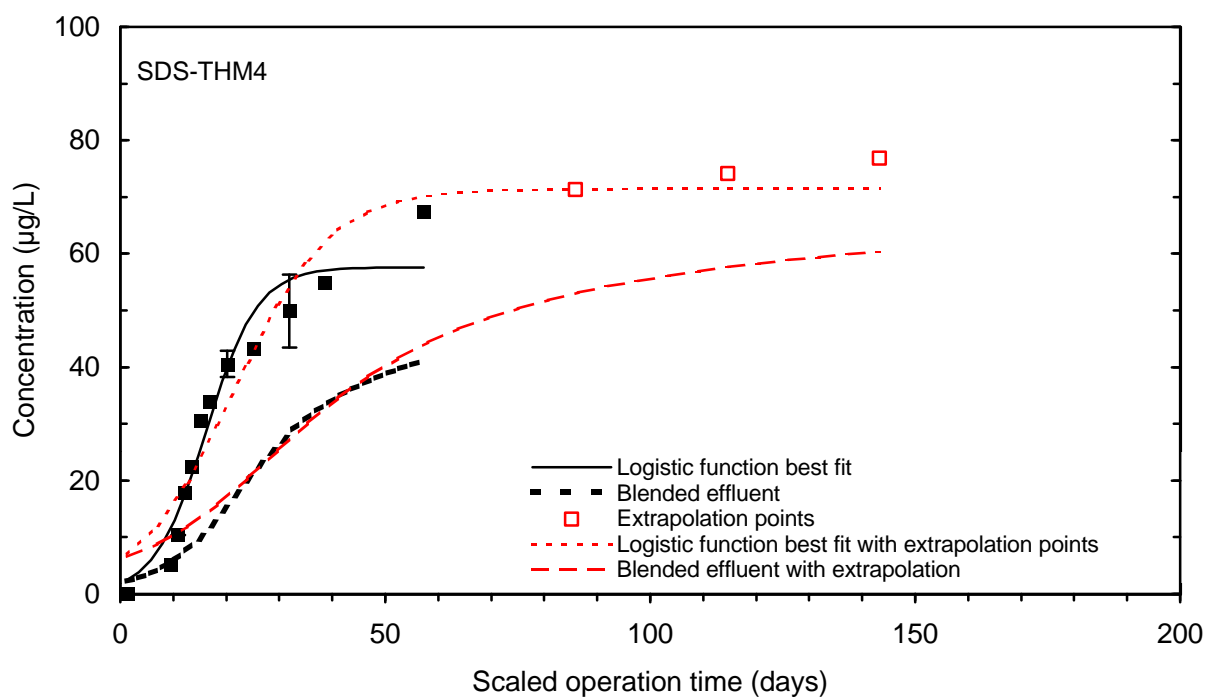


Figure 184 Single contactor and blended effluent extrapolated SDS-THM4 breakthrough curve (12.5 minute EBCT)

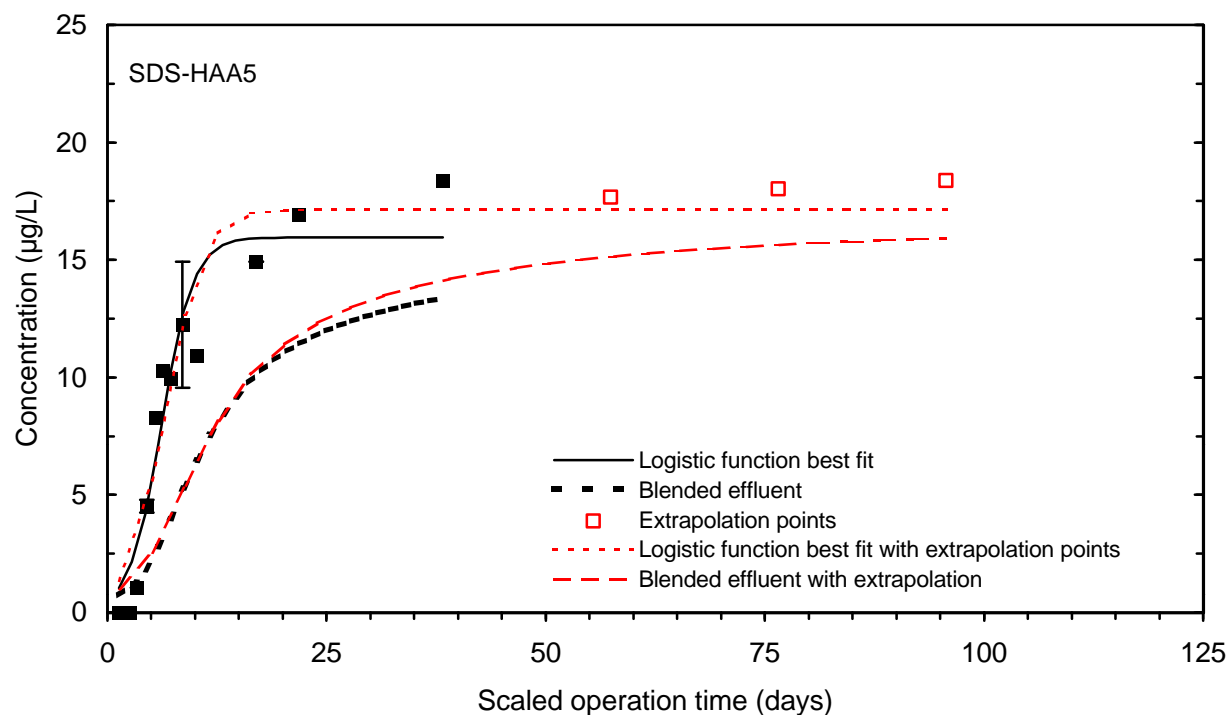


Figure 185 Single contactor and blended effluent extrapolated SDS-HAA5 breakthrough curve (5 minute EBCT)

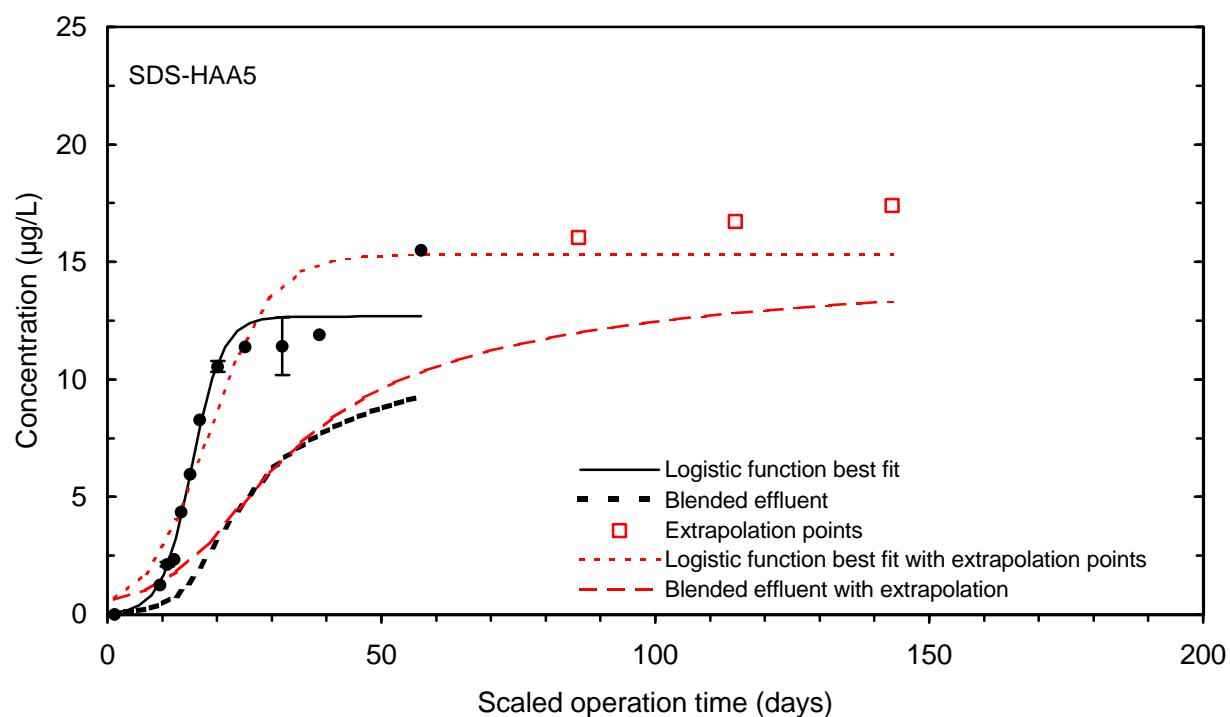


Figure 186 Single contactor and blended effluent extrapolated SDS-HAA5 breakthrough curve (12.5 minute EBCT)

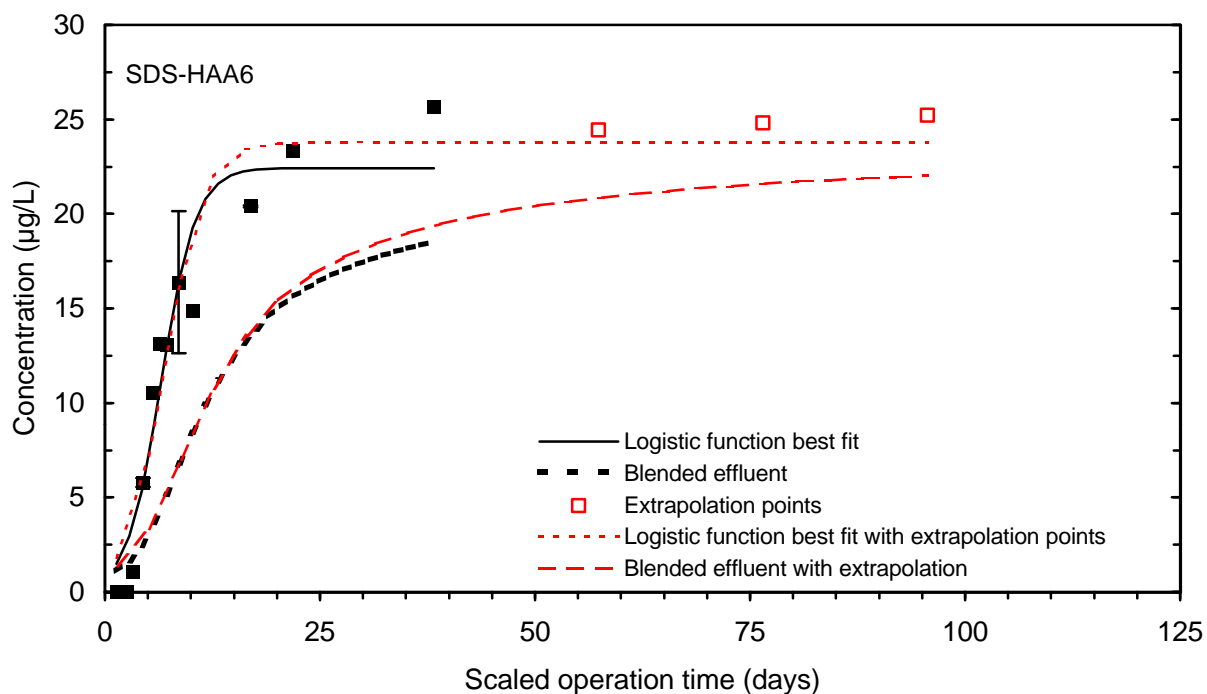


Figure 187 Single contactor and blended effluent extrapolated SDS-HAA6 breakthrough curve (5 minute EBCT)

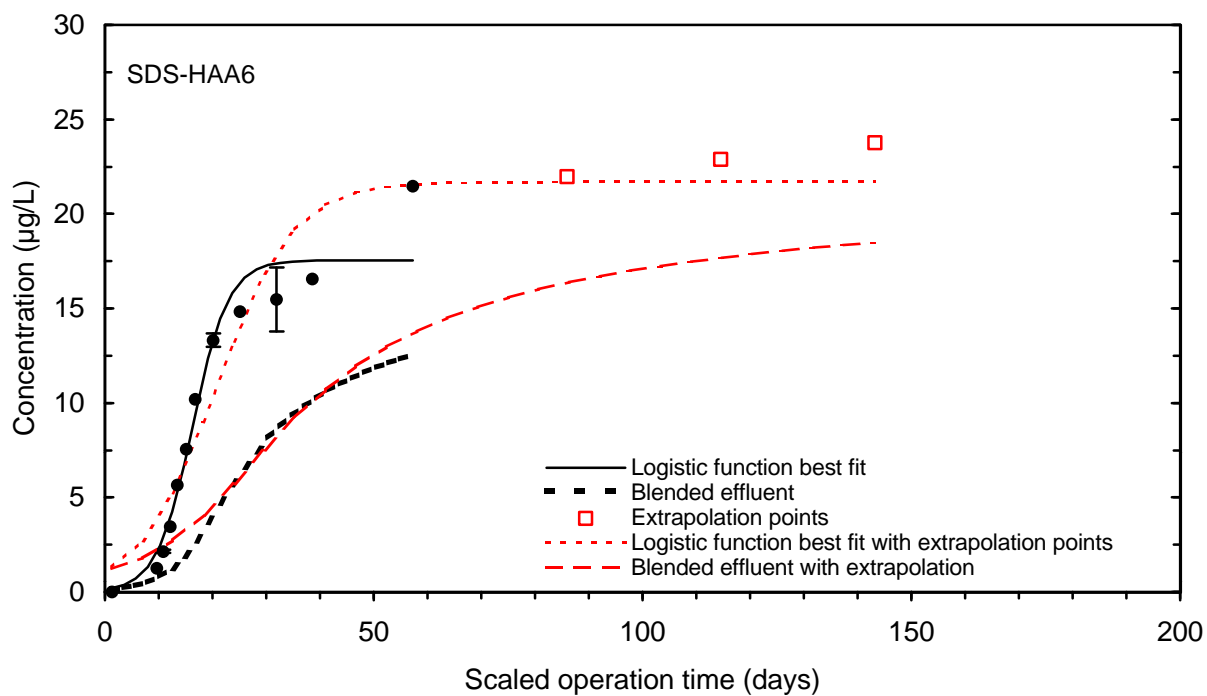


Figure 188 Single contactor and blended effluent extrapolated SDS-HAA6 breakthrough curve (12.5 minute EBCT)

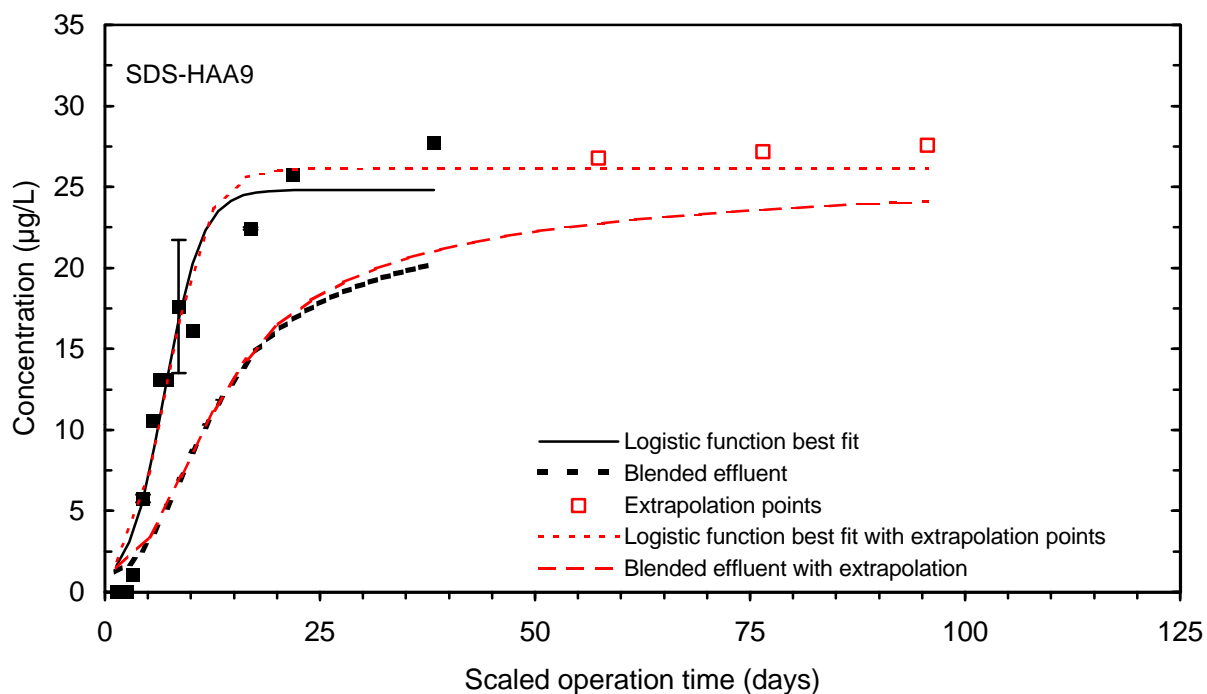


Figure 189 Single contactor and blended effluent extrapolated SDS-HAA9 breakthrough curve (5 minute EBCT)

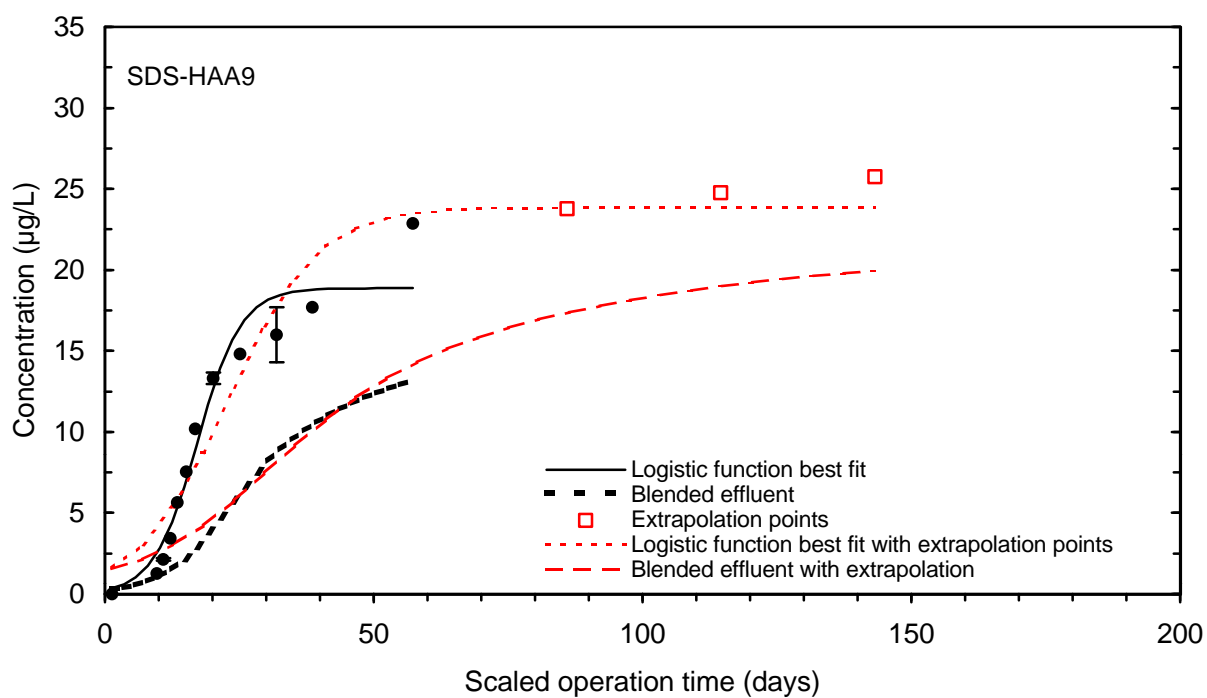


Figure 190 Single contactor and blended effluent extrapolated SDS-HAA9 breakthrough curve (12.5 minute EBCT)

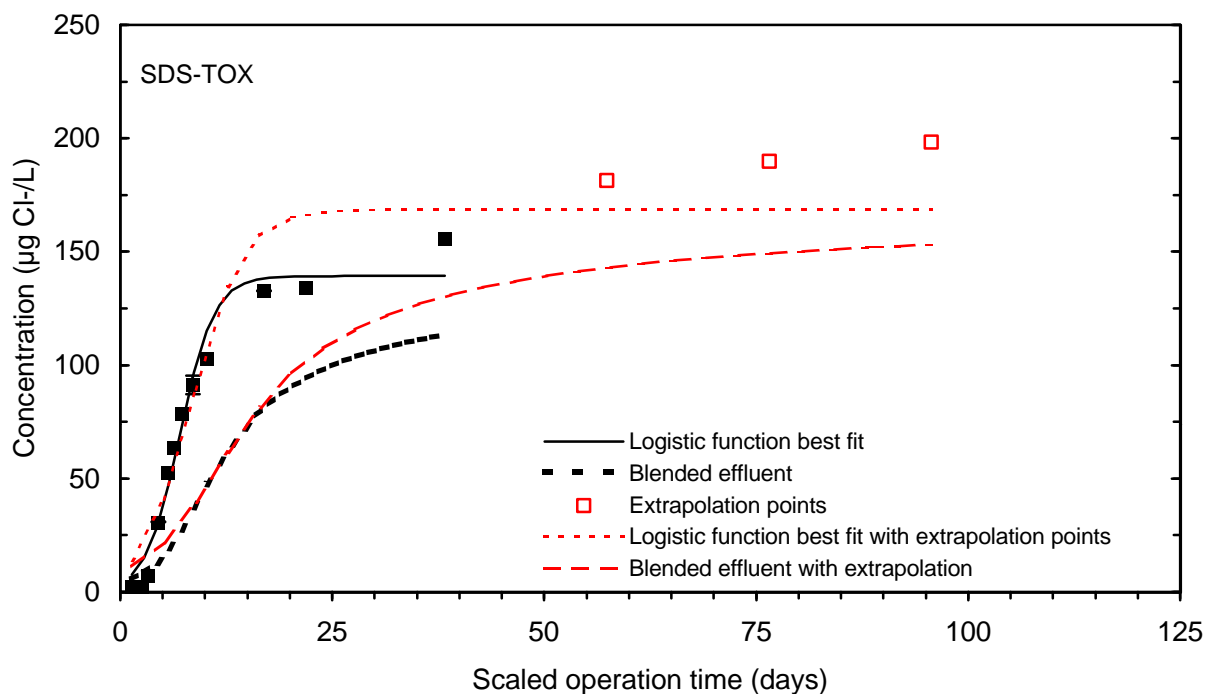


Figure 191 Single contactor and blended effluent extrapolated SDS-TOX breakthrough curve (5 minute EBCT)

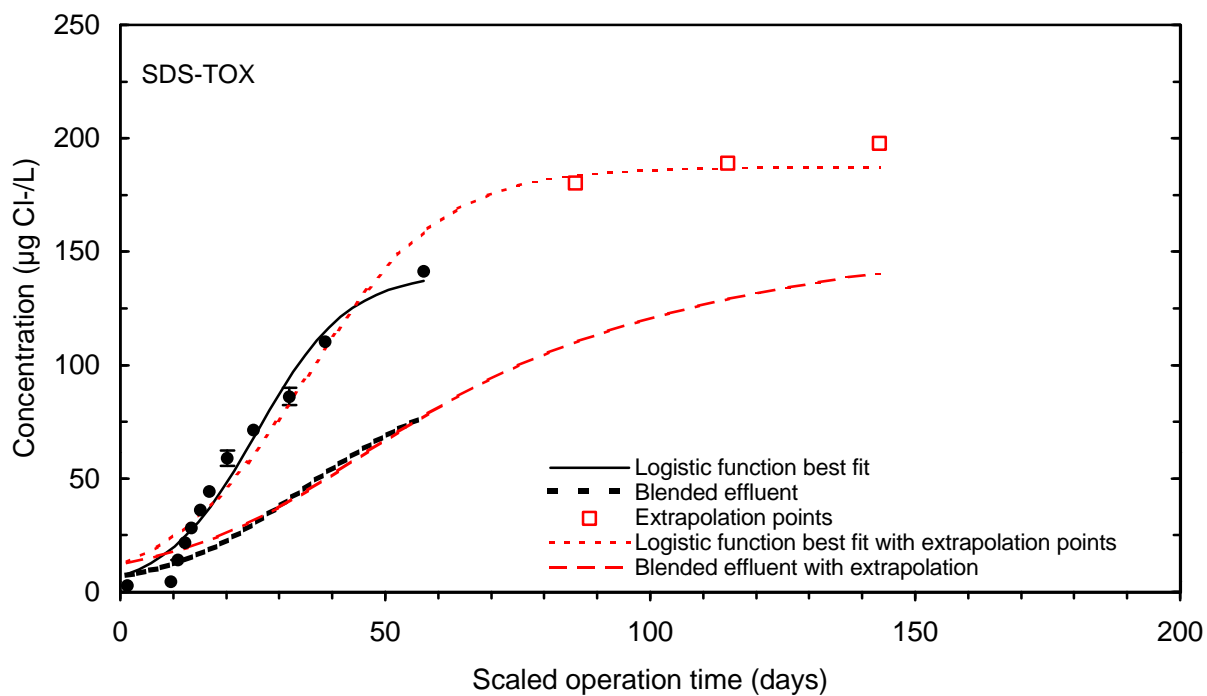


Figure 192 Single contactor and blended effluent extrapolated SDS-TOX breakthrough curve (12.5 minute EBCT)

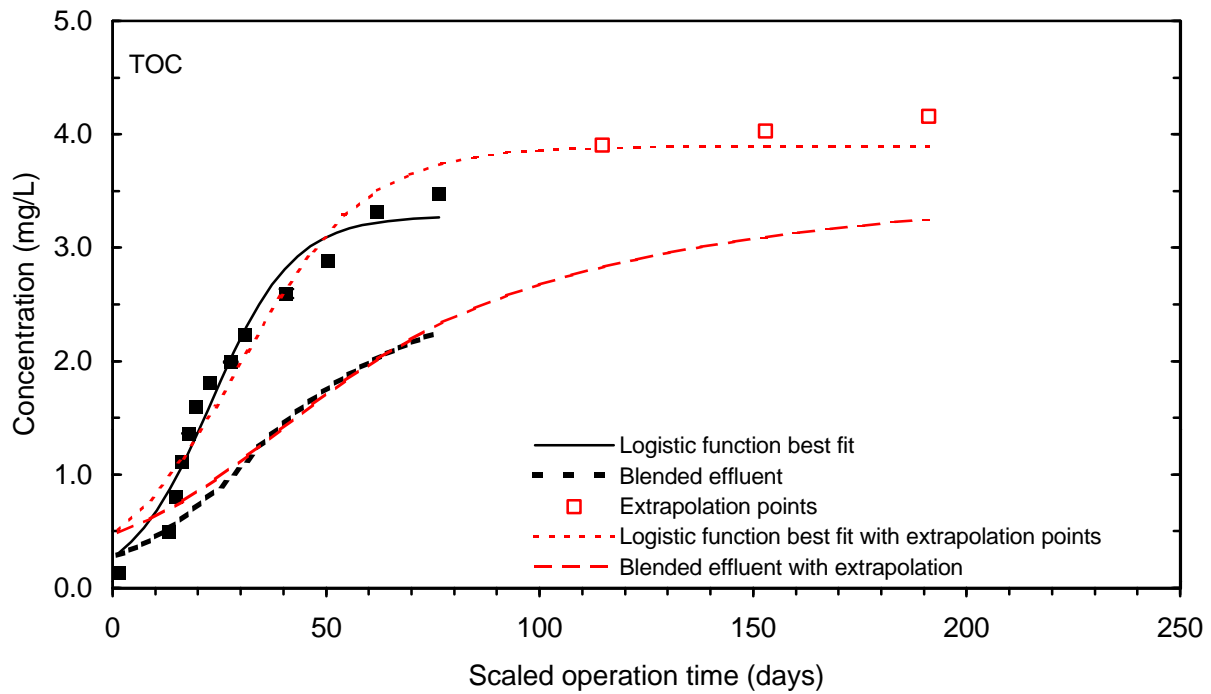


Figure 193 Single contactor and blended effluent extrapolated TOC breakthrough curve (15 minute EBCT)

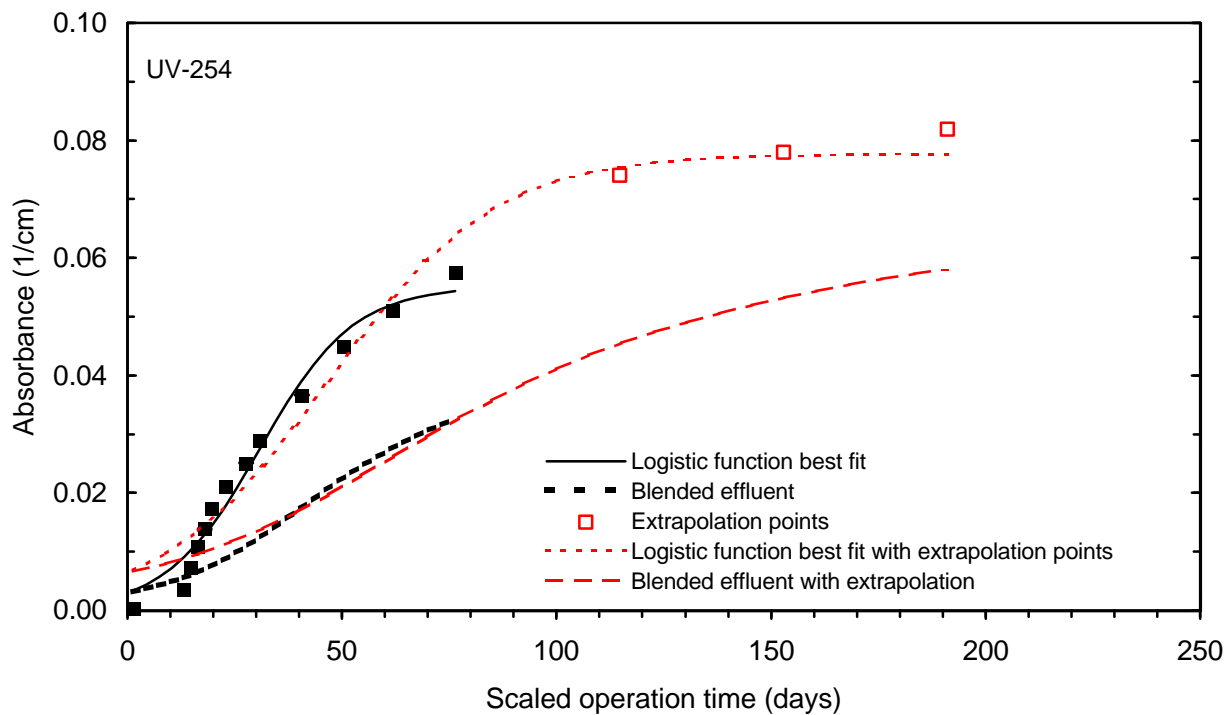


Figure 194 Single contactor and blended effluent extrapolated UV-254 breakthrough curve (15 minute EBCT)

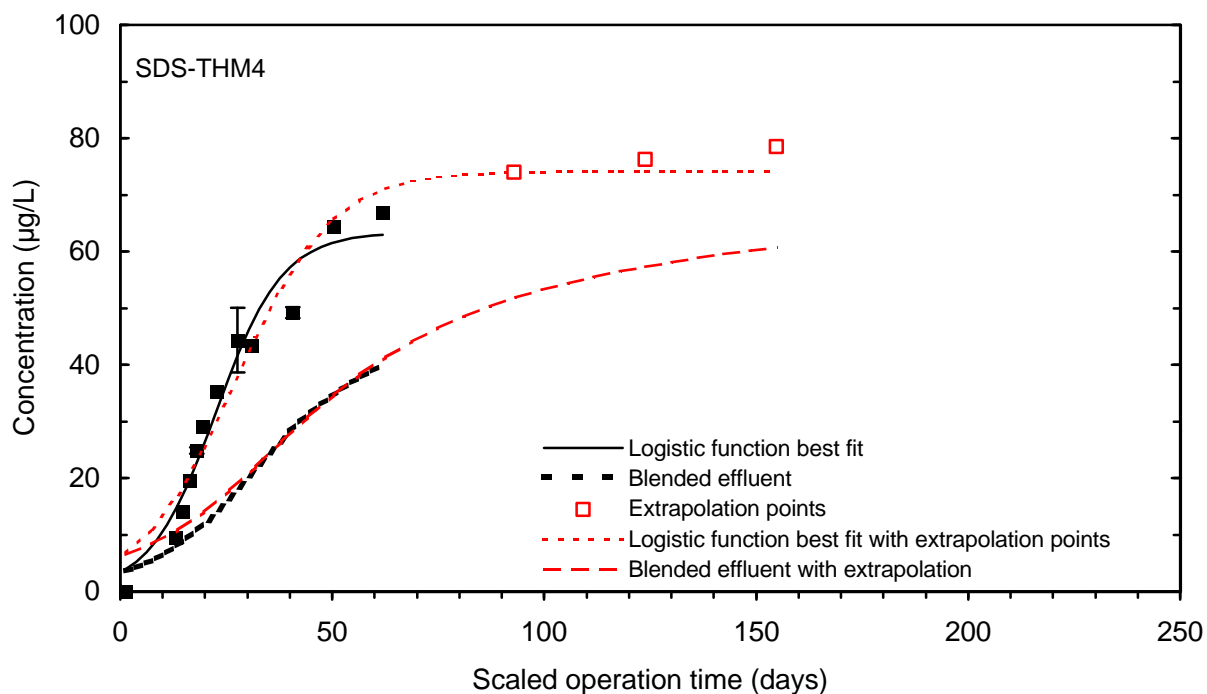


Figure 195 Single contactor and blended effluent extrapolated SDS-THM4 breakthrough curve (15 minute EBCT)

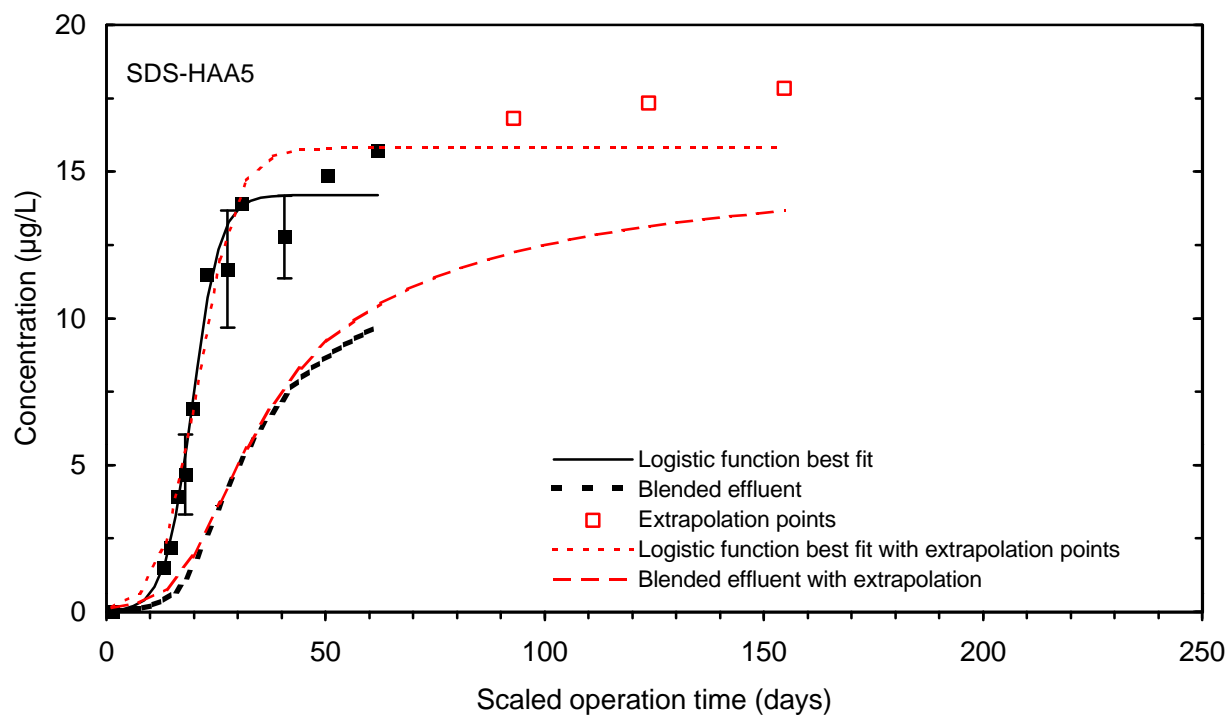


Figure 196 Single contactor and blended effluent extrapolated SDS-HAA5 breakthrough curve (15 minute EBCT)

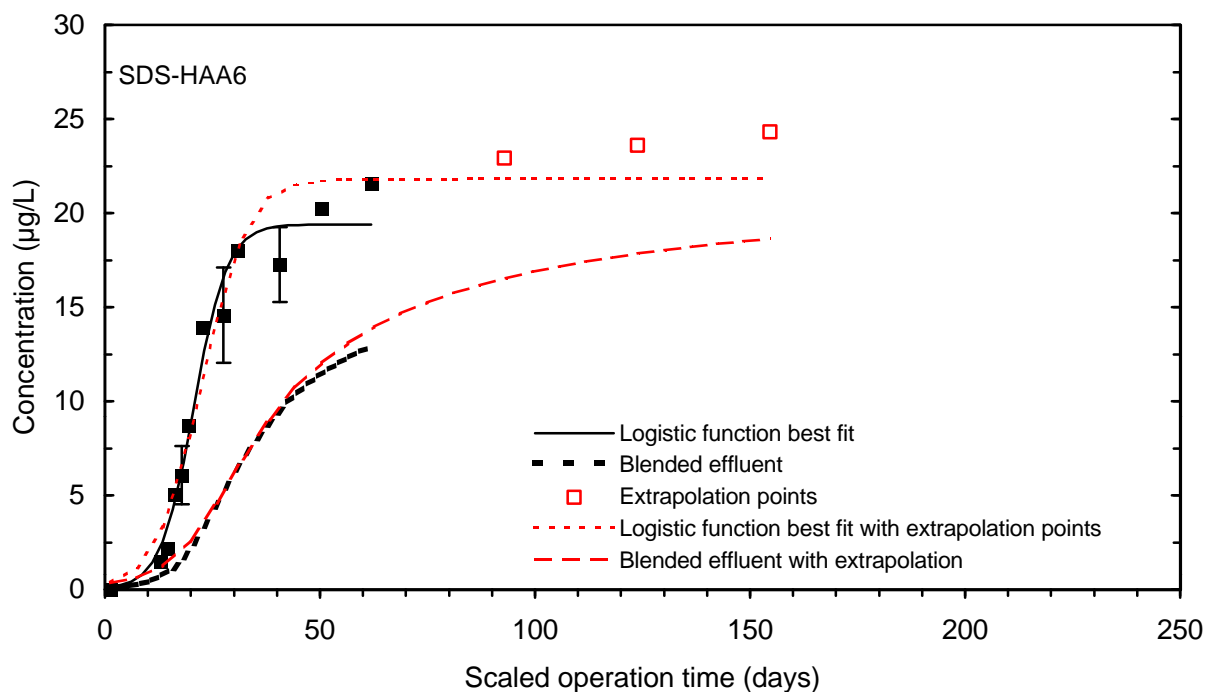


Figure 197 Single contactor and blended effluent extrapolated SDS-HAA6 breakthrough curve (15 minute EBCT)

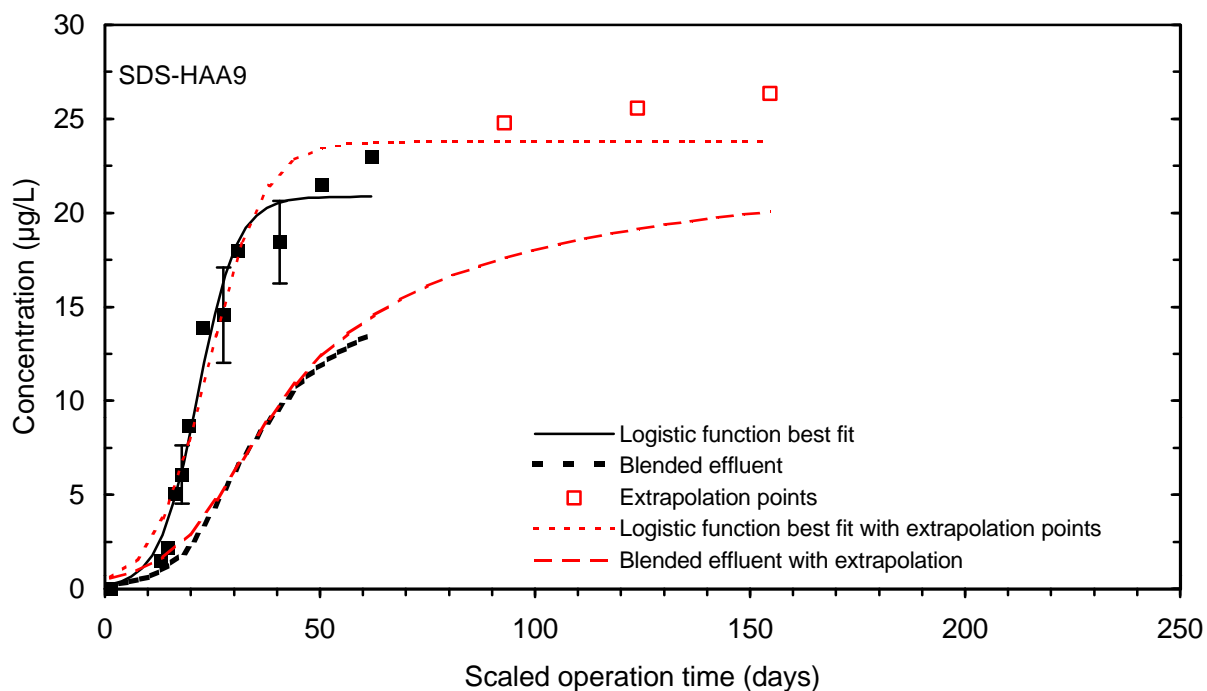


Figure 198 Single contactor and blended effluent extrapolated SDS-HAA9 breakthrough curve (15 minute EBCT)

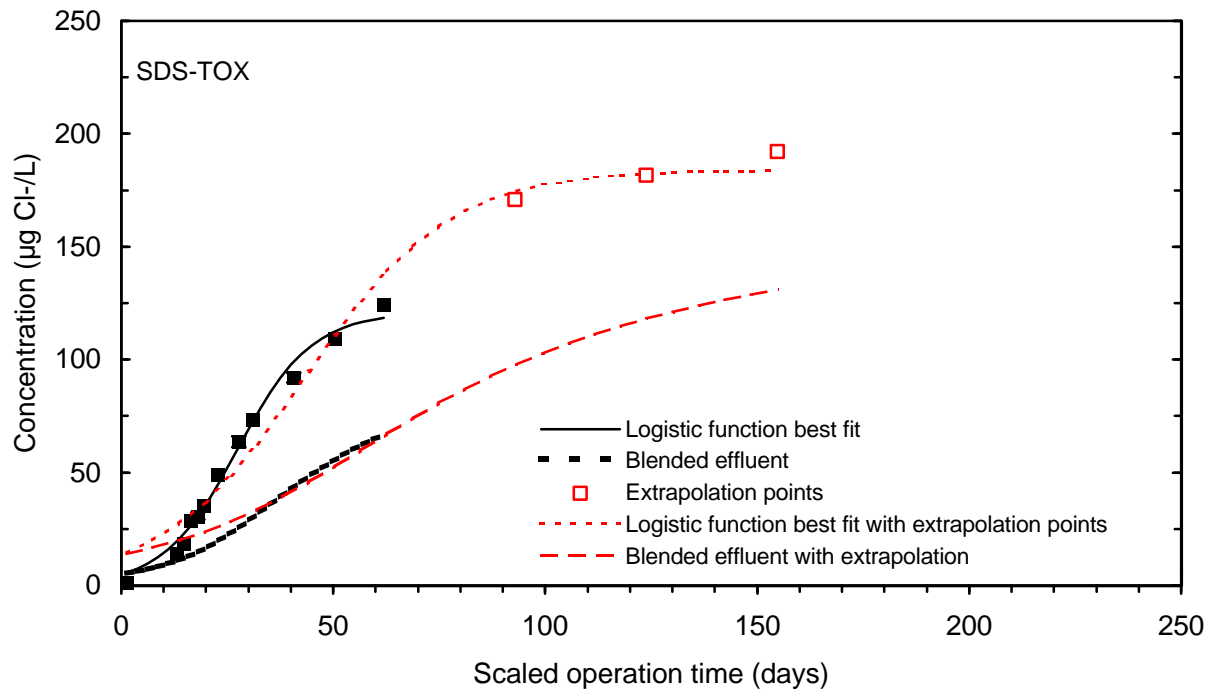


Figure 199 Single contactor and blended effluent extrapolated SDS-TOX breakthrough curve (15 minute EBCT)

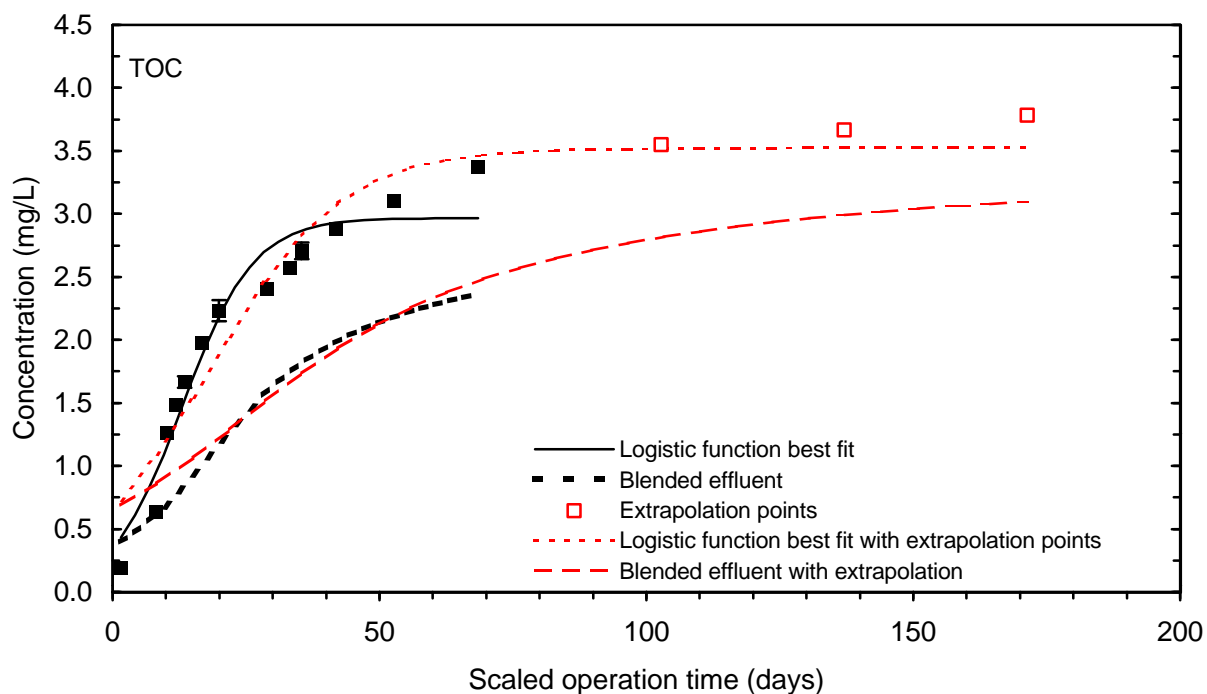


Figure 200 Single contactor and blended effluent extrapolated TOC breakthrough curve for influent pH 9.2 contactor (10 minute EBCT)

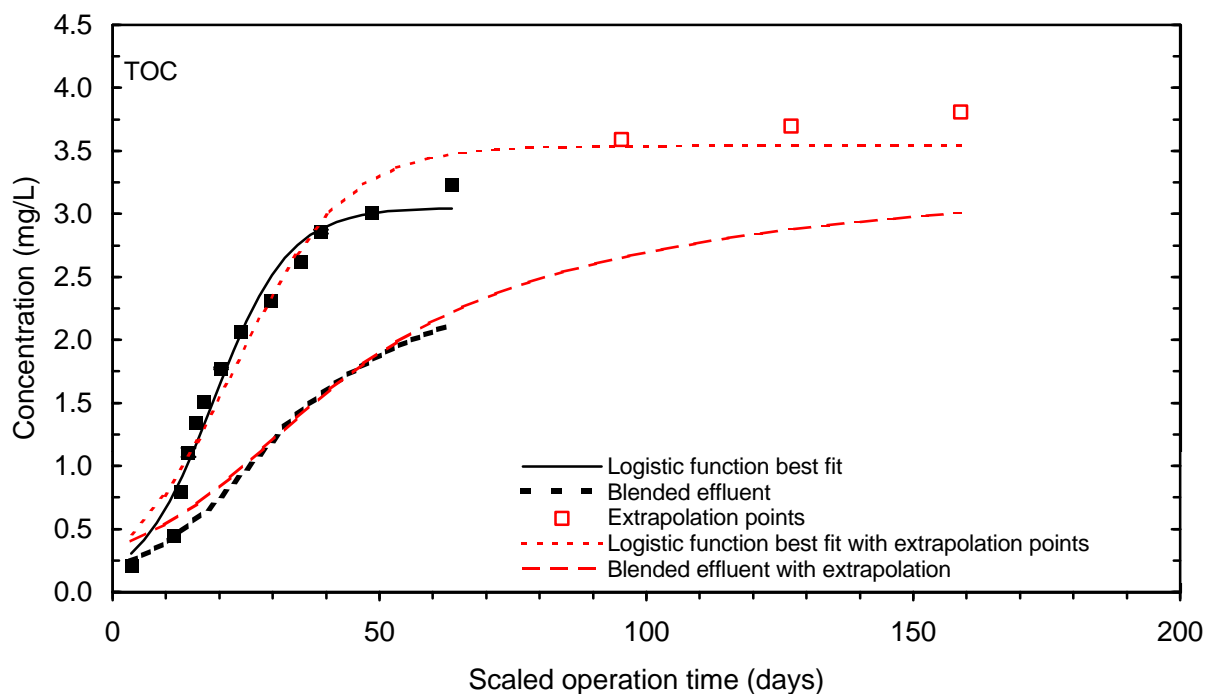


Figure 201 Single contactor and blended effluent extrapolated TOC breakthrough curve for influent pH 8.2 contactor (10 minute EBCT)

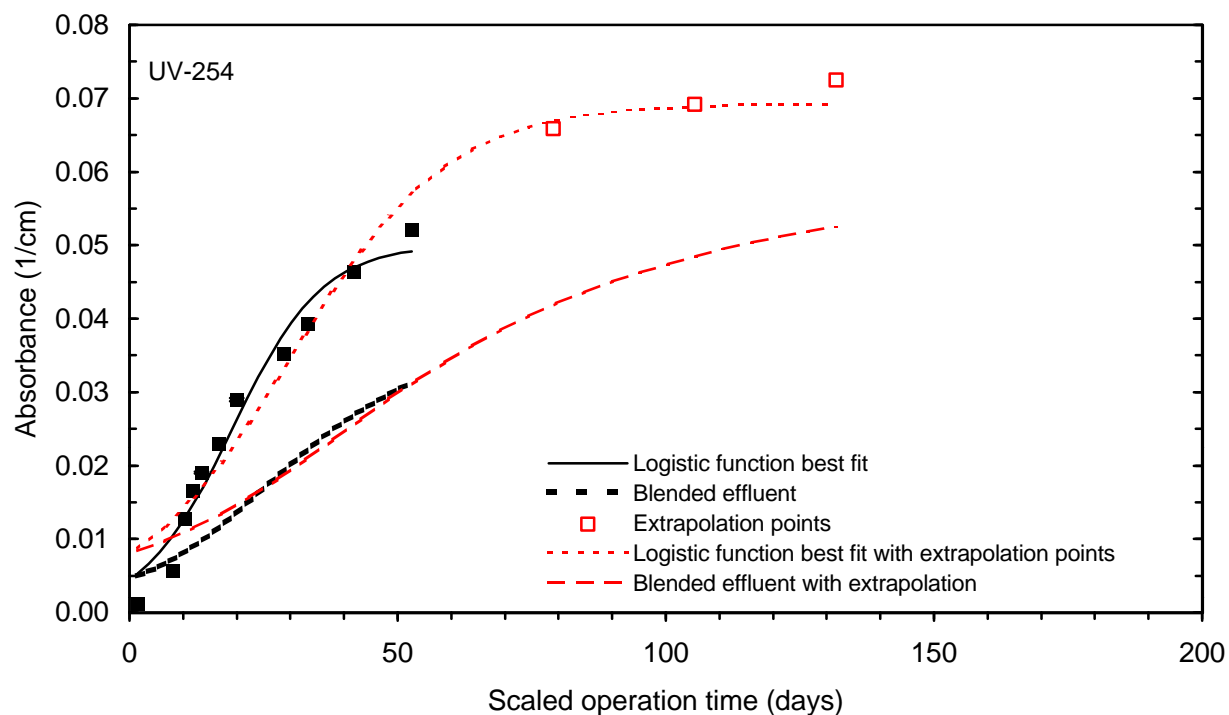


Figure 202 Single contactor and blended effluent extrapolated UV-254 breakthrough curve for influent pH 9.2 contactor (10 minute EBCT)

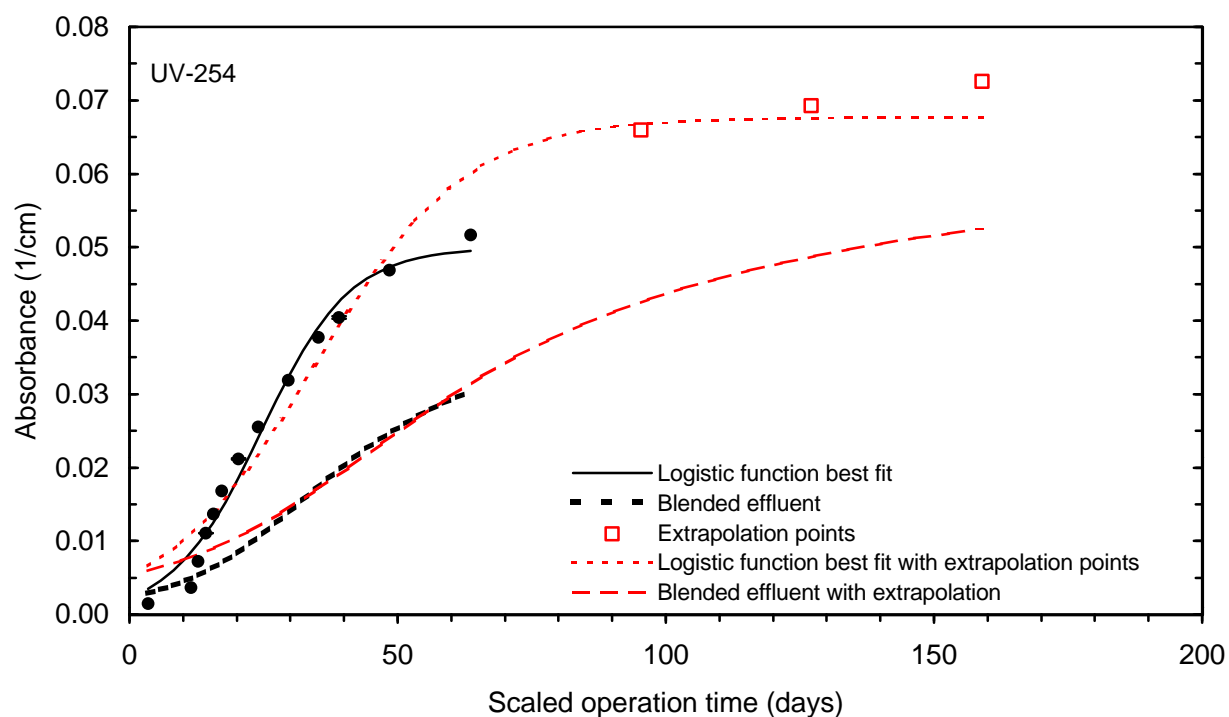


Figure 203 Single contactor and blended effluent extrapolated UV-254 breakthrough curve for influent pH 8.2 contactor (10 minute EBCT)

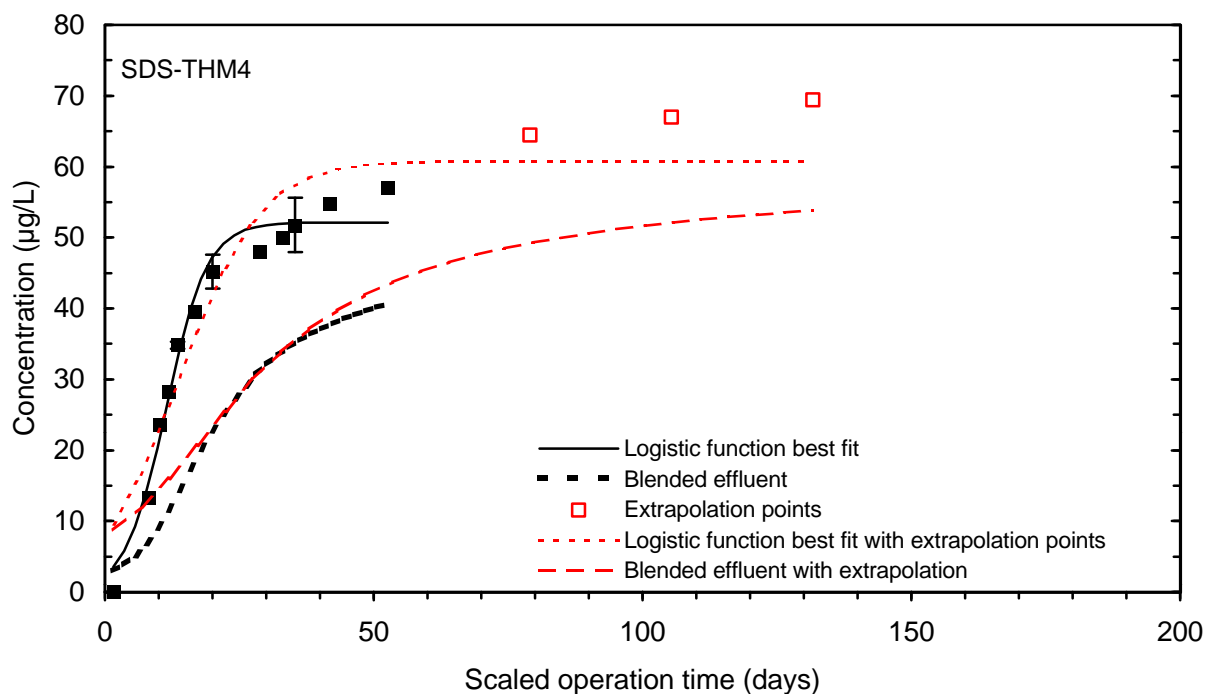


Figure 204 Single contactor and blended effluent extrapolated SDS-THM4 breakthrough curve for influent pH 9.2 contactor (10 minute EBCT)

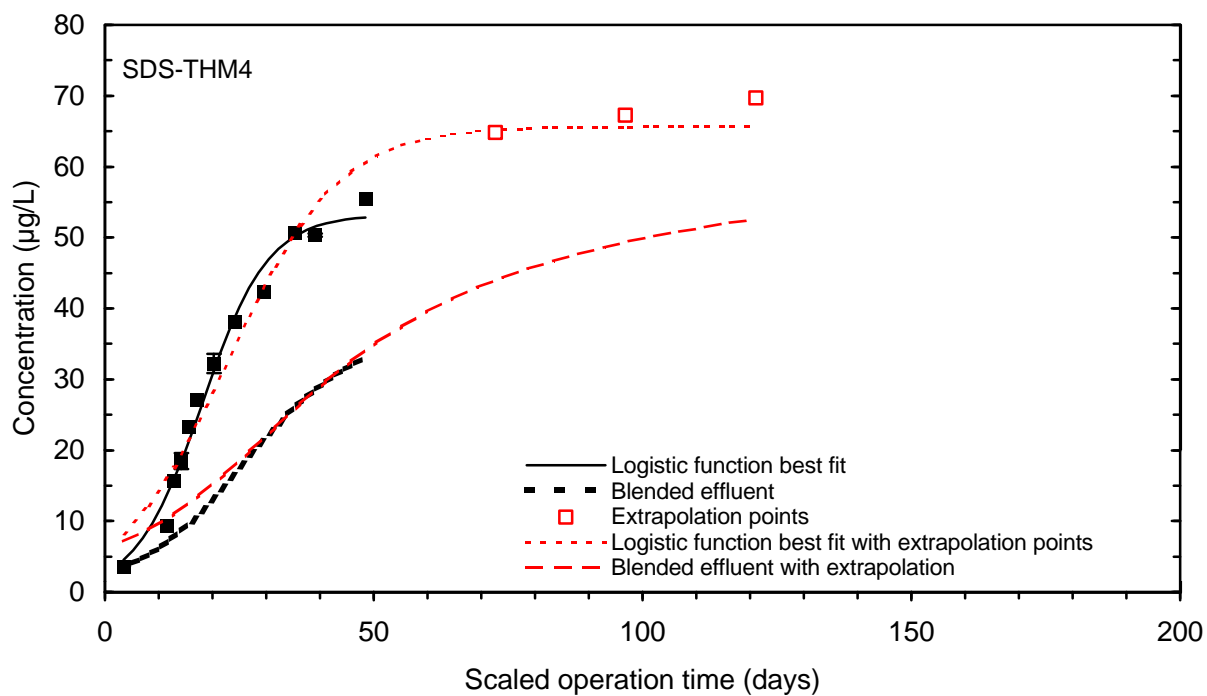


Figure 205 Single contactor and blended effluent extrapolated SDS-THM4 breakthrough curve for influent pH 8.2 contactor (10 minute EBCT)

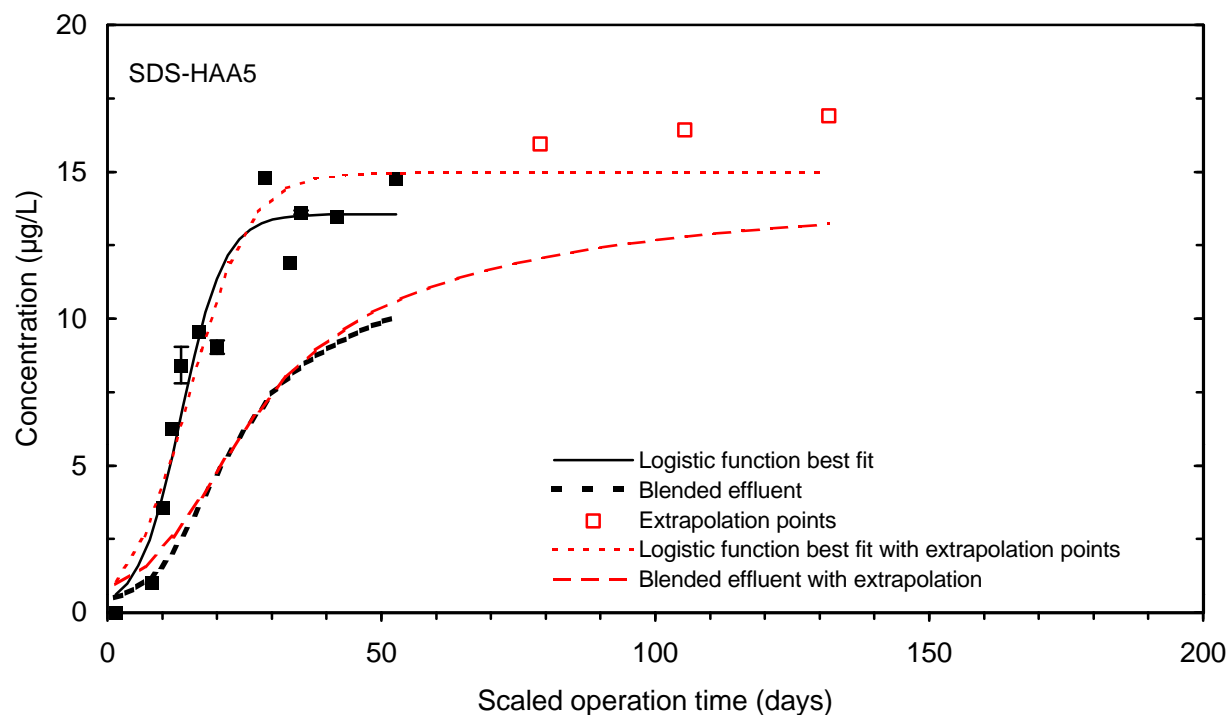


Figure 206 Single contactor and blended effluent extrapolated SDS-HAA5 breakthrough curve for influent pH 9.2 contactor (10 minute EBCT)

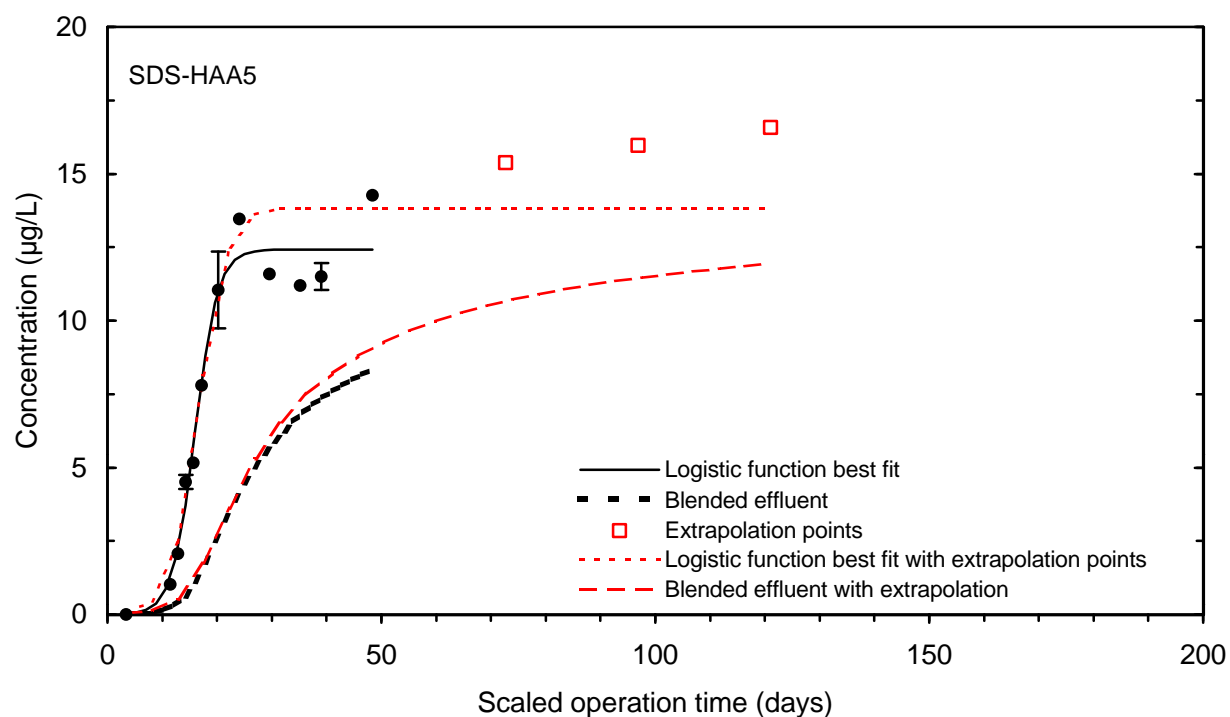


Figure 207 Single contactor and blended effluent extrapolated SDS-HAA5 breakthrough curve for influent pH 8.2 contactor (10 minute EBCT)

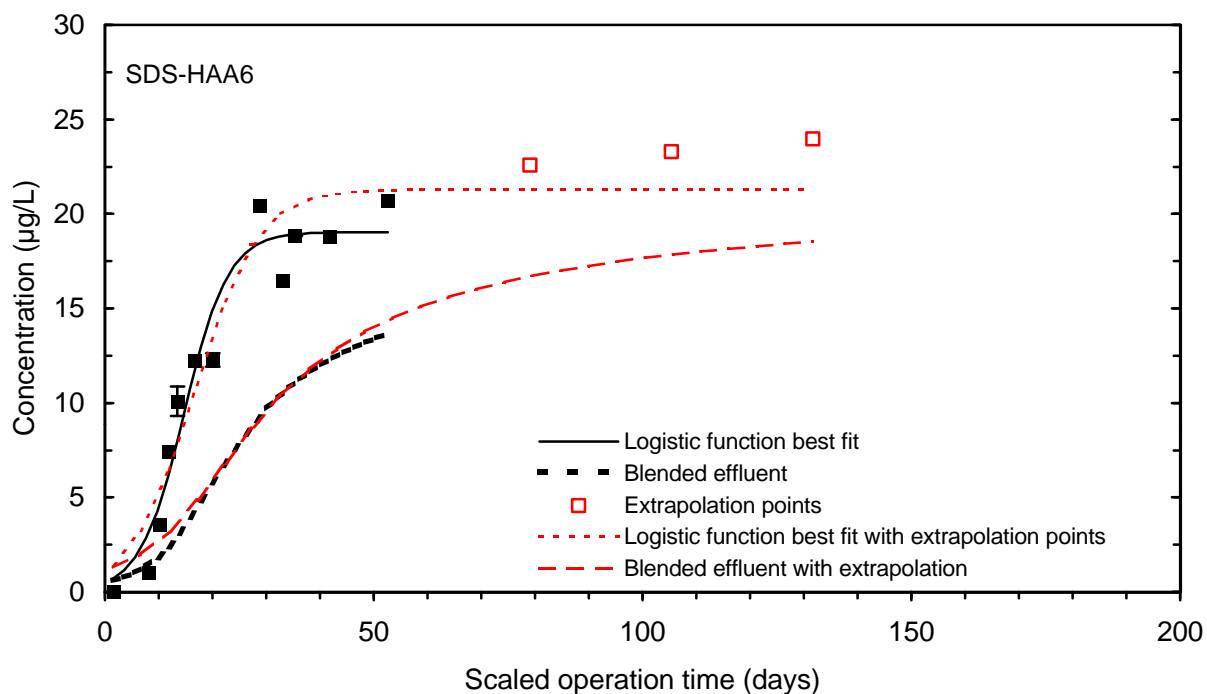


Figure 208 Single contactor and blended effluent extrapolated SDS-HAA6 breakthrough curve for influent pH 9.2 contactor (10 minute EBCT)

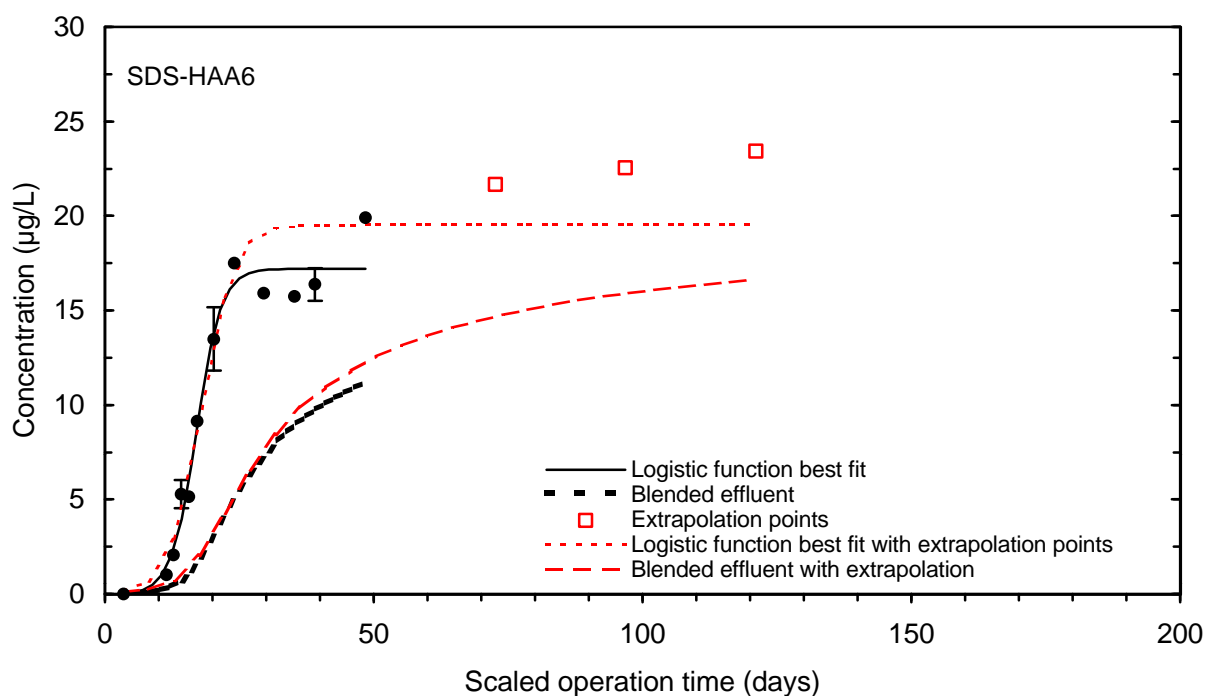


Figure 209 Single contactor and blended effluent extrapolated SDS-HAA6 breakthrough curve for influent pH 8.2 contactor (10 minute EBCT)

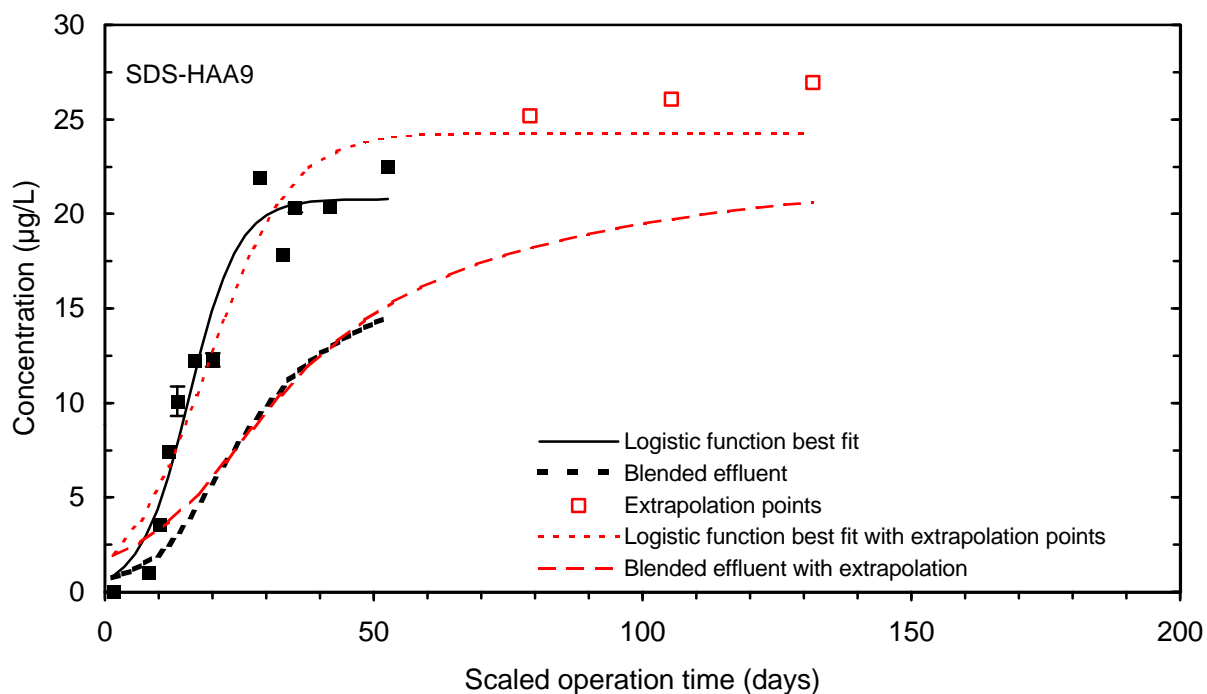


Figure 210 Single contactor and blended effluent extrapolated SDS-HAA9 breakthrough curve for influent pH 9.2 contactor (10 minute EBCT)

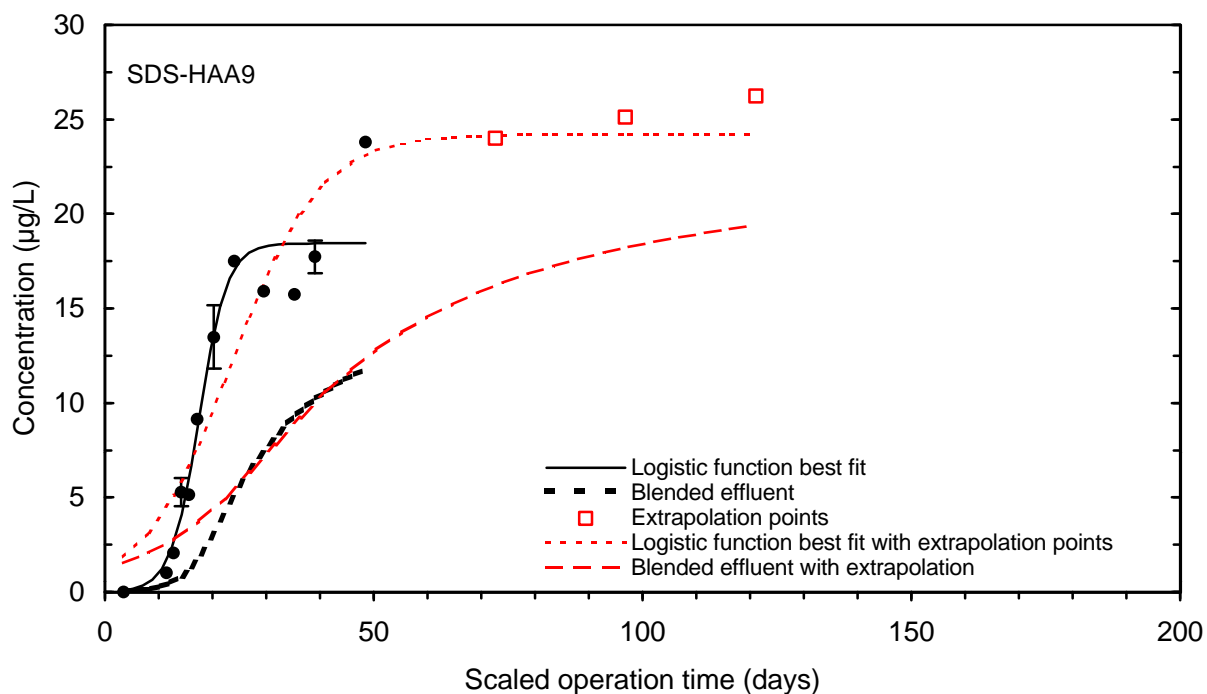


Figure 211 Single contactor and blended effluent extrapolated SDS-HAA9 breakthrough curve for influent pH 8.2 contactor (10 minute EBCT)

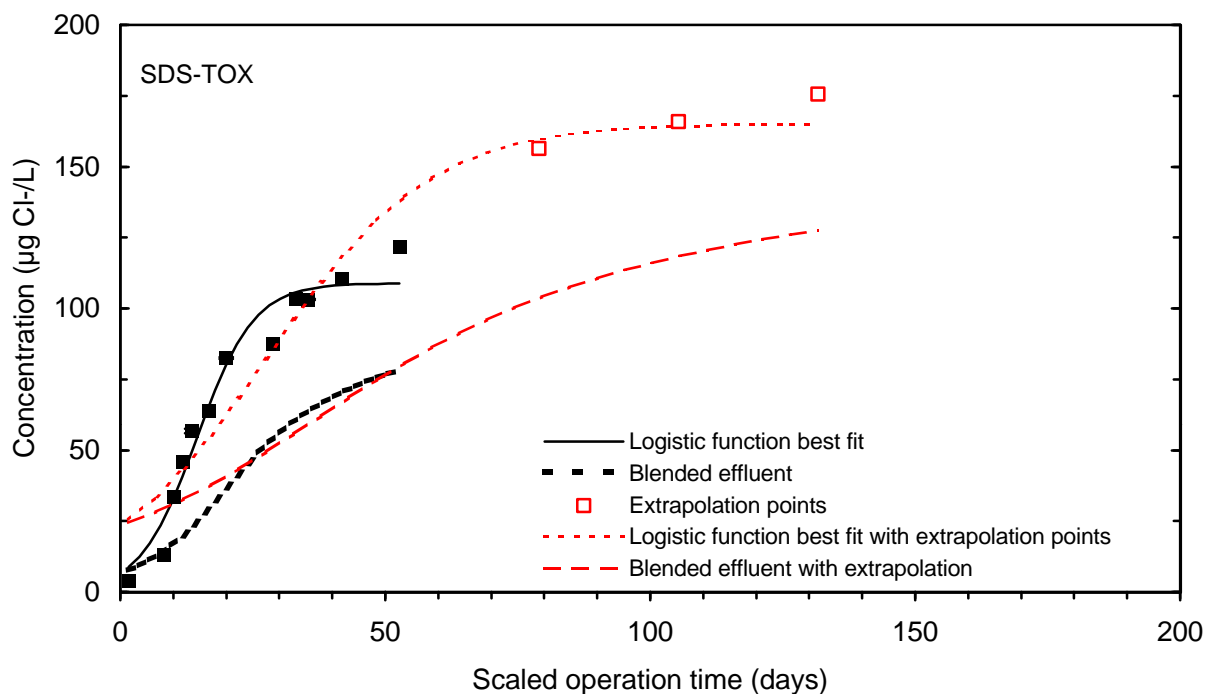


Figure 212 Single contactor and blended effluent extrapolated SDS-TOX breakthrough curve for influent pH 9.2 contactor (10 minute EBCT)

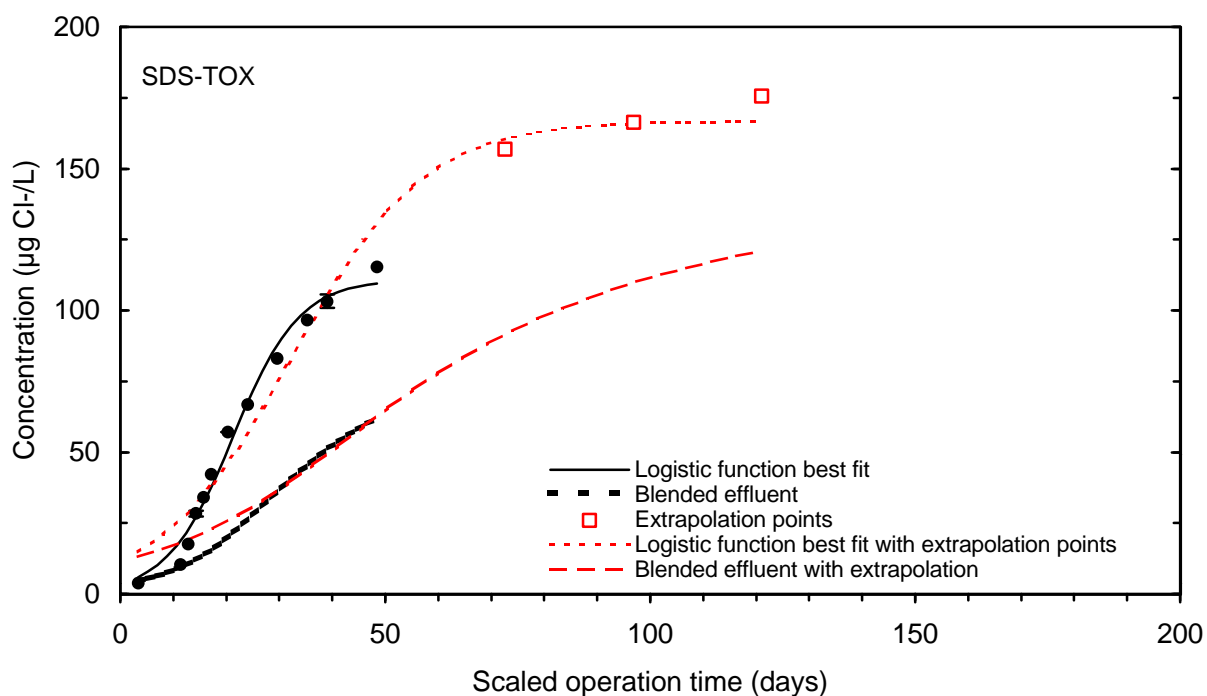


Figure 213 Single contactor and blended effluent extrapolated SDS-TOX breakthrough curve for influent pH 8.2 contactor (10 minute EBCT)

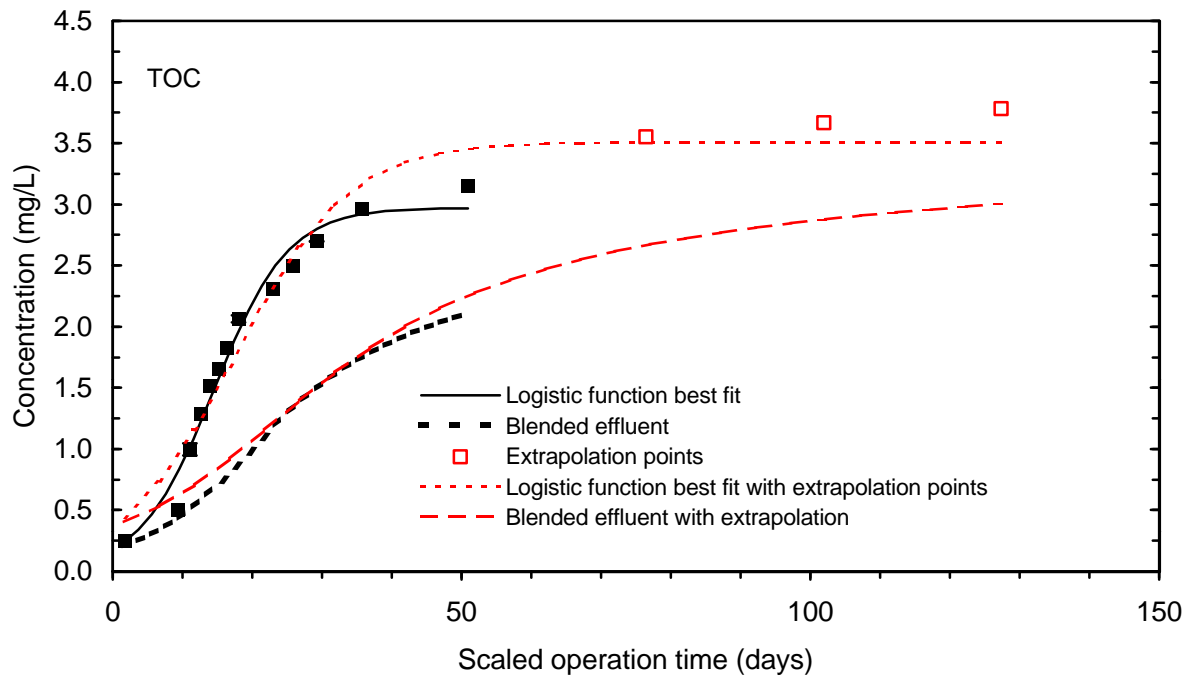


Figure 214 Single contactor and blended effluent extrapolated TOC breakthrough curve for influent pH 8.7 contactor (10 minute EBCT)

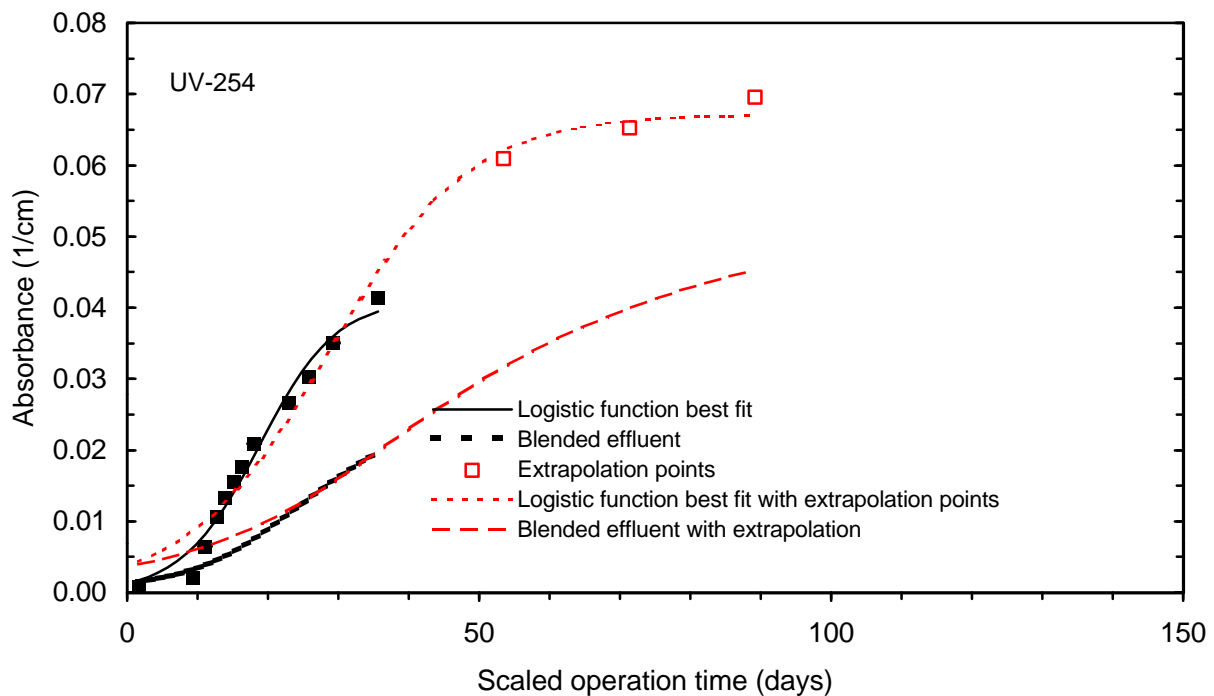


Figure 215 Single contactor and blended effluent extrapolated UV-254 breakthrough curve for contactor (10 minute EBCT)

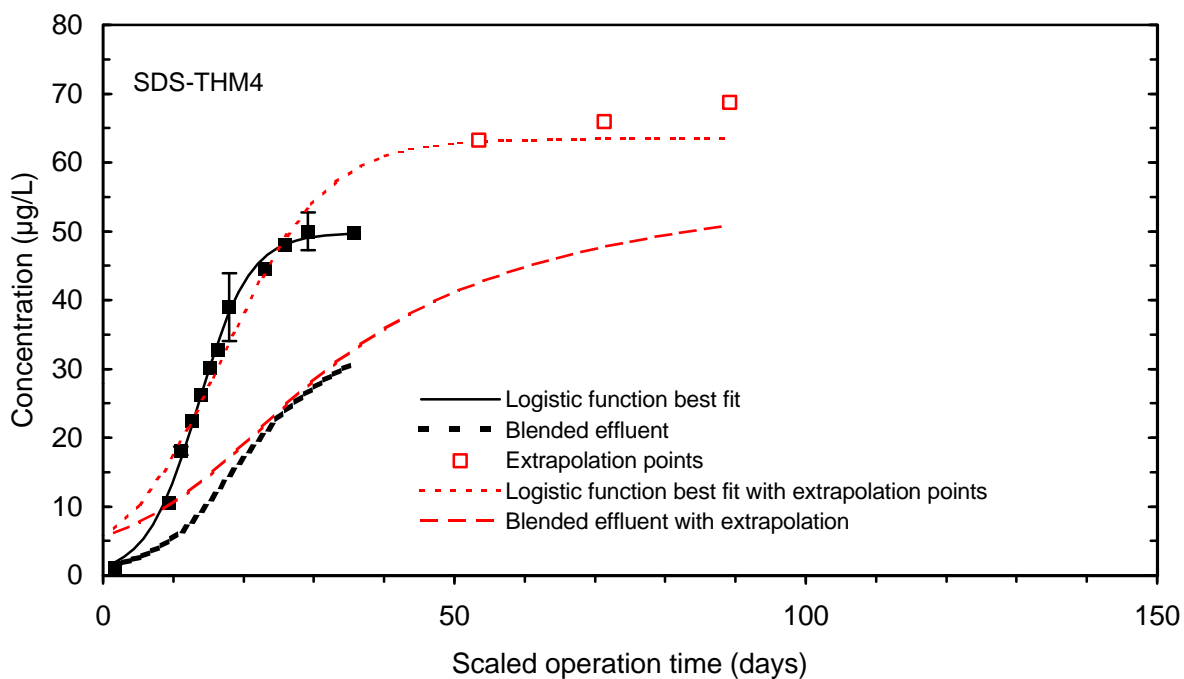


Figure 216 Single contactor and blended effluent extrapolated SDS-THM4 breakthrough curve (10 minute EBCT)

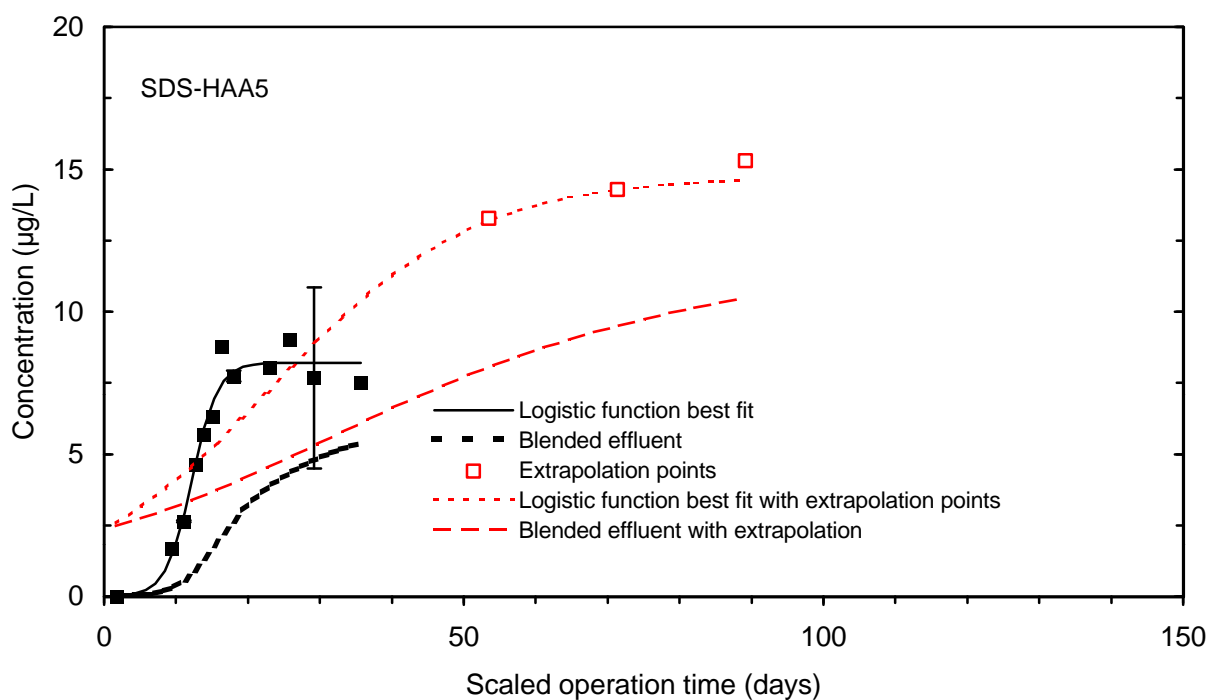


Figure 217 Single contactor and blended effluent extrapolated SDS-HAA5 breakthrough curve (10 minute EBCT)

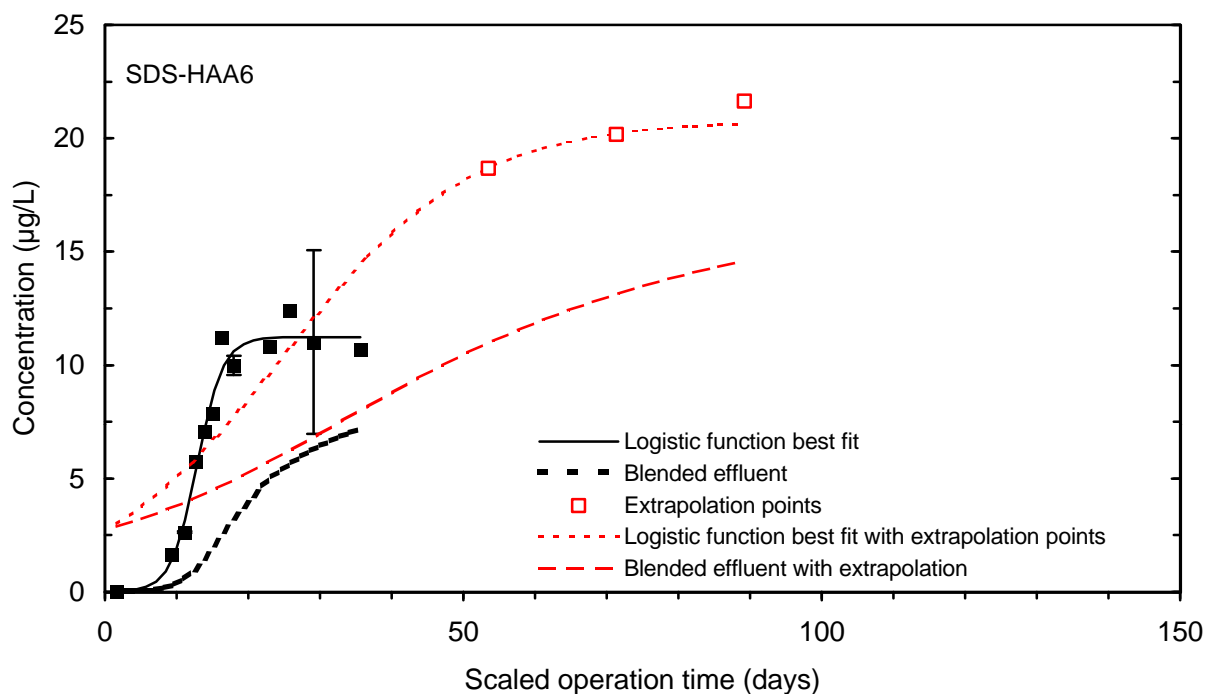


Figure 218 Single contactor and blended effluent extrapolated SDS-HAA6 breakthrough curve for influent pH 8.7 contactor (10 minute EBCT)

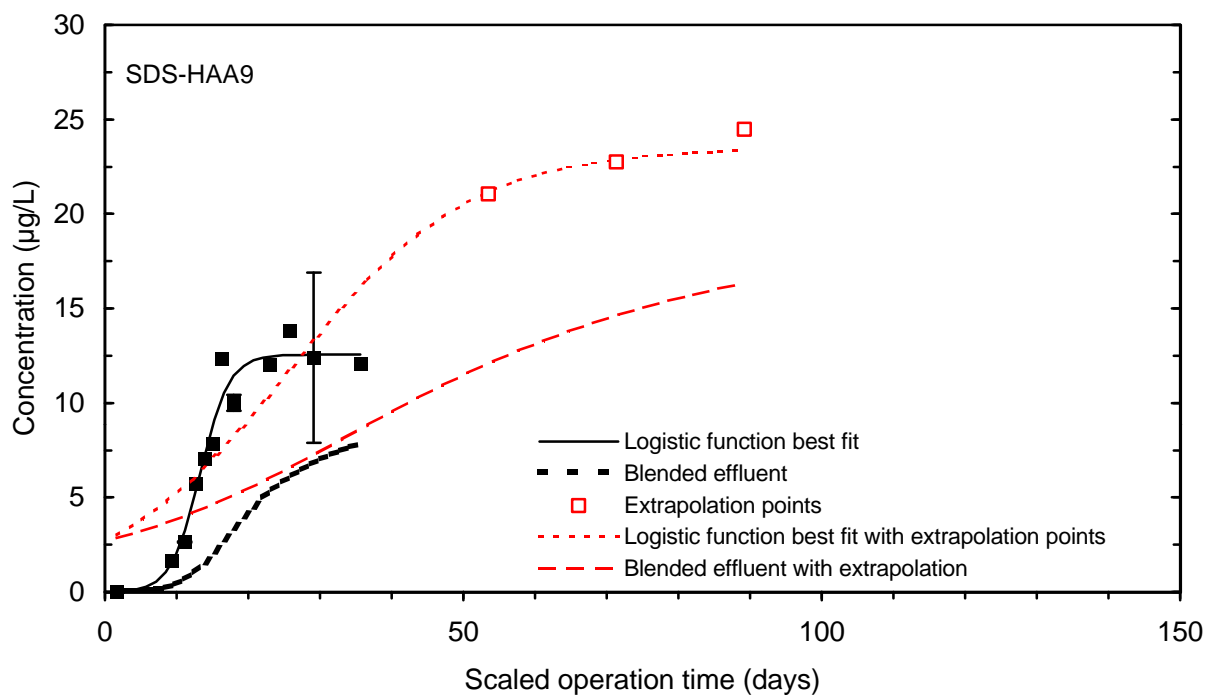


Figure 219 Single contactor and blended effluent extrapolated SDS-HAA9 breakthrough curve for influent pH 8.7 contactor (10 minute EBCT)

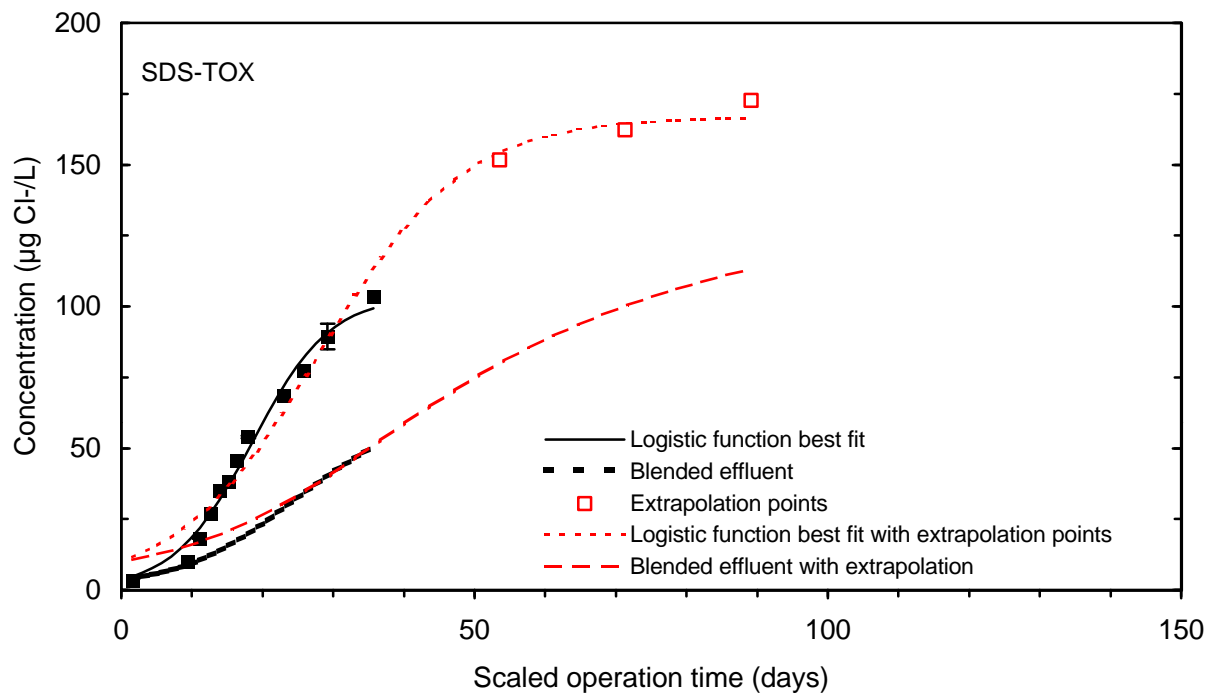


Figure 220 Single contactor and blended effluent extrapolated SDS-TOX breakthrough curve for influent pH 8.7 contactor (10 minute EBCT)

11

*Normalized DBP Precursor
Breakthrough*

11 Normalized DBP Precursor Breakthrough

An additional method of analyzing GAC breakthrough data is to divide the GAC effluent concentrations of each parameter by their respective GAC influent concentrations. The relative breakthrough patterns of each parameter can then be compared on a percent breakthrough level. This type of analysis helps determine whether surrogates for DBP precursor breakthrough are reliable indicators of DBP precursor breakthrough. Furthermore, the normalized comparison analysis can determine how well the surrogates serve as indicators of DBP precursor breakthrough.

The normalized breakthrough patterns for all parameters for the 10 minute EBCT contactor are shown in Figure 221. High initial relative levels of chlorine demand are present, due mostly to the presence of inorganic chlorine demand. The normalized breakthrough of TOC occurs earlier and remains at a higher percent breakthrough than DBP precursors throughout most the run time. SDS-THM4 normalized breakthrough occurs at virtually the same rate as TOC breakthrough: for this run, TOC served as a direct indicator of SDS-THM4 breakthrough. SDS-HAA breakthrough initially lagged normalized TOC breakthrough, but peaked at or above normalized TOC breakthrough for a short period during the run. Normalized breakthrough of UV₂₅₄ matched that of SDS-TOX, and both occurred much later than TOC. For the 10 minute EBCT contactor, therefore, TOC breakthrough could be used as a conservative indicator of HAA and TOX precursor breakthrough, and a direct indicator of THM4 precursor breakthrough.

Similar patterns were observed for the 20 minute EBCT contactor (Figure 222). However, towards the end of the run, normalized SDS-THM4 breakthrough exceeded normalized TOC breakthrough. For the 5.0 minute EBCT run, Figure 223, the normalized SDS-THM4 breakthrough matched normalized TOC breakthrough throughout the entire run. Normalized SDS-HAA levels at first matched normalized TOC levels, and towards the end of the run (above 70 percent TOC breakthrough) exceeded them. Similar results were obtained during the 12.5 minute EBCT run, with normalized SDS-THM4 and SDS-HAA levels at or above normalized TOC breakthrough (Figure 224). For the 15 minute EBCT run, shown in Figure 225, normalized SDS-THM4 and SDS-HAA levels exceeded normalized TOC levels throughout most of the run.

The normalized breakthrough profiles for the three influent pH runs showed similar results (Figures 226 through 228). Normalized SDS-THM4 matched normalized TOC breakthrough closely during all three runs, as did normalized SDS-TOX and normalized UV₂₅₄ breakthrough. Normalized SDS-HAA breakthrough roughly matched normalized TOC breakthrough, exceeding it at times for the influent pH 9.2 and 8.2 runs. For the influent pH 8.7 run, normalized SDS-HAA breakthrough reached a plateau at levels well below normalized TOC breakthrough.

During all runs, normalized UV₂₅₄ breakthrough matched normalized SDS-TOX breakthrough very closely. Thus, percent UV₂₅₄ breakthrough can be used as a predictive tool for TOX breakthrough, once the influent to GAC SDS-TOX concentration is known.

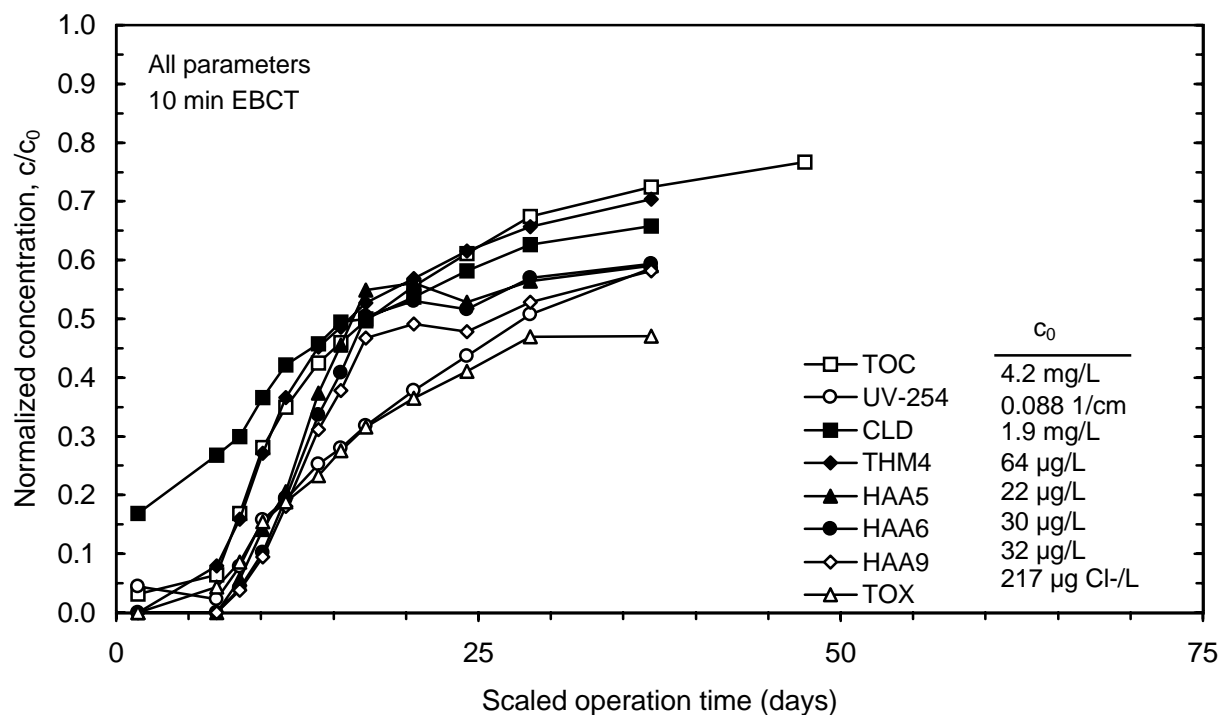


Figure 221 Normalized breakthrough patterns for 10 minute EBCT contactor

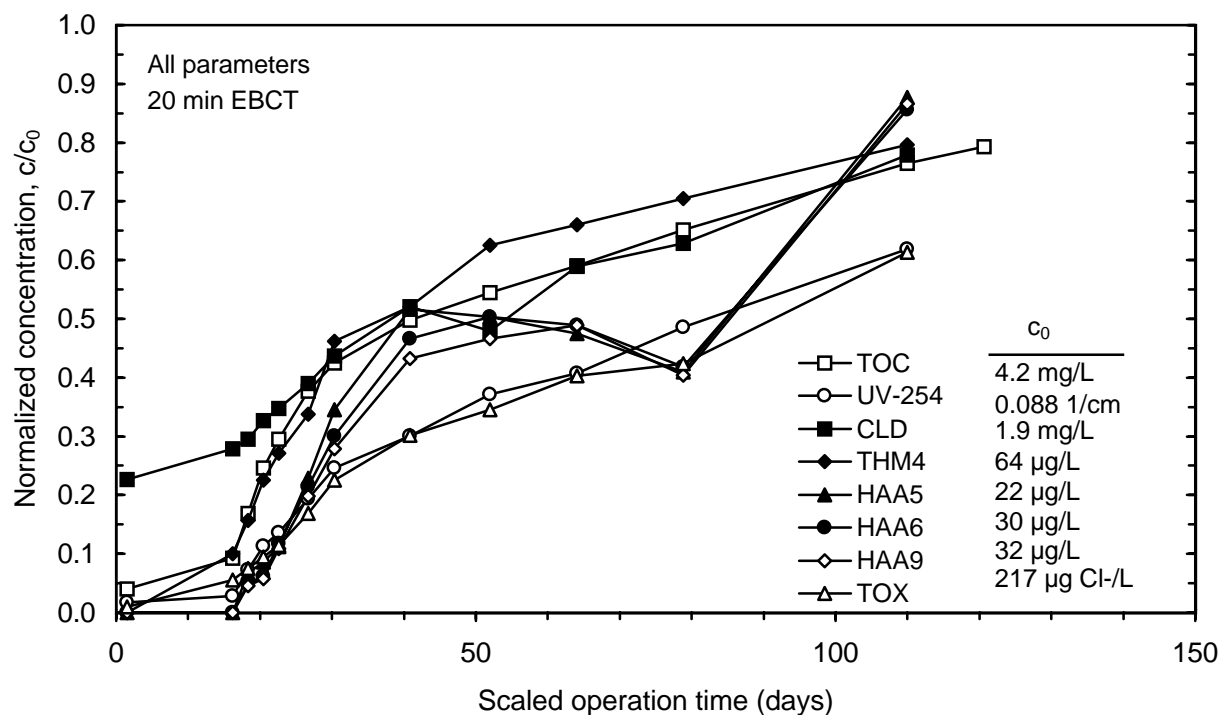


Figure 222 Normalized breakthrough patterns for 20 minute EBCT contactor

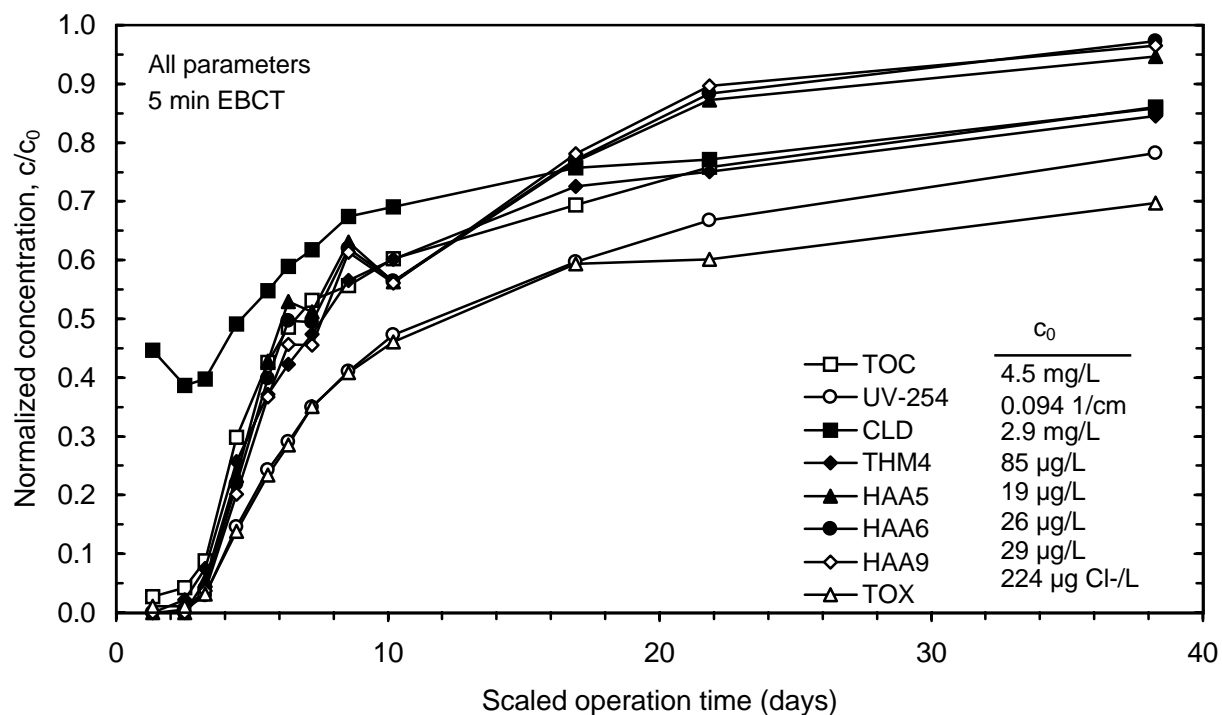


Figure 223 Normalized breakthrough patterns for 5 minute EBCT contactor

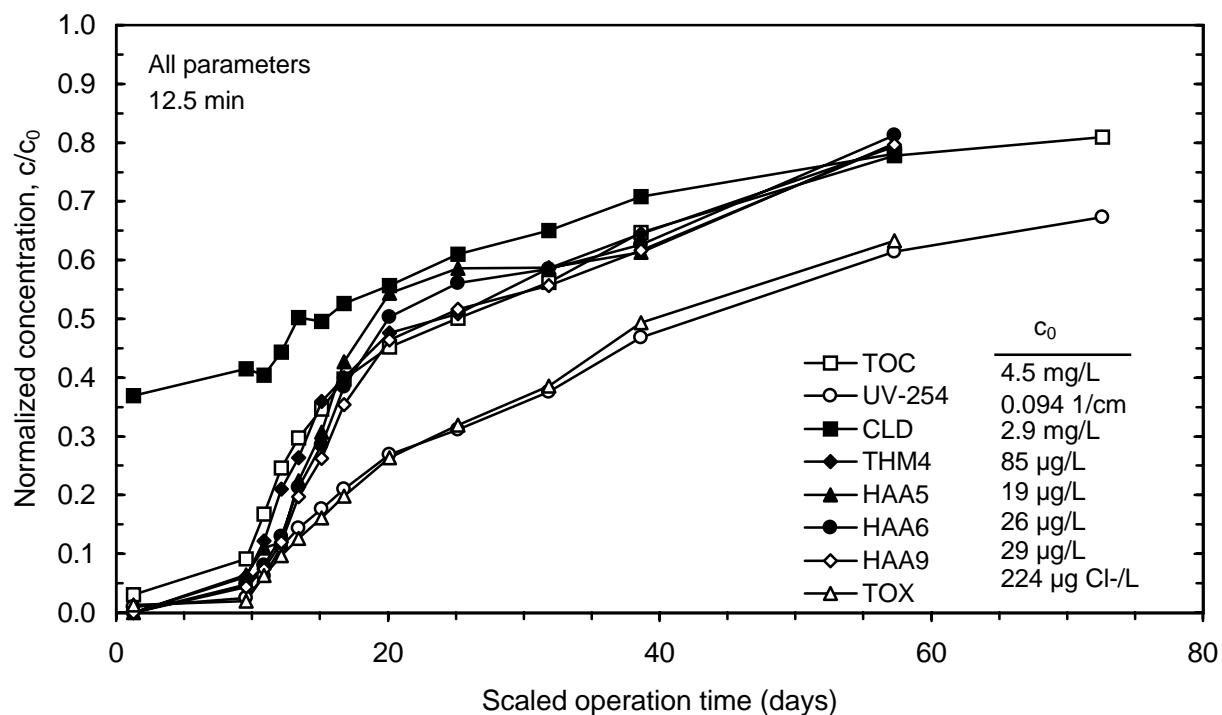


Figure 224 Normalized breakthrough patterns for 12.5 minute EBCT contactor

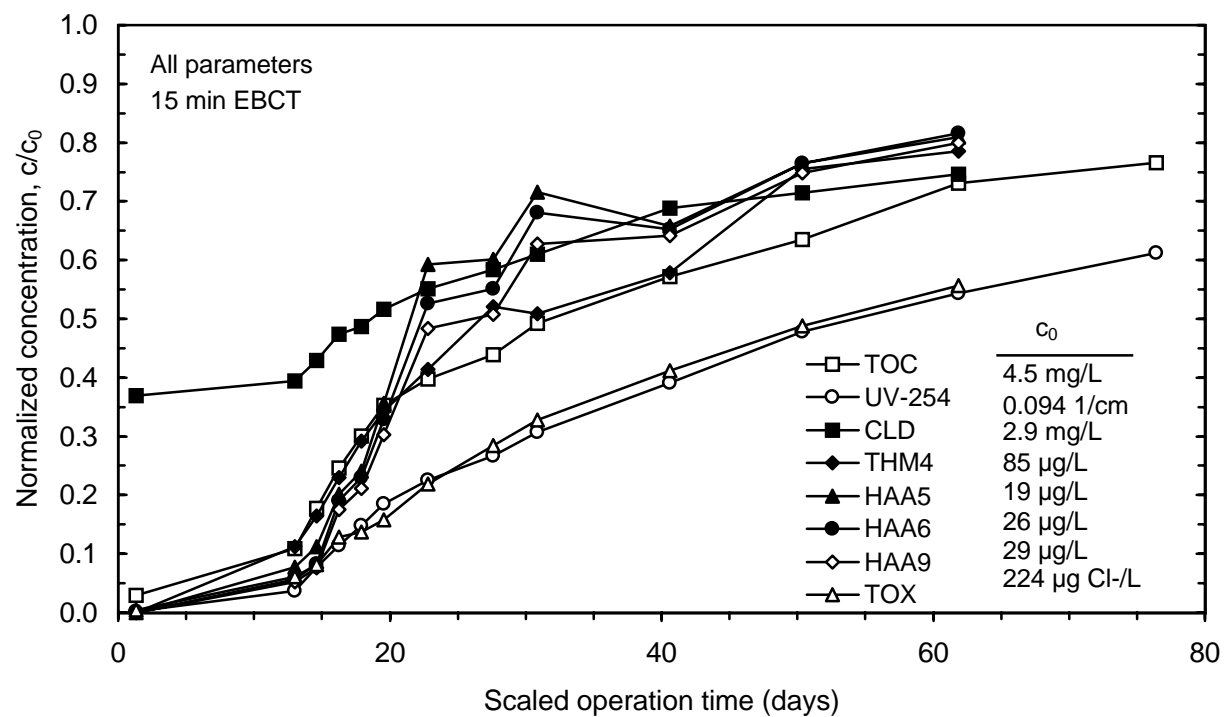


Figure 225 Normalized breakthrough patterns for 15 minute EBCT contactor

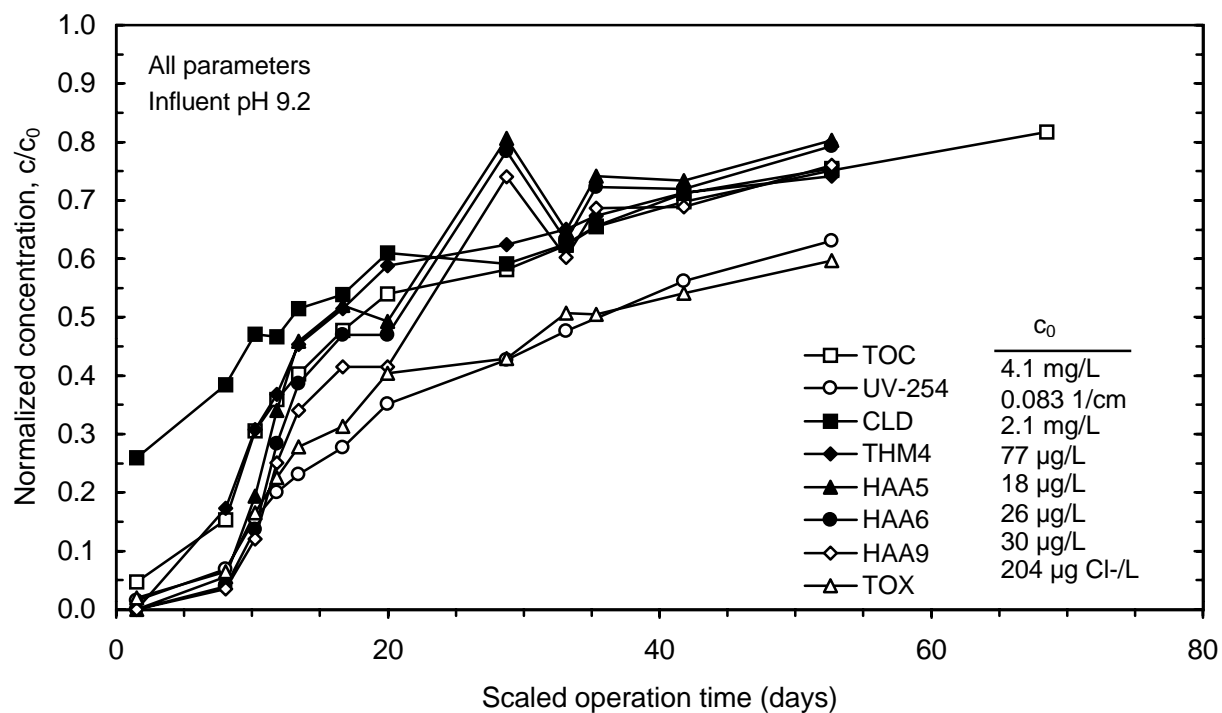


Figure 226 Normalized breakthrough patterns for influent pH 9.2 contactor (10 minute EBCT)

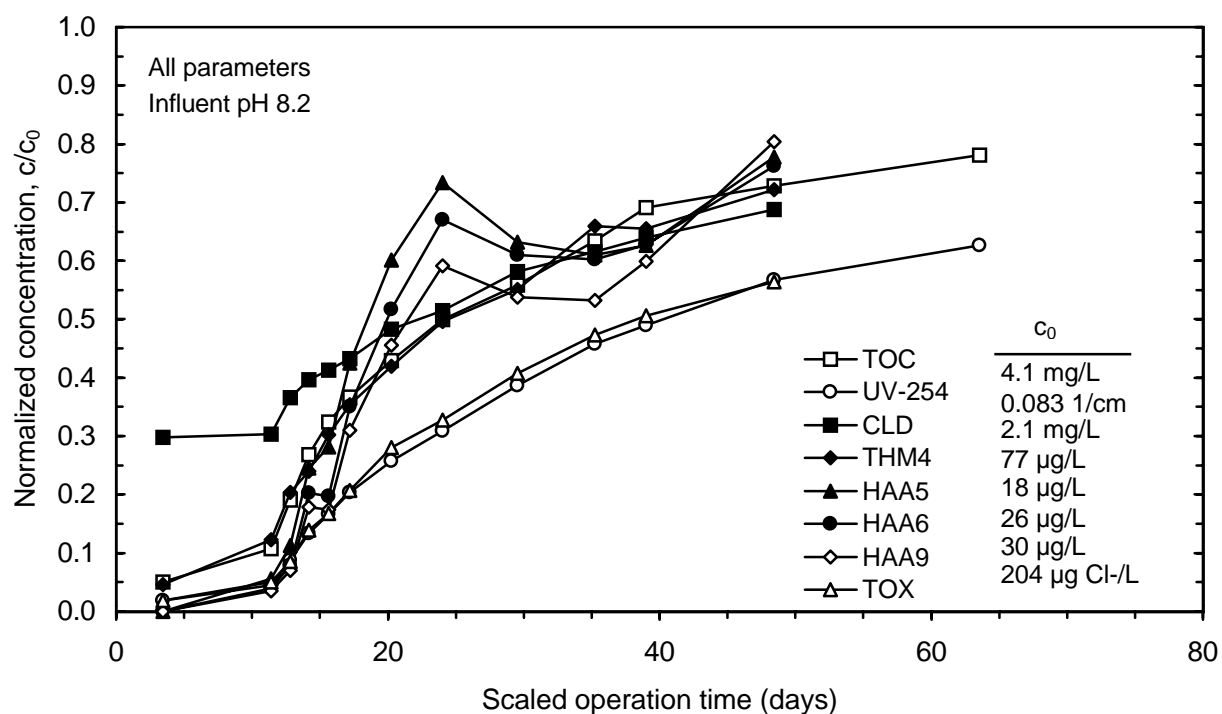


Figure 227 Normalized breakthrough patterns for influent pH 8.2 contactor (10 minute EBCT)

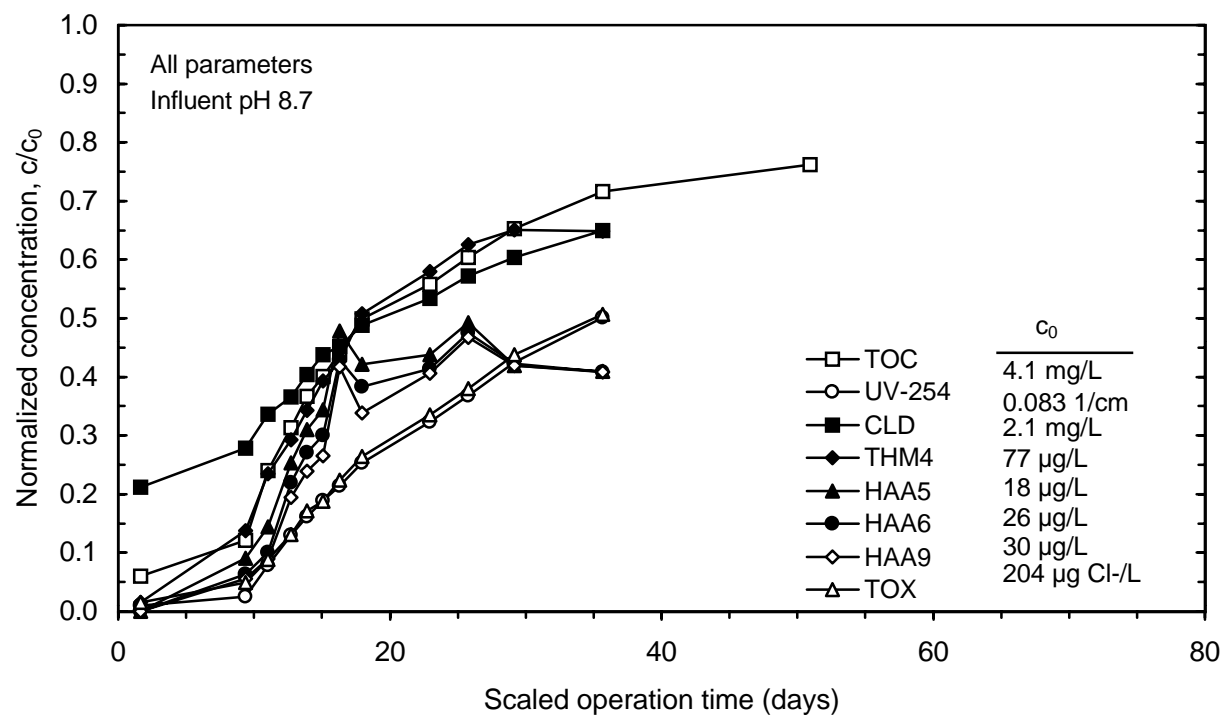


Figure 228 Normalized breakthrough patterns for influent pH 8.7 contactor (10 minute EBCT)

12

Duplicate RSSCT Performance Comparison

12 Duplicate RSSCT Performance Comparison

As part of the EBCT study, DBP precursor removal by a 10 minute EBCT contactor at an influent pH of 9.2 was evaluated. The influent water for this run was sampled on April 20, 1998. During the influent pH study, a 10 minute EBCT contactor with influent pH 9.2 was again operated, to provide a direct comparison of the results of the influent pH 8.2 and 8.7 contactors. The water for the influent pH study was sampled on June 19, 1998. As was shown in Table 18, the influent water quality for the two runs showed little difference between most measured parameters, with the exception of SDS-THM4, which showed a 25 percent RPD between the two sessions.

Figures 229 and 230 compare the TOC and UV₂₅₄ breakthrough profiles generated during the two runs. Both curves matched very well until an effluent TOC concentration of about 2.3 mg/L and an effluent UV₂₅₄ value of 0.030 1/cm were reached. After this point in run time (about 20 days) the breakthrough curves diverged slightly. The curves with the higher measured influent concentrations showed higher levels of breakthrough. The difference in influent TOC concentration and UV₂₅₄ was 5 and 6 percent, respectively. SDS-THM4 breakthrough is compared in Figure 231. The breakthrough profile for the run with higher influent SDS-THM4 concentration was shifted slightly to the left. The difference in breakthrough between the two curves increased after 15 days of run time. Although some variability in influent SDS-HAA levels was observed, effluent SDS-HAA breakthrough profiles, shown in Figures 232 through 234, compared very closely between the two runs. SDS-TOX breakthrough also showed excellent agreement between the two runs (Figure 235); SDS-TOX influent levels showed only a 2 percent RPD. Other than a difference in inorganic demand the two runs showed similar rates of breakthrough of SDS-CLD, as shown in Figure 236.

Figures 237 through 240 show the breakthrough of SDS-THM species for the two contactors. The difference in SDS-THM4 breakthrough was mainly due to differences in SDS-BDCM and SDS-CHBr₃ breakthrough. Influent levels of these analytes also showed significant differences. The breakthrough of SDS-BDCM, Figure 239, was very similar for both runs, although the influent formed concentrations were not. Comparisons of the breakthrough of SDS-HAA species are shown in Figures 241 through 249. The main contributors to SDS-HAA6 formation, DCAA, DBAA, and BCAA showed little difference in breakthrough profiles between the two contactors.

With the exception of SDS-THM4, the two runs yielded similar results. A summary comparison of run times to GAC effluent criteria for the two runs is given in Table 40. The effluent run time to the placeholder for Stage 2 THM4 MCL differed by 24 percent between the two runs, matching the 25 percent difference in influent SDS-THM4 to each contactor.

Parameter	Units	Value	Run time (days)		Relative difference (days)	Relative percent difference (RPD)
			April	June		
TOC	(mg/L)	2.0	16	17	1	3
		1.0	10	9	0	2
		$c/c_0 = 50\%^{\dagger}$	17	17	0	1
UV-254	(1/cm)	0.040	25	*	1	9
		0.020	13	14		
		$c/c_0 = 50\%^{\dagger}$	28	*		
SDS-THM4	(µg/L)	80	*	*	3	24
		64	*	*		
		32	16	13		
SDS-HAA5	(µg/L)	48	*	*		
		24	*	*		
SDS-HAA6	(µg/L)	48	*	*		
		24	*	*		
SDS-HAA9	(µg/L)	48	*	*		
		24	*	*		
SDS-TOX	(µg Cl ⁻ /L)	120	*	51	0	0
		70	18	18		

[†]GAC effluent concentration equal to 50 percent of the average influent concentration.

*Effluent concentration criteria not exceeded during GAC run time, calculated values are left blank.

Table 40 Run time performance comparison to listed GAC effluent run time criteria for duplicate RSSCT

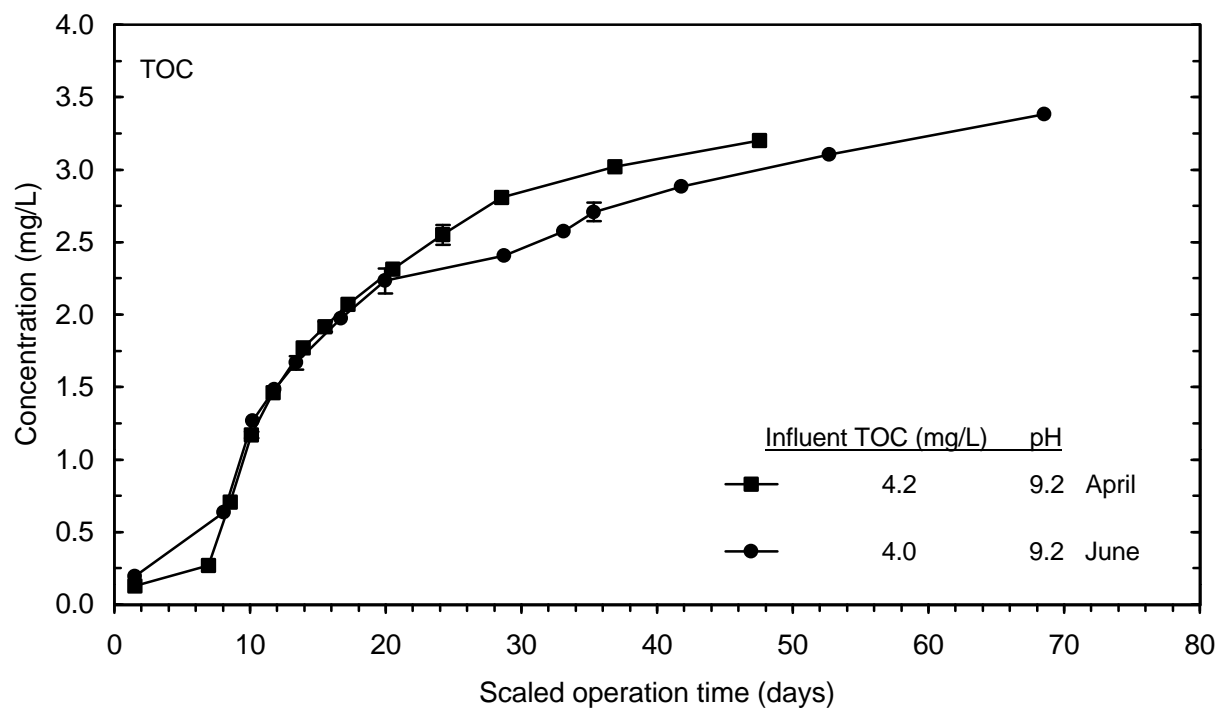


Figure 229 TOC breakthrough comparison for two 10 minute EBCT contactors

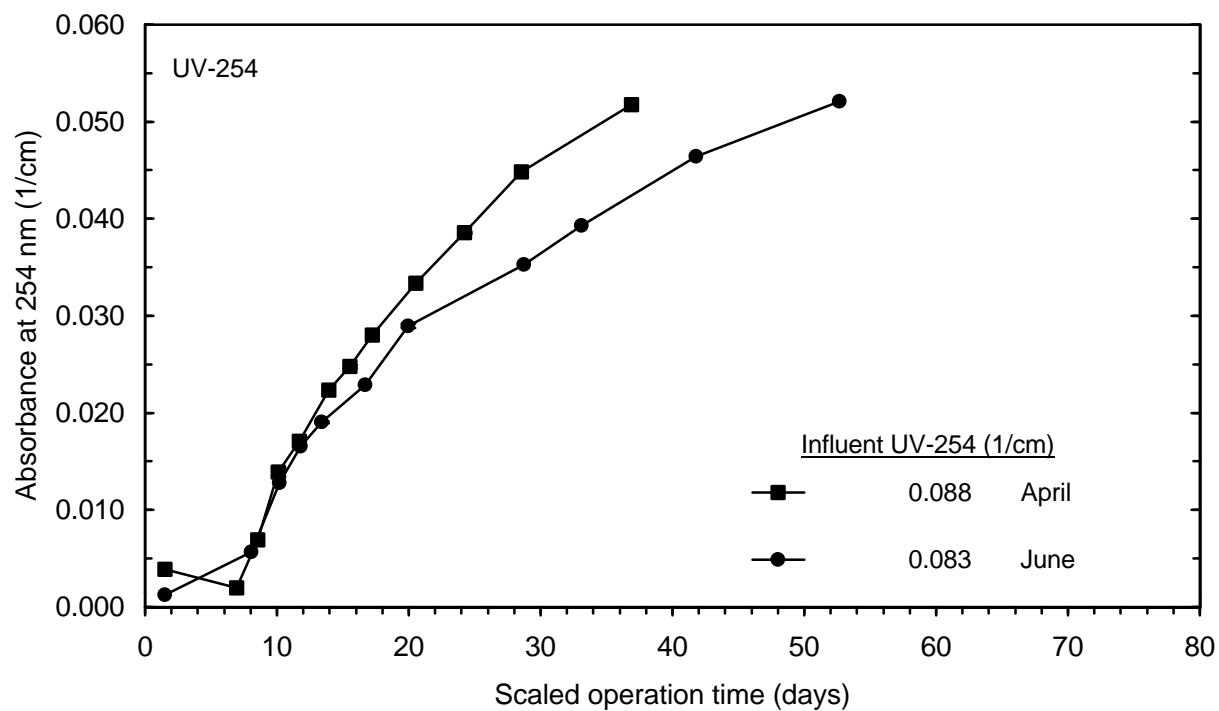


Figure 230 UV-254 breakthrough comparison for two 10 minute EBCT contactors

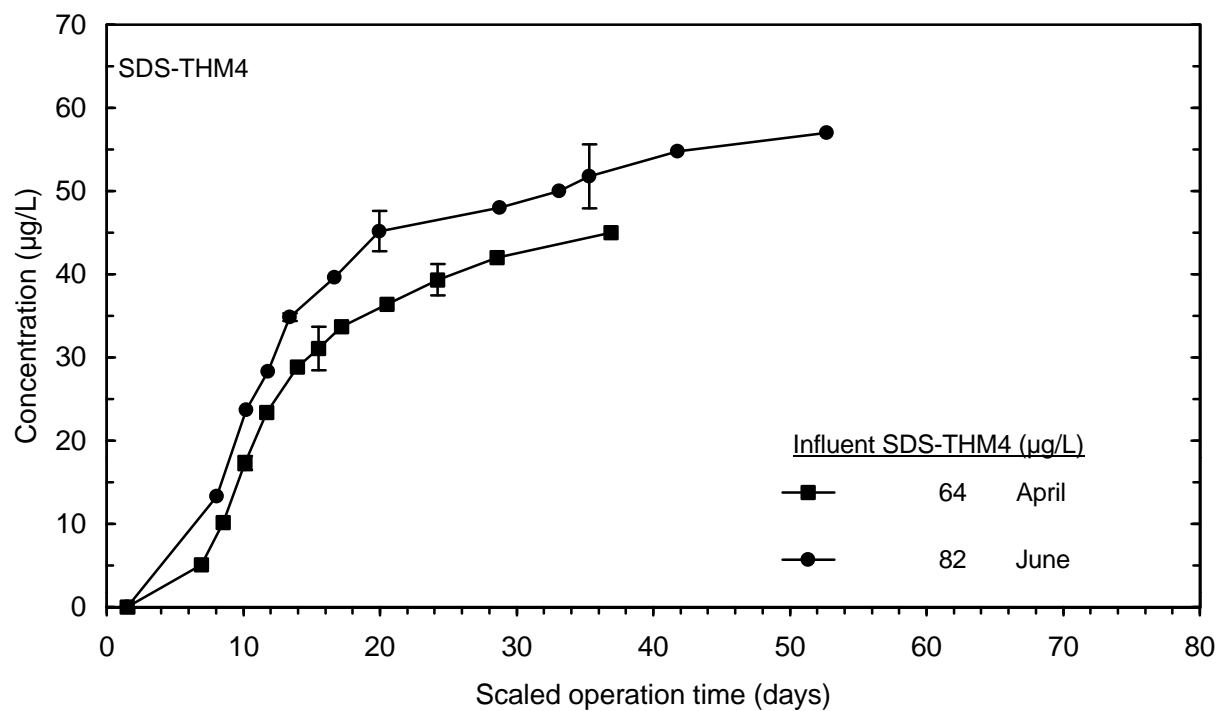


Figure 231 SDS-THM4 breakthrough comparison for two 10 minute EBCT contactors

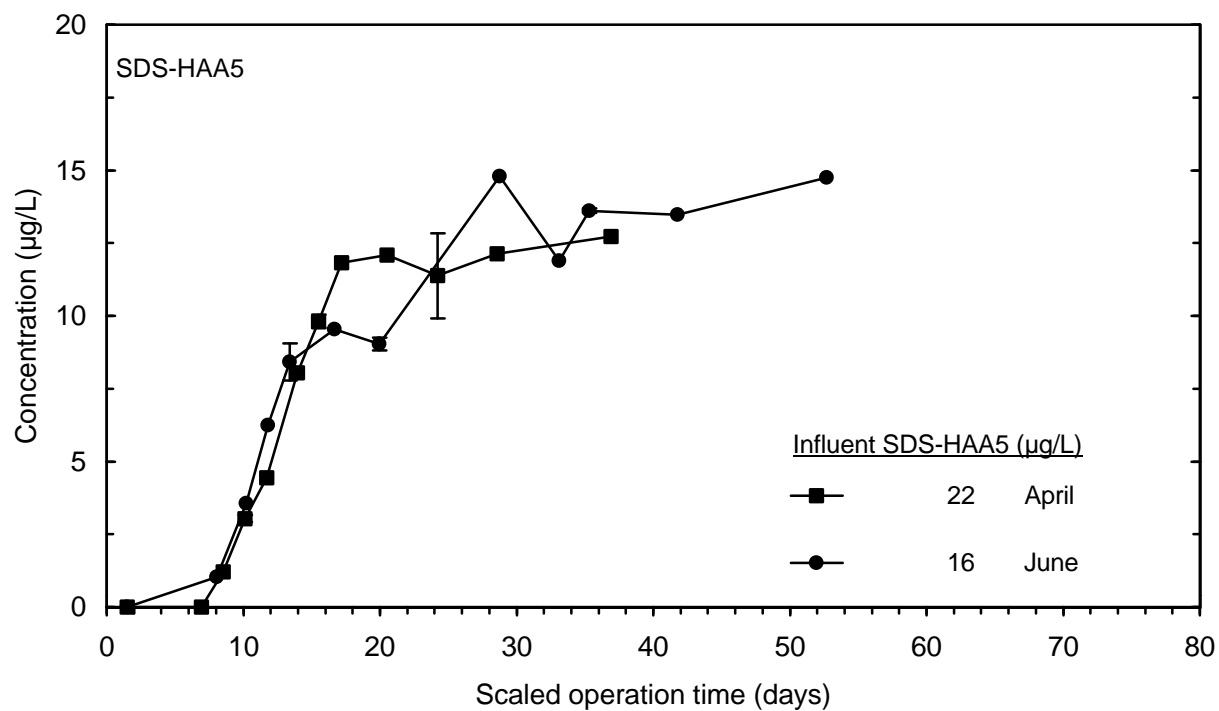


Figure 232 SDS-HAA5 breakthrough comparison for two 10 minute EBCT contactors

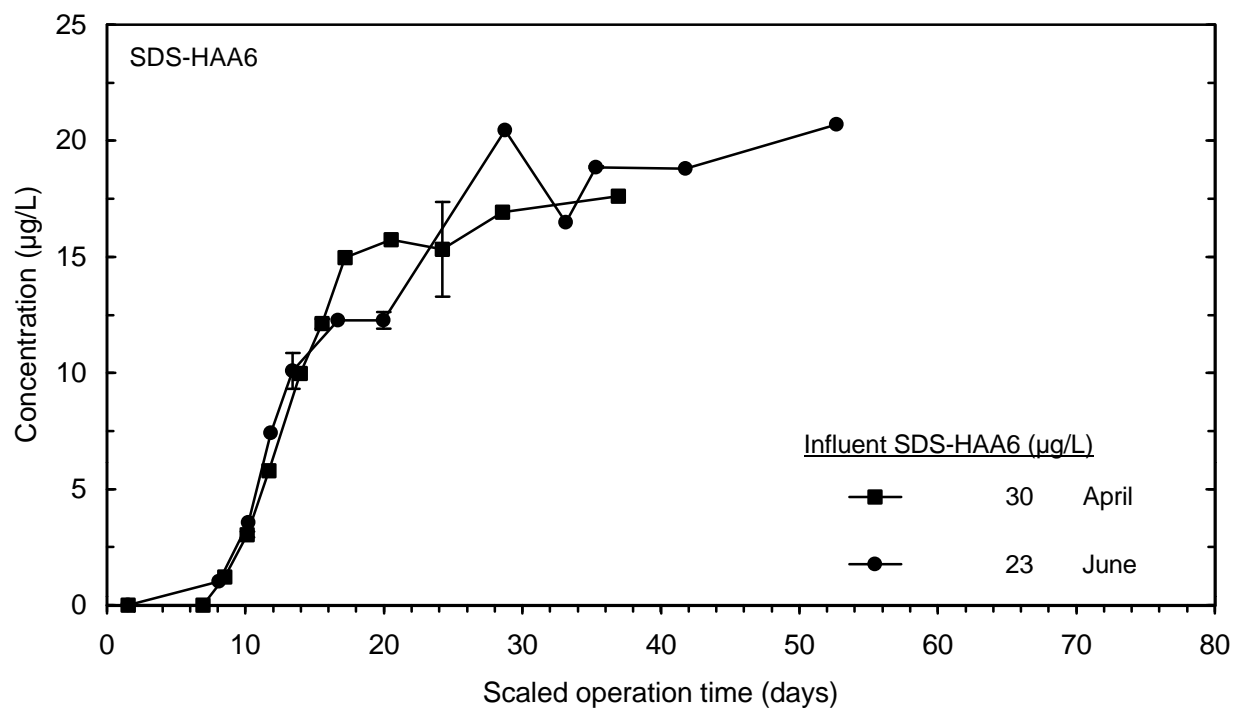


Figure 233 SDS-HAA6 breakthrough comparison for two 10 minute EBCT contactors

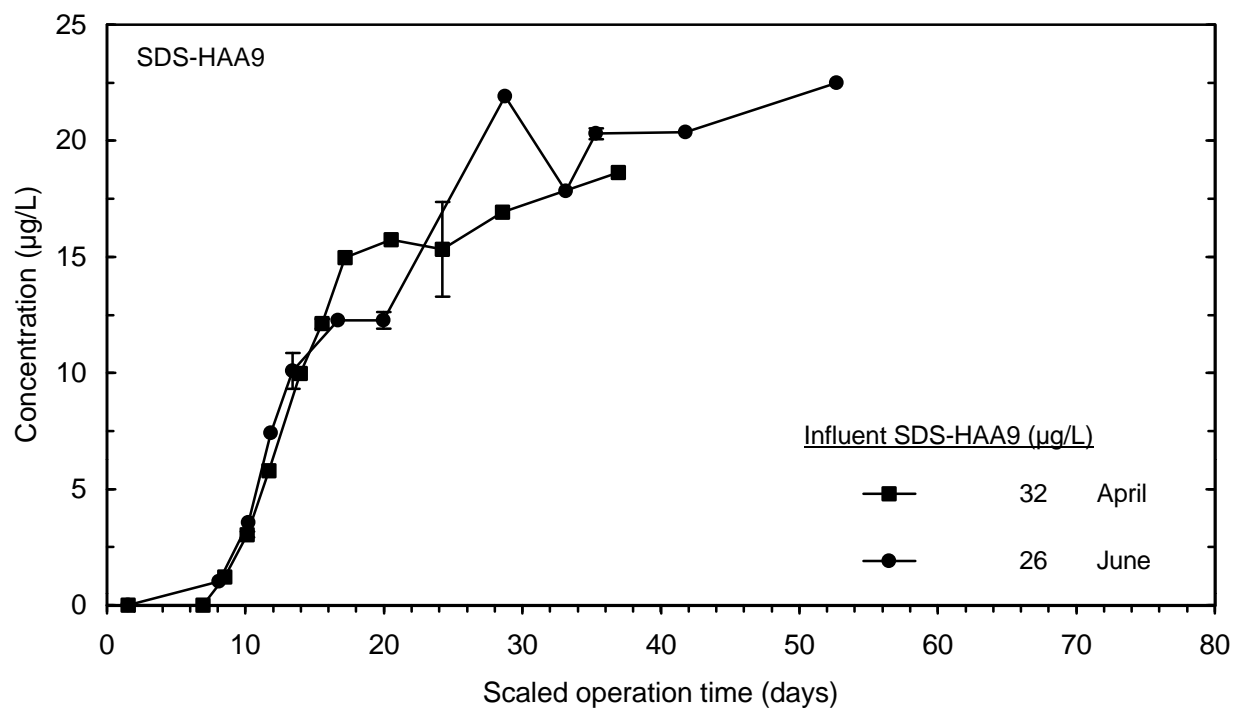


Figure 234 SDS-HAA9 breakthrough comparison for two 10 minute EBCT contactors

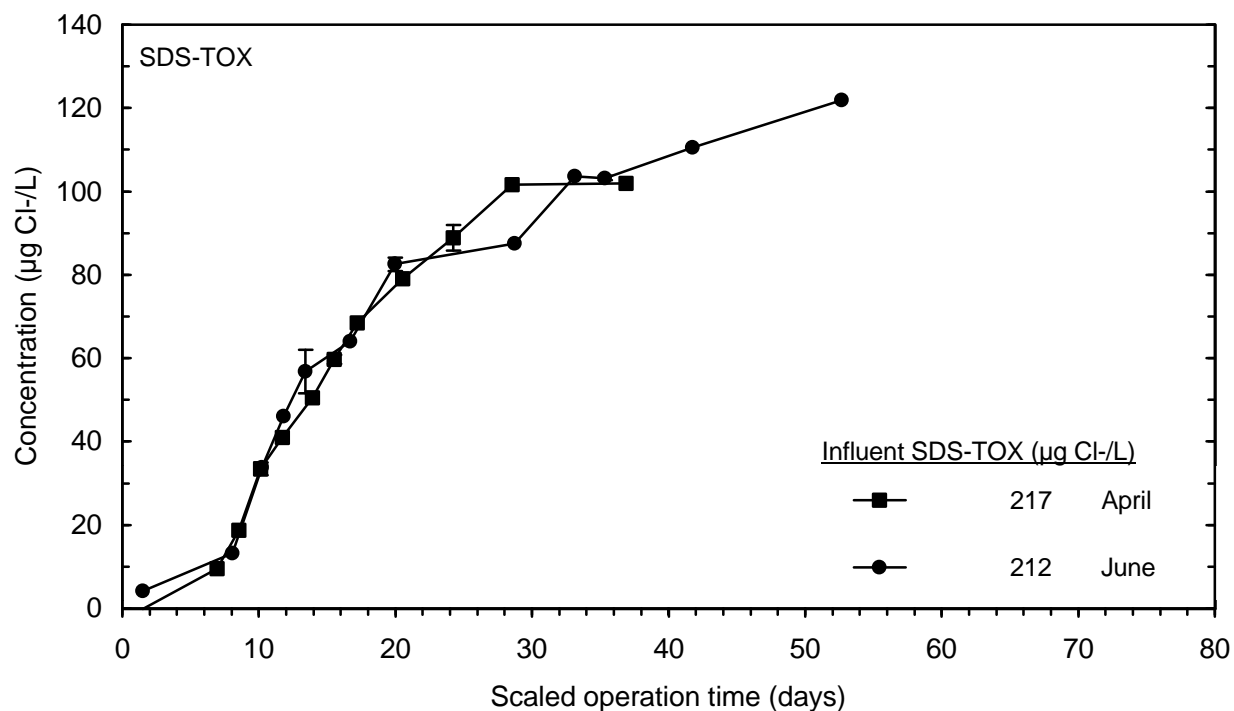


Figure 235 SDS-TOX breakthrough comparison for two 10 minute EBCT contactors

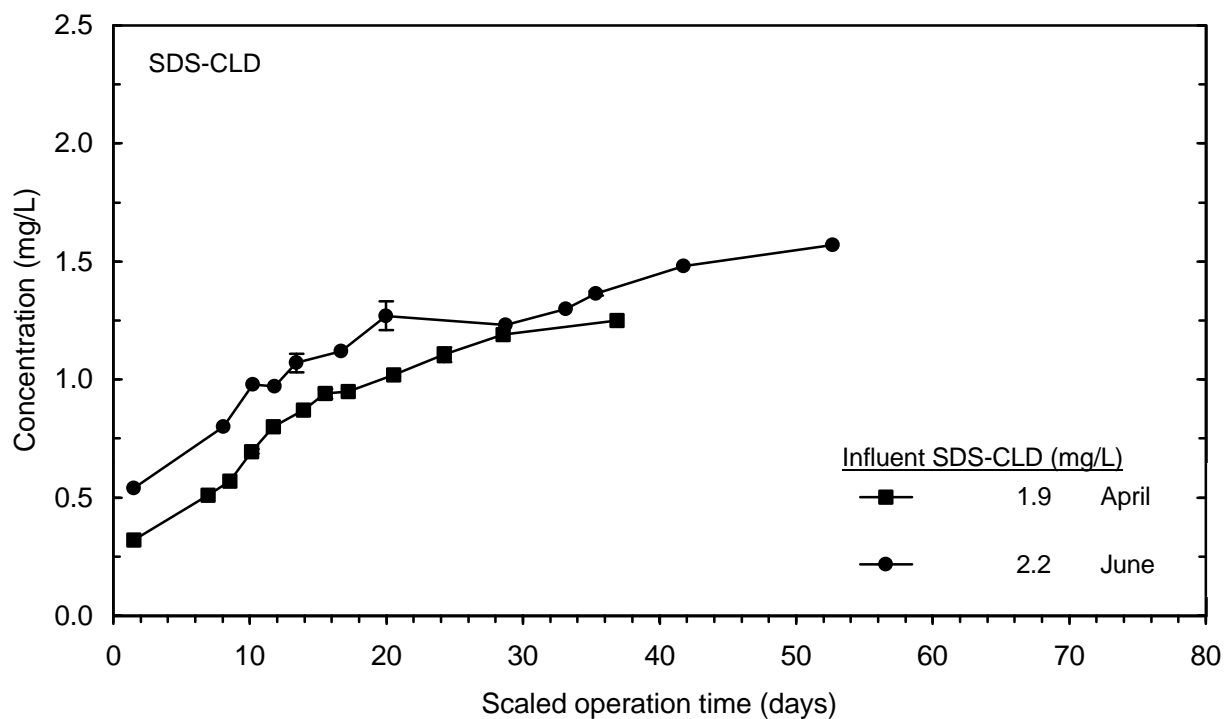


Figure 236 SDS-CLD breakthrough comparison for two 10 minute EBCT contactors

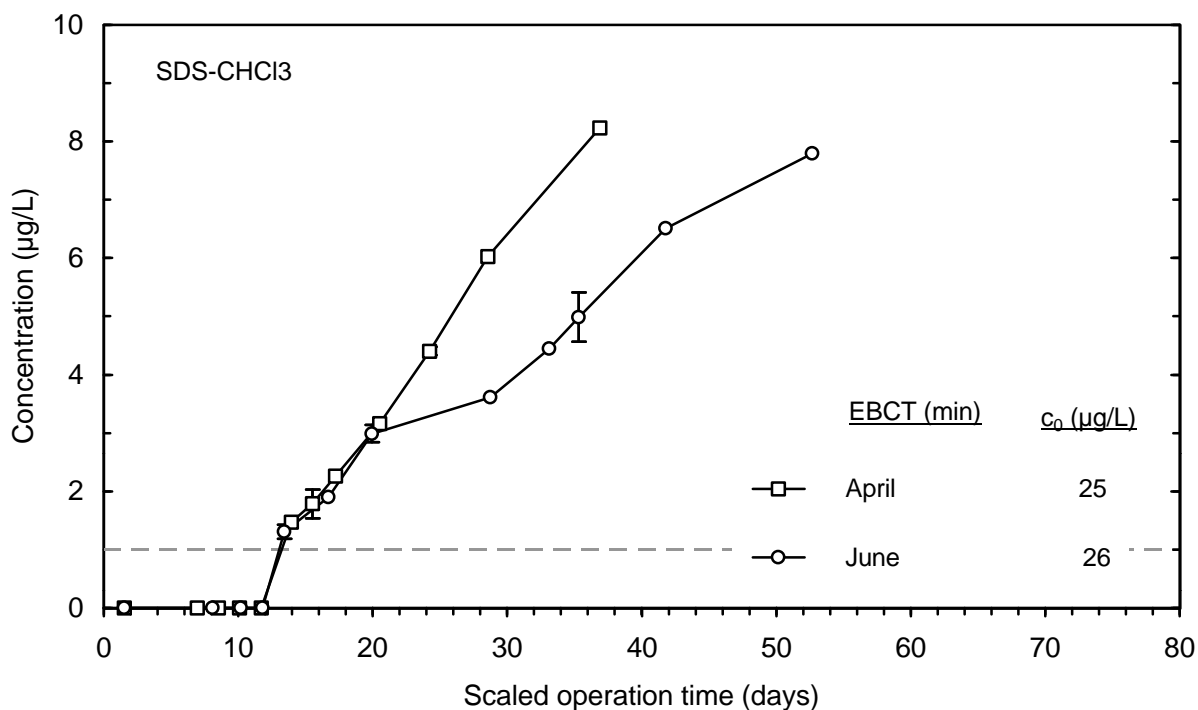


Figure 237 SDS-CHCl₃ breakthrough comparison for two 10 minute EBCT contactors

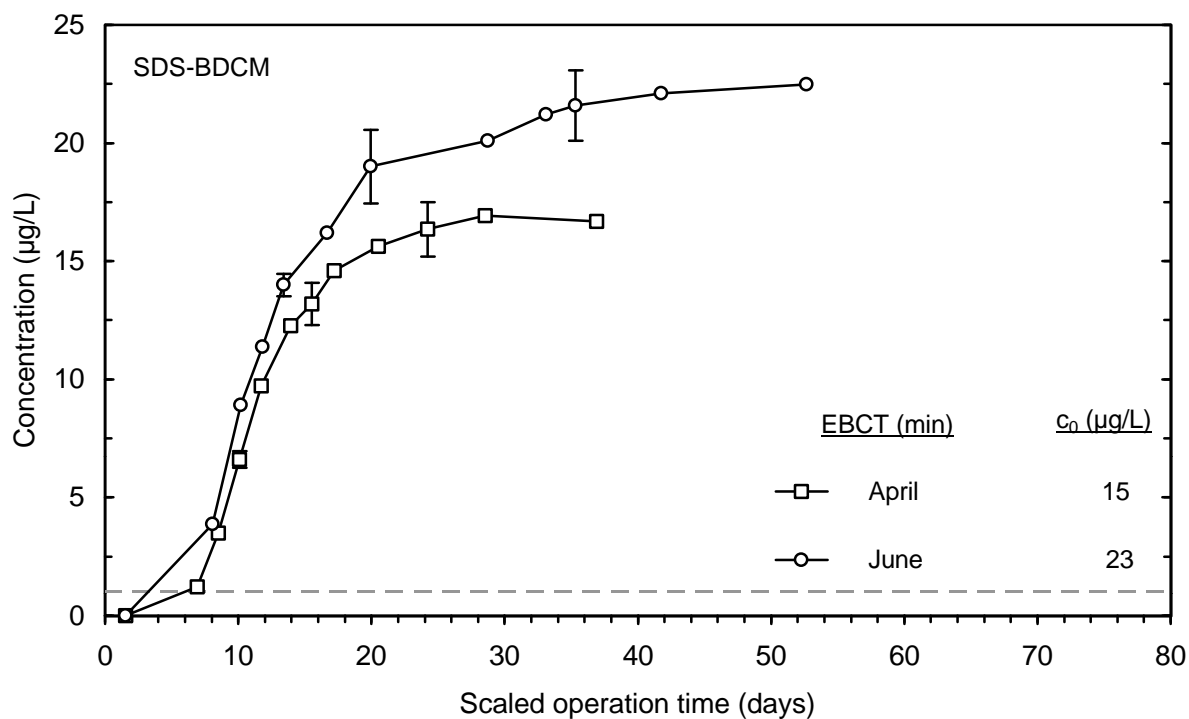


Figure 238 SDS-BDCM breakthrough comparison for two 10 minute EBCT contactors

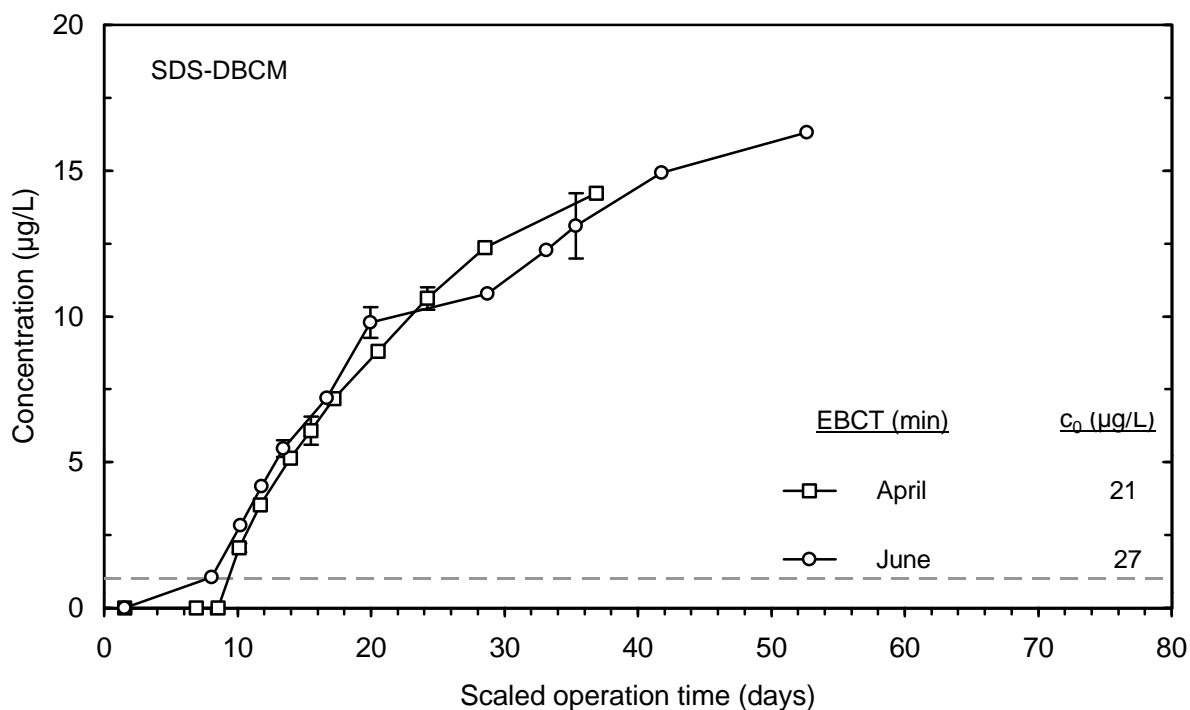


Figure 239 SDS-DBCM breakthrough comparison for two 10 minute EBCT contactors

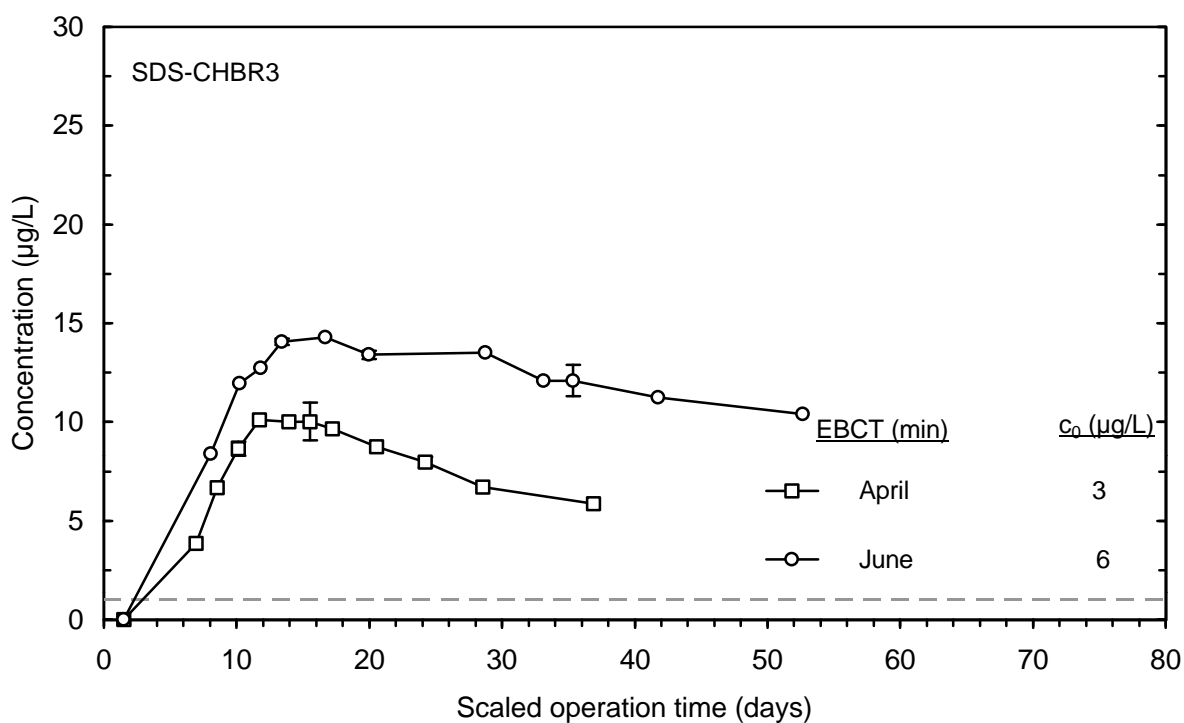


Figure 240 SDS-CHBR3 breakthrough comparison for two 10 minute EBCT contactors

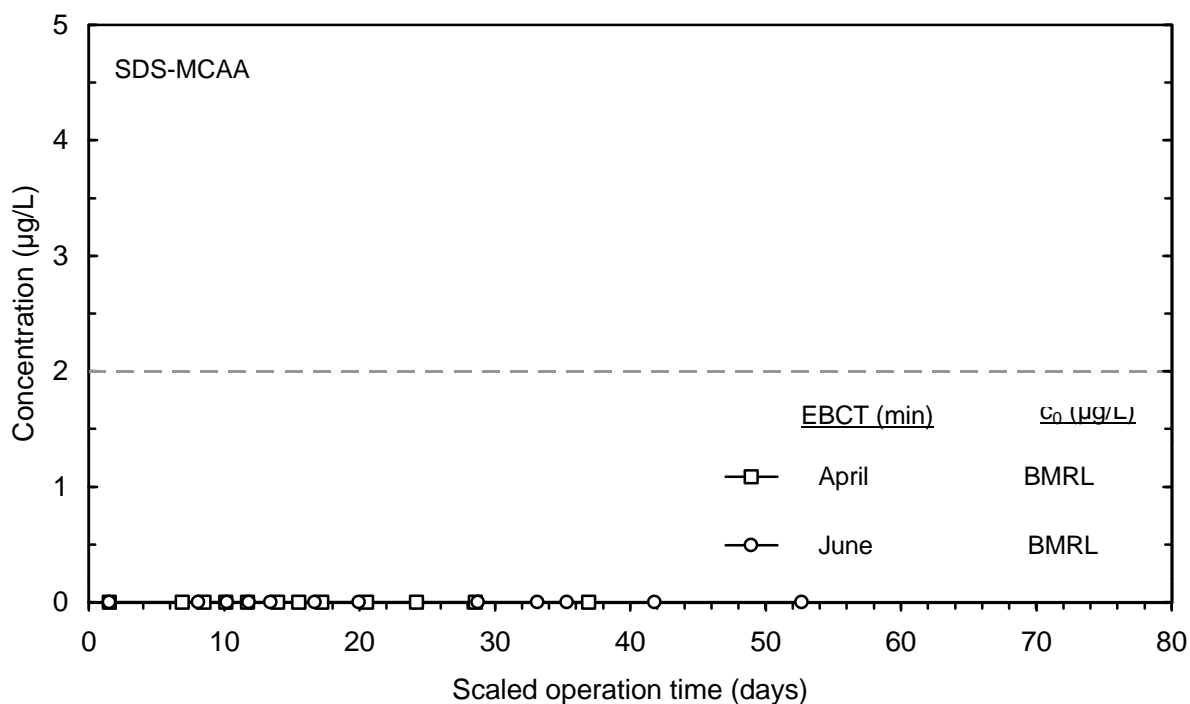


Figure 241 SDS-MCAA breakthrough comparison for two 10 minute EBCT contactors

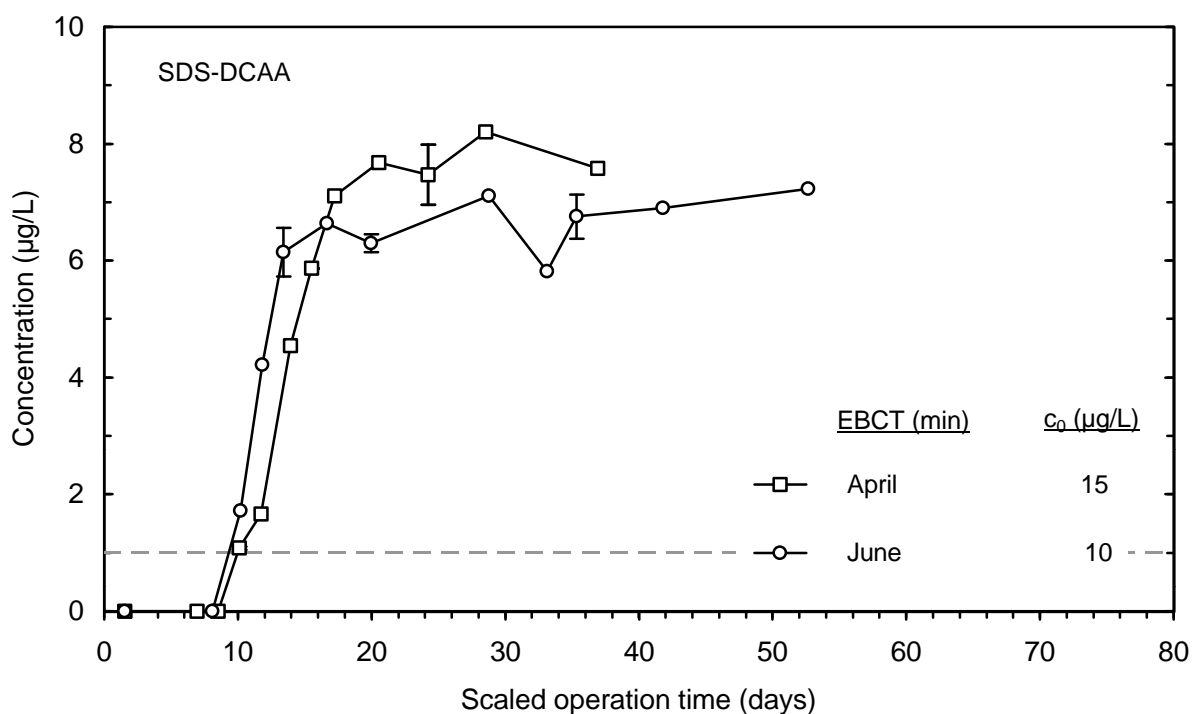


Figure 242 SDS-DCAA breakthrough comparison for two 10 minute EBCT contactors

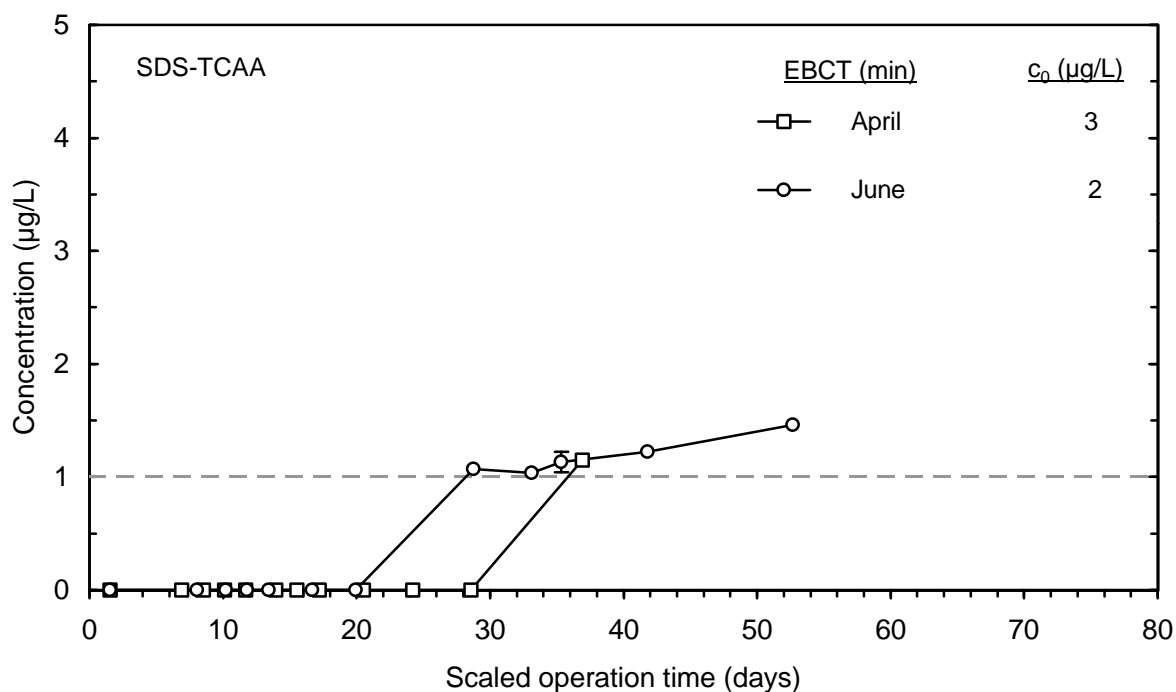


Figure 243 SDS-TCAA breakthrough comparison for two 10 minute EBCT contactors

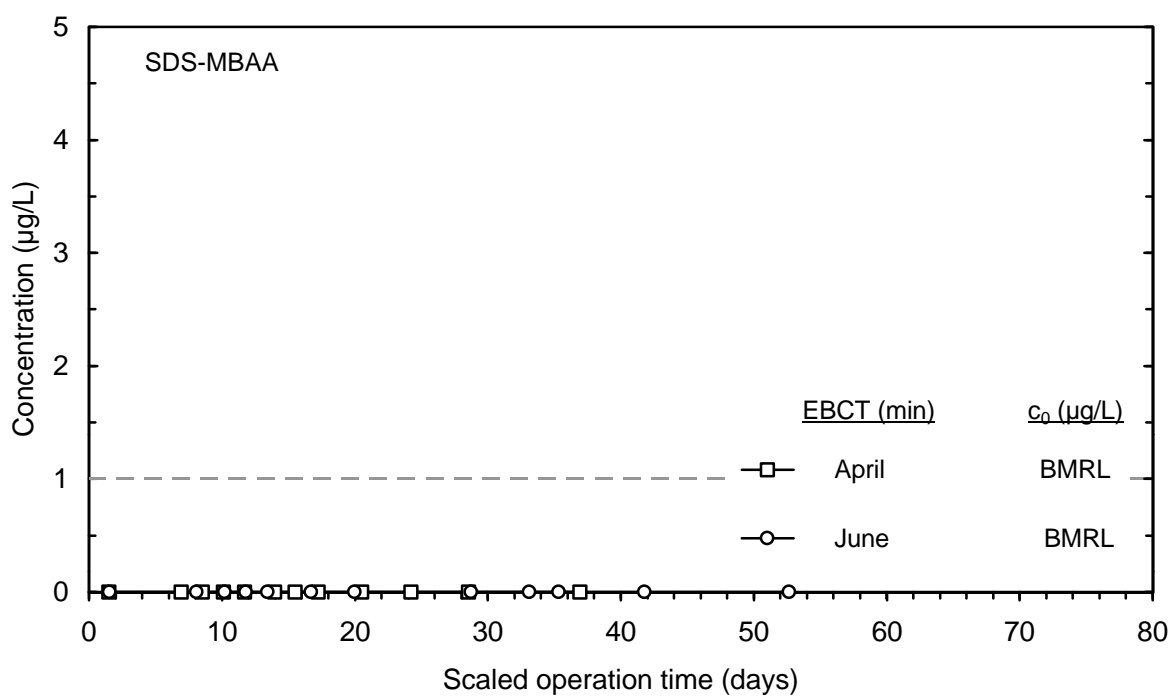


Figure 244 SDS-MBAA breakthrough comparison for two 10 minute EBCT contactors

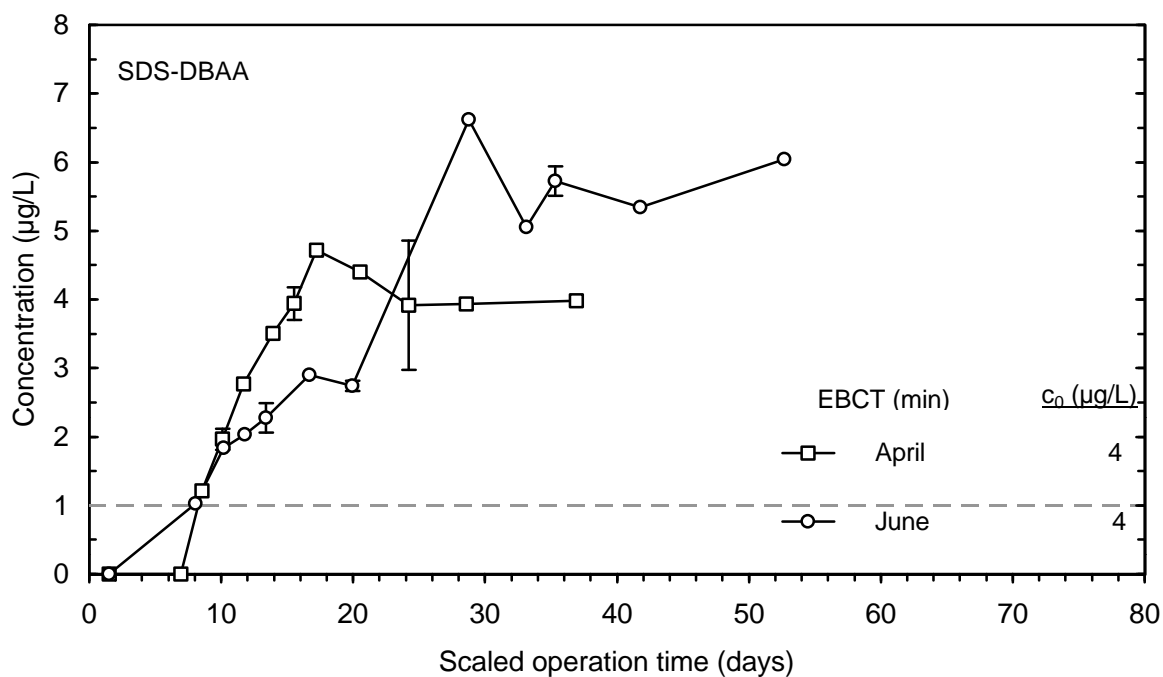


Figure 245 SDS-DBAA breakthrough comparison for two 10 minute EBCT contactors

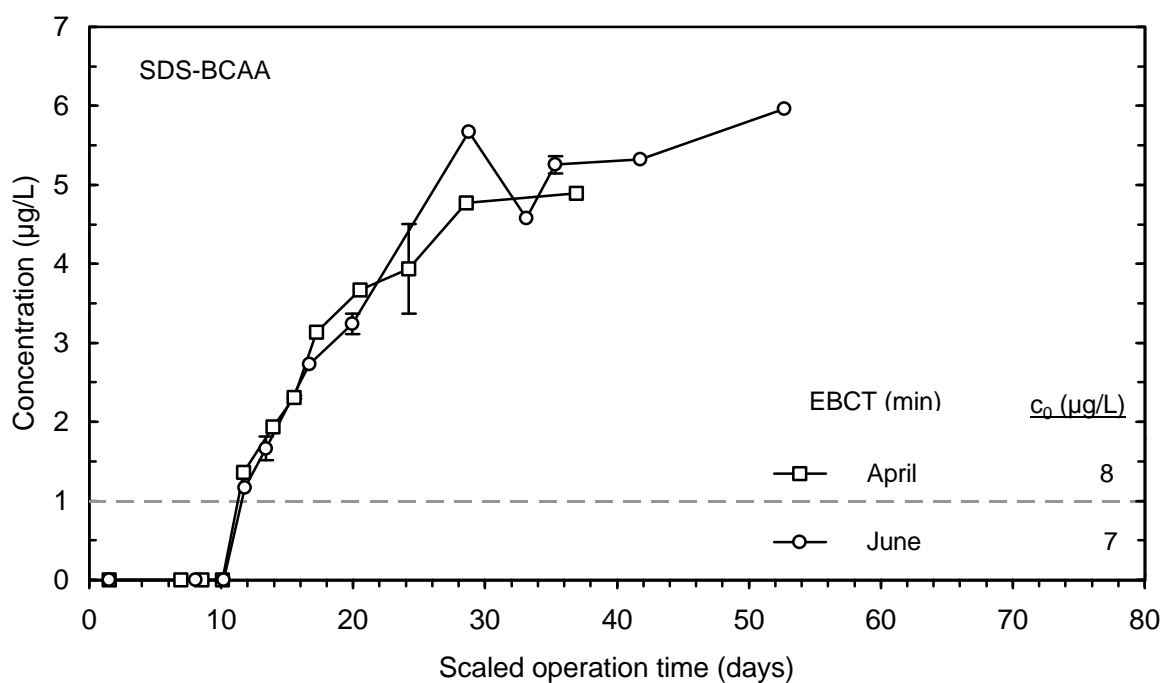


Figure 246 SDS-BCAA breakthrough comparison for two 10 minute EBCT contactors

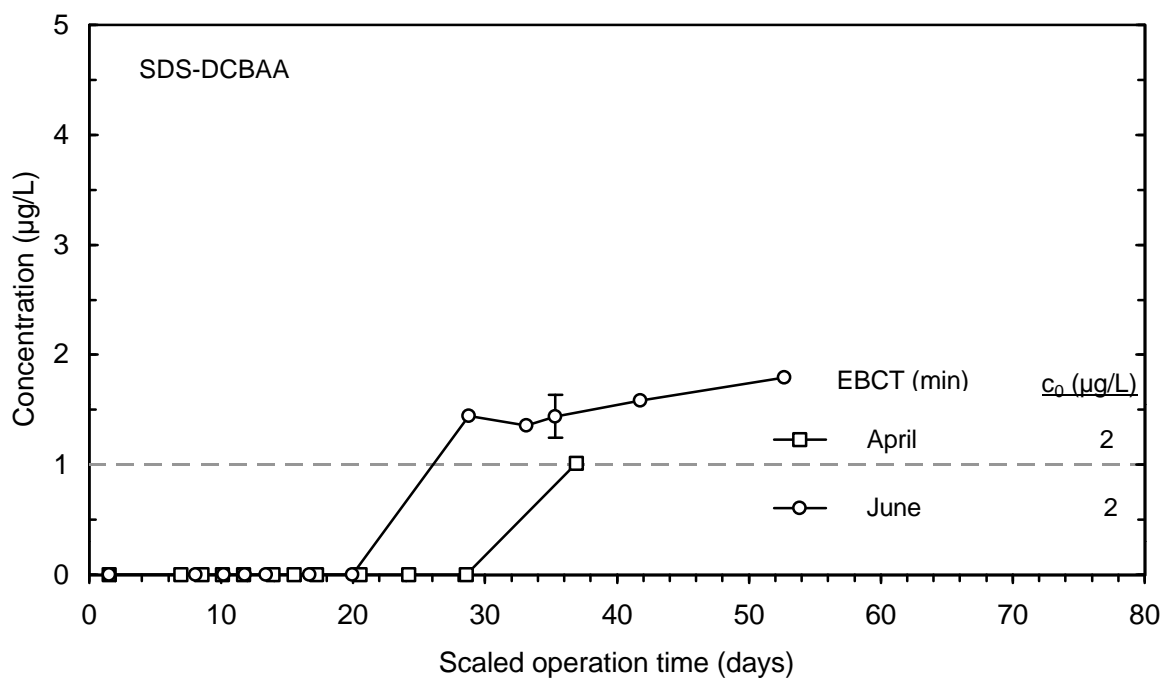


Figure 247 SDS-DCBAA breakthrough comparison for two 10 minute EBCT contactors

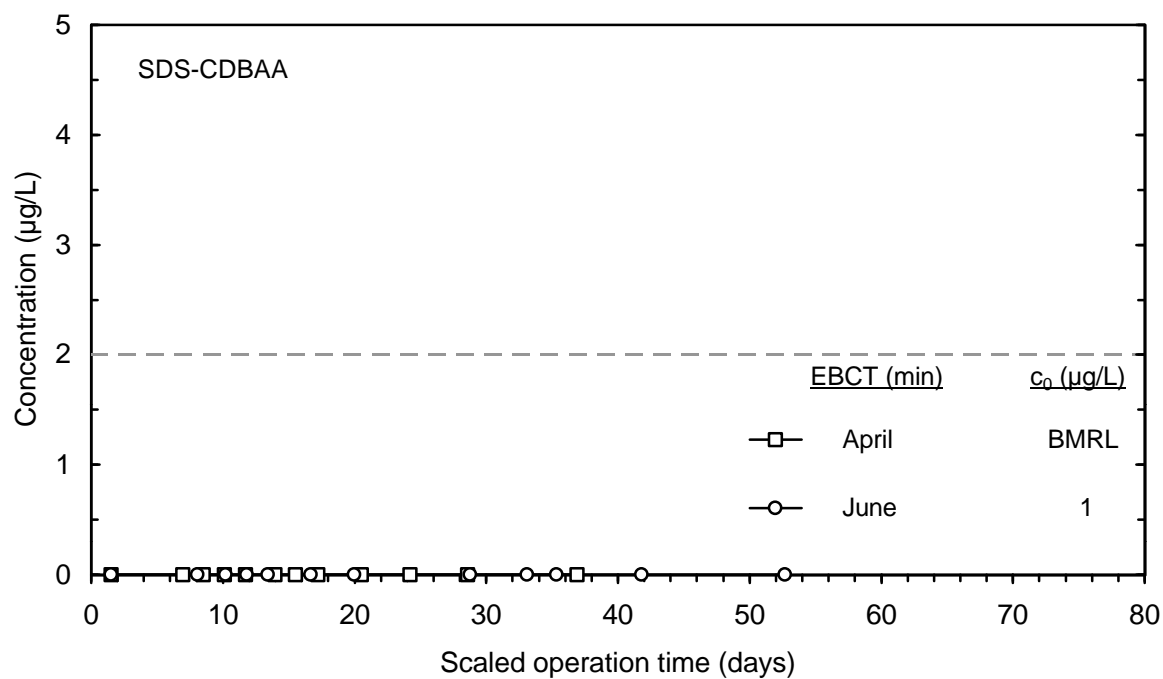


Figure 248 SDS-CDBAA breakthrough comparison for two 10 minute EBCT contactors

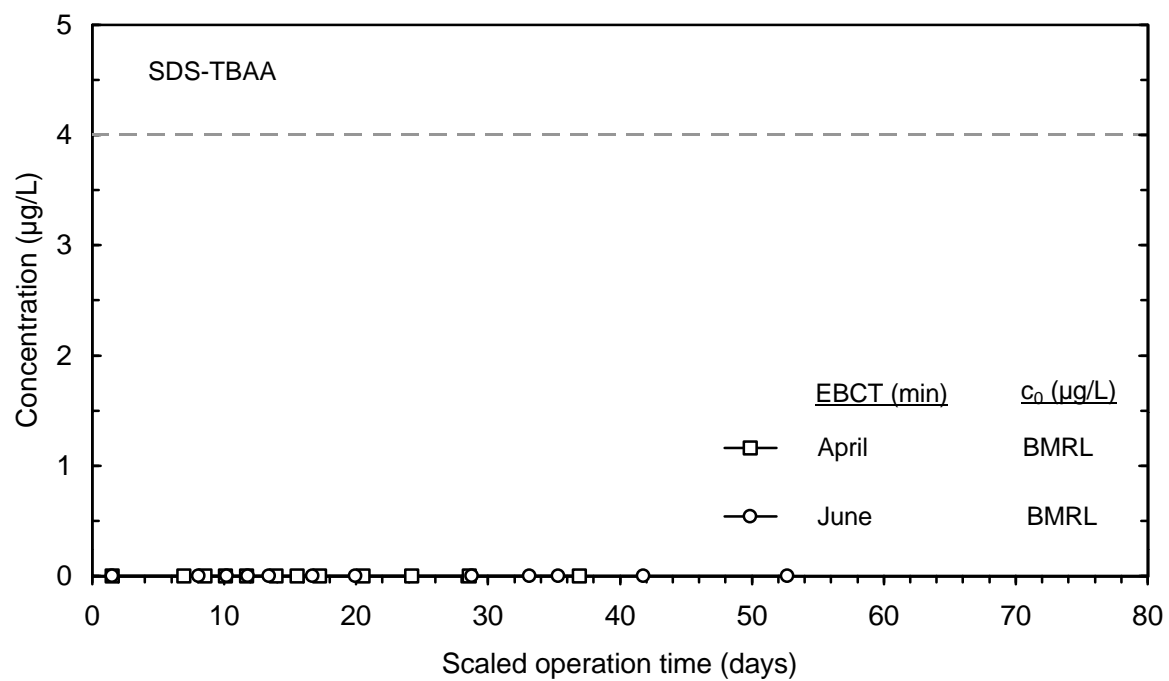


Figure 249 SDS-TBAA breakthrough comparison for two 10 minute EBCT contactors

13

TOC-DBP and UV₂₅₄-DBP Relationships

13 TOC-DBP and UV₂₅₄-DBP Relationships

Paired concentration plots of GAC effluent SDS-THM4, SDS-HAA5, SDS-HAA6, SDS-HAA9, and SDS-TOX against GAC effluent TOC and UV₂₅₄ were generated on a concentration and normalized (percent breakthrough) basis. These plots are summarized in Figures 229 through 232. All EBCT and influent pH runs are presented on the same plots. In general, TOC and UV₂₅₄ served as good predictors of GAC effluent DBP formation regardless of EBCT and influent pH.

In the paired normalized concentration data plots shown in Figures 231 and 232, a line with a slope of 1 and y-intercept of 0 is also plotted. The general trend of the data in comparison to this line indicates whether the percent breakthrough of the surrogate parameter (TOC or UV₂₅₄) directly predicts the percent breakthrough of the formed DBP (data falls on the line), or if the surrogate parameter serves as a conservative indicator of the formed DBP breakthrough (data lies below the line). Examples of the former are SDS-THM4 against TOC and SDS-TOX against UV₂₅₄. Examples of the latter are SDS-HAA and SDS-TOX against TOC.

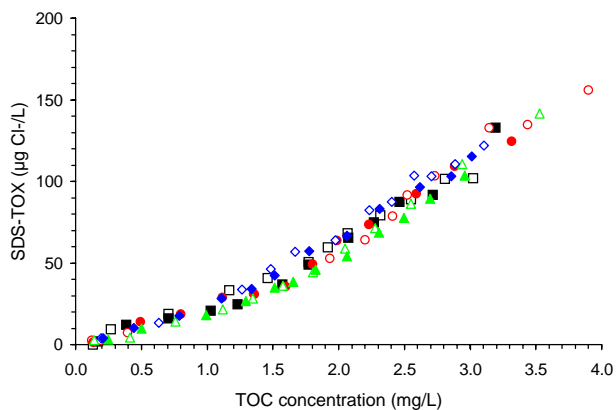
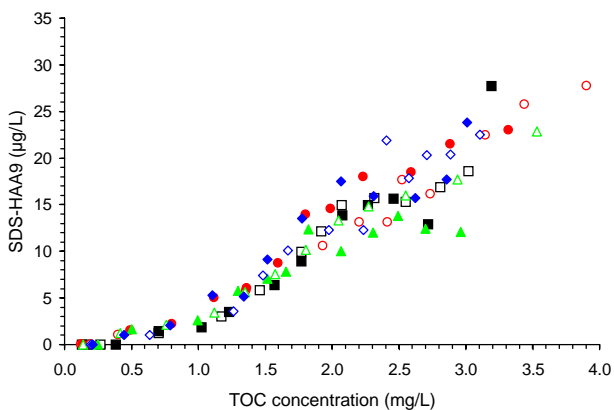
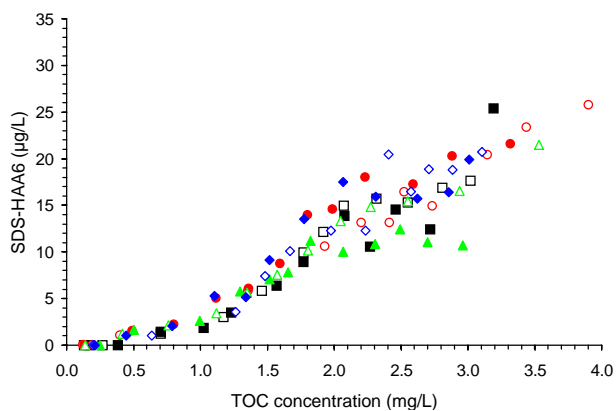
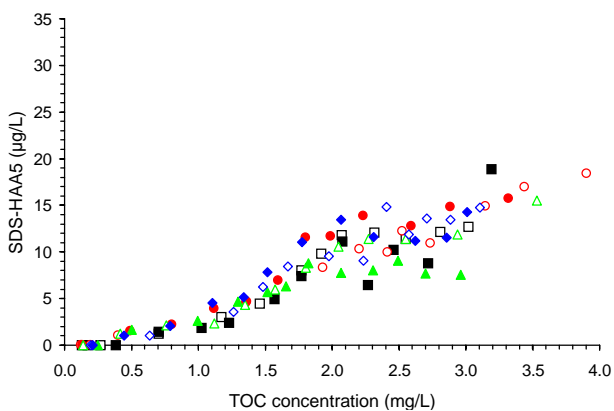
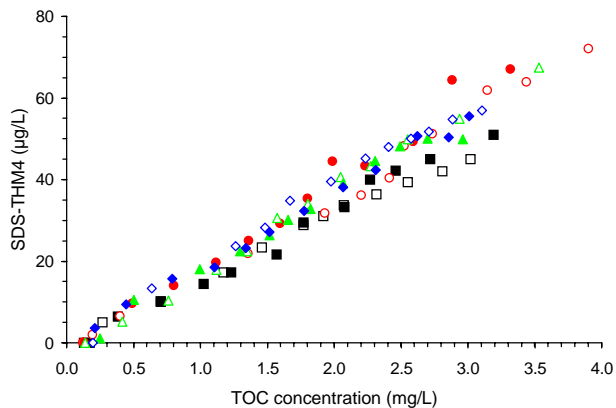
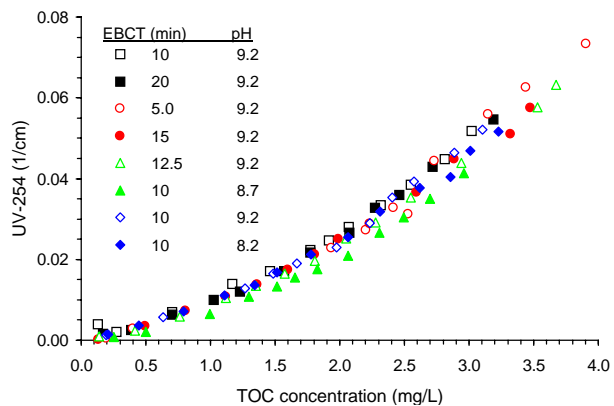


Figure 250 TOC correlations with UV-254 and SDS-DBPs in GAC effluent water

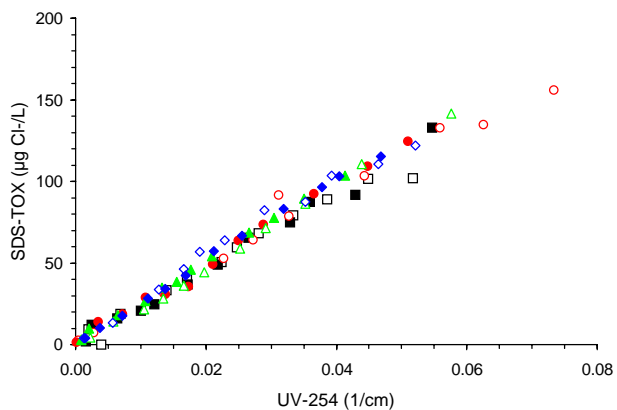
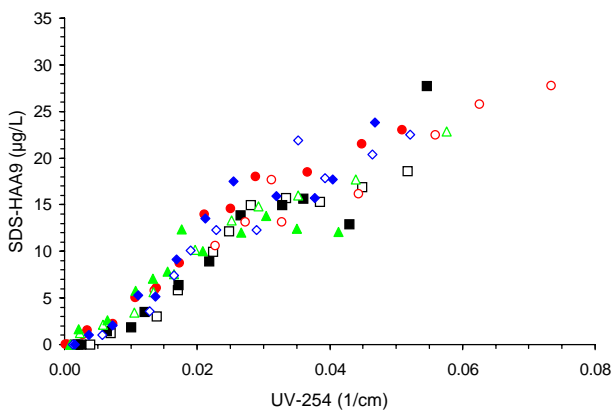
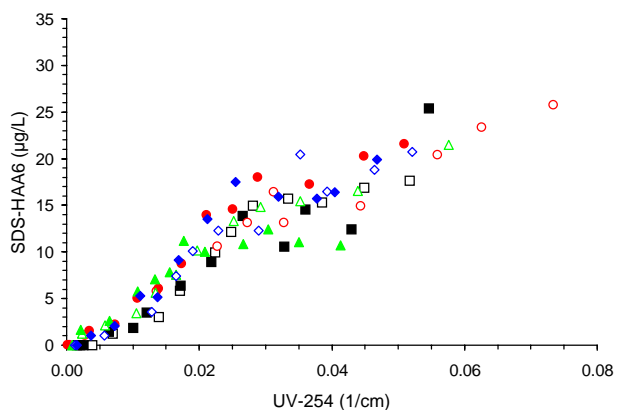
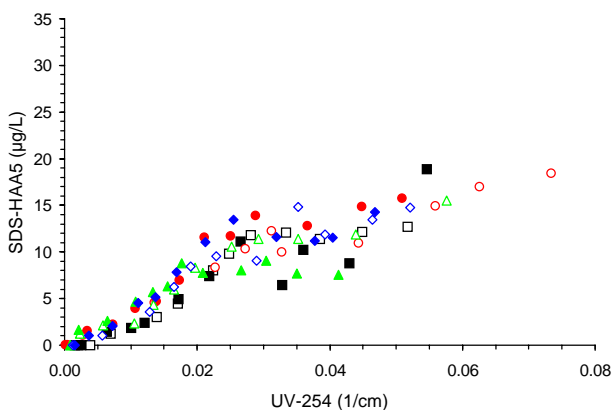
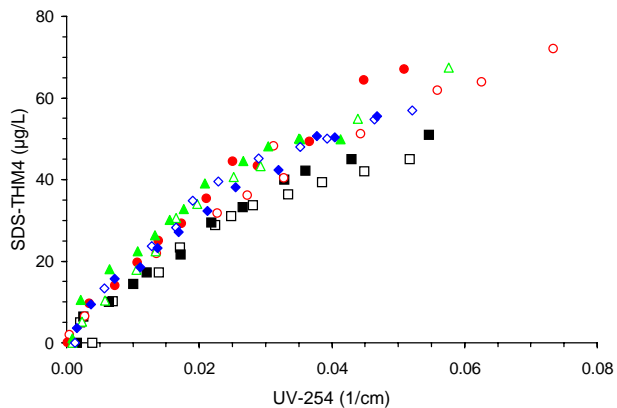
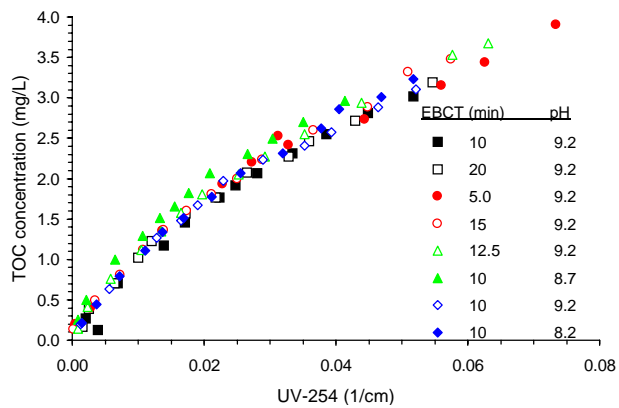


Figure 251 UV-254 correlations with TOC and SDS-DBPs in GAC effluent water

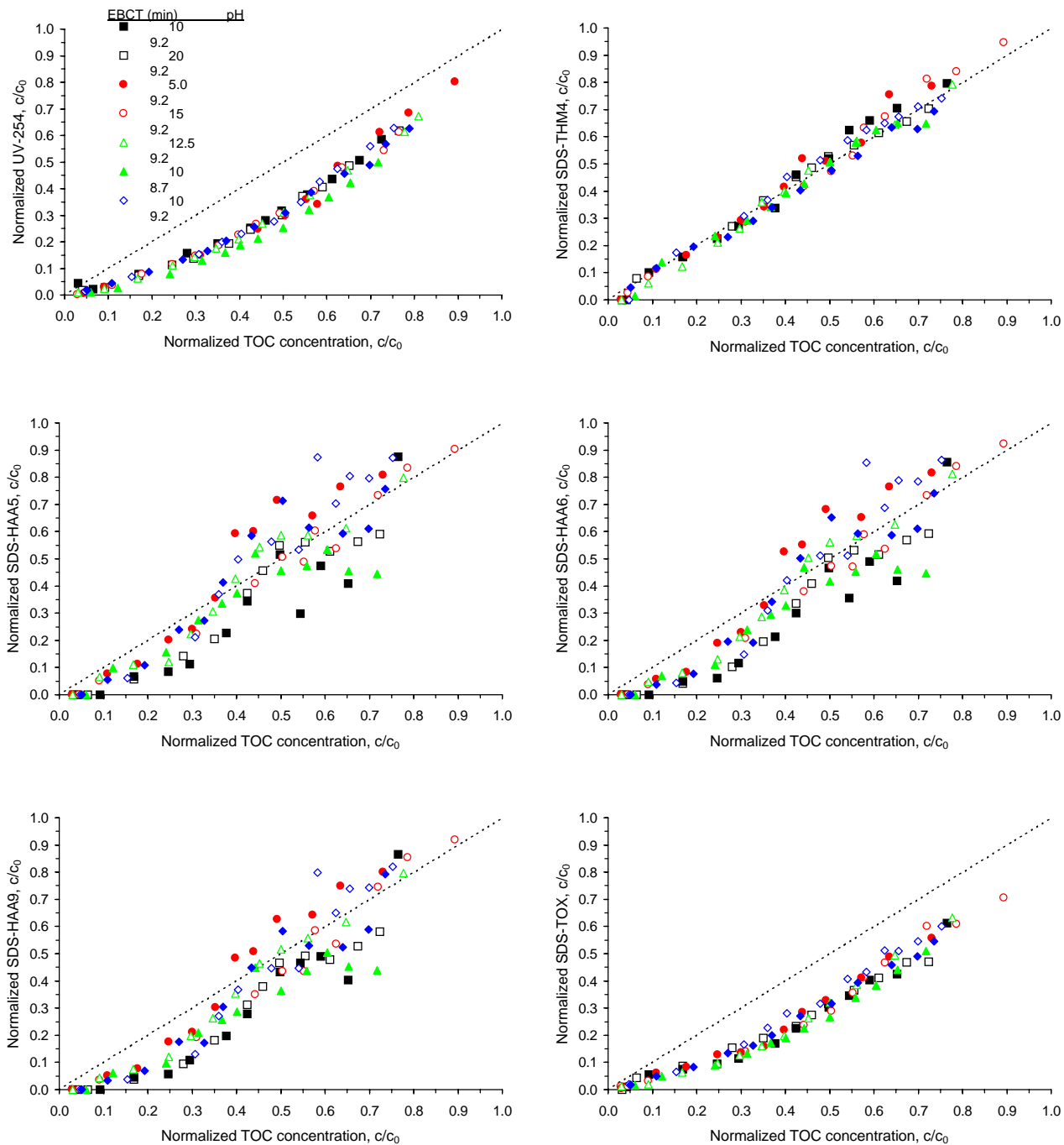


Figure 252 Normalized TOC correlations with normalized UV-254 and SDS-DBPs in GAC effluent water

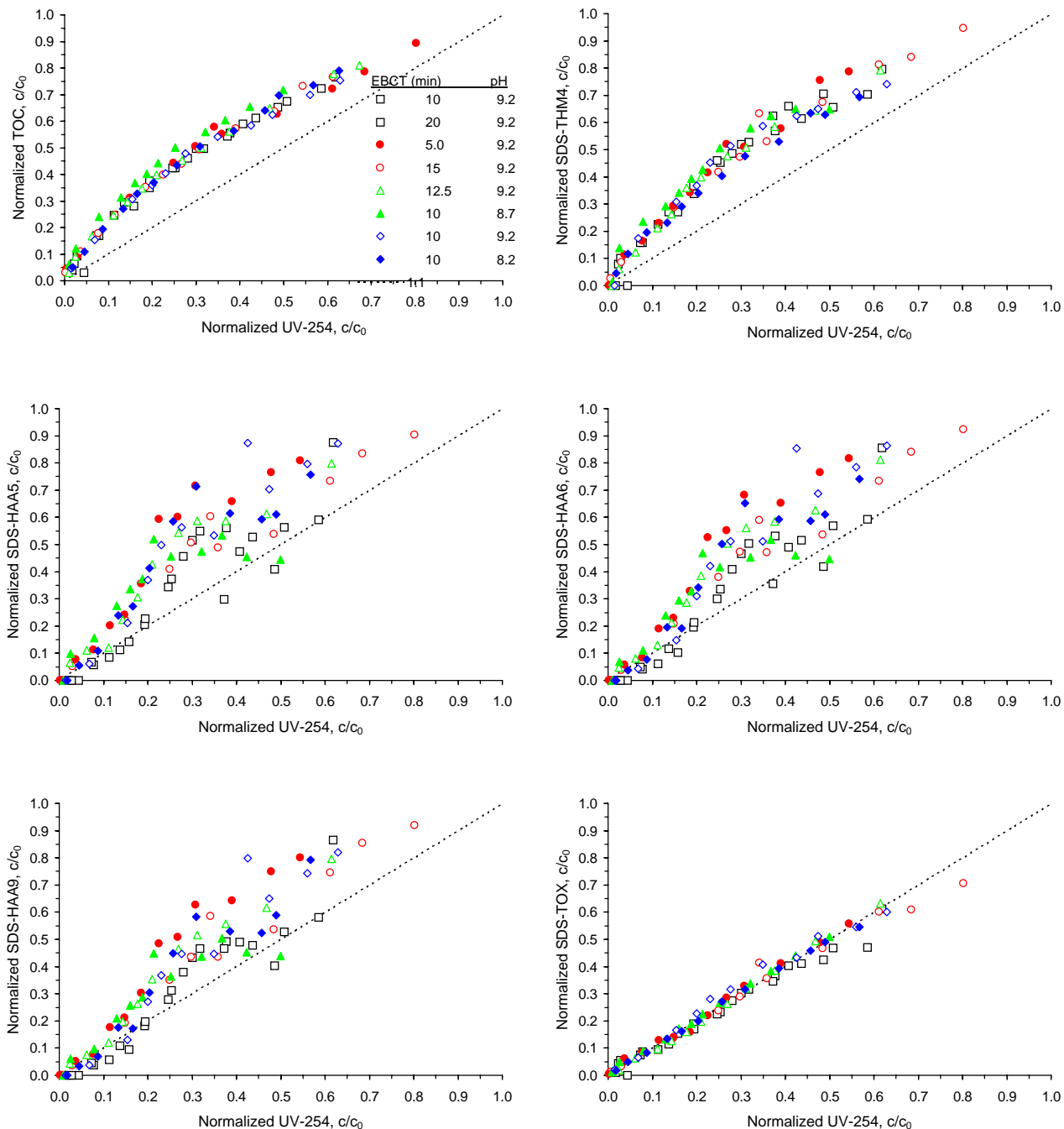


Figure 253 Normalized UV-254 correlations with normalized TOC and SDS-DBPs in GAC effluent water

14

TOC Breakthrough Performance Evaluation

14 TOC Breakthrough Performance Evaluation

Based on a correlation that relates influent TOC concentration to bed volumes to 50 percent TOC breakthrough, BV_{50} (Summers et al. 1994; Hooper et al. 1996), the GAC performance of the Meander Creek Reservoir Works water source after lime softening can be evaluated. The correlation is given by the following equation:

$$BV_{50} = \frac{18,000}{TOC_0} \quad (8)$$

where TOC_0 is the mean influent TOC concentration, in mg/L. The correlation was developed for conventionally treated waters with a pH in the range of 7 to 8. For RSSCT runs, the BV_{50} obtained is plotted in Figure 254. The performance of an average water is given by the dashed line, which represents Equation 8. Figure 254 shows that in general, GAC performance was lower than that predicted by Equation 8, due in part to the high influent pH used for most runs (9.2). At high pH, natural organic matter is more soluble and less adsorbable by GAC.

GAC performance improved with increasing EBCT and decreasing pH. The BV_{50} value for the 5.0 minute EBCT was 1,900 bed volumes, about 52 percent lower than the predicted BV_{50} of 4,000 bed volumes. The 10, 12.5, 15, and 20 minute EBCT contactors averaged a BV_{50} 31 percent lower than predicted. At a 10 minute EBCT, adjusting the influent pH from 9.2 to 8.7 did not affect the BV_{50} , which was 2,600 bed volumes for both runs, about 41 percent lower than predicted. However, decreasing the influent pH to 8.2, close to the range for which the correlation was developed, resulted in a BV_{50} of 3,500, 20 percent lower than the predicted BV_{50} . Thus, a significant improvement in GAC performance, based on BV_{50} , was afforded by decreasing the influent pH from 9.2 to 8.2.

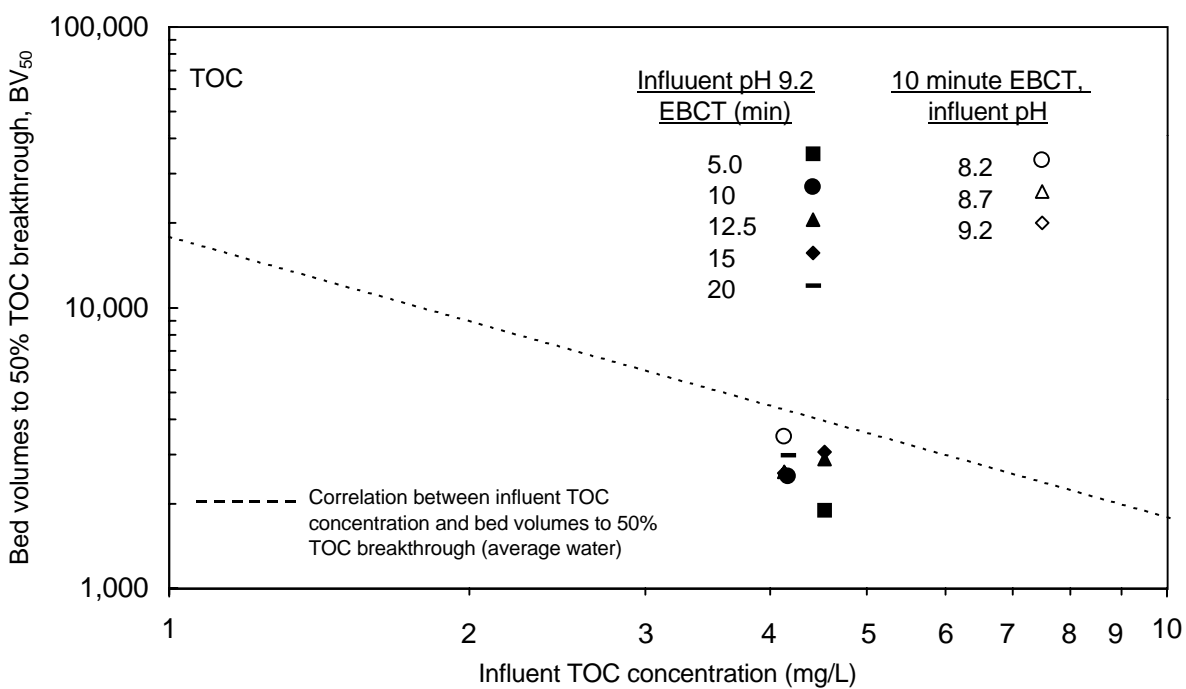


Figure 254 Comparison between GAC performance during treatment study testing and average water GAC performance

15

Cost Information and Analysis

15 Cost Information and Analysis

A comparative cost analysis was performed based on the data obtained during the treatment study using an EPA cost model (Clark and Adams, 1991). The cost analysis included the cost of on-site spent carbon reactivation. Costs were evaluated using either steel pressure contactors or concrete gravity contactors and were determined in cents/1,000 gal for both capital and operations and maintenance (O&M) costs. Based on the maximum plant capacity of 196 MGD, the required number of steel pressure contactors was 73 (20-ft diameter), while 11 concrete gravity contactors (2,110 ft²) were required. Although average plant production varies throughout the year, an average of 170 MGD was used for all four quarters for modeling purposes. The economic input data to the model are summarized in Table 41.

For cost modeling purposes, it was assumed that GAC reactivation would be performed on-site. An average reactivation cost was determined based on reactivation by fluidized bed, infrared, and multihearth technologies. Total costs reflect an average of reactivation costs by the three technologies: individual costs for each reactivation technology are not reported.

The cost model sizes the contactors based on the plant capacity flow. The EBCT input into the model is the EBCT under plant capacity conditions. Therefore, under average flow conditions, the EBCT in each contactor will be higher, leading to longer intervals between GAC reactivation and lower O&M costs.

The capital costs are based on the economic input values, EBCT, type of contactor, and spent carbon reactivation demand. The O&M costs are determined based on the service life of each contactor. Relative to the placeholders for DBP MCLs, THM4 formation was higher than HAA5 formation, and thus run time calculations are based on effluent SDS-THM4 levels. The service life input into the model was the run time to Stage 2 THM4 MCL (with a 20 percent safety factor). Thus, the blended effluent analysis run times determined in Section 10 (including breakthrough curve extrapolation calculations when necessary) were used to model costs for steel pressure contactors. A cost of 90 cents/lb GAC was assumed. Table 42 summarizes the estimated run times to comply with the placeholders for Stage 2 DBP MCLs.

Table 43 summarize the GAC cost analysis results. Capital, O&M, and total costs are all runs and two contactor types (concrete gravity and steel pressure). The costs are given in cents/1,000 gallons water treated. On average, the total costs for steel pressure contactors were 16 percent greater than those for concrete gravity contactors. Overall, the most cost-effective option for GAC treatment was 10-minute EBCT concrete gravity contactors with an influent pH adjusted to 8.2. Total cost for concrete gravity systems ranged from 25 to 43 cents/1,000 gallons. For steel pressure systems, the total cost ranged from 30 to 47 cents/1,000 gallons. A bar graph comparison of capital, O&M, and total costs for all runs is shown in Figure 255 for concrete gravity contactors. For steel pressure contactors, the same analysis is presented in Figure 256. The error bars shown represent the standard deviation of the average cost calculated from the three reactivation technologies. The cost model results do not include the cost for pH adjustment (recarbonation) from 9.2 to 8.7 and 8.2 for the influent pH runs.

Parameter	Value
Capital recovery interest rate (%)	5
Capital recovery period (years)	30
Overhead & profit factor (% of construction costs)	25
Special sitework factor (% of construction costs)	5
Construction contingencies (% of construction costs)	10
Engineering fee factor (% of construction costs)	15
ENR construction cost index (CCI base year 1913) and date	5986 (March 1999)
Producers Price Index (PPI base year 1967=100) and date	369 (February 1999)
Labor rate + fringe (\$/manhour)	24
Labor overhead factor (% of labor)	67
Electric rate (\$/kWh)	0.05
Fuel oil rate (\$/gallon)	0.95
Natural gas rate (\$/cu.ft.)	0.0055
Process water rate (\$/1,000 gal)	0.20
Modifications to existing plant (% of construction cost)	5

Table 41 Economic input data to cost model

EBCT (min)	Influent pH	Run time (days) for contactor configuration	
		Single	Multiple
5.0	9.2	6	12
10	9.2	16	39†
12.5	9.2	16	37
15	9.2	21	46
20	9.2	37	96
10	8.2	20	46
10	8.7	16	34†
10	9.2	13	30

†Extrapolation beyond maximum run time required for estimate

Table 42 Summary of GAC run times to meet the placeholders for Stage 2 MCLs

EBCT (min)	Influent pH	Cost (cents/1000 gal)					
		Concrete gravity			Steel pressure		
		Capital	O&M	Total	Capital	O&M	Total
5.0	9.2	20	23	43	22	23	45
10	9.2	15	15	30	19	16	35
12.5	9.2	20	19	39	25	20	45
15	9.2	20	19	39	27	19	47
20	9.2	14	13	27	23	14	37
10	8.2	12	14	25	16	14	30
10	8.7	18	17	35	22	18	40
10	9.2	19	19	38	23	20	43

Table 43 Summary of GAC adsorption costs for compliance with the placeholders for Stage 2 MCLs

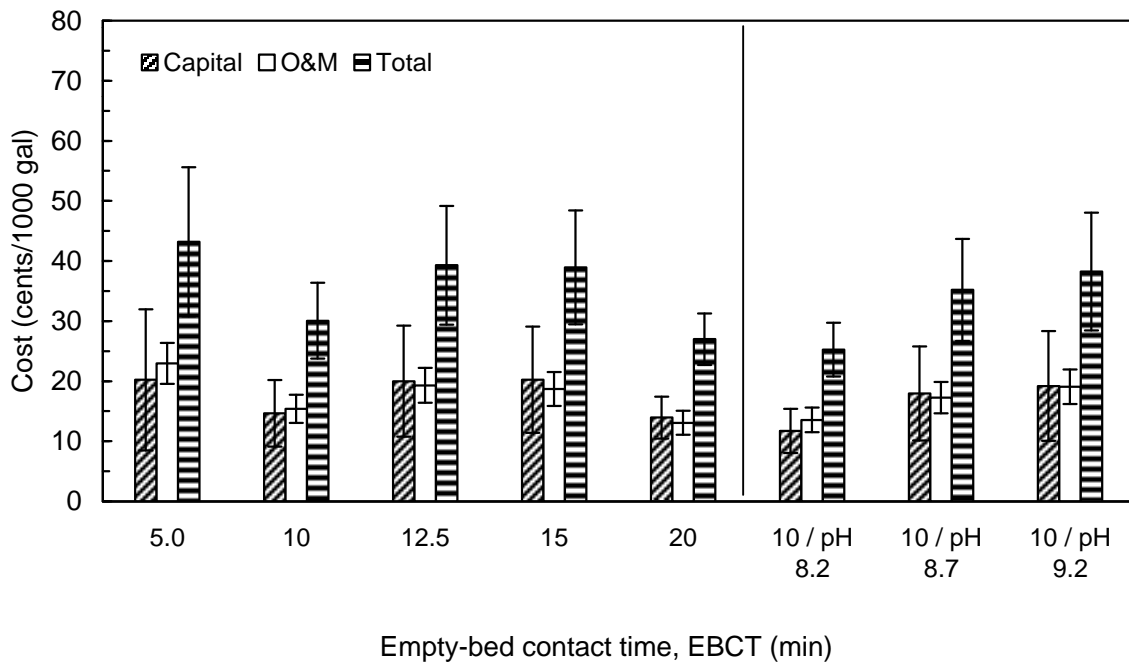


Figure 255 Average costs for GAC treatment with concrete gravity contactors and on-site reactivation

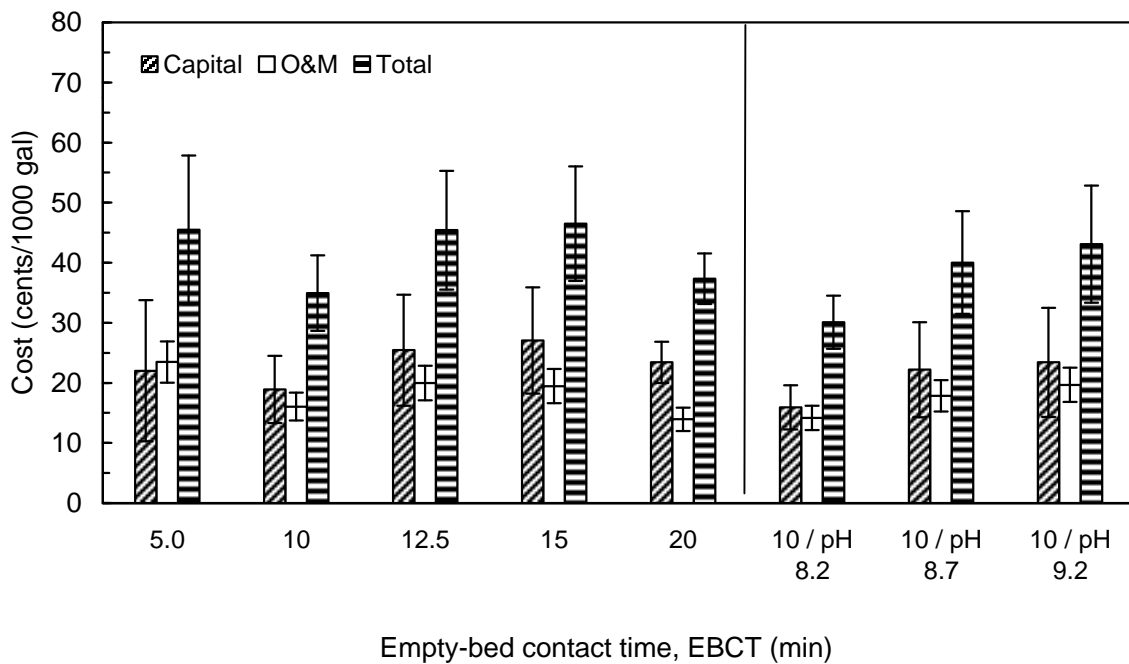


Figure 256 Average costs for GAC treatment with steel pressure contactors and on-site reactivation

16

Summary of Significant Results

16 Summary of Significant Results

Based on an EPA cost model, the cost for GAC to maintain SDS-DBP levels below the placeholders for Stage 2 MCLs using concrete gravity contactors was estimated as low as 25 cents/1,000 gallons for a 10 minute with influent pH adjustment to 8.2. Without pH adjustment below 9.2, the most cost-effective system is either a 10 or 20 minute EBCT concrete gravity contactor, with costs of 30 and 27 cents/1,000 gallons, respectively. Overall, cost estimate for steel pressure contactors averaged 16 percent higher than concrete gravity contactors. The cost estimates do not include the cost of further pH adjustment (recarbonation) from pH 9.2 to 8.7 and 8.2. To comply with the placeholders for Stage 2 DBP MCLs, all GAC run times were controlled by the breakthrough of SDS-THM4. By meeting the placeholder for Stage 2 THM4, the system will be in compliance with the placeholder for Stage 2 HAA5 MCL.

All chlorination was conducted at pH 9.1, which likely favored the base-catalyzed formation of THMs. In comparison to Stage 1 or the placeholders for Stage 2 DBP MCLs, HAA formation was much lower than THM4 formation. Thus, all cost estimates were based on the breakthrough of SDS-THM4.

Based on average influent TOC concentration of 4.0 mg/L and pH of 9.2, the contactor operation time measured as bed volumes to 50 percent TOC breakthrough (BV_{50}) was lower than that predicted by a correlation developed for pH values between 7 and 8. For the 5.0 minute EBCT contactor, BV_{50} was 52 percent lower than that predicted, and for the 10, 12.5, 15, and 20 minute EBCT contactors, BV_{50} averaged 31 percent lower than predicted. Decreasing the influent pH improved BV_{50} values from 41 percent below that predicted for an influent pH 9.2 or 8.7, to 20 percent below that predicted, for an influent pH 8.2.

Overall, SDS-DBP formation was well-controlled by GAC, given sufficient contact time. For a 5.0 minute EBCT contactor, the run times to the placeholder for Stage 2 THM4 MCL was only 6 days. Assuming 10 or more contactors operated in parallel and staggered operation, the blended effluent modeled SDS-THM4 allows for each individual 5.0 minute EBCT contactor to be run for 12 days. Under the blended effluent assumption, run times are increased to 96 days for a 20 minute EBCT contactor. Thus, selection of an appropriate EBCT is important towards maintaining cost-effective adsorption of DBP precursors.

The contactor influent pH for all EBCT runs was relatively high, 9.2. At this pH, natural organic matter is more soluble and therefore less adsorbable by GAC. To optimize GAC performance, three 10 minute EBCT contactors were operated in parallel, with influent pH values of 9.2, 8.7, and 8.2. Based on compliance with Stage 2 DBP MCLs, the run time for an influent pH of 8.2 were increased by 53 percent over the run time for an influent pH of 9.2. Assuming a similar improvement would be observed for the 20 minute contactor, a run time of 147 days would be expected. Incorporating this run time, a cost for GAC treatment was estimated at 30 cents/1,000 gallons, not including the cost of pH adjustment.

A normalized breakthrough evaluation showed that TOC usually served as a conservative indicator for the breakthrough of SDS-HAA, while SDS-THM4 breakthrough was usually very

well matched by TOC breakthrough. UV_{254} served as an excellent predictor of SDS-TOX breakthrough.

17

QA/QC Summary

17 QA/QC Summary

All analyses performed during the treatment study followed the methods and QA/QC procedures required by the *DBP/ICR Analytical Methods Manual*. A summary of the data analyzed during this treatment study and all the required QA/QC information is summarized in electronic form in portable document format at the end of this report. The EPA has requested that the results of laboratory duplicate analyses, laboratory fortified matrix spike analyses, and any performance evaluation (PE) analyses be reported in the *Treatment Study Summary Report Spreadsheet*, an electronic Excel workbook supplied by EPA. The required data has been input into this file, and an electronic version of it is included at the end of this report.

As required by the ICR, three field duplicates were collected from each RSSCT. The results of the duplicate analyses are summarized in Table 44.

17.1 Calibration Procedures

Calibration procedures for bromide, haloacetic acids, total organic carbon, total organic halide, and trihalomethanes analyzed during this study are summarized in the following sections.

17.1.1 Bromide (EPA Method 300.0 A)

Five calibration standards and a blank are prepared by adding accurately measured volumes of ICR stock standard to volumetric flask and diluting to volume with reagent water. The calibration standards range from 0.02 to 0.50 mg/L. Using a 200 µL injection volume, the peak area responses against the concentration are tabulated and a linear curve is established. The calibration correlation coefficient must be equal to or greater than 0.995. After establishing the calibration the fourth calibration standard is analyzed. The recovery must be within 90-110 percent of the true value. Next a second source standard at the MID level is analyzed and the recovery must be within 90-110 percent of the true value prior to proceeding with ICR protocol.

17.1.2 Haloacetic Acids (EPA Method 552.2)

An initial calibration curve is extracted and analyzed for each set of samples to be analyzed for haloacetic acids. The concentrations of each of the levels of aqueous calibration standards are given in Table 45.

Level 1 represents concentrations near the MDL for each analyte. The concentrations of the remaining levels define the working range of the detector. Levels 5 and 6 are specified by the *DBP/ICR Analytical Methods Manual* to be used as continuing calibration checks.

Each analysis run is started with a methyl tert-butyl ether (MtBE) solvent blank. This is a check on the extraction solvent as well as on the instrument system. If this run is acceptable, the extracts of the seven levels of the calibration curve are analyzed (2-µL injection volume). The Chemstation Chromatography Software System is used to generate a calibration curve by

plotting the areas against the concentrations of the seven calibration extracts. The curve is defined as first order; correlation coefficients must be greater than 0.9900.

17.1.3 Total Organic Carbon (Standard Method 5310 C)

The instrument calibration accuracy is verified daily by analysis of a 4.00 mg/L as carbon standard solution of potassium hydrogen phthalate. Recovery of the standard must be between 99 and 101 percent. When outside of this range, the slope of a linear regression between standard amount and area count and the origin is adjusted and the standard is reanalyzed to ensure a recovery between 99 and 101 percent. Calibration check standards and samples are then analyzed as described in the *DBP/ICR Analytical Methods Manual*.

17.1.4 Total Organic Halide (Standard Method 5320 B)

An instrument calibration verification is performed yearly. The 2,4,6-trichlorophenol standard is injected directly onto the nitrate-washed method blank. Concentrations of 0.5, 1, 2.5, 5, 10, and 20 µg as Cl⁻ are included in the curve. A first order curve with correlation coefficient greater than 0.99 must be obtained, and is only used to verify instrument performance.

At the beginning of each daily run, and after cell cleaning during the day, three NaCl injections of 5 µg as Cl⁻ are made directly into the titration cell. This serves as a cell performance check. Recovery of the NaCl standard must be within 3 percent of the historic mean. Typically, recovery is 95 to 105 percent.

17.1.5 Trihalomethanes (EPA Method 551.1)

An initial calibration curve is extracted and analyzed for each set of samples to be analyzed for trihalomethanes. The concentrations of each of the levels of aqueous calibration standards are given in Table 46.

Level 1 represents concentrations near the MDL for each analyte. The concentrations of the remaining levels define the working range of the detector. Levels 4 and 5 are specified by the *DBP/ICR Analytical Methods Manual* to be used as continuing calibration checks.

Each analysis run is started with a MtBE solvent blank. This is a check on the extraction solvent as well as on the instrument system. If this run is acceptable, the extracts of the six levels of the calibration curve are analyzed (2-µL injection volume). The Chemstation Chromatography Software System is used to generate a calibration curve by plotting the areas against the concentrations of the six calibration extracts. The curve is defined as first order; correlation coefficients must be greater than 0.99.

Analyte	Count	Mean RPD	Percentiles		
			25th	50th	75th
TOC	24	1.5	0.5	1.4	2.5
UV-254	22	1.0	0.3	0.6	0.9
pH	24	0.6	0.2	0.4	0.8
Temperature	24	0.2	0.0	0.0	0.4
SDS-TOX	24	4.3	1.8	3.1	4.8
SDS-THM4	24	4.9	1.9	4.8	6.0
SDS-HAA5	24	8.8	2.4	5.1	11.2
SDS-HAA6	24	9.0	2.8	5.3	12.7
SDS-HAA9	24	8.8	2.7	4.2	12.7
SDS-chlorine residual	24	4.0	2.1	3.4	6.2
<i>THM Species</i>					
SDS-CHCl ₃	19	27.8	2.7	8.5	13.5
SDS-BDCM	24	5.0	1.8	5.4	7.2
SDS-DBCM	24	5.5	2.3	4.5	7.5
SDS-CHBR ₃	24	4.8	2.0	3.5	7.2
<i>HAA Species</i>					
SDS-MCAA	0	NA	NA	NA	NA
SDS-DCAA	21	7.8	2.4	5.6	10.8
SDS-TCAA	3	4.9	3.4	6.8	7.4
SDS-MBAA	0	NA	NA	NA	NA
SDS-DBAA	24	12.0	3.5	8.0	15.0
SDS-BCAA	20	12.8	3.6	9.5	14.7
SDS-TBAA	0	NA	NA	NA	NA
SDS-CDBAA	0	NA	NA	NA	NA
SDS-DCBAA	8	64.7	15.6	27.2	73.6

RPD: relative percent difference

NA: not applicable

Table 44 Summary of field duplicate precision for RSSCT runs

Level	Concentration (µg/L)
1	0.5
2	1.0
3	2.0
4	4.0
5	20.
6	40.
7	80.

Table 45 Haloacetic acid aqueous calibration standard concentrations (EPA Method 552.2)

Level	Concentration (µg/L)
1	0.5
2	1.0
3	5.0
4	20.
5	40.
6	80.

Table 46 Trihalomethane aqueous calibration standard concentrations (EPA Method 551.1)

18

References

18 References

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*Appendix: Summary of
Treatment Study Data*

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #1

Client: Miami-Dade Water and Sewer De **Study#:** 107

												SDS Chlorination Conditions*													
No.	Sample ID	Client Sample ID	Start Date/Time		End Date/Time		Stop T (days)	Run L (days)	F-S L (days)	TOC (mg/L)	UV254 (1/cm)	Temp (°C)	pH	Dose (mg/L)	Res. (mg/L)	Dem (mg/L)	Temp (°C)	pH	Time hrs	Alk. (mg/L)	Hard-Tot (mg/L as CaCO3)	Hard-CA (mg/L)	Turb. (ntu)		
Effluent C		EBCT: 10 min	Carbon Type: Bituminous			Influent pH: 9.2		Scaling Factor: 9.44																	
1	9804-503	107.10.Eff-1	4/29/98	15:43	4/29/98	20:59			0.16	2	0.13	0.004	21.3	9.1	1.14	0.82	0.32	26.7	9.07	6.3					
2	9804-506	107.10.Eff-4	4/30/98	5:27	4/30/98	10:46			0.73	7	0.27	0.002	22.0	8.8	1.21	0.70	0.51	26.6	9.04	6.0					
3	9804-510	107.10.Eff-5	4/30/98	10:46	4/30/98	13:35			0.90	9	0.70	0.007	21.6	8.7	1.36	0.79	0.57	26.6	9.02	6.0					
4	9805-1	107.10.Eff-6	4/30/98	13:35	4/30/98	18:50			1.07	10	1.16	0.014	21.8	8.6	1.51	0.82	0.69	26.6	9.00	6.0					
4d	9805-2	107.10.Eff-6d	4/30/98	13:35	4/30/98	18:50			1.07	10	1.18	0.014	21.8	8.7	1.52	0.82	0.70	26.6	8.99	6.0					
5	9805-3	107.10.Eff-7	4/30/98	18:50	4/30/98	21:43			1.24	12	1.46	0.017	21.9	8.7	1.62	0.82	0.80	26.6	9.03	6.0					
6	9805-5	107.10.Eff-9	5/1/98	0:32	5/1/98	3:20			1.48	14	1.77	0.022	22.3	8.8	1.72	0.85	0.87	26.6	9.03	6.0					
7	9805-6	107.10.Eff-10	5/1/98	3:20	5/1/98	8:32			1.64	16	1.90	0.025	22.0	8.7	1.77	0.84	0.93	26.6	9.02	6.1					
7d	9805-7	107.10.Eff-10d	5/1/98	3:20	5/1/98	8:32			1.64	16	1.94	0.025	22.1	8.8	1.78	0.83	0.95	26.6	8.96	6.1					
8	9805-19	107.10.Eff-11	5/1/98	8:32	5/1/98	11:59			1.82	17	2.07	0.028	22.1	8.7	1.72	0.77	0.95	26.8	8.99	5.8					
9	9805-29	107.10.Eff-13	5/1/98	17:14	5/1/98	20:08			2.17	21	2.31	0.033	22.1	8.7	1.80	0.78	1.02	26.8	8.97	5.8					
10	9805-51	107.10.Eff-15	5/2/98	1:27	5/2/98	6:40			2.56	24	2.52	0.039	22.1	8.8	1.85	0.76	1.09	26.8	9.02	5.9					
10d	9805-52	107.10.Eff-15d	5/2/98	1:27	5/2/98	6:40			2.56	24	2.59	0.039	22.1	8.8	1.87	0.75	1.12	26.8	9.01	5.9					
11	9805-59	107.10.Eff-17	5/2/98	12:26	5/2/98	17:46			3.03	29	2.81	0.045	22.6	8.8	1.94	0.75	1.19	26.8	9.05	5.9					
12	9805-73	107.10.Eff-19	5/3/98	9:41	5/3/98	14:58			3.91	37	3.02	0.052	22.5	8.8	2.00	0.75	1.25	26.8	9.08	5.9					
13	9805-91	107.10.Eff-20	5/4/98	12:49	5/4/98	17:55			5.04	48	3.20		22.0	8.5											
Effluent C		EBCT: 20 min	Carbon Type: Bituminous			Influent pH: 9.2		Scaling Factor: 9.44																	
1	9804-507	107.20.Eff-1	4/29/98	15:43	4/29/98	20:57			0.16	2	0.17	0.002	20.8	9.4	1.14	0.71	0.43	26.7	9.11	6.1					
2	9805-20	107.20.Eff-4	5/1/98	5:05	5/1/98	10:25			1.72	16	0.39	0.003	21.9	8.9	1.25	0.72	0.53	26.6	9.04	6.1					
3	9805-24	107.20.Eff-5	5/1/98	10:25	5/1/98	15:46			1.94	18	0.70	0.006	21.5	8.7	1.33	0.77	0.56	26.8	9.01	5.9					
4	9805-34	107.20.Eff-6	5/1/98	15:46	5/1/98	21:10			2.17	20	1.02	0.010	21.8	8.7	1.42	0.82	0.60	26.8	8.98	5.9					
4d	9805-35	107.20.Eff-6d	5/1/98	15:46	5/1/98	21:10			2.17	20	1.04	0.010	21.8	8.7	1.42	0.78	0.64	26.8	8.93	5.9					
5	9805-36	107.20.Eff-7	5/1/98	21:10	5/2/98	2:31			2.39	23	1.23	0.012	21.7	8.9	1.48	0.82	0.66	26.8	8.98	5.9					
6	9805-53	107.20.Eff-9	5/2/98	7:46	5/2/98	13:05			2.83	27	1.57	0.017	21.8	9.2	1.58	0.84	0.74	26.8	9.02	6.0					
7	9805-60	107.20.Eff-11	5/2/98	17:00	5/2/98	22:17			3.21	30	1.77	0.022	22.4	9.3	1.64	0.84	0.80	26.8	9.03	6.0					
7d	9805-61	107.20.Eff-11d	5/2/98	17:00	5/2/98	22:17			3.21	30	1.77	0.022	22.4	9.4	1.64	0.78	0.86	26.8	9.02	6.0					
8	9805-76	107.20.Eff-16	5/3/98	19:39	5/4/98	1:02			4.33	41	2.08	0.027	21.4	8.9	1.71	0.72	0.99	26.4	8.99	6.2					
9	9805-104	107.20.Eff-20	5/5/98	0:00	5/5/98	5:24			5.51	52	2.27	0.033	21.6	8.7	1.76	0.85	0.91	26.4	9.01	6.2					
10	9805-116	107.20.Eff-21	5/6/98	6:31	5/6/98	12:06			6.78	64	2.46	0.036	21.9	8.7	1.82	0.70	1.12	26.4	9.01	6.2					
11	9805-138	107.20.Eff-23	5/7/98	20:19	5/8/98	1:35			8.35	79	2.70	0.043	21.3	8.8	1.89	0.69	1.20	26.4	9.00	6.0					
11d	9805-139	107.20.Eff-23d	5/7/98	20:19	5/8/98	1:35			8.35	79	2.74	0.043	21.3	8.9	1.90	0.71	1.19	26.4	9.05	6.1					
12	9805-175	107.20.Eff-28	5/11/98	3:20	5/11/98	8:52			11.65	110	3.19	0.055	21.3	8.6	2.10	0.62	1.48	26.5	8.98	6.0					

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #1

Client: Miami-Dade Water and Sewer De **Study#:** 107

#	SamplesID	ClientSampleID	F-S L	TOC	TOX	Trihalomethanes (µg/L)					Haloacetic Acids (µg/L)										NH3-N	Brom					
			(days)	(mg/L)	(µg Cl-/L)	CF	BDCM	DBCM	BF	TTHM	MCAA	DCAA	TCAA	MBAA	DBAA	BCAA	BDCAA	DBCAA	TBAA	HAA6	HAA9	(mg/L)	(µg/L)				
Effluent C		EBCT: 10 min	Carbon Type: Bituminous			Influent pH: 9.2					Scaling Factor: 9.44																
1	9804-503	107.10.Eff-1	2	0.13	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
2	9804-506	107.10.Eff-4	7	0.27	10	ND	1.2	ND	3.9	5.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
3	9804-510	107.10.Eff-5	9	0.70	19	ND	3.5	ND	6.7	10.2	ND	ND	ND	ND	1	ND	ND	ND	ND	1	1						
4	9805-1	107.10.Eff-6	10	1.16	34	ND	6.4	2.0	8.5	16.9	ND	1	ND	ND	2	ND	ND	ND	ND	3	3						
4d	9805-2	107.10.Eff-6d	10	1.18	33	ND	6.8	2.1	8.8	17.8	ND	1	ND	ND	2	ND	ND	ND	ND	3	3						
5	9805-3	107.10.Eff-7	12	1.46	41	ND	9.7	3.5	10.1	23.4	ND	2	ND	ND	3	1	ND	ND	ND	6	6						
6	9805-5	107.10.Eff-9	14	1.77	51	1.5	12.3	5.1	10.0	28.9	ND	5	ND	ND	4	2	ND	ND	ND	10	10						
7	9805-6	107.10.Eff-10	16	1.90	60	1.9	13.6	6.3	10.5	32.4	ND	6	ND	ND	4	2	ND	ND	ND	12	12						
7d	9805-7	107.10.Eff-10d	16	1.94	59	1.7	12.7	5.8	9.6	29.8	ND	6	ND	ND	4	2	ND	ND	ND	12	12						
8	9805-19	107.10.Eff-11	17	2.07	68	2.3	14.6	7.2	9.7	33.7	ND	7	ND	ND	5	3	ND	ND	ND	15	15						
9	9805-29	107.10.Eff-13	21	2.31	79	3.2	15.6	8.8	8.8	36.4	ND	8	ND	ND	4	4	ND	ND	ND	16	16						
10	9805-51	107.10.Eff-15	24	2.52	90	4.4	16.9	10.8	8.1	40.3	ND	8	ND	ND	4	4	ND	ND	ND	16	16						
10d	9805-52	107.10.Eff-15d	24	2.59	87	4.4	15.8	10.4	7.8	38.4	ND	7	ND	ND	3	4	ND	ND	ND	14	14						
11	9805-59	107.10.Eff-17	29	2.81	102	6.0	16.9	12.4	6.7	42.0	ND	8	ND	ND	4	5	ND	ND	ND	17	17						
12	9805-73	107.10.Eff-19	37	3.02	102	8.2	16.7	14.2	5.9	45.0	ND	8	1	ND	4	5	1	ND	ND	18	19						
13	9805-91	107.10.Eff-20	48	3.20																							
Effluent C		EBCT: 20 min	Carbon Type: Bituminous			Influent pH: 9.2					Scaling Factor: 9.44																
1	9804-507	107.20.Eff-1	2	0.17	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
2	9805-20	107.20.Eff-4	16	0.39	12	ND	1.6	ND	4.9	6.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
3	9805-24	107.20.Eff-5	18	0.70	16	ND	3.1	ND	6.9	10.1	ND	ND	ND	ND	1	ND	ND	ND	ND	1	1						
4	9805-34	107.20.Eff-6	20	1.02	19	ND	4.8	1.4	8.0	14.1	ND	ND	ND	ND	2	ND	ND	ND	ND	2	2						
4d	9805-35	107.20.Eff-6d	20	1.04	22	ND	5.2	1.6	8.0	14.7	ND	ND	ND	ND	2	ND	ND	ND	ND	2	2						
5	9805-36	107.20.Eff-7	23	1.23	25	ND	6.4	1.9	9.0	17.3	ND	ND	ND	ND	2	1	ND	ND	ND	3	3						
6	9805-53	107.20.Eff-9	27	1.57	37	ND	8.7	3.0	9.9	21.6	ND	2	ND	ND	3	1	ND	ND	ND	6	6						
7	9805-60	107.20.Eff-11	30	1.77	47	1.3	12.1	4.9	10.4	28.7	ND	4	ND	ND	3	1	ND	ND	ND	9	9						
7d	9805-61	107.20.Eff-11d	30	1.77	51	1.5	12.7	5.3	10.9	30.3	ND	4	ND	ND	3	2	ND	ND	ND	9	9						
8	9805-76	107.20.Eff-16	41	2.08	66	2.1	14.1	6.5	10.5	33.3	ND	8	ND	ND	4	3	ND	ND	ND	14	14						
9	9805-104	107.20.Eff-20	52	2.27	75	3.4	17.0	9.2	10.4	40.0	ND	6	ND	ND	4	4	ND	ND	ND	15	15						
10	9805-116	107.20.Eff-21	64	2.46	87	4.1	17.9	10.5	9.8	42.3	ND	6	ND	ND	4	4	1	ND	ND	15	16						
11	9805-138	107.20.Eff-23	79	2.70	94	5.7	18.5	12.6	8.4	45.2	ND	4	1	ND	4	4	ND	ND	ND	13	13						
11d	9805-139	107.20.Eff-23d	79	2.74	90	5.8	18.3	12.5	8.4	45.0	ND	4	1	ND	3	3	1	ND	ND	12	13						
12	9805-175	107.20.Eff-28	110	3.19	133	11.6	17.7	15.7	6.0	51.0	ND	7	5	ND	7	7	2	ND	ND	25	28						

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #1

Client: Miami-Dade Water and Sewer De **Study#:** 107

													SDS Chlorination Conditions*										
No.	Sample ID	Client Sample ID	Start Date/Time		End Date/Time		Stop T (days)	Run L (days)	F-S L (days)	TOC (mg/L)	UV254 (1/cm)	Temp (°C)	pH	Dose (mg/L)	Res. (mg/L)	Dem (mg/L)	Temp (°C)	pH	Time hrs	Alk. (mg/L)	Hard-Tot (mg/L as CaCO3)	Hard-CA	Turb. (ntu)
13	9805-216	107.20.Eff-29	5/12/98	6:30	5/12/98	12:00		12.78	121	3.30		21.7											
Influent A		EBCT:	Carbon Type:		Influent pH: 9.2		Scaling Factor: 9.44																
1	9804-501	107.INF.A-1	4/29/98	16:30	4/29/98	16:30		0.08	1												42		
2	9805-92	107.INF.A-2	5/4/98	18:05	5/4/98	18:05		5.15	49												35		
Influent B		EBCT:	Carbon Type:		Influent pH: 9.2		Scaling Factor: 9.44																
1	9804-500	107.INF.B-1	4/29/98	16:15	4/29/98	16:15		0.07	1	4.21	0.088	19.9	9.3	2.95	0.96	1.99	26.7	9.05	6.2				0.10
2	9804-532	107.INF.B-2	4/30/98	16:50	4/30/98	16:50		1.10	10	4.13		17.0	9.1										
3	9805-21	107.INF.B-3	5/1/98	14:00	5/1/98	14:00		1.98	19	4.32		17.2	9.1										
4	9805-88	107.INF.B-4	5/4/98	14:35	5/4/98	14:35	0.06	4.94	47	4.21	0.088	17.5	9.2	2.70	0.84	1.86	26.4	9.10	6.2		46	30	0.10
5	9805-190	107.INF.B-5	5/11/98	10:10	5/11/98	10:10	0.20	11.62	110	4.00	0.089	18.5	9.2	2.55	0.70	1.85	26.5	9.11	6.0				0.10
PreStudy		EBCT:	Carbon Type:		Influent pH:		Scaling Factor:																
1	9804-396	Settled on Arrival	4/23/98	17:40						4.48													
2	9804-502	107.Inst.INF-1	4/29/98	16:15																			
3	9804-472	filtered	4/28/98	13:25						4.16													
4	9804-350	Filtered	4/20/98	14:40						3.70													
5	9804-349	Settled	4/20/98	13:50						4.56													
6	9803-23	ICR - Raw	3/4/98	10:15																			
7	9803-22	ICR - Soft	3/4/98	10:30																			
8	9803-201	Softened and 7 day	3/19/98	12:00																			
9	9803-137	Soft	3/12/98	0:00																			
10	9803-136	Raw	3/12/98	0:00																			
11	9804-348	Raw	4/20/98	14:35					5.88														
12	9805-13	107.10.INST.Eff-1	4/30/98	13:35	4/30/98	18:05		1.06															
13	9805-14	107.10.INST.Eff-2	5/1/98	10:00	5/1/98	10:30		1.82															
14	9805-50	107.10.Inst.Eff-3	5/2/98	11:30	5/2/98	12:00		2.89															

***Target SDS Chlorination Conditions**

Free Cl2 Residual: 0.75 mg/L **pH:** 9.1 **Temperature:** 26.0 °C **Holding time:** 6.0 hrs

Study Comments

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #1

Client: Miami-Dade Water and Sewer De **Study#:** 107

#	SamplesID	ClientSampleID	F-S L (days)	TOC (mg/L)	TOX (µg Cl-/L)	Trihalomethanes (µg/L)					Haloacetic Acids (µg/L)										NH3-N	Brom		
						CF	BDCM	DBCM	BF	TTHM	MCAA	DCAA	TCAA	MBAA	DBAA	BCAA	BDCAA	DBCAA	TBAA	HAA6	HAA9	(mg/L)	(µg/L)	
13	9805-216	107.20.Eff-29	121	3.30																				
Influent A		EBCT:	Carbon Type:		Influent pH: 9.2					Scaling Factor: 9.44														
1	9804-501	107.INF.A-1		1																				
2	9805-92	107.INF.A-2		49																				
Influent B		EBCT:	Carbon Type:		Influent pH: 9.2					Scaling Factor: 9.44														
1	9804-500	107.INF.B-1		1	4.21	223	27.0	15.2	22.3	2.9	67.5	ND	16	2	ND	3	8	2	ND	ND	29	31		
2	9804-532	107.INF.B-2		10	4.13																			
3	9805-21	107.INF.B-3		19	4.32																			
4	9805-88	107.INF.B-4		47	4.21	217	25.3	14.3	20.7	2.8	63.1	ND	14	3	ND	4	7	2	ND	ND	27	29	ND	92
5	9805-190	107.INF.B-5		110	4.00	211	24.0	14.3	19.9	3.0	61.2	ND	14	4	ND	5	9	3	ND	ND	33	36		
PreStudy		EBCT:	Carbon Type:		Influent pH:					Scaling Factor:														
1	9804-396	Settled on Arrival		4.48																				
2	9804-502	107.Inst.INF-1					4.8	ND	2.2	ND	7.0	ND	7	ND	ND	ND	2	ND	ND	ND	9	9		
3	9804-472	filtered		4.16																				
4	9804-350	Filtered		3.70																				
5	9804-349	Settled		4.56																				
6	9803-23	ICR - Raw			8																			
7	9803-22	ICR - Soft			25																			
8	9803-201	Softened and 7 day hold				5.3	1.0	1.7	ND	8.0	ND	5	ND	ND	ND	1	ND	ND	ND	6	6			
9	9803-137	Soft				5.2	1.1	1.8	ND	8.1	ND	4	ND	ND	ND	1	ND	ND	ND	5	5			
10	9803-136	Raw				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
11	9804-348	Raw		5.88																				
12	9805-13	107.10.INST.Eff-1				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
13	9805-14	107.10.INST.Eff-2				ND	ND	ND	ND	ND	ND	7	ND	ND	ND	ND	ND	ND	ND	7	7			
14	9805-50	107.10.Inst.Eff-3				ND	ND	ND	ND	ND	ND	8	ND	ND	ND	2	ND	ND	ND	10	10			

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #2

Client: Miami-Dade Water and Sewer De **Study#:** 123

													SDS Chlorination Conditions*										
No.	Sample ID	Client Sample ID	Start Date/Time		End Date/Time		Stop T	Run L	F-S L	TOC	UV254	Temp	pH	Dose	Res.	Dem	Temp	pH	Time	Alk.	Hard-Tot	Hard-CA	Turb.
							(days)	(days)	(days)	(mg/L)	(1/cm)	(°C)		(mg/L)	(mg/L)	(mg/L)	(°C)		hrs	(mg/L)	(mg/L as CaCO3)		(ntu)
Effluent C		EBCT: 10 min		Carbon Type: Bituminous			Influent pH: 8.2		Scaling Factor: 9.44														
1	9807-12	123.10.pH8.2.Eff-1	7/2/98	17:15	7/3/98	8:05		0.36	3	0.21	0.002	21.3	8.0	1.35	0.73	0.62	27.2	9.04	6.0				
2	9807-16	123.10.pH8.2.Eff-5	7/3/98	18:38	7/3/98	23:11		1.21	11	0.45	0.004	23.1	8.2	1.43	0.80	0.63	27.2	9.09	6.0				
3	9807-17	123.10.pH8.2.Eff-6	7/3/98	23:11	7/4/98	1:43		1.36	13	0.79	0.007	22.2	8.1	1.54	0.78	0.76	27.2	9.03	6.0				
4	9807-18	123.10.pH8.2.Eff-7	7/4/98	1:43	7/4/98	6:18		1.50	14	1.09	0.011	21.9	7.7	1.85	1.04	0.81	27.2	9.07	6.0				
4d	9807-43	123.10.pH8.2.Eff-7d	7/4/98	1:43	7/4/98	6:18		1.50	14	1.13	0.011	21.9	7.8	1.85	1.01	0.84	27.2	9.07	6.1				
5	9807-19	123.10.pH8.2.Eff-8	7/4/98	6:18	7/4/98	9:04		1.66	16	1.34	0.014	22.0	7.8	1.70	0.84	0.86	26.6	9.03	6.1				
6	9807-20	123.10.pH8.2.Eff-9	7/4/98	9:04	7/4/98	14:11		1.82	17	1.52	0.017	22.8	8.1	1.76	0.86	0.90	26.6	9.06	6.2				
7	9807-22	123.10.pH8.2.Eff-11	7/4/98	16:48	7/4/98	21:56		2.14	20	1.78	0.021	23.0	8.1	1.85	0.83	1.02	26.6	9.07	6.2				
7d	9807-44	123.10.pH8.2.Eff-11d	7/4/98	16:48	7/4/98	21:56		2.14	20	1.77	0.021	23.1	8.1	1.85	0.86	0.99	26.6	9.03	6.2				
8	9807-24	123.10.pH8.2.Eff-13	7/5/98	2:38	7/5/98	7:20		2.54	24	2.06	0.026	22.2	8.2	1.95	0.88	1.07	26.6	9.07	6.2				
9	9807-27	123.10.pH8.2.Eff-16	7/5/98	16:44	7/5/98	21:24		3.13	30	2.31	0.032	23.7	8.2	2.04	0.83	1.21	26.6	9.09	6.2				
10	9807-30	123.10.pH8.2.Eff-19	7/6/98	6:47	7/6/98	12:08		3.73	35	2.62	0.038	22.7	7.6	2.15	0.87	1.28	26.6	9.06	6.2				
11	9807-31	123.10.pH8.2.Eff-20	7/6/98	16:46	7/6/98	21:24		4.13	39	2.85	0.041	23.3	7.7	2.23	0.89	1.34	26.6	9.08	6.2				
11d	9807-46	123.10.pH8.2.Eff-20d	7/6/98	16:46	7/6/98	21:24		4.13	39	2.87	0.040	23.4	7.7	2.23	0.91	1.32	26.6	9.07	6.2				
12	9807-34	123.10.pH8.2.Eff-23	7/7/98	16:37	7/7/98	21:23		5.13	48	3.01	0.047	23.0	7.7	2.22	0.79	1.43	26.6	9.06	6.1				
13	9807-35	123.10.pH8.2.Eff-24	7/9/98	7:04	7/9/98	11:58		6.73	64	3.23	0.052	22.5	7.9										
Effluent C		EBCT: 10 min		Carbon Type: Bituminous			Influent pH: 8.7		Scaling Factor: 9.44														
1	9807-135	123.10.pH8.7.Eff-1	7/8/98	15:51	7/8/98	21:46		0.18	2	0.25	0.001	23.6	8.5	1.34	0.90	0.44	26.5	9.05	6.0				
2	9807-137	123.10.pH8.7.Eff-3	7/9/98	12:56	7/9/98	15:57		0.99	9	0.50	0.002	23.5	8.1	1.42	0.84	0.58	26.5	9.03	6.0				
3	9807-138	123.10.pH8.7.Eff-4	7/9/98	15:57	7/9/98	21:21		1.17	11	0.97	0.007	23.5	8.2	1.57	0.85	0.72	26.5	9.10	6.0				
3d	9807-165	123.10.pH8.7.Eff-4d	7/9/98	15:57	7/9/98	21:21		1.17	11	1.02	0.007	23.5	8.3	1.57	0.89	0.68	26.5	9.02	6.0				
4	9807-139	123.10.pH8.7.Eff-5	7/9/98	21:21	7/10/98	0:25		1.35	13	1.29	0.011	22.6	8.3	1.66	0.90	0.76	26.5	9.02	6.0				
5	9807-140	123.10.pH8.7.Eff-6	7/10/98	0:25	7/10/98	3:26		1.47	14	1.52	0.013	22.1	8.3	1.73	0.89	0.84	26.5	9.08	6.0				
6	9807-141	123.10.pH8.7.Eff-7	7/10/98	3:26	7/10/98	6:29		1.60	15	1.65	0.016	22.0	8.2	1.77	0.86	0.91	26.5	9.06	6.1				
7	9807-142	123.10.pH8.7.Eff-8	7/10/98	6:29	7/10/98	9:31		1.73	16	1.83	0.018	22.4	8.0	1.82	0.88	0.94	26.5	9.06	6.1				
8	9807-143	123.10.pH8.7.Eff-9	7/10/98	9:31	7/10/98	15:00		1.90	18	2.05	0.021	23.0	8.1	1.89	0.90	0.99	26.6	9.01	6.0				
8d	9807-166	123.10.pH8.7.Eff-9d	7/10/98	9:31	7/10/98	15:00		1.90	18	2.08	0.021	22.9	8.2	1.89	0.85	1.04	26.6	9.03	6.0				
9	9807-146	123.10.pH8.7.Eff-12	7/10/98	23:26	7/11/98	2:28		2.43	23	2.30	0.027	22.1	8.3	1.96	0.85	1.11	26.6	9.01	6.1				
10	9807-148	123.10.pH8.7.Eff-14	7/11/98	5:24	7/11/98	10:52		2.73	26	2.50	0.030	22.8	8.5	2.03	0.84	1.19	26.6	9.04	6.1				
11	9807-150	123.10.pH8.7.Eff-16	7/11/98	13:55	7/11/98	19:28		3.09	29	2.70	0.035	22.4	8.2	2.09	0.82	1.27	26.6	9.04	6.1				
11d	9807-168	123.10.pH8.7.Eff-16d	7/11/98	13:55	7/11/98	19:28		3.09	29	2.70	0.035	22.5	8.2	2.09	0.85	1.24	26.6	9.04	6.1				
12	9807-153	123.10.pH8.7.Eff-19	7/12/98	6:41	7/12/98	12:29	0.01	3.78	36	2.96	0.041	22.8	8.2	2.18	0.83	1.35	26.6	9.04	6.2				

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #2

Client: Miami-Dade Water and Sewer De **Study#:** 123

#	SamplesID	ClientSampleID	F-S L (days)	TOC (mg/L)	TOX (µg Cl-/L)	Trihalomethanes (µg/L)					Haloacetic Acids (µg/L)										NH3-N (mg/L)	Brom (µg/L)
						CF	BDCM	DBCM	BF	TTHM	MCAA	DCAA	TCAA	MBAA	DBAA	BCAA	BDCAA	DBCAA	TBAA	HAA6		
Effluent C		EBCT: 10 min	Carbon Type: Bituminous		Influent pH: 8.2					Scaling Factor: 9.44												
1	9807-12	123.10.pH8.2.Eff-1	3	0.21	4	ND	1.3	ND	2.2	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2	9807-16	123.10.pH8.2.Eff-5	11	0.45	10	ND	2.4	ND	7.0	9.4	ND	ND	ND	ND	1	ND	ND	ND	ND	1	1	
3	9807-17	123.10.pH8.2.Eff-6	13	0.79	18	ND	4.8	1.2	9.7	15.7	ND	ND	ND	ND	2	ND	ND	ND	ND	2	2	
4	9807-18	123.10.pH8.2.Eff-7	14	1.09	28	ND	6.4	1.9	9.6	17.9	ND	2	ND	ND	3	1	ND	ND	ND	5	5	
4d	9807-43	123.10.pH8.2.Eff-7d	14	1.13	29	ND	6.7	1.9	10.4	19.0	ND	2	ND	ND	3	1	ND	ND	ND	6	6	
5	9807-19	123.10.pH8.2.Eff-8	16	1.34	34	ND	8.8	2.5	12.0	23.3	ND	3	ND	ND	3	ND	ND	ND	ND	5	5	
6	9807-20	123.10.pH8.2.Eff-9	17	1.52	42	ND	10.8	3.4	12.9	27.2	ND	4	ND	ND	3	1	ND	ND	ND	9	9	
7	9807-22	123.10.pH8.2.Eff-11	20	1.78	57	ND	13.5	5.0	13.1	31.6	ND	7	ND	ND	5	3	ND	ND	ND	14	14	
7d	9807-44	123.10.pH8.2.Eff-11d	20	1.77	57	1.1	13.4	4.9	13.5	32.9	ND	6	ND	ND	4	2	ND	ND	ND	13	13	
8	9807-24	123.10.pH8.2.Eff-13	24	2.06	67	1.6	16.1	6.7	13.7	38.2	ND	7	ND	ND	6	4	ND	ND	ND	17	17	
9	9807-27	123.10.pH8.2.Eff-16	30	2.31	83	2.3	18.4	8.7	12.9	42.3	ND	6	ND	ND	5	4	ND	ND	ND	16	16	
10	9807-30	123.10.pH8.2.Eff-19	35	2.62	97	3.6	21.9	11.6	13.5	50.7	ND	6	ND	ND	6	5	ND	ND	ND	16	16	
11	9807-31	123.10.pH8.2.Eff-20	39	2.85	104	4.5	21.3	12.4	12.2	50.5	ND	6	ND	ND	6	5	1	ND	ND	16	17	
11d	9807-46	123.10.pH8.2.Eff-20d	39	2.87	102	4.0	21.5	12.1	12.7	50.2	ND	5	ND	ND	6	5	2	ND	ND	17	18	
12	9807-34	123.10.pH8.2.Eff-23	48	3.01	115	5.6	22.3	14.3	13.3	55.5	ND	5	1	ND	8	6	2	2	ND	20	24	
13	9807-35	123.10.pH8.2.Eff-24	64	3.23																		
Effluent C		EBCT: 10 min	Carbon Type: Bituminous		Influent pH: 8.7					Scaling Factor: 9.44												
1	9807-135	123.10.pH8.7.Eff-1	2	0.25	3	ND	ND	ND	1.1	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2	9807-137	123.10.pH8.7.Eff-3	9	0.50	10	ND	2.2	ND	8.4	10.6	ND	ND	ND	ND	2	ND	ND	ND	ND	2	2	
3	9807-138	123.10.pH8.7.Eff-4	11	0.97	19	ND	4.9	1.2	11.7	17.8	ND	ND	ND	ND	3	ND	ND	ND	ND	3	3	
3d	9807-165	123.10.pH8.7.Eff-4d	11	1.02	17	ND	5.4	1.2	11.8	18.4	ND	ND	ND	ND	3	ND	ND	ND	ND	3	3	
4	9807-139	123.10.pH8.7.Eff-5	13	1.29	27	ND	7.4	1.9	13.1	22.5	ND	1	ND	ND	3	1	ND	ND	ND	6	6	
5	9807-140	123.10.pH8.7.Eff-6	14	1.52	35	ND	9.2	2.7	14.5	26.3	ND	2	ND	ND	4	1	ND	ND	ND	7	7	
6	9807-141	123.10.pH8.7.Eff-7	15	1.65	38	ND	10.8	3.4	16.0	30.2	ND	2	ND	ND	4	2	ND	ND	ND	8	8	
7	9807-142	123.10.pH8.7.Eff-8	16	1.83	46	ND	12.9	4.4	15.5	32.8	ND	3	ND	ND	6	2	1	ND	ND	11	12	
8	9807-143	123.10.pH8.7.Eff-9	18	2.05	54	ND	15.2	5.4	15.9	36.5	ND	2	ND	ND	5	2	ND	ND	ND	10	10	
8d	9807-166	123.10.pH8.7.Eff-9d	18	2.08	54	1.2	16.8	6.0	17.4	41.4	ND	2	ND	ND	5	2	ND	ND	ND	10	10	
9	9807-146	123.10.pH8.7.Eff-12	23	2.30	69	2.1	18.5	8.1	15.9	44.6	ND	2	ND	ND	6	3	1	ND	ND	11	12	
10	9807-148	123.10.pH8.7.Eff-14	26	2.50	78	2.7	20.4	9.6	15.4	48.1	ND	2	ND	ND	7	3	1	ND	ND	12	14	
11	9807-150	123.10.pH8.7.Eff-16	29	2.70	91	3.6	21.8	11.3	14.6	51.4	ND	2	ND	ND	7	4	2	ND	ND	13	15	
11d	9807-168	123.10.pH8.7.Eff-16d	29	2.70	88	3.5	20.5	10.9	13.6	48.6	ND	1	ND	ND	5	3	1	ND	ND	9	10	
12	9807-153	123.10.pH8.7.Eff-19	36	2.96	103	4.6	20.8	12.6	11.9	49.9	ND	2	1	ND	5	3	1	ND	ND	11	12	

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #2

Client: Miami-Dade Water and Sewer De **Study#:** 123

																SDS Chlorination Conditions*							
No.	Sample ID	Client Sample ID	Start Date/Time		End Date/Time		Stop T (days)	Run L (days)	F-S L (days)	TOC (mg/L)	UV254 (1/cm)	Temp (°C)	pH	Dose (mg/L)	Res. (mg/L)	Dem (mg/L)	Temp (°C)	pH	Time hrs	Alk. (mg/L)	Hard-Tot (mg/L as CaCO3)	Hard-CA	Turb. (ntu)
13	9807-155	123.10.pH8.7.Eff-21	7/13/98	21:40	7/14/98	3:14	0.01	5.40	51	3.15		22.4	8.5										
Effluent C		EBCT: 10 min		Carbon Type: Bituminous		Influent pH: 9.2		Scaling Factor: 9.44															
1	9806-763	123.10.pH9.2.Eff-1	6/26/98	16:10	6/26/98	21:33		0.16	2	0.20	0.001	26.7	8.7	1.74	1.20	0.54	27.2	9.06	6.1				
2	9806-764	123.10.pH9.2.Eff-2	6/27/98	8:47	6/27/98	14:17		0.86	8	0.64	0.006	25.3	8.6	1.92	1.12	0.80	27.2	9.10	6.2				
3	9806-765	123.10.pH9.2.Eff-3	6/27/98	14:17	6/27/98	19:36		1.08	10	1.27	0.013	26.7	8.8	2.16	1.18	0.98	27.2	9.09	6.2				
4	9806-766	123.10.pH9.2.Eff-4	6/27/98	19:36	6/27/98	22:27		1.25	12	1.48	0.017	26.7	8.5	2.25	1.28	0.97	27.2	9.09	6.3				
5	9806-767	123.10.pH9.2.Eff-5	6/27/98	22:27	6/28/98	3:45		1.42	13	1.65	0.019	25.0	8.6	2.32	1.27	1.05	27.2	9.08	6.3				
5d	9806-793	123.10.pH9.2.Eff-5d	6/27/98	22:27	6/28/98	3:45		1.42	13	1.69	0.019	25.0	8.6	2.33	1.24	1.09	27.2	9.08	6.3				
6	9806-769	123.10.pH9.2.Eff-7	6/28/98	6:42	6/28/98	12:08		1.77	17	1.98	0.023	24.7	8.6	2.44	1.32	1.12	27.2	9.10	6.3				
7	9806-771	123.10.pH9.2.Eff-9	6/28/98	15:05	6/28/98	20:25		2.11	20	2.27	0.029	26.3	8.6	2.57	1.33	1.24	27.2	9.06	6.3				
7d	9806-794	123.10.pH9.2.Eff-9d	6/28/98	15:05	6/28/98	20:25		2.11	20	2.19	0.029	26.2	8.6	2.53	1.23	1.30	27.2	9.05	6.3				
8	9806-776	123.10.pH9.2.Eff-14	6/29/98	13:22	6/29/98	18:49		3.05	29	2.41	0.035	23.3	8.4	2.03	0.80	1.23	27.3	9.04	5.7				
9	9806-778	123.10.pH9.2.Eff-16	6/30/98	0:22	6/30/98	6:03		3.51	33	2.58	0.039	21.4	8.9	2.11	0.81	1.30	27.3	9.06	6.0				
10	9806-779	123.10.pH9.2.Eff-17	6/30/98	6:03	6/30/98	11:35		3.74	35	2.74		22.4	8.5	2.16	0.79	1.37	27.3	9.05	6.0				
10d	9806-797	123.10.pH9.2.Eff-17d	6/30/98	6:03	6/30/98	11:35		3.74	35	2.67		22.4	8.5	2.16	0.80	1.36	27.3	9.04	6.0				
11	9806-780	123.10.pH9.2.Eff-18	6/30/98	22:26	7/1/98	3:59		4.43	42	2.88	0.046	22.5	8.7	2.18	0.70	1.48	27.3	9.12	5.7				
12	9806-781	123.10.pH9.2.Eff-19	7/2/98	2:08	7/2/98	7:43		5.58	53	3.11	0.052	21.7	8.6	2.25	0.68	1.57	27.3	9.07	5.7				
13	9806-783	123.10.pH9.2.Eff-21	7/3/98	19:48	7/3/98	22:35		7.26	69	3.38		23.6	8.7										
Influent A		EBCT: 10 min		Carbon Type:		Influent pH: 8.2		Scaling Factor: 9.44															
1	9807-52	123.10.pH8.2.Inf.A-1	7/2/98	17:15	7/2/98	17:15		0.06	1											21	54	35	
2	9807-53	123.10.pH8.2.Inf.A-2	7/8/98	17:10	7/8/98	17:10		6.05	57											26	54	35	
Influent A		EBCT: 10 min		Carbon Type:		Influent pH: 8.7		Scaling Factor: 9.44															
1	9807-175	123.10.pH8.7.Inf.A-1	7/8/98	15:55	7/8/98	15:55		0.06	1											29	53	35	
2	9807-176	123.10.pH8.7.Inf.A-2	7/13/98	11:50	7/13/98	11:50		4.89	46											33	54	35	
Influent A		EBCT: 10 min		Carbon Type:		Influent pH: 9.2		Scaling Factor: 9.44															
1	9806-803	123.10.pH9.2.Inf.A-1	6/26/98	17:45	6/26/98	17:45		0.11	1											25	54	35	
2	9806-804	123.10.pH9.2.Inf.A-2	7/2/98	13:05	7/2/98	13:05		5.92	56											29	54	35	
Influent B		EBCT: 10 min		Carbon Type:		Influent pH: 8.2		Scaling Factor: 9.44															
1	9807-54	123.pH8.2.Inf.B-1	7/2/98	17:25	7/2/98	17:25		0.06	1	4.26	0.081	19.6	8.3	3.05	0.88	2.17	27.2	9.09	6.1				0.20

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #2

Client: Miami-Dade Water and Sewer De **Study#:** 123

#	SamplesID	ClientSampleID	F-S L	TOC	TOX	Trihalomethanes (µg/L)					Haloacetic Acids (µg/L)										NH3-N	Brom		
			(days)	(mg/L)	(µg Cl-/L)	CF	BDCM	DBCM	BF	TTHM	MCAA	DCAA	TCAA	MBAA	DBAA	BCAA	BDCAA	DBCAA	TBAA	HAA6	HAA9	(mg/L)	(µg/L)	
13	9807-155	123.10.pH8.7.Eff-21	51	3.15																				
Effluent C			EBCT: 10 min	Carbon Type: Bituminous		Influent pH: 9.2				Scaling Factor: 9.44														
1	9806-763	123.10.pH9.2.Eff-1	2	0.20	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2	9806-764	123.10.pH9.2.Eff-2	8	0.64	13	ND	3.9	1.1	8.4	13.3	ND	ND	ND	ND	1	ND	ND	ND	ND	1	1			
3	9806-765	123.10.pH9.2.Eff-3	10	1.27	34	ND	8.9	2.8	12.0	23.7	ND	2	ND	ND	2	ND	ND	ND	ND	4	4			
4	9806-766	123.10.pH9.2.Eff-4	12	1.48	46	ND	11.4	4.2	12.7	28.3	ND	4	ND	ND	2	1	ND	ND	ND	7	7			
5	9806-767	123.10.pH9.2.Eff-5	13	1.65	59	1.2	14.2	5.6	14.0	35.1	ND	6	ND	ND	2	2	ND	ND	ND	10	10			
5d	9806-793	123.10.pH9.2.Eff-5d	13	1.69	54	1.4	13.8	5.3	14.1	34.6	ND	6	ND	ND	2	2	ND	ND	ND	10	10			
6	9806-769	123.10.pH9.2.Eff-7	17	1.98	64	1.9	16.2	7.2	14.3	39.6	ND	7	ND	ND	3	3	ND	ND	ND	12	12			
7	9806-771	123.10.pH9.2.Eff-9	20	2.27	83	2.9	18.2	9.5	13.3	44.0	ND	6	ND	ND	3	3	ND	ND	ND	12	12			
7d	9806-794	123.10.pH9.2.Eff-9d	20	2.19	82	3.1	19.8	10.1	13.5	46.4	ND	6	ND	ND	3	3	ND	ND	ND	12	12			
8	9806-776	123.10.pH9.2.Eff-14	29	2.41	88	3.6	20.1	10.8	13.5	48.0	ND	7	1	ND	7	6	1	ND	ND	20	22			
9	9806-778	123.10.pH9.2.Eff-16	33	2.58	104	4.4	21.2	12.3	12.1	50.0	ND	6	1	ND	5	5	1	ND	ND	16	18			
10	9806-779	123.10.pH9.2.Eff-17	35	2.74	103	4.8	20.8	12.5	11.7	49.9	ND	7	1	ND	6	5	2	ND	ND	19	20			
10d	9806-797	123.10.pH9.2.Eff-17d	35	2.67	103	5.2	22.3	13.7	12.5	53.7	ND	7	1	ND	6	5	1	ND	ND	19	20			
11	9806-780	123.10.pH9.2.Eff-18	42	2.88	111	6.5	22.1	14.9	11.3	54.8	ND	7	1	ND	5	5	2	ND	ND	19	20			
12	9806-781	123.10.pH9.2.Eff-19	53	3.11	122	7.8	22.5	16.3	10.4	57.0	ND	7	1	ND	6	6	2	ND	ND	21	22			
13	9806-783	123.10.pH9.2.Eff-21	69	3.38																				
Influent A			EBCT: 10 min	Carbon Type:		Influent pH: 8.2				Scaling Factor: 9.44														
1	9807-52	123.10.pH8.2.Inf.A-1	1																		0.13	110		
2	9807-53	123.10.pH8.2.Inf.A-2	57																		ND	140		
Influent A			EBCT: 10 min	Carbon Type:		Influent pH: 8.7				Scaling Factor: 9.44														
1	9807-175	123.10.pH8.7.Inf.A-1	1																		ND	140		
2	9807-176	123.10.pH8.7.Inf.A-2	46																		ND	140		
Influent A			EBCT: 10 min	Carbon Type:		Influent pH: 9.2				Scaling Factor: 9.44														
1	9806-803	123.10.pH9.2.Inf.A-1	1																		0.20	100		
2	9806-804	123.10.pH9.2.Inf.A-2	56																		0.08	110		
Influent B			EBCT: 10 min	Carbon Type:		Influent pH: 8.2				Scaling Factor: 9.44														
1	9807-54	123.pH8.2.Inf.B-1	1	4.26	210	24.0	21.4	25.6	5.5	76.6	ND	14	3	ND	7	11	3	ND	ND	35	38			

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #2

Client: Miami-Dade Water and Sewer De **Study#:** 123

													SDS Chlorination Conditions*										
							Stop T	Run L	F-S L	TOC	UV254	Temp	pH	Dose	Res.	Dem	Temp	pH	Time	Alk.	Hard-Tot	Hard-CA	Turb.
No.	Sample ID	Client Sample ID	Start Date/Time	End Date/Time		(days)	(days)	(days)	(mg/L)	(1/cm)	(°C)			(mg/L)	(mg/L)	(mg/L)	(°C)		hrs	(mg/L)	(mg/L as CaCO3)		(ntu)
2	9807-55	123.pH8.2.Inf.B-2	7/4/98 13:00	7/4/98 13:00			1.88	18	4.11		21.9	8.2											
3	9807-56	123.pH8.2.Inf.B-3	7/6/98 12:55	7/6/98 12:55			3.88	37	4.11		19.9	8.2											
Influent B		EBCT: 10 min	Carbon Type:			Influent pH: 8.7			Scaling Factor: 9.44														
1	9807-177	123.pH8.7.Inf.B-1	7/8/98 16:00	7/8/98 16:00			0.06	1	4.08	0.082	19.1	8.7	2.85	0.92	1.93	26.5	9.10	6.0					0.10
2	9807-178	123.pH8.7.Inf.B-2	7/10/98 17:10	7/10/98 17:10			2.11	20	4.22		18.5	8.7											
3	9807-179	123.pH8.7.Inf.B-3	7/11/98 19:50	7/11/98 19:50			3.22	30	4.25		17.9	8.7											
4	9807-180	123.pH8.7.Inf.B-4	7/13/98 11:45	7/13/98 11:45			4.88	46	4.26	0.083	17.2	8.7	2.65	0.72	1.93	26.6	9.06	6.2					0.10
Influent B		EBCT: 10 min	Carbon Type:			Influent pH: 9.2			Scaling Factor: 9.44														
1	9806-805	123.10.pH9.2.Inf.B-1	6/26/98 17:45	6/26/98 17:45			0.11	1	4.17	0.083	21.4	9.2	4.43	2.11	2.32	27.2	9.11	6.3					0.10
2	9806-806	123.10.pH9.2.Inf.B-2	6/29/98 15:00	6/29/98 15:00			3.00	28	3.98		21.3	9.2											
3	9806-807	123.10.pH9.2.Inf.B-3	6/30/98 19:00	6/30/98 19:00			4.17	39	3.94		20.4	9.2											
4	9806-808	123.10.pH9.2.Inf.B-4	7/2/98 13:00	7/2/98 13:00			5.92	56	4.09	0.084	19.1	9.2	3.05	1.00	2.05	27.3	9.14	5.7					0.10
PreStudy		EBCT:	Carbon Type:			Influent pH:			Scaling Factor:														
1	9807-74	123.inst.8.2.inf-1	7/3/98 12:45																				
2	9807-76	123.inst.8.2.eff-3	7/4/98 19:15																				
3	9806-754	123.Settled on Arrival	6/25/98 13:40										4.37										
4	9806-720	Plant Raw	6/19/98 0:00										7.74										
5	9806-721	123. Plant Settled-	6/19/98 0:00										4.63										
6	9807-75	123.inst.8.2.eff-2	7/4/98 9:15																				
7	9806-722	123. Plant Filtered	6/19/98 0:00										4.44										
8	9806-755	123.Filtered Cartridge	6/25/98 15:15										4.30										
9	9807-77	123.inst.8.2.eff-4	7/6/98 9:00																				

***Target SDS Chlorination Conditions**

Free Cl2 Residual: 0.75 mg/L **pH:** 9.1 **Temperature:** 26.0 °C **Holding time:** 6.0 hrs

Study Comments

After consultation with the USEPA, it was decided to chlorinate a total of 5 influents from the 3 different pHs.

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #2

Client: Miami-Dade Water and Sewer De **Study#:** 123

#	SamplesID	ClientSampleID	F-S L (days)	TOC (mg/L)	TOX (µg Cl-/L)	Trihalomethanes (µg/L)					Haloacetic Acids (µg/L)										NH3-N (mg/L)	Brom (µg/L)	
						CF	BDCM	DBCM	BF	TTHM	MCAA	DCAA	TCAA	MBAA	DBAA	BCAA	BDCAA	DBCAA	TBAA	HAA6			HAA9
2	9807-55	123.pH8.2.Inf.B-2	18	4.11																			
3	9807-56	123.pH8.2.Inf.B-3	37	4.11																			
Influent B		EBCT: 10 min	Carbon Type:			Influent pH: 8.7				Scaling Factor: 9.44													
1	9807-177	123.pH8.7.Inf.B-1	1	4.08	193	22.0	22.6	24.5	6.5	75.7	ND	10	3	ND	7	8	3	2	ND	27	33		
2	9807-178	123.pH8.7.Inf.B-2	20	4.22																			
3	9807-179	123.pH8.7.Inf.B-3	30	4.25																			
4	9807-180	123.pH8.7.Inf.B-4	46	4.26	195	20.0	20.2	22.7	5.8	68.7	ND	9	2	ND	5	7	2	ND	ND	23	25		
Influent B		EBCT: 10 min	Carbon Type:			Influent pH: 9.2				Scaling Factor: 9.44													
1	9806-805	123.10.pH9.2.Inf.B-1	1	4.17	227	28.8	23.4	28.5	5.9	86.6	ND	8	1	ND	3	5	1	ND	ND	16	18		
2	9806-806	123.10.pH9.2.Inf.B-2	28	3.98																			
3	9806-807	123.10.pH9.2.Inf.B-3	39	3.94																			
4	9806-808	123.10.pH9.2.Inf.B-4	56	4.09	196	22.6	22.0	25.7	6.6	76.9	ND	12	2	ND	6	9	3	2	ND	29	34		
PreStudy		EBCT:	Carbon Type:			Influent pH:				Scaling Factor:													
1	9807-74	123.inst.8.2.inf-1				3.5	1.3	2.4	ND	7.2	ND	6	1	ND	1	2	ND	ND	ND	10	10		
2	9807-76	123.inst.8.2.eff-3				ND	ND	ND	ND	ND	ND	6	ND	ND	ND	ND		ND	ND	6			
3	9806-754	123.Settled on Arrival		4.37																			
4	9806-720	Plant Raw		7.74																			
5	9806-721	123. Plant Settled-Drum		4.63																			
6	9807-75	123.inst.8.2.eff-2				ND	ND	ND	ND	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	3	3		
7	9806-722	123. Plant Filtered		4.44																			
8	9806-755	123.Filtered Cartridge		4.30																			
9	9807-77	123.inst.8.2.eff-4				ND	ND	ND	ND	ND	ND	5	ND	ND	ND	2	ND	ND	ND	6	6		

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #3

Client: Miami-Dade Water and Sewer De **Study#:** 128

													SDS Chlorination Conditions*										
No.	Sample ID	Client Sample ID	Start Date/Time		End Date/Time		Stop T	Run L	F-S L	TOC	UV254	Temp	pH	Dose	Res.	Dem	Temp	pH	Time	Alk.	Hard-Tot	Hard-CA	Turb.
							(days)	(days)	(days)	(mg/L)	(1/cm)	(°C)		(mg/L)	(mg/L)	(mg/L)	(°C)		hrs	(mg/L)	(mg/L as CaCO3)	(ntu)	
Effluent C		EBCT: 12.5 min	Carbon Type: Bituminous			Influent pH: 9.2		Scaling Factor: 9.44															
1	9808-61	128.12.5.Eff-1	8/5/98	16:43	8/5/98	21:02		0.14	1	0.14	0.001	23.7	9.1	1.70	0.64	1.06	25.1	9.12	5.9				
2	9808-66	128.12.5.Eff-6	8/6/98	14:46	8/6/98	17:08		1.02	10	0.41	0.002	23.7	8.7	1.94	0.75	1.19	25.3	9.10	6.1				
3	9808-67	128.12.5.Eff-7	8/6/98	17:08	8/6/98	21:18		1.15	11	0.77	0.006	24.0	8.8	2.04	0.88	1.16	25.3	9.09	6.1				
3d	9808-93	128.12.5.Eff-7d	8/6/98	17:08	8/6/98	21:18		1.15	11	0.75	0.006	24.0	8.8	2.04	0.88	1.16	25.3	9.08	5.9				
4	9808-68	128.12.5.Eff-8	8/6/98	21:18	8/6/98	23:37		1.29	12	1.12	0.010	23.8	8.8	2.12	0.85	1.27	25.3	9.01	5.9				
5	9808-69	128.12.5.Eff-9	8/6/98	23:37	8/7/98	3:50		1.42	13	1.35	0.013	22.8	9.0	2.19	0.75	1.44	25.3	9.07	6.0				
6	9808-70	128.12.5.Eff-10	8/7/98	3:50	8/7/98	8:10		1.60	15	1.58	0.017	22.8	8.9	2.27	0.85	1.42	25.3	9.08	6.0				
7	9808-71	128.12.5.Eff-11	8/7/98	8:10	8/7/98	12:24		1.78	17	1.81	0.020	23.3	8.6	2.34	0.83	1.51	25.3	9.06	6.0				
8	9808-73	128.12.5.Eff-13	8/7/98	16:39	8/7/98	20:53		2.13	20	2.04	0.025	23.9	8.8	2.42	0.85	1.57	25.3	9.07	6.0				
8d	9808-95	128.12.5.Eff-13d	8/7/98	16:39	8/7/98	20:53		2.13	20	2.05	0.025	23.6	8.8	2.42	0.80	1.62	25.3	9.09	6.1				
9	9808-76	128.12.5.Eff-16	8/8/98	5:23	8/8/98	9:42		2.66	25	2.27	0.029	22.4	9.0	2.51	0.76	1.75	25.4	9.05	5.8				
10	9808-80	128.12.5.Eff-20	8/8/98	22:25	8/9/98	2:41		3.37	32	2.54	0.035	23.3	8.6	2.60	0.76	1.84	25.4	9.07	5.8				
10d	9808-97	128.12.5.Eff-20d	8/8/98	22:25	8/9/98	2:41		3.37	32	2.55	0.035	23.1	8.5	2.60	0.71	1.89	25.4	9.06	5.9				
11	9808-83	128.12.5.Eff-23	8/9/98	15:39	8/9/98	19:54		4.09	39	2.94	0.044	23.8	8.5	2.73	0.70	2.03	25.4	9.06	5.8				
12	9808-86	128.12.5.Eff-26	8/11/98	15:04	8/11/98	19:22		6.07	57	3.53	0.058	23.4	8.5	2.96	0.72	2.24	25.3	9.02	5.9				
13	9808-89	128.12.5.Eff-29	8/13/98	6:02	8/13/98	10:19		7.69	73	3.67	0.063	22.6	8.9										
Effluent C		EBCT: 15 min	Carbon Type: Bituminous			Influent pH: 9.2		Scaling Factor: 9.44															
1	9808-101	128.15.Eff-1	8/5/98	10:25	8/5/98	14:33		0.14	1	0.14	0.000	22.6	9.3	1.87	0.81	1.06	25.5	9.07	6.0				
2	9808-103	128.15.Eff-3	8/6/98	16:09	8/6/98	20:16		1.38	13	0.50	0.004	23.2	8.5	1.96	0.83	1.13	25.5	9.07	6.0				
3	9808-104	128.15.Eff-4	8/6/98	20:16	8/7/98	0:23		1.55	15	0.81	0.007	23.0	8.7	2.05	0.82	1.23	25.5	9.09	6.0				
4	9808-105	128.15.Eff-5	8/7/98	0:23	8/7/98	4:34		1.72	16	1.12	0.011	22.0	8.8	2.13	0.77	1.36	25.5	9.07	6.0				
5	9808-106	128.15.Eff-6	8/7/98	4:34	8/7/98	8:47		1.90	18	1.37	0.014	22.1	8.8	2.19	0.83	1.36	25.5	9.08	6.0				
5d	9808-131	128.15.Eff-6d	8/7/98	4:34	8/7/98	8:47		1.90	18	1.36	0.014	22.1	8.7	2.19	0.76	1.43	25.5	9.07	6.0				
6	9808-107	128.15.Eff-7	8/7/98	8:47	8/7/98	12:55		2.07	20	1.60	0.017	22.6	8.5	2.26	0.78	1.48	25.5	9.07	6.1				
7	9808-109	128.15.Eff-9	8/7/98	17:02	8/7/98	21:08		2.41	23	1.81	0.021	23.0	8.7	2.31	0.73	1.58	25.5	9.10	6.1				
8	9808-112	128.15.Eff-12	8/8/98	5:16	8/8/98	9:23		2.92	28	2.00	0.025	22.0	8.7	2.36	0.71	1.65	25.5	9.09	6.1				
8d	9808-133	128.15.Eff-12d	8/8/98	5:16	8/8/98	9:23		2.92	28	1.99	0.025	22.0	8.8	2.36	0.66	1.70	25.5	9.11	6.1				
9	9808-114	128.15.Eff-14	8/8/98	13:34	8/8/98	17:46		3.27	31	2.24	0.029	23.6	8.7	2.49	0.74	1.75	25.4	9.05	5.8				
10	9808-117	128.15.Eff-17	8/9/98	14:20	8/9/98	18:32		4.30	41	2.58	0.037	23.0	8.6	2.62	0.64	1.98	25.4	9.06	5.8				
10d	9808-135	128.15.Eff-17d	8/9/98	14:20	8/9/98	18:32		4.30	41	2.62	0.037	23.0	8.6	2.62	0.65	1.97	25.4	9.08	5.8				
11	9808-119	128.15.Eff-19	8/10/98	15:10	8/10/98	19:18		5.34	50	2.88	0.045	23.4	8.4	2.73	0.68	2.05	25.3	9.04	6.0				
12	9808-121	128.15.Eff-21	8/11/98	20:21	8/12/98	0:36		6.55	62	3.32	0.051	22.4	8.8	2.89	0.75	2.14	25.3	9.06	6.0				

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #3

Client: Miami-Dade Water and Sewer De **Study#:** 128

#	SamplesID	ClientSampleID	F-S L (days)	TOC (mg/L)	TOX (µg Cl-/L)	Trihalomethanes (µg/L)					Haloacetic Acids (µg/L)										NH3-N (mg/L)	Brom (µg/L)	
						CF	BDCM	DBCM	BF	TTHM	MCAA	DCAA	TCAA	MBAA	DBAA	BCAA	BDCAA	DBCAA	TBAA	HAA6			HAA9
Effluent C		EBCT: 12.5 min	Carbon Type: Bituminous			Influent pH: 9.2					Scaling Factor: 9.44												
1	9808-61	128.12.5.Eff-1	1	0.14	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2	9808-66	128.12.5.Eff-6	10	0.41	4	ND	2.0	ND	3.2	5.2	ND	ND	ND	ND	1	ND	ND	ND	ND	1	1		
3	9808-67	128.12.5.Eff-7	11	0.77	14	ND	3.6	1.2	5.7	10.4	ND	ND	ND	ND	2	ND	ND	ND	ND	2	2		
3d	9808-93	128.12.5.Eff-7d	11	0.75	14	ND	3.7	1.2	5.6	10.4	ND	ND	ND	ND	2	ND	ND	ND	ND	2	2		
4	9808-68	128.12.5.Eff-8	12	1.12	22	ND	6.7	2.3	8.9	17.9	ND	ND	ND	ND	2	1	ND	ND	ND	3	3		
5	9808-69	128.12.5.Eff-9	13	1.35	28	ND	8.6	3.2	10.7	22.5	ND	1	ND	ND	3	1	ND	ND	ND	6	6		
6	9808-70	128.12.5.Eff-10	15	1.58	36	1.5	11.8	4.7	12.5	30.6	ND	3	ND	ND	3	2	ND	ND	ND	8	8		
7	9808-71	128.12.5.Eff-11	17	1.81	44	1.8	13.5	6.1	12.7	34.0	ND	5	ND	ND	4	2	ND	ND	ND	10	10		
8	9808-73	128.12.5.Eff-13	20	2.04	57	2.9	16.0	8.2	12.3	39.4	ND	6	ND	ND	5	3	ND	ND	ND	13	13		
8d	9808-95	128.12.5.Eff-13d	20	2.05	61	3.1	16.9	8.8	12.9	41.7	ND	6	ND	ND	5	3	ND	ND	ND	13	13		
9	9808-76	128.12.5.Eff-16	25	2.27	71	4.0	17.3	10.3	11.7	43.3	ND	7	ND	ND	5	3	ND	ND	ND	15	15		
10	9808-80	128.12.5.Eff-20	32	2.54	88	5.3	18.7	12.5	10.2	46.7	ND	7	ND	ND	5	4	ND	ND	ND	16	16		
10d	9808-97	128.12.5.Eff-20d	32	2.55	84	6.3	21.0	14.3	11.5	53.1	ND	6	ND	ND	5	4	1	ND	ND	15	16		
11	9808-83	128.12.5.Eff-23	39	2.94	110	8.9	20.8	16.6	8.7	54.9	ND	7	ND	ND	5	5	1	ND	ND	17	18		
12	9808-86	128.12.5.Eff-26	57	3.53	141	15.6	22.6	22.1	7.2	67.5	ND	9	2	ND	5	6	1	ND	ND	21	23		
13	9808-89	128.12.5.Eff-29	73	3.67																			
Effluent C		EBCT: 15 min	Carbon Type: Bituminous			Influent pH: 9.2					Scaling Factor: 9.44												
1	9808-101	128.15.Eff-1	1	0.14	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2	9808-103	128.15.Eff-3	13	0.50	14	ND	2.9	1.0	5.6	9.5	ND	ND	ND	ND	1	ND	ND	ND	ND	1	1		
3	9808-104	128.15.Eff-4	15	0.81	18	ND	5.0	1.8	7.2	14.0	ND	ND	ND	ND	2	ND	ND	ND	ND	2	2		
4	9808-105	128.15.Eff-5	16	1.12	29	ND	6.8	2.6	10.1	19.6	ND	1	ND	ND	3	1	ND	ND	ND	5	5		
5	9808-106	128.15.Eff-6	18	1.37	30	1.3	9.2	3.6	11.1	25.2	ND	2	ND	ND	4	1	ND	ND	ND	7	7		
5d	9808-131	128.15.Eff-6d	18	1.36	31	1.1	9.2	3.5	10.8	24.6	ND	1	ND	ND	3	1	ND	ND	ND	5	5		
6	9808-107	128.15.Eff-7	20	1.60	35	1.4	11.5	4.7	11.5	29.2	ND	3	ND	ND	4	2	ND	ND	ND	9	9		
7	9808-109	128.15.Eff-9	23	1.81	49	2.2	13.6	6.4	13.1	35.3	ND	7	ND	ND	5	2	ND	ND	ND	14	14		
8	9808-112	128.15.Eff-12	28	2.00	64	3.6	18.3	9.9	15.4	47.2	ND	7	ND	ND	5	3	ND	ND	ND	16	16		
8d	9808-133	128.15.Eff-12d	28	1.99	63	3.0	16.6	8.3	13.5	41.5	ND	7	ND	ND	4	3	ND	ND	ND	13	13		
9	9808-114	128.15.Eff-14	31	2.24	73	4.0	17.7	10.3	11.4	43.4	ND	8	ND	ND	6	4	ND	ND	ND	18	18		
10	9808-117	128.15.Eff-17	41	2.58	93	6.1	19.5	13.5	10.7	49.7	ND	7	ND	ND	5	4	1	ND	ND	16	17		
10d	9808-135	128.15.Eff-17d	41	2.62	91	5.7	19.1	13.5	10.4	48.7	ND	8	ND	ND	6	5	1	ND	ND	18	20		
11	9808-119	128.15.Eff-19	50	2.88	109	10.9	24.0	19.3	10.1	64.3	ND	8	1	ND	5	5	1	ND	ND	20	21		
12	9808-121	128.15.Eff-21	62	3.32	125	13.6	23.9	21.2	8.2	66.9	ND	9	1	ND	5	6	1	ND	ND	22	23		

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #3

Client: Miami-Dade Water and Sewer De **Study#:** 128

													SDS Chlorination Conditions*										
No.	Sample ID	Client Sample ID	Start Date/Time		End Date/Time		Stop T (days)	Run L (days)	F-S L (days)	TOC (mg/L)	UV254 (1/cm)	Temp (°C)	pH	Dose (mg/L)	Res. (mg/L)	Dem (mg/L)	Temp (°C)	pH	Time hrs	Alk. (mg/L)	Hard-Tot (mg/L as CaCO3)	Hard-CA	Turb. (ntu)
13	9808-122	128.15.Eff-22	8/13/98	10:21	8/13/98	12:37		8.10	76	3.48	0.057	22.4	8.2										
Effluent C		EBCT: 5 min		Carbon Type: Bituminous			Influent pH: 9.2		Scaling Factor: 9.44														
1	9808-21	128.5.Eff-1	8/5/98	10:25	8/5/98	14:32		0.14	1	0.13	0.000	22.6	9.1	1.70	0.42	1.28	25.1	9.05	6.0				
2	9808-22	128.5.Eff-2	8/5/98	14:32	8/5/98	16:26		0.27	3	0.20	0.001	22.9	8.8	1.72	0.61	1.11	25.1	9.06	6.0				
3	9808-23	128.5.Eff-3	8/5/98	16:26	8/5/98	18:20		0.35	3	0.40	0.003	23.0	9.0	1.77	0.63	1.14	25.1	9.10	6.0				
4	9808-24	128.5.Eff-4	8/5/98	18:20	8/5/98	22:19		0.47	4	1.35	0.013	22.8	9.2	2.01	0.62	1.39	25.1	9.13	6.0				
4d	9808-51	128.5.Eff-4d	8/5/98	18:20	8/5/98	22:19		0.47	4	1.37	0.014	22.8	9.0	2.01	0.58	1.43	25.1	9.12	6.0				
5	9808-25	128.5.Eff-5	8/5/98	22:19	8/6/98	0:15		0.59	6	1.94	0.023	22.3	9.0	2.16	0.59	1.57	25.1	9.10	6.0				
6	9808-26	128.5.Eff-6	8/6/98	0:15	8/6/98	2:07		0.67	6	2.21	0.027	21.9	9.1	2.22	0.53	1.69	25.1	9.12	6.0				
7	9808-27	128.5.Eff-7	8/6/98	2:07	8/6/98	4:44		0.76	7	2.42	0.033	21.6	9.2	2.27	0.50	1.77	25.1	9.16	5.9				
8	9808-28	128.5.Eff-8	8/6/98	4:44	8/6/98	8:54		0.91	9	2.53	0.039	21.8	9.1	2.51	0.59	1.92	25.3	9.14	6.1				
8d	9808-52	128.5.Eff-8d	8/6/98	4:44	8/6/98	8:54		0.91	9	2.52		21.9	9.1	2.56	0.61	1.95	25.3	9.08	6.1				
9	9808-29	128.5.Eff-9	8/6/98	8:54	8/6/98	13:09		1.08	10	2.74	0.044	22.2	8.9	2.56	0.58	1.98	25.3	9.09	6.1				
10	9808-33	128.5.Eff-13	8/7/98	1:53	8/7/98	6:14		1.79	17	3.14	0.056	21.8	8.7	2.78	0.60	2.18	25.3	9.07	6.1				
10d	9808-55	128.5.Eff-13d	8/7/98	1:53	8/7/98	6:14		1.79	17	3.16	0.056	21.8	8.7	2.78	0.62	2.16	25.3	9.04	6.2				
11	9808-36	128.5.Eff-16	8/7/98	14:33	8/7/98	18:39		2.31	22	3.44	0.063	23.2	8.4	2.87	0.66	2.21	25.3	9.07	6.2				
12	9808-38	128.5.Eff-18	8/9/98	8:14	8/9/98	12:26		4.05	38	3.91	0.073	22.4	8.5	3.06	0.60	2.46	25.4	9.06	5.8				
Influent A		EBCT:		Carbon Type:			Influent pH: 9.2		Scaling Factor: 9.44														
1	9808-141	128.Inf.A-1	8/5/98	10:55	8/5/98	10:55		0.08	1											25	56	40	
2	9808-142	128.Inf.A-2	8/10/98	10:40	8/10/98	10:40		5.07	48											20	51	37	
Influent B		EBCT:		Carbon Type:			Influent pH: 9.2		Scaling Factor: 9.44														
1	9808-143	128.Inf.B-1	8/5/98	11:00	8/5/98	11:00		0.08	1	4.56	0.093	20.5	9.4	3.60	0.81	2.79	25.1	9.07	5.9				0.10
2	9808-144	128.Inf.B-2	8/8/98	18:30	8/8/98	18:30		3.39	32	4.53		16.1	9.2										
3	9808-145	128.Inf.B-3	8/8/98	18:45	8/8/98	18:45		3.40	32	4.50		18.7	9.2										
4	9808-146	128.Inf.B-4	8/8/98	20:30	8/8/98	20:30		3.48	33	4.48	0.094	16.8	9.3	3.55	0.65	2.90	25.3	9.18	6.1				0.15
5	9808-147	128.Inf.B-5	8/12/98	11:10	8/12/98	11:10		7.09	67	4.63	0.094	19.4	9.1	3.65	0.77	2.88	25.3	9.08	5.9				0.15
6	9808-148	128.Inf.B-6	8/13/98	10:15	8/13/98	10:15		8.05	76	4.54	0.094	18.2	9.3	3.65	0.75	2.90	25.3	9.09	6.0				0.15
PreStudy		EBCT:		Carbon Type:			Influent pH:		Scaling Factor:														
1	9808-209	128.12.5.Inst.Eff-3	8/9/98	2:41																			
2	9808-177	128.Raw.Orr	7/24/98	12:00						9.66													

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #3

Client: Miami-Dade Water and Sewer De **Study#:** 128

#	SamplesID	ClientSampleID	F-S L	TOC	TOX	Trihalomethanes (µg/L)					Haloacetic Acids (µg/L)										NH3-N	Brom		
			(days)	(mg/L)	(µg Cl-/L)	CF	BDCM	DBCM	BF	TTHM	MCAA	DCAA	TCAA	MBAA	DBAA	BCAA	BDCAA	DBCAA	TBAA	HAA6	HAA9	(mg/L)	(µg/L)	
13	9808-122	128.15.Eff-22	76	3.48																				
Effluent C			EBCT: 5 min	Carbon Type: Bituminous		Influent pH: 9.2		Scaling Factor: 9.44																
1	9808-21	128.5.Eff-1	1	0.13	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2	9808-22	128.5.Eff-2	3	0.20	2	ND	ND	ND	1.9	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
3	9808-23	128.5.Eff-3	3	0.40	7	ND	2.0	ND	4.4	6.4	ND	ND	ND	ND	1	ND	ND	ND	ND	1	1			
4	9808-24	128.5.Eff-4	4	1.35	31	1.1	7.4	3.0	9.8	21.2	ND	2	ND	ND	3	1	ND	ND	ND	6	6			
4d	9808-51	128.5.Eff-4d	4	1.37	31	1.1	7.6	3.1	10.7	22.5	ND	2	ND	ND	3	1	ND	ND	ND	6	6			
5	9808-25	128.5.Eff-5	6	1.94	53	2.3	12.2	5.9	11.3	31.7	ND	4	ND	ND	4	2	ND	ND	ND	11	11			
6	9808-26	128.5.Eff-6	6	2.21	64	3.1	14.2	7.7	11.1	36.0	ND	5	ND	ND	5	3	ND	ND	ND	13	13			
7	9808-27	128.5.Eff-7	7	2.42	78	4.3	16.1	9.9	10.0	40.3	ND	6	ND	ND	4	3	ND	ND	ND	13	13			
8	9808-28	128.5.Eff-8	9	2.53	92	6.1	18.7	13.2	10.0	48.0	ND	6	ND	ND	4	4	1	ND	ND	15	16			
8d	9808-52	128.5.Eff-8d	9	2.52	90	6.1	18.9	13.2	10.2	48.4	ND	7	ND	ND	6	5	1	ND	ND	18	20			
9	9808-29	128.5.Eff-9	10	2.74	103	7.7	19.6	15.1	8.7	51.2	ND	6	ND	ND	4	4	1	ND	ND	15	16			
10	9808-33	128.5.Eff-13	17	3.14	126	12.3	22.2	19.7	7.2	61.4	ND	8	1	ND	5	6	2	ND	ND	20	22			
10d	9808-55	128.5.Eff-13d	17	3.16	139	12.5	22.4	20.0	7.4	62.2	ND	8	2	ND	5	5	2	ND	ND	20	22			
11	9808-36	128.5.Eff-16	22	3.44	134	15.0	21.6	21.1	6.3	63.9	ND	9	2	ND	6	6	2	ND	ND	23	26			
12	9808-38	128.5.Eff-18	38	3.91	156	20.9	20.1	23.5	5.0	69.6	ND	11	2	ND	5	7	2	ND	ND	26	28			
Influent A			EBCT:	Carbon Type:		Influent pH: 9.2		Scaling Factor: 9.44																
1	9808-141	128.Inf.A-1	1																		0.20	100		
2	9808-142	128.Inf.A-2	48																		0.11	130		
Influent B			EBCT:	Carbon Type:		Influent pH: 9.2		Scaling Factor: 9.44																
1	9808-143	128.Inf.B-1	1	4.56	229	27.3	15.6	23.2	3.2	69.3	ND	13	3	ND	4	7	2	ND	ND	27	29			
2	9808-144	128.Inf.B-2	32	4.53																				
3	9808-145	128.Inf.B-3	32	4.50																				
4	9808-146	128.Inf.B-4	33	4.48	226	35.3	17.7	26.4	3.6	83.0	ND	13	3	ND	4	7	3	ND	ND	27	30			
5	9808-147	128.Inf.B-5	67	4.63	219	34.6	20.3	28.9	3.6	87.5	ND	12	3	ND	4	7	2	ND	ND	27	29			
6	9808-148	128.Inf.B-6	76	4.54	221	39.7	23.4	33.4	4.5	100.9	ND	12	3	ND	4	7	2	ND	ND	25	27			
PreStudy			EBCT:	Carbon Type:		Influent pH:		Scaling Factor:																
1	9808-209	128.12.5.Inst.Eff-3				ND	ND	ND	ND	ND	ND	4	ND	ND	ND	ND	ND	ND	ND	4	4			
2	9808-177	128.Raw.Qrr		9.66																				

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #3

Client: Miami-Dade Water and Sewer De **Study#:** 128

												SDS Chlorination Conditions*									
No.	Sample ID	Client Sample ID	Start Date/Time	End Date/Time	Stop T (days)	Run L (days)	F-S L (days)	TOC (mg/L)	UV254 (1/cm)	Temp (°C)	pH	Dose (mg/L)	Res. (mg/L)	Dem (mg/L)	Temp (°C)	pH	Time hrs	Alk. (mg/L)	Hard-Tot (mg/L as CaCO3)	Hard-CA (mg/L)	Turb. (ntu)
3	9808-208	128.12.5.Inst.Eff-2	8/7/98 12:24																		
4	9807-581	128.SettledOnArrival.	7/29/98 0:00					5.34													
5	9807-582	128.Filtered.Miami	7/29/98 0:00					4.76													
6	9808-169	128.12.5.Inst.Inf-1	8/6/98 13:45																		
7	9808-170	128.12.5.Inst.Eff-1	8/6/98 13:45																		
8	9808-175	128.Filtered.Orr	7/24/98 13:00					4.50													
9	9808-176	128.Settled.Orr	7/24/98 12:10					5.06													

***Target SDS Chlorination Conditions**

Free Cl2 Residual: 0.75 mg/L **pH:** 9.1 **Temperature:** 26.0 °C **Holding time:** 6.0 hrs

Study Comments

Summers & Hooper, Inc.

RSSCT Sampling Summary Report

Study title: ICR RSSCT #3

Client: Miami-Dade Water and Sewer De **Study#:** 128

#	SamplesID	ClientSampleID	F-S L (days)	TOC (mg/L)	TOX (µg Cl-/L)	Trihalomethanes (µg/L)					Haloacetic Acids (µg/L)										NH3-N	Brom
						CF	BDCM	DBCM	BF	TTHM	MCAA	DCAA	TCAA	MBAA	DBAA	BCAA	BDCAA	DBCAA	TBAA	HAA6	HAA9	(mg/L)
3	9808-208	128.12.5.Inst.Eff-2				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
4	9807-581	128.SettledOnArrival.Mia		5.34																		
5	9807-582	128.Filtered.Miami		4.76																		
6	9808-169	128.12.5.Inst.Inf-1				2.1	ND	ND	ND	2.1	ND	5	ND	ND	ND	ND	ND	ND	ND	5	5	
7	9808-170	128.12.5.Inst.Eff-1				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
8	9808-175	128.Filtered.Orr		4.50																		
9	9808-176	128.Settled.Orr		5.06																		

Laboratory Report

Client:

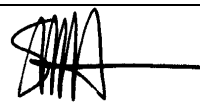
Mr. Anthony Clemente
Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, FL 33146

Phone: 305-669-7602 Fax: 305-669-5796

Study Title: ICR RSSCT #1

Study #: 107

Reviewed By: _____



Stuart M. Hooper

Date Reviewed: 7/13/99

Laboratory Test ResultsPage 1 of 40
Printed on 6/23/99Mr. Anthony Clemente
Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, FL 33146

Phone: 305-669-7602 Fax: 305-669-5796

Study#: 107
Study Title: ICR RSSCT #1

Sample ID: ICR - Soft			S&H ID: 9803-22		Date Sampled: 3/4/98 10:30:00 AM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1	TOX-ICR	TOX	28	µg Cl-/L	SM 5320 B	1	25	3/4/98		3/5/98	12-0-100
2	TOX-ICR	TOX (Dupl)	ND	µg Cl-/L	SM 5320 B	1	25	3/4/98		3/5/98	12-0-100
			25	µg Cl-/L							

Sample ID: ICR - Raw			S&H ID: 9803-23		Date Sampled: 3/4/98 10:15:00 AM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
3	TOX-ICR	TOX	ND	µg Cl-/L	SM 5320 B	1	25	3/4/98		3/5/98	12-0-100
4	TOX-ICR	TOX (Dupl)	ND	µg Cl-/L	SM 5320 B	1	25	3/4/98		3/5/98	12-0-100
			ND	µg Cl-/L							

Sample ID: Raw			S&H ID: 9803-136		Date Sampled: 3/12/98						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
5	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	94.8	%	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
6	HAA-ICR	2-Bromopropionic acid (Surrogate)	105.6	%	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
7	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
8	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
9	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	3/12/98	3/25/98	3/25/98	0-100-0
10	HAA-ICR	Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
11	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
12	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
13	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	3/12/98	3/25/98	3/25/98	0-100-0
14	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	3/12/98	3/25/98	3/25/98	0-100-0
15	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
16	THM-ICR	1,2,3-Trichloropropane (Surrogate)	96.8	%	EPA 551.1	1	1.0	3/12/98	3/20/98	3/20/98	0-97-0
17	THM-ICR	Bromodichloromethane	ND	µg/L	EPA 551.1	1	1.0	3/12/98	3/20/98	3/20/98	0-97-0
18	THM-ICR	Bromoform	ND	µg/L	EPA 551.1	1	1.0	3/12/98	3/20/98	3/20/98	0-97-0
19	THM-ICR	Chloroform	ND	µg/L	EPA 551.1	1	1.0	3/12/98	3/20/98	3/20/98	0-97-0
20	THM-ICR	Dibromochloromethane	ND	µg/L	EPA 551.1	1	1.0	3/12/98	3/20/98	3/20/98	0-97-0

Sample ID: Soft		S&H ID: 9803-137		Date Sampled: 3/12/98						
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

21	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	100.8 %	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
22	HAA-ICR 2-Bromopropionic acid (Surrogate)	99.6 %	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
23	HAA-ICR Bromochloroacetic acid	1.2 µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
24	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
25	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	3/12/98	3/25/98	3/25/98	0-100-0
26	HAA-ICR Dibromoacetic acid	ND µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
27	HAA-ICR Dichloroacetic acid	3.8 µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
28	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
29	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	3/12/98	3/25/98	3/25/98	0-100-0
30	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	3/12/98	3/25/98	3/25/98	0-100-0
31	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	3/12/98	3/25/98	3/25/98	0-100-0
32	THM-ICR 1,2,3-Trichloropropane (Surrogate)	102.8 %	EPA 551.1	1	1.0	3/12/98	3/20/98	3/20/98	0-97-0
33	THM-ICR Bromodichloromethane	1.8 µg/L	EPA 551.1	1	1.0	3/12/98	3/20/98	3/20/98	0-97-0
34	THM-ICR Bromoform	ND µg/L	EPA 551.1	1	1.0	3/12/98	3/20/98	3/20/98	0-97-0
35	THM-ICR Chloroform	5.2 µg/L	EPA 551.1	1	1.0	3/12/98	3/20/98	3/20/98	0-97-0
36	THM-ICR Dibromochloromethane	1.1 µg/L	EPA 551.1	1	1.0	3/12/98	3/20/98	3/20/98	0-97-0

Sample ID: Softened and 7 day hold

S&H ID: 9803-201

Date Sampled: 3/19/98 12:00:00 PM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
37	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	101.6 %	%	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
38	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard) (Lab Dupl)	102.4 %	%	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
		102.0 %		0.8 % RPD						
39	HAA-ICR 2-Bromopropionic acid (Surrogate)	99.6 %	%	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
40	HAA-ICR 2-Bromopropionic acid (Surrogate) (Lab Dupl)	96.8 %	%	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
		98.2 %		2.9 % RPD						
41	HAA-ICR Bromochloroacetic acid	1.2 µg/L	µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
42	HAA-ICR Bromochloroacetic acid (Lab Dupl)	1.2 µg/L	µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
		1.2 µg/L		0.0 % RPD						
43	HAA-ICR Bromodichloroacetic acid	ND µg/L	µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
44	HAA-ICR Bromodichloroacetic acid (Lab Dupl)	ND µg/L	µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
		ND µg/L								
45	HAA-ICR Chlorodibromoacetic acid	ND µg/L	µg/L	EPA 552.2	1	2.0	3/19/98	3/25/98	3/26/98	0-100-0
46	HAA-ICR Chlorodibromoacetic acid (Lab Dupl)	ND µg/L	µg/L	EPA 552.2	1	2.0	3/19/98	3/25/98	3/26/98	0-100-0
		ND µg/L								
47	HAA-ICR Dibromoacetic acid	ND µg/L	µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

48	HAA-ICR	Dibromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
			ND µg/L							
49	HAA-ICR	Dichloroacetic acid	5.0 µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
50	HAA-ICR	Dichloroacetic acid (Lab Dupl)	4.8 µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
			4.9 µg/L	4.1 % RPD						
51	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
52	HAA-ICR	Monobromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
			ND µg/L							
53	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	3/19/98	3/25/98	3/26/98	0-100-0
54	HAA-ICR	Monochloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	2.0	3/19/98	3/25/98	3/26/98	0-100-0
			ND µg/L							
55	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	3/19/98	3/25/98	3/26/98	0-100-0
56	HAA-ICR	Tribromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	4.0	3/19/98	3/25/98	3/26/98	0-100-0
			ND µg/L							
57	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
58	HAA-ICR	Trichloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	3/19/98	3/25/98	3/26/98	0-100-0
			ND µg/L							
59	THM-ICR	1,2,3-Trichloropropane (Surrogate)	96.0 %	EPA 551.1	1	1.0	3/19/98	3/20/98	3/20/98	0-97-0
60	THM-ICR	Bromodichloromethane	1.7 µg/L	EPA 551.1	1	1.0	3/19/98	3/20/98	3/20/98	0-97-0
61	THM-ICR	Bromoform	ND µg/L	EPA 551.1	1	1.0	3/19/98	3/20/98	3/20/98	0-97-0
62	THM-ICR	Chloroform	5.3 µg/L	EPA 551.1	1	1.0	3/19/98	3/20/98	3/20/98	0-97-0
63	THM-ICR	Dibromochloromethane	1.0 µg/L	EPA 551.1	1	1.0	3/19/98	3/20/98	3/20/98	0-97-0

Sample ID: Raw

S&H ID: 9804-348

Date Sampled: 4/20/98 2:35:00 PM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
64	TOC-ICR TOC	5.95	mg/L	SM 5310 C	1	0.50	4/20/98		4/21/98	7-0-243
65	TOC-ICR TOC	5.83	mg/L	SM 5310 C	1	0.50	4/20/98		4/28/98	7-0-249
66	TOC-ICR TOC (Dupl)	5.81	mg/L	SM 5310 C	1	0.50	4/20/98		4/21/98	7-0-243
67	TOC-ICR TOC (Dupl)	5.79	mg/L	SM 5310 C	1	0.50	4/20/98		4/28/98	7-0-249
		5.84	mg/L	1.2 % RPD						

Sample ID: Settled

S&H ID: 9804-349

Date Sampled: 4/20/98 1:50:00 PM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
68	TOC-ICR TOC	4.57	mg/L	SM 5310 C	1	0.50	4/20/98		4/28/98	7-0-249
69	TOC-ICR TOC (Dupl)	4.55	mg/L	SM 5310 C	1	0.50	4/20/98		4/28/98	7-0-249
		4.56	mg/L	0.4 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

Sample ID: Filtered		S&H ID: 9804-350		Date Sampled: 4/20/98 2:40:00 PM						
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
70	TOC-ICR TOC	3.58	mg/L	SM 5310 C	1	0.50	4/20/98		4/28/98	7-0-249
71	TOC-ICR TOC (Dupl)	3.81	mg/L	SM 5310 C	1	0.50	4/20/98		4/28/98	7-0-249
		3.70	mg/L	6.2 % RPD						

Sample ID: Settled on Arrival		S&H ID: 9804-396		Date Sampled: 4/23/98 5:40:00 PM						
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
72	TOC-ICR TOC	4.51	mg/L	SM 5310 C	1	0.50	4/23/98		4/28/98	7-0-249
73	TOC-ICR TOC (Dupl)	4.45	mg/L	SM 5310 C	1	0.50	4/23/98		4/28/98	7-0-249
		4.48	mg/L	1.3 % RPD						

Sample ID: filtered		S&H ID: 9804-472		Date Sampled: 4/28/98 1:25:00 PM						
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
74	TOC-ICR TOC	4.16	mg/L	SM 5310 C	1	0.50	4/28/98		4/28/98	7-0-249
75	TOC-ICR TOC (Dupl)	4.16	mg/L	SM 5310 C	1	0.50	4/28/98		4/28/98	7-0-249
		4.16	mg/L	0.0 % RPD						

Sample ID: 107.INF.B-1			S&H ID: 9804-500		Date Sampled: 4/29/98 4:15:00 PM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
76	Cl2Dose	Chlorine Dose	2.95	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/1/98		5/1/98	n/a
77	Cl2Res	Chlorine Residual	0.96	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/1/98		5/1/98	n/a
78	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	98.8	%	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
79	HAA-ICR	2-Bromopropionic acid (Surrogate)	96.4	%	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
80	HAA-ICR	Bromochloroacetic acid	7.8	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
81	HAA-ICR	Bromodichloroacetic acid	2.0	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
82	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/1/98	5/7/98	5/9/98	0-123-0
83	HAA-ICR	Dibromoacetic acid	3.1	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
84	HAA-ICR	Dichloroacetic acid	15.7	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
85	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
86	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/1/98	5/7/98	5/9/98	0-123-0
87	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/1/98	5/7/98	5/9/98	0-123-0
88	HAA-ICR	Trichloroacetic acid	2.2	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
89	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
90	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
91	pH	pH	9.3	Unit	SM 4500-H+ B	1	n/a	4/29/98		4/29/98	n/a
92	TEMP	Cl2 Temperature	26.7	°C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
93	TEMP	Temperature	19.9	°C	SM 2550 B	1	n/a	4/29/98		4/29/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

94	TIME	Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	5/1/98	5/1/98	n/a
95	TOC-ICR	TOC	4.18 mg/L	SM 5310 C	1	0.50	4/29/98	4/30/98	7-0-251
96	TOC-ICR	TOC (Dupl)	4.25 mg/L	SM 5310 C	1	0.50	4/29/98	4/30/98	7-0-251
			4.21 mg/L	1.7 % RPD					
97	TOX-ICR	TOX	222 µg Cl-/L	SM 5320 B	1	25	5/1/98	5/8/98	12-0-129
98	TOX-ICR	TOX (Dupl)	223 µg Cl-/L	SM 5320 B	1	25	5/1/98	5/8/98	12-0-129
			223 µg Cl-/L	0.4 % RPD					
99	THM-ICR	1,2,3-Trichloropropane (Surrogate)	90.4 %	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98 0-122-0
100	THM-ICR	Bromodichloromethane	22.3 µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98 0-122-0
101	THM-ICR	Bromoform	2.9 µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98 0-122-0
102	THM-ICR	Chloroform	27.0 µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98 0-122-0
103	THM-ICR	Dibromochloromethane	15.2 µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98 0-122-0
104	TURB	Turbidity	0.10 ntu	SM 2130 B	1	0.05	4/29/98	4/29/98	9-0-10
105	UV-ICR	UV	0.087 1/cm	SM 5910 B	1	0.009	4/29/98	5/1/98	8-0-174
106	UV-ICR	UV (Dupl)	0.088 1/cm	SM 5910 B	1	0.009	4/29/98	5/1/98	8-0-174
			0.087 1/cm	1.1 % RPD					

Sample ID: 107.INF.A-1

S&H ID: 9804-501

Date Sampled: 4/29/98 4:30:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
107	ALK	Alkalinity	41	mg/L	SM 2320 B	1	5	4/29/98		4/30/98	1-0-19
108	ALK	Alkalinity (Dupl)	42	mg/L	SM 2320 B	1	5	4/29/98		4/30/98	1-0-19
			42 mg/L		2.4 % RPD						

Sample ID: 107.Inst.INF-1

S&H ID: 9804-502

Date Sampled: 4/29/98 4:15:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
109	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	100.4	%	EPA 552.2	1	1.0	4/29/98	5/7/98	5/8/98	0-123-0
110	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.4	%	EPA 552.2	1	1.0	4/29/98	5/7/98	5/8/98	0-123-0
111	HAA-ICR	Bromochloroacetic acid	1.9	µg/L	EPA 552.2	1	1.0	4/29/98	5/7/98	5/8/98	0-123-0
112	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	4/29/98	5/7/98	5/8/98	0-123-0
113	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	4/29/98	5/7/98	5/8/98	0-123-0
114	HAA-ICR	Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	4/29/98	5/7/98	5/8/98	0-123-0
115	HAA-ICR	Dichloroacetic acid	7.4	µg/L	EPA 552.2	1	1.0	4/29/98	5/7/98	5/8/98	0-123-0
116	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	4/29/98	5/7/98	5/8/98	0-123-0
117	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	4/29/98	5/7/98	5/8/98	0-123-0
118	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	4/29/98	5/7/98	5/8/98	0-123-0
119	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	4/29/98	5/7/98	5/8/98	0-123-0
120	THM-ICR	1,2,3-Trichloropropane (Surrogate)	102.0	%	EPA 551.1	1	1.0	4/29/98	5/5/98	5/5/98	0-122-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

121	THM-ICR 1,2,3-Trichloropropane (Surrogate) (Lab Dupl)	106.0 %	EPA 551.1	1	1.0	4/29/98	5/5/98	5/5/98	0-122-0
		104.0 %	3.8 % RPD						
122	THM-ICR Bromodichloromethane	2.2 µg/L	EPA 551.1	1	1.0	4/29/98	5/5/98	5/5/98	0-122-0
123	THM-ICR Bromodichloromethane (Lab Dupl)	2.2 µg/L	EPA 551.1	1	1.0	4/29/98	5/5/98	5/5/98	0-122-0
		2.2 µg/L	0.0 % RPD						
124	THM-ICR Bromoform	ND µg/L	EPA 551.1	1	1.0	4/29/98	5/5/98	5/5/98	0-122-0
125	THM-ICR Bromoform (Lab Dupl)	ND µg/L	EPA 551.1	1	1.0	4/29/98	5/5/98	5/5/98	0-122-0
		ND µg/L							
126	THM-ICR Chloroform	4.8 µg/L	EPA 551.1	1	1.0	4/29/98	5/5/98	5/5/98	0-122-0
127	THM-ICR Chloroform (Lab Dupl)	4.9 µg/L	EPA 551.1	1	1.0	4/29/98	5/5/98	5/5/98	0-122-0
		4.8 µg/L	2.1 % RPD						
128	THM-ICR Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	4/29/98	5/5/98	5/5/98	0-122-0
129	THM-ICR Dibromochloromethane (Lab Dupl)	ND µg/L	EPA 551.1	1	1.0	4/29/98	5/5/98	5/5/98	0-122-0
		ND µg/L							

Sample ID: 107.10.Eff-1

S&H ID: 9804-503

Date Sampled: 4/29/98 8:59:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
130	Cl2Dose Chlorine Dose	1.14 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/1/98		5/1/98	n/a
131	Cl2Res Chlorine Residual	0.82 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/1/98		5/1/98	n/a
132	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	99.2 %	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
133	HAA-ICR 2-Bromopropionic acid (Surrogate)	95.2 %	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
134	HAA-ICR Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
135	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
136	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/1/98	5/7/98	5/9/98	0-123-0
137	HAA-ICR Dibromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
138	HAA-ICR Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
139	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
140	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/1/98	5/7/98	5/9/98	0-123-0
141	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/1/98	5/7/98	5/9/98	0-123-0
142	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
143	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
144	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
145	pH pH	9.1 Unit	SM 4500-H+ B	1	n/a	4/29/98		4/29/98	n/a
146	TEMP Cl2 Temperature	26.7 °C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
147	TEMP Temperature	21.3 °C	SM 2550 B	1	n/a	4/29/98		4/29/98	n/a
148	TIME Cl2 Incubation Time	6.3 hrs	n/a	1	n/a	5/1/98		5/1/98	n/a
149	TOC-ICR TOC	ND mg/L	SM 5310 C	1	0.50	4/29/98		4/30/98	7-0-251
150	TOC-ICR TOC (Dupl)	ND mg/L	SM 5310 C	1	0.50	4/29/98		4/30/98	7-0-251

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

		ND mg/L						
151	TOX-ICR TOX	ND µg Cl-/L	SM 5320 B	1	25	5/1/98	5/7/98	12-0-128
152	TOX-ICR TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	5/1/98	5/7/98	12-0-128
		ND µg Cl-/L						
153	THM-ICR 1,2,3-Trichloropropane (Surrogate)	98.8 %	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98 0-122-0
154	THM-ICR Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98 0-122-0
155	THM-ICR Bromoform	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98 0-122-0
156	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98 0-122-0
157	THM-ICR Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98 0-122-0
158	UV-ICR UV	ND 1/cm	SM 5910 B	1	0.009	4/29/98	5/1/98	8-0-174
159	UV-ICR UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	4/29/98	5/1/98	8-0-174
		ND 1/cm						

Sample ID: 107.10.Eff-4

S&H ID: 9804-506

Date Sampled: 4/30/98 10:46:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
160	Cl2Dose	Chlorine Dose	1.21	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/4/98		5/4/98	n/a
161	Cl2Res	Chlorine Residual	0.70	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/4/98		5/4/98	n/a
162	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	114.0	%	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
163	HAA-ICR	2-Bromopropionic acid (Surrogate)	102.0	%	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
164	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
165	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
166	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
167	HAA-ICR	Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
168	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
169	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
170	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
171	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/4/98	5/7/98	5/9/98	0-123-0
172	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
173	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
174	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
175	pH	pH	8.8	Unit	SM 4500-H+ B	1	n/a	4/30/98		4/30/98	n/a
176	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
177	TEMP	Temperature	22.0	°C	SM 2550 B	1	n/a	4/30/98		4/30/98	n/a
178	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	5/4/98		5/4/98	n/a
179	TOC-ICR	TOC	ND	mg/L	SM 5310 C	1	0.50	4/30/98		4/30/98	7-0-251
180	TOC-ICR	TOC (Dupl)	ND	mg/L	SM 5310 C	1	0.50	4/30/98		4/30/98	7-0-251
			ND	mg/L							
181	TOX-ICR	TOX	ND	µg Cl-/L	SM 5320 B	1	25	5/4/98		5/11/98	12-0-130

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

182	TOX-ICR TOX (Dupl)	ND	µg Cl-/L	SM 5320 B	1	25	5/4/98	5/11/98	12-0-130
		ND	µg Cl-/L						
183	THM-ICR 1,2,3-Trichloropropane (Surrogate)	102.8	%	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98 0-122-0
184	THM-ICR Bromodichloromethane	ND	µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98 0-122-0
185	THM-ICR Bromoform	3.8	µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98 0-122-0
186	THM-ICR Chloroform	ND	µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98 0-122-0
187	THM-ICR Dibromochloromethane	1.2	µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98 0-122-0
188	UV-ICR UV	ND	1/cm	SM 5910 B	1	0.009	4/30/98	5/1/98	8-0-174
189	UV-ICR UV (Dupl)	ND	1/cm	SM 5910 B	1	0.009	4/30/98	5/1/98	8-0-174
		ND	1/cm						

Sample ID: 107.20.Eff-1

S&H ID: 9804-507

Date Sampled: 4/29/98 8:57:00 PM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
190	Cl2Dose Chlorine Dose	1.14	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/1/98		5/1/98	n/a
191	Cl2Res Chlorine Residual	0.71	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/1/98		5/1/98	n/a
192	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	97.6	%	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
193	HAA-ICR 2-Bromopropionic acid (Surrogate)	100.8	%	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
194	HAA-ICR Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
195	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
196	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/1/98	5/7/98	5/9/98	0-123-0
197	HAA-ICR Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
198	HAA-ICR Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
199	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
200	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/1/98	5/7/98	5/9/98	0-123-0
201	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/1/98	5/7/98	5/9/98	0-123-0
202	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
203	pH Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
204	pH Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
205	pH pH	9.4	Unit	SM 4500-H+ B	1	n/a	4/29/98		4/29/98	n/a
206	TEMP Cl2 Temperature	26.7	°C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
207	TEMP Temperature	20.8	°C	SM 2550 B	1	n/a	4/29/98		4/29/98	n/a
208	TIME Cl2 Incubation Time	6.1	hrs	n/a	1	n/a	5/1/98		5/1/98	n/a
209	TOC-ICR TOC	ND	mg/L	SM 5310 C	1	0.50	4/29/98		4/30/98	7-0-251
210	TOC-ICR TOC (Dupl)	ND	mg/L	SM 5310 C	1	0.50	4/29/98		4/30/98	7-0-251
		ND	mg/L							
211	TOX-ICR TOX	ND	µg Cl-/L	SM 5320 B	1	25	5/1/98		5/8/98	12-0-129
212	TOX-ICR TOX (Dupl)	ND	µg Cl-/L	SM 5320 B	1	25	5/1/98		5/8/98	12-0-129
		ND	µg Cl-/L							

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

213	THM-ICR 1,2,3-Trichloropropane (Surrogate)	101.6 %	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98	0-122-0
214	THM-ICR Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98	0-122-0
215	THM-ICR Bromoform	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98	0-122-0
216	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98	0-122-0
217	THM-ICR Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98	0-122-0
218	UV-ICR UV	ND 1/cm	SM 5910 B	1	0.009	4/29/98		5/1/98	8-0-174
219	UV-ICR UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	4/29/98		5/1/98	8-0-174
		ND 1/cm							

Sample ID: 107.10.Eff-5

S&H ID: 9804-510

Date Sampled: 4/30/98 1:35:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
220	Cl2Dose Chlorine Dose	1.36 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/4/98		5/4/98	n/a
221	Cl2Res Chlorine Residual	0.79 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/4/98		5/4/98	n/a
222	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	102.8 %	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
223	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.4 %	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
224	HAA-ICR Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
225	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
226	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
227	HAA-ICR Dibromoacetic acid	1.2 µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
228	HAA-ICR Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
229	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
230	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
231	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/4/98	5/7/98	5/9/98	0-123-0
232	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
233	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
234	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
235	pH pH	8.7 Unit	SM 4500-H+ B	1	n/a	4/30/98		4/30/98	n/a
236	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
237	TEMP Temperature	21.6 °C	SM 2550 B	1	n/a	4/30/98		4/30/98	n/a
238	TIME Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	5/4/98		5/4/98	n/a
239	TOC-ICR TOC	0.71 mg/L	SM 5310 C	1	0.50	4/30/98		4/30/98	7-0-251
240	TOC-ICR TOC (Dupl)	0.70 mg/L	SM 5310 C	1	0.50	4/30/98		4/30/98	7-0-251
		0.70 mg/L	1.4 % RPD						
241	TOX-ICR TOX	ND µg Cl-/L	SM 5320 B	1	25	5/4/98		5/11/98	12-0-130
242	TOX-ICR TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	5/4/98		5/11/98	12-0-130
		ND µg Cl-/L							
243	THM-ICR 1,2,3-Trichloropropane (Surrogate)	96.4 %	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

244	THM-ICR Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
245	THM-ICR Bromoform	6.7 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
246	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
247	THM-ICR Dibromochloromethane	3.5 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
248	UV-ICR UV	ND 1/cm	SM 5910 B	1	0.009	4/30/98		5/1/98	8-0-174
249	UV-ICR UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	4/30/98		5/1/98	8-0-174
		ND 1/cm							

Sample ID: 107.INF.B-2

S&H ID: 9804-532

Date Sampled: 4/30/98 4:50:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
250	pH	pH	9.1	Unit	SM 4500-H+ B	1	n/a	4/30/98		4/30/98	n/a
251	TEMP	Temperature	17.0	°C	SM 2550 B	1	n/a	4/30/98		4/30/98	n/a
252	TOC-ICR	TOC	4.12	mg/L	SM 5310 C	1	0.50	4/30/98		4/30/98	7-0-251
253	TOC-ICR	TOC (Dupl)	4.14	mg/L	SM 5310 C	1	0.50	4/30/98		4/30/98	7-0-251
			4.13	mg/L	0.5 % RPD						

Sample ID: 107.10.Eff-6

S&H ID: 9805-1

Date Sampled: 4/30/98 6:50:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
254	Cl2Dose	Chlorine Dose	1.51	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/4/98		5/4/98	n/a
255	Cl2Res	Chlorine Residual	0.82	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/4/98		5/4/98	n/a
256	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	100.0	%	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
257	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.0	%	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
258	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
259	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
260	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
261	HAA-ICR	Dibromoacetic acid	2.0	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
262	HAA-ICR	Dichloroacetic acid	1.1	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
263	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
264	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
265	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/4/98	5/7/98	5/9/98	0-123-0
266	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
267	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
268	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
269	pH	pH	8.6	Unit	SM 4500-H+ B	1	n/a	4/30/98		4/30/98	n/a
270	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
271	TEMP	Temperature	21.8	°C	SM 2550 B	1	n/a	4/30/98		4/30/98	n/a
272	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	5/4/98		5/4/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

273	TOC-ICR TOC	1.16 mg/L	SM 5310 C	1	0.50	4/30/98	5/1/98	7-0-252
274	TOC-ICR TOC (Dupl)	1.16 mg/L	SM 5310 C	1	0.50	4/30/98	5/1/98	7-0-252
		1.16 mg/L	0.0 % RPD					
275	TOX-ICR TOX (Dupl)	37 µg Cl-/L	SM 5320 B	1	25	5/4/98	5/11/98	12-0-130
276	TOX-ICR TOX (Dupl)	31 µg Cl-/L	SM 5320 B	1	25	5/4/98	5/11/98	12-0-130
		34 µg Cl-/L	17.6 % RPD					
277	THM-ICR 1,2,3-Trichloropropane (Surrogate)	92.8 %	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98 0-122-0
278	THM-ICR Bromodichloromethane	2.0 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98 0-122-0
279	THM-ICR Bromoform	8.5 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98 0-122-0
280	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98 0-122-0
281	THM-ICR Dibromochloromethane	6.4 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98 0-122-0
282	UV-ICR UV	0.014 1/cm	SM 5910 B	1	0.009	4/30/98	5/1/98	8-0-174
283	UV-ICR UV (Dupl)	0.014 1/cm	SM 5910 B	1	0.009	4/30/98	5/1/98	8-0-174
		0.014 1/cm	0.0 % RPD					

Sample ID: 107.10.Eff-6d

S&H ID: 9805-2

Date Sampled: 4/30/98 6:50:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
284	Cl2Dose Chlorine Dose	1.52 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/4/98		5/4/98	n/a
285	Cl2Res Chlorine Residual	0.82 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/4/98		5/4/98	n/a
286	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	105.2 %	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
287	HAA-ICR 2-Bromopropionic acid (Surrogate)	98.4 %	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
288	HAA-ICR Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
289	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
290	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
291	HAA-ICR Dibromoacetic acid	1.9 µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
292	HAA-ICR Dichloroacetic acid	1.1 µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
293	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
294	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
295	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/4/98	5/7/98	5/9/98	0-123-0
296	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
297	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
298	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
299	pH pH	8.7 Unit	SM 4500-H+ B	1	n/a	4/30/98		4/30/98	n/a
300	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
301	TEMP Temperature	21.8 °C	SM 2550 B	1	n/a	4/30/98		4/30/98	n/a
302	TIME Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	5/4/98		5/4/98	n/a
303	TOC-ICR TOC	1.17 mg/L	SM 5310 C	1	0.50	4/30/98		5/1/98	7-0-252
304	TOC-ICR TOC (Dupl)	1.19 mg/L	SM 5310 C	1	0.50	4/30/98		5/1/98	7-0-252

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

		1.18 mg/L	1.7 % RPD						
305	TOX-ICR TOX	30 µg Cl-/L	SM 5320 B	1	25	5/4/98		5/11/98	12-0-130
306	TOX-ICR TOX (Dupl)	35 µg Cl-/L	SM 5320 B	1	25	5/4/98		5/11/98	12-0-130
		33 µg Cl-/L	15.2 % RPD						
307	THM-ICR 1,2,3-Trichloropropane (Surrogate)	92.4 %	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
308	THM-ICR Bromodichloromethane	2.1 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
309	THM-ICR Bromoform	8.8 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
310	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
311	THM-ICR Dibromochloromethane	6.8 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
312	UV-ICR UV	0.014 1/cm	SM 5910 B	1	0.009	4/30/98		5/1/98	8-0-174
313	UV-ICR UV (Dupl)	0.014 1/cm	SM 5910 B	1	0.009	4/30/98		5/1/98	8-0-174
		0.014 1/cm	0.0 % RPD						

Sample ID: 107.10.Eff-7

S&H ID: 9805-3

Date Sampled: 4/30/98 9:43:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
314	Cl2Dose Chlorine Dose	1.62 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/4/98		5/4/98	n/a
315	Cl2Res Chlorine Residual	0.82 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/4/98		5/4/98	n/a
316	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	100.0 %	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
317	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.0 %	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
318	HAA-ICR Bromochloroacetic acid	1.4 µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
319	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
320	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
321	HAA-ICR Dibromoacetic acid	2.8 µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
322	HAA-ICR Dichloroacetic acid	1.7 µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
323	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
324	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
325	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/4/98	5/7/98	5/9/98	0-123-0
326	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
327	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
328	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
329	pH pH	8.7 Unit	SM 4500-H+ B	1	n/a	4/30/98		4/30/98	n/a
330	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
331	TEMP Temperature	21.9 °C	SM 2550 B	1	n/a	4/30/98		4/30/98	n/a
332	TIME Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	5/4/98		5/4/98	n/a
333	TOC-ICR TOC	1.47 mg/L	SM 5310 C	1	0.50	4/30/98		5/1/98	7-0-252
334	TOC-ICR TOC (Dupl)	1.45 mg/L	SM 5310 C	1	0.50	4/30/98		5/1/98	7-0-252
		1.46 mg/L	1.4 % RPD						
335	TOX-ICR TOX	41 µg Cl-/L	SM 5320 B	1	25	5/4/98		5/8/98	12-0-129

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

336	TOX-ICR TOX (Dupl)	41 µg Cl-/L 41 µg Cl-/L	SM 5320 B 0.0 % RPD	1	25	5/4/98		5/8/98	12-0-129
337	THM-ICR 1,2,3-Trichloropropane (Surrogate)	94.0 %	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
338	THM-ICR Bromodichloromethane	3.5 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
339	THM-ICR Bromoform	10.1 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
340	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
341	THM-ICR Dibromochloromethane	9.7 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
342	UV-ICR UV	0.017 1/cm	SM 5910 B	1	0.009	4/30/98		5/2/98	8-0-175
343	UV-ICR UV (Dupl)	0.017 1/cm 0.017 1/cm	SM 5910 B 0.0 % RPD	1	0.009	4/30/98		5/2/98	8-0-175

Sample ID: 107.10.Eff-9

S&H ID: 9805-5

Date Sampled: 5/1/98 3:20:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
344	Cl2Dose Chlorine Dose	1.72 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/4/98		5/4/98	n/a
345	Cl2Res Chlorine Residual	0.85 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/4/98		5/4/98	n/a
346	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	98.8 %	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
347	HAA-ICR 2-Bromopropionic acid (Surrogate)	95.6 %	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
348	HAA-ICR Bromochloroacetic acid	1.9 µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
349	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
350	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
351	HAA-ICR Dibromoacetic acid	3.5 µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
352	HAA-ICR Dichloroacetic acid	4.5 µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
353	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
354	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/7/98	5/9/98	0-123-0
355	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/4/98	5/7/98	5/9/98	0-123-0
356	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/7/98	5/9/98	0-123-0
357	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
358	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
359	pH pH	8.8 Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
360	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
361	TEMP Temperature	22.3 °C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
362	TIME Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	5/4/98		5/4/98	n/a
363	TOC-ICR TOC	1.77 mg/L	SM 5310 C	1	0.50	5/1/98		5/1/98	7-0-252
364	TOC-ICR TOC (Dupl)	1.77 mg/L 1.77 mg/L	SM 5310 C 0.0 % RPD	1	0.50	5/1/98		5/1/98	7-0-252
365	TOX-ICR TOX	50 µg Cl-/L	SM 5320 B	1	25	5/4/98		5/11/98	12-0-130
366	TOX-ICR TOX (Dupl)	51 µg Cl-/L 51 µg Cl-/L	SM 5320 B 2.0 % RPD	1	25	5/4/98		5/11/98	12-0-130

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

367	THM-ICR 1,2,3-Trichloropropane (Surrogate)	88.8 %	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
368	THM-ICR Bromodichloromethane	5.1 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
369	THM-ICR Bromoform	10.0 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
370	THM-ICR Chloroform	1.5 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
371	THM-ICR Dibromochloromethane	12.3 µg/L	EPA 551.1	1	1.0	5/4/98	5/5/98	5/6/98	0-122-0
372	UV-ICR UV	0.022 1/cm	SM 5910 B	1	0.009	5/1/98		5/2/98	8-0-175
373	UV-ICR UV (Dupl)	0.022 1/cm	SM 5910 B	1	0.009	5/1/98		5/2/98	8-0-175
		0.022 1/cm	0.0 % RPD						

Sample ID: 107.10.Eff-10

S&H ID: 9805-6

Date Sampled: 5/1/98 8:32:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
374	Cl2Dose Chlorine Dose	1.77 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/4/98		5/4/98	n/a
375	Cl2Res Chlorine Residual	0.84 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/4/98		5/4/98	n/a
376	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	106.8 %	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
377	HAA-ICR 2-Bromopropionic acid (Surrogate)	98.0 %	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
378	HAA-ICR Bromochloroacetic acid	2.3 µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
379	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
380	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/12/98	5/12/98	0-127-0
381	HAA-ICR Dibromoacetic acid	3.8 µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
382	HAA-ICR Dichloroacetic acid	5.9 µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
383	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
384	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/12/98	5/12/98	0-127-0
385	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/4/98	5/12/98	5/12/98	0-127-0
386	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
387	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
388	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
389	pH pH	8.7 Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
390	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
391	TEMP Temperature	22.0 °C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
392	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	5/4/98		5/4/98	n/a
393	TOC-ICR TOC	1.91 mg/L	SM 5310 C	1	0.50	5/1/98		5/1/98	7-0-252
394	TOC-ICR TOC (Dupl)	1.89 mg/L	SM 5310 C	1	0.50	5/1/98		5/1/98	7-0-252
		1.90 mg/L	1.1 % RPD						
395	TOX-ICR TOX	61 µg Cl-/L	SM 5320 B	1	25	5/4/98		5/8/98	12-0-129
396	TOX-ICR TOX (Dupl)	59 µg Cl-/L	SM 5320 B	1	25	5/4/98		5/8/98	12-0-129
		60 µg Cl-/L	3.3 % RPD						
397	THM-ICR 1,2,3-Trichloropropane (Surrogate)	105.6 %	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

398	THM-ICR Bromodichloromethane	6.3 µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
399	THM-ICR Bromoform	10.5 µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
400	THM-ICR Chloroform	1.9 µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
401	THM-ICR Dibromochloromethane	13.6 µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
402	UV-ICR UV	0.025 1/cm	SM 5910 B	1	0.009	5/1/98		5/2/98	8-0-175
403	UV-ICR UV (Dupl)	0.025 1/cm	SM 5910 B	1	0.009	5/1/98		5/2/98	8-0-175
		0.025 1/cm	0.0 % RPD						

Sample ID: 107.10.Eff-10d

S&H ID: 9805-7

Date Sampled: 5/1/98 8:32:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
404	Cl2Dose Chlorine Dose	1.78 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/4/98		5/4/98	n/a
405	Cl2Res Chlorine Residual	0.83 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/4/98		5/4/98	n/a
406	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	101.6 %	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
407	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.4 %	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
408	HAA-ICR Bromochloroacetic acid	2.3 µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
409	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
410	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/12/98	5/12/98	0-127-0
411	HAA-ICR Dibromoacetic acid	4.1 µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
412	HAA-ICR Dichloroacetic acid	5.9 µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
413	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
414	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/12/98	5/12/98	0-127-0
415	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/4/98	5/12/98	5/12/98	0-127-0
416	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
417	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
418	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
419	pH pH	8.8 Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
420	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
421	TEMP Temperature	22.1 °C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
422	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	5/4/98		5/4/98	n/a
423	TOC-ICR TOC	1.92 mg/L	SM 5310 C	1	0.50	5/1/98		5/1/98	7-0-252
424	TOC-ICR TOC (Dupl)	1.95 mg/L	SM 5310 C	1	0.50	5/1/98		5/1/98	7-0-252
		1.94 mg/L	1.5 % RPD						
425	TOX-ICR TOX	57 µg Cl-/L	SM 5320 B	1	25	5/4/98		5/8/98	12-0-129
426	TOX-ICR TOX (Dupl)	62 µg Cl-/L	SM 5320 B	1	25	5/4/98		5/8/98	12-0-129
		60 µg Cl-/L	8.3 % RPD						
427	THM-ICR 1,2,3-Trichloropropane (Surrogate)	100.8 %	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
428	THM-ICR Bromodichloromethane	5.8 µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
429	THM-ICR Bromoform	9.6 µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 107
Study Title: ICR RSSCT #1

430	THM-ICR Chloroform	1.7 µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
431	THM-ICR Dibromochloromethane	12.7 µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
432	UV-ICR UV	0.025 1/cm	SM 5910 B	1	0.009	5/1/98		5/2/98	8-0-175
433	UV-ICR UV (Dupl)	0.025 1/cm	SM 5910 B	1	0.009	5/1/98		5/2/98	8-0-175
		0.025 1/cm	0.0 % RPD						

Sample ID: 107.10.INST.Eff-1**S&H ID:** 9805-13**Date Sampled:** 4/30/98 6:05:00 PM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
434	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	103.6	%	EPA 552.2	1	1.0	4/30/98	5/7/98	5/9/98	0-123-0
435	HAA-ICR 2-Bromopropionic acid (Surrogate)	98.4	%	EPA 552.2	1	1.0	4/30/98	5/7/98	5/9/98	0-123-0
436	HAA-ICR Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	4/30/98	5/7/98	5/9/98	0-123-0
437	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	4/30/98	5/7/98	5/9/98	0-123-0
438	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	4/30/98	5/7/98	5/9/98	0-123-0
439	HAA-ICR Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	4/30/98	5/7/98	5/9/98	0-123-0
440	HAA-ICR Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	4/30/98	5/7/98	5/9/98	0-123-0
441	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	4/30/98	5/7/98	5/9/98	0-123-0
442	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	4/30/98	5/7/98	5/9/98	0-123-0
443	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	4/30/98	5/7/98	5/9/98	0-123-0
444	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	4/30/98	5/7/98	5/9/98	0-123-0
445	THM-ICR 1,2,3-Trichloropropane (Surrogate)	96.0	%	EPA 551.1	1	1.0	4/30/98	5/5/98	5/6/98	0-122-0
446	THM-ICR Bromodichloromethane	ND	µg/L	EPA 551.1	1	1.0	4/30/98	5/5/98	5/6/98	0-122-0
447	THM-ICR Bromoform	ND	µg/L	EPA 551.1	1	1.0	4/30/98	5/5/98	5/6/98	0-122-0
448	THM-ICR Chloroform	ND	µg/L	EPA 551.1	1	1.0	4/30/98	5/5/98	5/6/98	0-122-0
449	THM-ICR Dibromochloromethane	ND	µg/L	EPA 551.1	1	1.0	4/30/98	5/5/98	5/6/98	0-122-0

Sample ID: 107.10.INST.Eff-2**S&H ID:** 9805-14**Date Sampled:** 5/1/98 10:30:00 AM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
450	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	102.4	%	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
451	HAA-ICR 2-Bromopropionic acid (Surrogate)	97.2	%	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
452	HAA-ICR Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
453	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
454	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/1/98	5/7/98	5/9/98	0-123-0
455	HAA-ICR Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
456	HAA-ICR Dichloroacetic acid	7.1	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
457	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
458	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/1/98	5/7/98	5/9/98	0-123-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

459	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/1/98	5/7/98	5/9/98	0-123-0
460	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/1/98	5/7/98	5/9/98	0-123-0
461	THM-ICR	1,2,3-Trichloropropane (Surrogate)	96.0 %	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98	0-122-0
462	THM-ICR	Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98	0-122-0
463	THM-ICR	Bromoform	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98	0-122-0
464	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98	0-122-0
465	THM-ICR	Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	5/1/98	5/5/98	5/6/98	0-122-0

Sample ID: 107.10.Eff-11

S&H ID: 9805-19

Date Sampled: 5/1/98 11:59:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
466	Cl2Dose	Chlorine Dose	1.72	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
467	Cl2Res	Chlorine Residual	0.77	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
468	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	108.8	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
469	HAA-ICR	2-Bromopropionic acid (Surrogate)	97.2	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
470	HAA-ICR	Bromochloroacetic acid	3.1	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
471	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
472	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
473	HAA-ICR	Dibromoacetic acid	4.7	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
474	HAA-ICR	Dichloroacetic acid	7.1	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
475	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
476	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
477	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
478	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
479	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
480	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
481	pH	pH	8.7	Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
482	TEMP	Cl2 Temperature	26.8	°C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
483	TEMP	Temperature	22.1	°C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
484	TIME	Cl2 Incubation Time	5.8	hrs	n/a	1	n/a	5/5/98		5/5/98	n/a
485	TOC-ICR	TOC	2.07	mg/L	SM 5310 C	1	0.50	5/1/98		5/1/98	7-0-252
486	TOC-ICR	TOC (Dupl)	2.07	mg/L	SM 5310 C	1	0.50	5/1/98		5/1/98	7-0-252
			2.07	mg/L	0.0 % RPD						
487	TOX-ICR	TOX	70	µg Cl-/L	SM 5320 B	1	25	5/5/98		5/14/98	12-0-133
488	TOX-ICR	TOX (Dupl)	66	µg Cl-/L	SM 5320 B	1	25	5/5/98		5/14/98	12-0-133
			68	µg Cl-/L	5.9 % RPD						
489	THM-ICR	1,2,3-Trichloropropane (Surrogate)	91.2	%	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
490	THM-ICR	Bromodichloromethane	7.2	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

491	THM-ICR Bromoform	9.7 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
492	THM-ICR Chloroform	2.3 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
493	THM-ICR Dibromochloromethane	14.6 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
494	UV-ICR UV	0.028 1/cm	SM 5910 B	1	0.009	5/1/98		5/2/98	8-0-175
495	UV-ICR UV (Dupl)	0.028 1/cm	SM 5910 B	1	0.009	5/1/98		5/2/98	8-0-175
		0.028 1/cm	0.0 % RPD						
<hr/>									
Sample ID: 107.20.Eff-4		S&H ID: 9805-20		Date Sampled: 5/1/98 10:25:00 AM					
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
496	Cl2Dose Chlorine Dose	1.25 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/4/98		5/4/98	n/a
497	Cl2Res Chlorine Residual	0.72 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/4/98		5/4/98	n/a
498	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	103.2 %	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
499	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.0 %	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
500	HAA-ICR Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
501	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
502	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/12/98	5/12/98	0-127-0
503	HAA-ICR Dibromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
504	HAA-ICR Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
505	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
506	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/4/98	5/12/98	5/12/98	0-127-0
507	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/4/98	5/12/98	5/12/98	0-127-0
508	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/4/98	5/12/98	5/12/98	0-127-0
509	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
510	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
511	pH pH	8.9 Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
512	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
513	TEMP Temperature	21.9 °C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
514	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	5/4/98		5/4/98	n/a
515	TOC-ICR TOC	ND mg/L	SM 5310 C	1	0.50	5/1/98		5/1/98	7-0-252
516	TOC-ICR TOC (Dupl)	ND mg/L	SM 5310 C	1	0.50	5/1/98		5/1/98	7-0-252
		ND mg/L							
517	TOX-ICR TOX	ND µg Cl-/L	SM 5320 B	1	25	5/4/98		5/8/98	12-0-129
518	TOX-ICR TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	5/4/98		5/8/98	12-0-129
		ND µg Cl-/L							
519	THM-ICR 1,2,3-Trichloropropane (Surrogate)	106.0 %	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
520	THM-ICR Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
521	THM-ICR Bromoform	4.9 µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
522	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

523	THM-ICR Dibromochloromethane	1.6 µg/L	EPA 551.1	1	1.0	5/4/98	5/9/98	5/9/98	0-125-0
524	UV-ICR UV	ND 1/cm	SM 5910 B	1	0.009	5/1/98		5/2/98	8-0-175
525	UV-ICR UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	5/1/98		5/2/98	8-0-175
		ND 1/cm							

Sample ID: 107.INF.B-3

S&H ID: 9805-21

Date Sampled: 5/1/98 2:00:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
526	pH	pH	9.1	Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
527	TEMP	Temperature	17.2	°C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
528	TOC-ICR	TOC	4.31	mg/L	SM 5310 C	1	0.50	5/1/98		5/3/98	7-0-254
529	TOC-ICR	TOC (Dupl)	4.34	mg/L	SM 5310 C	1	0.50	5/1/98		5/3/98	7-0-254
			4.32	mg/L	0.7 % RPD						

Sample ID: 107.20.Eff-5

S&H ID: 9805-24

Date Sampled: 5/1/98 3:46:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
530	Cl2Dose	Chlorine Dose	1.33	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
531	Cl2Res	Chlorine Residual	0.77	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
532	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	103.6	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
533	HAA-ICR	2-Bromopropionic acid (Surrogate)	96.0	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
534	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
535	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
536	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
537	HAA-ICR	Dibromoacetic acid	1.5	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
538	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
539	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
540	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
541	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
542	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
543	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
544	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
545	pH	pH	8.7	Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
546	TEMP	Cl2 Temperature	26.8	°C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
547	TEMP	Temperature	21.5	°C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
548	TIME	Cl2 Incubation Time	5.9	hrs	n/a	1	n/a	5/5/98		5/5/98	n/a
549	TOC-ICR	TOC	0.71	mg/L	SM 5310 C	1	0.50	5/1/98		5/1/98	7-0-252
550	TOC-ICR	TOC (Dupl)	0.70	mg/L	SM 5310 C	1	0.50	5/1/98		5/1/98	7-0-252
			0.70	mg/L	1.4 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

551	TOX-ICR TOX	ND µg Cl-/L	SM 5320 B	1	25	5/5/98	5/12/98	12-0-131
552	TOX-ICR TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	5/5/98	5/12/98	12-0-131
		ND µg Cl-/L						
553	THM-ICR 1,2,3-Trichloropropane (Surrogate)	96.8 %	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
554	THM-ICR 1,2,3-Trichloropropane (Surrogate) (Lab Dupl)	100.4 %	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
		98.6 %	3.7 % RPD					
555	THM-ICR Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
556	THM-ICR Bromodichloromethane (Lab Dupl)	ND µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
		ND µg/L						
557	THM-ICR Bromoform	6.8 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
558	THM-ICR Bromoform (Lab Dupl)	7.0 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
		6.9 µg/L	2.9 % RPD					
559	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
560	THM-ICR Chloroform (Lab Dupl)	ND µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
		ND µg/L						
561	THM-ICR Dibromochloromethane	3.1 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
562	THM-ICR Dibromochloromethane (Lab Dupl)	3.2 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
		3.2 µg/L	3.1 % RPD					
563	UV-ICR UV	ND 1/cm	SM 5910 B	1	0.009	5/1/98	5/2/98	8-0-175
564	UV-ICR UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	5/1/98	5/2/98	8-0-175
		ND 1/cm						

Sample ID: 107.10.Eff-13

S&H ID: 9805-29

Date Sampled: 5/1/98 8:08:00 PM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
565	Cl2Dose Chlorine Dose	1.80	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
566	Cl2Res Chlorine Residual	0.78	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
567	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	103.6	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
568	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard) (Lab Dupl)	106.0	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
		104.8 %	2.3 % RPD							
569	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.4	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
570	HAA-ICR 2-Bromopropionic acid (Surrogate) (Lab Dupl)	96.0	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
		96.2 %	0.4 % RPD							
571	HAA-ICR Bromochloroacetic acid	3.8	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
572	HAA-ICR Bromochloroacetic acid (Lab Dupl)	3.6	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
		3.7 µg/L	5.4 % RPD							
573	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
574	HAA-ICR Bromodichloroacetic acid (Lab Dupl)	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

			ND µg/L							
575	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
576	HAA-ICR	Chlorodibromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
			ND µg/L							
577	HAA-ICR	Dibromoacetic acid	4.5 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
578	HAA-ICR	Dibromoacetic acid (Lab Dupl)	4.3 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
			4.4 µg/L	4.5 % RPD						
579	HAA-ICR	Dichloroacetic acid	7.9 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
580	HAA-ICR	Dichloroacetic acid (Lab Dupl)	7.5 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
			7.7 µg/L	5.2 % RPD						
581	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
582	HAA-ICR	Monobromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
			ND µg/L							
583	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
584	HAA-ICR	Monochloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
			ND µg/L							
585	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
586	HAA-ICR	Tribromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
			ND µg/L							
587	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
588	HAA-ICR	Trichloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
			ND µg/L							
589	pH	Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
590	pH	Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
591	pH	pH	8.7 Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
592	TEMP	Cl2 Temperature	26.8 °C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
593	TEMP	Temperature	22.1 °C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
594	TIME	Cl2 Incubation Time	5.8 hrs	n/a	1	n/a	5/5/98		5/5/98	n/a
595	TOC-ICR	TOC	2.30 mg/L	SM 5310 C	1	0.50	5/1/98		5/2/98	7-0-254
596	TOC-ICR	TOC (Dupl)	2.33 mg/L	SM 5310 C	1	0.50	5/1/98		5/2/98	7-0-254
			2.31 mg/L	1.3 % RPD						
597	TOX-ICR	TOX	79 µg Cl-/L	SM 5320 B	1	25	5/5/98		5/14/98	12-0-133
598	TOX-ICR	TOX (Dupl)	79 µg Cl-/L	SM 5320 B	1	25	5/5/98		5/14/98	12-0-133
			79 µg Cl-/L	0.0 % RPD						
599	THM-ICR	1,2,3-Trichloropropane (Surrogate)	103.6 %	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
600	THM-ICR	Bromodichloromethane	8.8 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
601	THM-ICR	Bromoform	8.8 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
602	THM-ICR	Chloroform	3.2 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

603	THM-ICR Dibromochloromethane	15.6 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
604	UV-ICR UV	0.034 1/cm	SM 5910 B	1	0.009	5/1/98		5/3/98	8-0-176
605	UV-ICR UV (Dupl)	0.033 1/cm	SM 5910 B	1	0.009	5/1/98		5/3/98	8-0-176
		0.034 1/cm	2.9 % RPD						

Sample ID: 107.20.Eff-6

S&H ID: 9805-34

Date Sampled: 5/1/98 9:10:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
606	Cl2Dose Chlorine Dose	1.42 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
607	Cl2Res Chlorine Residual	0.82 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
608	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	101.6 %	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
609	HAA-ICR 2-Bromopropionic acid (Surrogate)	95.2 %	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
610	HAA-ICR Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
611	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
612	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
613	HAA-ICR Dibromoacetic acid	1.8 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
614	HAA-ICR Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
615	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
616	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
617	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
618	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
619	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
620	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
621	pH pH	8.7 Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
622	TEMP Cl2 Temperature	26.8 °C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
623	TEMP Temperature	21.8 °C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
624	TIME Cl2 Incubation Time	5.9 hrs	n/a	1	n/a	5/5/98		5/5/98	n/a
625	TOC-ICR TOC	1.03 mg/L	SM 5310 C	1	0.50	5/1/98		5/3/98	7-0-254
626	TOC-ICR TOC (Dupl)	1.00 mg/L	SM 5310 C	1	0.50	5/1/98		5/3/98	7-0-254
		1.02 mg/L	2.9 % RPD						
627	TOX-ICR TOX	ND µg Cl-/L	SM 5320 B	1	25	5/5/98		5/12/98	12-0-131
628	TOX-ICR TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	5/5/98		5/12/98	12-0-131
		ND µg Cl-/L							
629	THM-ICR 1,2,3-Trichloropropane (Surrogate)	94.8 %	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
630	THM-ICR Bromodichloromethane	1.4 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
631	THM-ICR Bromoform	8.0 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
632	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
633	THM-ICR Dibromochloromethane	4.8 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
634	UV-ICR UV	0.010 1/cm	SM 5910 B	1	0.009	5/1/98		5/3/98	8-0-176

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

635	UV-ICR	UV (Dupl)	0.010	1/cm	SM 5910 B	1	0.009	5/1/98		5/3/98	8-0-176
			0.010	1/cm	0.0 % RPD						
<hr/>											
Sample ID: 107.20.Eff-6d			S&H ID: 9805-35		Date Sampled: 5/1/98 9:10:00 PM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
636	Cl2Dose	Chlorine Dose	1.42	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
637	Cl2Res	Chlorine Residual	0.78	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
638	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	108.4	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
639	HAA-ICR	2-Bromopropionic acid (Surrogate)	93.6	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
640	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
641	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
642	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
643	HAA-ICR	Dibromoacetic acid	1.9	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
644	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
645	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
646	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
647	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
648	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
649	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
650	pH	Cl2 pH - Initial	8.9	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
651	pH	pH	8.7	Unit	SM 4500-H+ B	1	n/a	5/1/98		5/1/98	n/a
652	TEMP	Cl2 Temperature	26.8	°C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
653	TEMP	Temperature	21.8	°C	SM 2550 B	1	n/a	5/1/98		5/1/98	n/a
654	TIME	Cl2 Incubation Time	5.9	hrs	n/a	1	n/a	5/5/98		5/5/98	n/a
655	TOC-ICR	TOC	1.00	mg/L	SM 5310 C	1	0.50	5/1/98		5/3/98	7-0-254
656	TOC-ICR	TOC (Dupl)	1.07	mg/L	SM 5310 C	1	0.50	5/1/98		5/3/98	7-0-254
			1.04	mg/L	6.7 % RPD						
657	TOX-ICR	TOX	ND	µg Cl-/L	SM 5320 B	1	25	5/5/98		5/12/98	12-0-131
658	TOX-ICR	TOX (Dupl)	ND	µg Cl-/L	SM 5320 B	1	25	5/5/98		5/12/98	12-0-131
			ND	µg Cl-/L							
659	THM-ICR	1,2,3-Trichloropropane (Surrogate)	90.8	%	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
660	THM-ICR	Bromodichloromethane	1.6	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
661	THM-ICR	Bromoform	8.0	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
662	THM-ICR	Chloroform	ND	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
663	THM-ICR	Dibromochloromethane	5.2	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
664	UV-ICR	UV	0.010	1/cm	SM 5910 B	1	0.009	5/1/98		5/3/98	8-0-176
665	UV-ICR	UV (Dupl)	0.010	1/cm	SM 5910 B	1	0.009	5/1/98		5/3/98	8-0-176
			0.010	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

Sample ID: 107.20.Eff-7

S&H ID: 9805-36

Date Sampled: 5/2/98 2:31:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
666	Cl2Dose	Chlorine Dose	1.48	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
667	Cl2Res	Chlorine Residual	0.82	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
668	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	107.2	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
669	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.0	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
670	HAA-ICR	Bromochloroacetic acid	1.1	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
671	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
672	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
673	HAA-ICR	Dibromoacetic acid	2.4	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
674	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
675	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
676	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
677	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
678	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
679	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
680	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
681	pH	pH	8.9	Unit	SM 4500-H+ B	1	n/a	5/2/98		5/2/98	n/a
682	TEMP	Cl2 Temperature	26.8	°C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
683	TEMP	Temperature	21.7	°C	SM 2550 B	1	n/a	5/2/98		5/2/98	n/a
684	TIME	Cl2 Incubation Time	5.9	hrs	n/a	1	n/a	5/5/98		5/5/98	n/a
685	TOC-ICR	TOC	1.25	mg/L	SM 5310 C	1	0.50	5/2/98		5/3/98	7-0-254
686	TOC-ICR	TOC (Dupl)	1.21	mg/L	SM 5310 C	1	0.50	5/2/98		5/3/98	7-0-254
			1.23	mg/L	3.3 % RPD						
687	TOX-ICR	TOX	25	µg Cl-/L	SM 5320 B	1	25	5/5/98		5/12/98	12-0-131
688	TOX-ICR	TOX (Dupl)	ND	µg Cl-/L	SM 5320 B	1	25	5/5/98		5/12/98	12-0-131
			ND	µg Cl-/L							
689	THM-ICR	1,2,3-Trichloropropane (Surrogate)	94.4	%	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
690	THM-ICR	Bromodichloromethane	1.9	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
691	THM-ICR	Bromoform	9.0	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
692	THM-ICR	Chloroform	ND	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
693	THM-ICR	Dibromochloromethane	6.4	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
694	UV-ICR	UV	0.012	1/cm	SM 5910 B	1	0.009	5/2/98		5/3/98	8-0-176
695	UV-ICR	UV (Dupl)	0.012	1/cm	SM 5910 B	1	0.009	5/2/98		5/3/98	8-0-176
			0.012	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

Sample ID: 107.10.Inst.Eff-3			S&H ID: 9805-50		Date Sampled: 5/2/98 12:00:00 PM					
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
696	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	99.6	%	EPA 552.2	1	1.0	5/2/98	5/7/98	5/9/98	0-123-0
697	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.0	%	EPA 552.2	1	1.0	5/2/98	5/7/98	5/9/98	0-123-0
698	HAA-ICR Bromochloroacetic acid	1.8	µg/L	EPA 552.2	1	1.0	5/2/98	5/7/98	5/9/98	0-123-0
699	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/2/98	5/7/98	5/9/98	0-123-0
700	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/2/98	5/7/98	5/9/98	0-123-0
701	HAA-ICR Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/2/98	5/7/98	5/9/98	0-123-0
702	HAA-ICR Dichloroacetic acid	7.9	µg/L	EPA 552.2	1	1.0	5/2/98	5/7/98	5/9/98	0-123-0
703	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/2/98	5/7/98	5/9/98	0-123-0
704	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/2/98	5/7/98	5/9/98	0-123-0
705	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/2/98	5/7/98	5/9/98	0-123-0
706	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/2/98	5/7/98	5/9/98	0-123-0
707	THM-ICR 1,2,3-Trichloropropane (Surrogate)	91.6	%	EPA 551.1	1	1.0	5/2/98	5/5/98	5/6/98	0-122-0
708	THM-ICR Bromodichloromethane	ND	µg/L	EPA 551.1	1	1.0	5/2/98	5/5/98	5/6/98	0-122-0
709	THM-ICR Bromoform	ND	µg/L	EPA 551.1	1	1.0	5/2/98	5/5/98	5/6/98	0-122-0
710	THM-ICR Chloroform	ND	µg/L	EPA 551.1	1	1.0	5/2/98	5/5/98	5/6/98	0-122-0
711	THM-ICR Dibromochloromethane	ND	µg/L	EPA 551.1	1	1.0	5/2/98	5/5/98	5/6/98	0-122-0

Sample ID: 107.10.Eff-15			S&H ID: 9805-51		Date Sampled: 5/2/98 6:40:00 AM					
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
712	Cl2Dose Chlorine Dose	1.85	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
713	Cl2Res Chlorine Residual	0.76	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
714	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	112.8	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
715	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.8	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
716	HAA-ICR Bromochloroacetic acid	4.2	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
717	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
718	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
719	HAA-ICR Dibromoacetic acid	4.4	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
720	HAA-ICR Dichloroacetic acid	7.7	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
721	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
722	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
723	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
724	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
725	pH Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
726	pH Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

727	pH	pH	8.8	Unit	SM 4500-H+ B	1	n/a	5/2/98	5/2/98	n/a
728	TEMP	Cl2 Temperature	26.8	°C	SM 2550 B	1	n/a	5/5/98	5/5/98	n/a
729	TEMP	Temperature	22.1	°C	SM 2550 B	1	n/a	5/2/98	5/2/98	n/a
730	TIME	Cl2 Incubation Time	5.9	hrs	n/a	1	n/a	5/5/98	5/5/98	n/a
731	TOC-ICR	TOC	2.54	mg/L	SM 5310 C	1	0.50	5/2/98	5/2/98	7-0-254
732	TOC-ICR	TOC (Dupl)	2.49	mg/L	SM 5310 C	1	0.50	5/2/98	5/2/98	7-0-254
			2.52	mg/L	2.0 % RPD					
733	TOX-ICR	TOX	88	µg Cl-/L	SM 5320 B	1	25	5/5/98	5/14/98	12-0-133
734	TOX-ICR	TOX (Dupl)	92	µg Cl-/L	SM 5320 B	1	25	5/5/98	5/14/98	12-0-133
			90	µg Cl-/L	4.4 % RPD					
735	THM-ICR	1,2,3-Trichloropropane (Surrogate)	100.4	%	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
736	THM-ICR	Bromodichloromethane	10.8	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
737	THM-ICR	Bromoform	8.1	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
738	THM-ICR	Chloroform	4.4	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
739	THM-ICR	Dibromochloromethane	16.9	µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
740	UV-ICR	UV	0.039	1/cm	SM 5910 B	1	0.009	5/2/98	5/3/98	8-0-176
741	UV-ICR	UV (Dupl)	0.038	1/cm	SM 5910 B	1	0.009	5/2/98	5/3/98	8-0-176
			0.039	1/cm	2.6 % RPD					

Sample ID: 107.10.Eff-15d

S&H ID: 9805-52

Date Sampled: 5/2/98 6:40:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
742	Cl2Dose	Chlorine Dose	1.87	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
743	Cl2Res	Chlorine Residual	0.75	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
744	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	113.6	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
745	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.0	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
746	HAA-ICR	Bromochloroacetic acid	3.7	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
747	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
748	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
749	HAA-ICR	Dibromoacetic acid	3.4	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
750	HAA-ICR	Dichloroacetic acid	7.2	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
751	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
752	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
753	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
754	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
755	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
756	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
757	pH	pH	8.8	Unit	SM 4500-H+ B	1	n/a	5/2/98		5/2/98	n/a
758	TEMP	Cl2 Temperature	26.8	°C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

759	TEMP	Temperature	22.1 °C	SM 2550 B	1	n/a	5/2/98	5/2/98	n/a
760	TIME	Cl2 Incubation Time	5.9 hrs	n/a	1	n/a	5/5/98	5/5/98	n/a
761	TOC-ICR	TOC	2.58 mg/L	SM 5310 C	1	0.50	5/2/98	5/2/98	7-0-254
762	TOC-ICR	TOC (Dupl)	2.59 mg/L	SM 5310 C	1	0.50	5/2/98	5/2/98	7-0-254
			2.59 mg/L	0.4 % RPD					
763	TOX-ICR	TOX	91 µg Cl-/L	SM 5320 B	1	25	5/5/98	5/14/98	12-0-133
764	TOX-ICR	TOX (Dupl)	84 µg Cl-/L	SM 5320 B	1	25	5/5/98	5/14/98	12-0-133
			88 µg Cl-/L	8.0 % RPD					
765	THM-ICR	1,2,3-Trichloropropane (Surrogate)	101.6 %	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
766	THM-ICR	Bromodichloromethane	10.4 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
767	THM-ICR	Bromoform	7.8 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
768	THM-ICR	Chloroform	4.4 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
769	THM-ICR	Dibromochloromethane	15.8 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
770	UV-ICR	UV	0.038 1/cm	SM 5910 B	1	0.009	5/2/98	5/3/98	8-0-176
771	UV-ICR	UV (Dupl)	0.038 1/cm	SM 5910 B	1	0.009	5/2/98	5/3/98	8-0-176
			0.038 1/cm	0.0 % RPD					

Sample ID: 107.20.Eff-9

S&H ID: 9805-53

Date Sampled: 5/2/98 1:05:00 PM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Sample	Prep.	Anal.	QC Batch
772	Cl2Dose Chlorine Dose	1.58	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
773	Cl2Res Chlorine Residual	0.84	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
774	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	93.6	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
775	HAA-ICR 2-Bromopropionic acid (Surrogate)	104.4	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
776	HAA-ICR Bromochloroacetic acid	1.4	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
777	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
778	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
779	HAA-ICR Dibromoacetic acid	3.2	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
780	HAA-ICR Dichloroacetic acid	1.7	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
781	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
782	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
783	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
784	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
785	pH Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
786	pH Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
787	pH pH	9.2	Unit	SM 4500-H+ B	1	n/a	5/2/98		5/2/98	n/a
788	TEMP Cl2 Temperature	26.8	°C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
789	TEMP Temperature	21.8	°C	SM 2550 B	1	n/a	5/2/98		5/2/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

790	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	5/5/98	5/5/98	n/a
791	TOC-ICR	TOC	1.60 mg/L	SM 5310 C	1	0.50	5/2/98	5/3/98	7-0-254
792	TOC-ICR	TOC (Dupl)	1.54 mg/L	SM 5310 C	1	0.50	5/2/98	5/3/98	7-0-254
			1.57 mg/L	3.8 % RPD					
793	TOX-ICR	TOX	36 µg Cl-/L	SM 5320 B	1	25	5/5/98	5/12/98	12-0-131
794	TOX-ICR	TOX (Dupl)	37 µg Cl-/L	SM 5320 B	1	25	5/5/98	5/12/98	12-0-131
			37 µg Cl-/L	2.7 % RPD					
795	THM-ICR	1,2,3-Trichloropropane (Surrogate)	102.4 %	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
796	THM-ICR	Bromodichloromethane	3.0 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
797	THM-ICR	Bromoform	9.9 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
798	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
799	THM-ICR	Dibromochloromethane	8.7 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
800	UV-ICR	UV	0.017 1/cm	SM 5910 B	1	0.009	5/2/98	5/3/98	8-0-176
801	UV-ICR	UV (Dupl)	0.017 1/cm	SM 5910 B	1	0.009	5/2/98	5/3/98	8-0-176
			0.017 1/cm	0.0 % RPD					

Sample ID: 107.10.Eff-17

S&H ID: 9805-59

Date Sampled: 5/2/98 5:46:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
802	Cl2Dose	Chlorine Dose	1.94	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
803	Cl2Res	Chlorine Residual	0.75	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
804	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	103.2	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
805	HAA-ICR	2-Bromopropionic acid (Surrogate)	102.8	%	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
806	HAA-ICR	Bromochloroacetic acid	4.8	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
807	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
808	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
809	HAA-ICR	Dibromoacetic acid	3.9	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
810	HAA-ICR	Dichloroacetic acid	8.2	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
811	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
812	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
813	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
814	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
815	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
816	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
817	pH	pH	8.8	Unit	SM 4500-H+ B	1	n/a	5/2/98		5/2/98	n/a
818	TEMP	Cl2 Temperature	26.8	°C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
819	TEMP	Temperature	22.6	°C	SM 2550 B	1	n/a	5/2/98		5/2/98	n/a
820	TIME	Cl2 Incubation Time	5.9	hrs	n/a	1	n/a	5/5/98		5/5/98	n/a
821	TOC-ICR	TOC	2.83	mg/L	SM 5310 C	1	0.50	5/2/98		5/2/98	7-0-254

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

822	TOC-ICR TOC (Dupl)	2.79 mg/L 2.81 mg/L	SM 5310 C 1.4 % RPD	1	0.50	5/2/98	5/3/98	7-0-254
823	TOX-ICR TOX	102 µg Cl-/L	SM 5320 B	1	25	5/5/98	5/12/98	12-0-131
824	TOX-ICR TOX (Dupl)	102 µg Cl-/L 102 µg Cl-/L	SM 5320 B 0.0 % RPD	1	25	5/5/98	5/12/98	12-0-131
825	THM-ICR 1,2,3-Trichloropropane (Surrogate)	100.8 %	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
826	THM-ICR Bromodichloromethane	12.4 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
827	THM-ICR Bromoform	6.7 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
828	THM-ICR Chloroform	6.0 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
829	THM-ICR Dibromochloromethane	16.9 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
830	UV-ICR UV	0.045 1/cm	SM 5910 B	1	0.009	5/2/98	5/3/98	8-0-177
831	UV-ICR UV (Dupl)	0.045 1/cm 0.045 1/cm	SM 5910 B 0.0 % RPD	1	0.009	5/2/98	5/3/98	8-0-177

Sample ID: 107.20.Eff-11

S&H ID: 9805-60

Date Sampled: 5/2/98 10:17:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Sample	Prep.	Anal.	QC Batch
832	Cl2Dose Chlorine Dose	1.64 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
833	Cl2Res Chlorine Residual	0.84 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
834	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	112.4 %	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
835	HAA-ICR 2-Bromopropionic acid (Surrogate)	90.8 %	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
836	HAA-ICR Bromochloroacetic acid	1.5 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
837	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
838	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
839	HAA-ICR Dibromoacetic acid	2.9 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
840	HAA-ICR Dichloroacetic acid	4.5 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
841	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
842	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
843	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
844	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
845	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
846	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
847	pH pH	9.3 Unit	SM 4500-H+ B	1	n/a	5/2/98		5/2/98	n/a
848	TEMP Cl2 Temperature	26.8 °C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
849	TEMP Temperature	22.4 °C	SM 2550 B	1	n/a	5/2/98		5/2/98	n/a
850	TIME Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	5/5/98		5/5/98	n/a
851	TOC-ICR TOC	1.77 mg/L	SM 5310 C	1	0.50	5/2/98		5/3/98	7-0-254
852	TOC-ICR TOC (Dupl)	1.77 mg/L 1.77 mg/L	SM 5310 C 0.0 % RPD	1	0.50	5/2/98		5/3/98	7-0-254

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

853	TOX-ICR TOX	46 µg Cl-/L	SM 5320 B	1	25	5/5/98	5/12/98	12-0-131
854	TOX-ICR TOX (Dupl)	47 µg Cl-/L	SM 5320 B	1	25	5/5/98	5/12/98	12-0-131
		47 µg Cl-/L	2.1 % RPD					
855	THM-ICR 1,2,3-Trichloropropane (Surrogate)	98.8 %	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
856	THM-ICR Bromodichloromethane	4.9 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
857	THM-ICR Bromoform	10.4 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
858	THM-ICR Chloroform	1.3 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
859	THM-ICR Dibromochloromethane	12.1 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98 0-125-0
860	UV-ICR UV	0.022 1/cm	SM 5910 B	1	0.009	5/2/98	5/3/98	8-0-177
861	UV-ICR UV (Dupl)	0.022 1/cm	SM 5910 B	1	0.009	5/2/98	5/3/98	8-0-177
		0.022 1/cm	0.0 % RPD					

Sample ID: 107.20.Eff-11d

S&H ID: 9805-61

Date Sampled: 5/2/98 10:17:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
862	Cl2Dose Chlorine Dose	1.64 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
863	Cl2Res Chlorine Residual	0.78 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
864	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	110.4 %	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
865	HAA-ICR 2-Bromopropionic acid (Surrogate)	91.2 %	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
866	HAA-ICR Bromochloroacetic acid	1.5 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
867	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
868	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
869	HAA-ICR Dibromoacetic acid	3.0 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
870	HAA-ICR Dichloroacetic acid	4.5 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
871	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
872	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/13/98	0-127-0
873	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/13/98	0-127-0
874	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/13/98	0-127-0
875	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
876	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
877	pH pH	9.4 Unit	SM 4500-H+ B	1	n/a	5/2/98		5/2/98	n/a
878	TEMP Cl2 Temperature	26.8 °C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
879	TEMP Temperature	22.4 °C	SM 2550 B	1	n/a	5/2/98		5/2/98	n/a
880	TIME Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	5/5/98		5/5/98	n/a
881	TOC-ICR TOC	1.79 mg/L	SM 5310 C	1	0.50	5/2/98		5/3/98	7-0-254
882	TOC-ICR TOC (Dupl)	1.75 mg/L	SM 5310 C	1	0.50	5/2/98		5/3/98	7-0-254
		1.77 mg/L	2.3 % RPD						
883	TOX-ICR TOX	52 µg Cl-/L	SM 5320 B	1	25	5/5/98		5/14/98	12-0-133
884	TOX-ICR TOX (Dupl)	50 µg Cl-/L	SM 5320 B	1	25	5/5/98		5/14/98	12-0-133

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

		51 µg Cl-/L	3.9 % RPD						
885	THM-ICR 1,2,3-Trichloropropane (Surrogate)	97.6 %	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
886	THM-ICR Bromodichloromethane	5.3 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
887	THM-ICR Bromoform	10.9 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
888	THM-ICR Chloroform	1.4 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
889	THM-ICR Dibromochloromethane	12.7 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
890	UV-ICR UV	0.022 1/cm	SM 5910 B	1	0.009	5/2/98		5/3/98	8-0-177
891	UV-ICR UV (Dupl)	0.022 1/cm	SM 5910 B	1	0.009	5/2/98		5/3/98	8-0-177
		0.022 1/cm	0.0 % RPD						

Sample ID: 107.10.Eff-19

S&H ID: 9805-73

Date Sampled: 5/3/98 2:58:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
892	Cl2Dose Chlorine Dose	2.00 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/5/98		5/5/98	n/a
893	Cl2Res Chlorine Residual	0.75 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/5/98		5/5/98	n/a
894	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	93.2 %	EPA 552.2	1	1.0	5/5/98	5/12/98	5/14/98	0-127-0
895	HAA-ICR 2-Bromopropionic acid (Surrogate)	90.4 %	EPA 552.2	1	1.0	5/5/98	5/12/98	5/14/98	0-127-0
896	HAA-ICR Bromochloroacetic acid	4.9 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/14/98	0-127-0
897	HAA-ICR Bromodichloroacetic acid	1.0 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/14/98	0-127-0
898	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/14/98	0-127-0
899	HAA-ICR Dibromoacetic acid	4.0 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/14/98	0-127-0
900	HAA-ICR Dichloroacetic acid	7.6 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/14/98	0-127-0
901	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/14/98	0-127-0
902	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/5/98	5/12/98	5/14/98	0-127-0
903	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/5/98	5/12/98	5/14/98	0-127-0
904	HAA-ICR Trichloroacetic acid	1.1 µg/L	EPA 552.2	1	1.0	5/5/98	5/12/98	5/14/98	0-127-0
905	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
906	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
907	pH pH	8.8 Unit	SM 4500-H+ B	1	n/a	5/3/98		5/3/98	n/a
908	TEMP Cl2 Temperature	26.8 °C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
909	TEMP Temperature	22.5 °C	SM 2550 B	1	n/a	5/3/98		5/3/98	n/a
910	TIME Cl2 Incubation Time	5.9 hrs	n/a	1	n/a	5/5/98		5/5/98	n/a
911	TOC-ICR TOC	3.02 mg/L	SM 5310 C	1	0.50	5/3/98		5/3/98	7-0-255
912	TOC-ICR TOC (Dupl)	3.02 mg/L	SM 5310 C	1	0.50	5/3/98		5/3/98	7-0-255
		3.02 mg/L	0.0 % RPD						
913	TOX-ICR TOX	95 µg Cl-/L	SM 5320 B	1	25	5/5/98		5/12/98	12-0-131
914	TOX-ICR TOX (Dupl)	109 µg Cl-/L	SM 5320 B	1	25	5/5/98		5/12/98	12-0-131
		102 µg Cl-/L	13.7 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

915	THM-ICR 1,2,3-Trichloropropane (Surrogate)	100.0 %	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
916	THM-ICR Bromodichloromethane	14.2 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
917	THM-ICR Bromoform	5.9 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
918	THM-ICR Chloroform	8.2 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
919	THM-ICR Dibromochloromethane	16.7 µg/L	EPA 551.1	1	1.0	5/5/98	5/9/98	5/9/98	0-125-0
920	UV-ICR UV	0.052 1/cm	SM 5910 B	1	0.009	5/3/98		5/3/98	8-0-177
921	UV-ICR UV (Dupl)	0.052 1/cm	SM 5910 B	1	0.009	5/3/98		5/3/98	8-0-177
		0.052 1/cm	0.0 % RPD						

Sample ID: 107.20.Eff-16

S&H ID: 9805-76

Date Sampled: 5/4/98 1:02:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
922	Cl2Dose Chlorine Dose	1.71 mg/L as Cl2	SM 4500-Cl B	1	n/a	5/7/98		5/7/98	n/a
923	Cl2Res Chlorine Residual	0.72 mg/L as Cl2	SM 4500-Cl F	1	0.10	5/7/98		5/7/98	n/a
924	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	106.0 %	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
925	HAA-ICR 2-Bromopropionic acid (Surrogate)	93.6 %	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
926	HAA-ICR Bromochloroacetic acid	2.7 µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
927	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
928	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/7/98	5/19/98	5/20/98	0-129-0
929	HAA-ICR Dibromoacetic acid	3.6 µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
930	HAA-ICR Dichloroacetic acid	7.6 µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
931	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
932	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/7/98	5/19/98	5/20/98	0-129-0
933	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/7/98	5/19/98	5/20/98	0-129-0
934	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
935	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/7/98		5/7/98	n/a
936	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/7/98		5/7/98	n/a
937	pH pH	8.9 Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
938	TEMP Cl2 Temperature	26.4 °C	SM 2550 B	1	n/a	5/7/98		5/7/98	n/a
939	TEMP Temperature	21.4 °C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
940	TIME Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	5/7/98		5/7/98	n/a
941	TOC-ICR TOC	2.06 mg/L	SM 5310 C	1	0.50	5/4/98		5/4/98	7-0-256
942	TOC-ICR TOC (Dupl)	2.09 mg/L	SM 5310 C	1	0.50	5/4/98		5/4/98	7-0-256
		2.08 mg/L	1.4 % RPD						
943	TOX-ICR TOX	65 µg Cl-/L	SM 5320 B	1	25	5/7/98		5/15/98	12-0-134
944	TOX-ICR TOX (Dupl)	66 µg Cl-/L	SM 5320 B	1	25	5/7/98		5/15/98	12-0-134
		66 µg Cl-/L	1.5 % RPD						
945	THM-ICR 1,2,3-Trichloropropane (Surrogate)	102.4 %	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

946	THM-ICR Bromodichloromethane	6.5 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
947	THM-ICR Bromoform	10.5 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
948	THM-ICR Chloroform	2.1 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
949	THM-ICR Dibromochloromethane	14.1 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
950	UV-ICR UV	0.027 1/cm	SM 5910 B	1	0.009	5/4/98		5/5/98	8-0-178
951	UV-ICR UV (Dupl)	0.027 1/cm	SM 5910 B	1	0.009	5/4/98		5/5/98	8-0-178
		0.027 1/cm	0.0 % RPD						

Sample ID: 107.INF.B-4

S&H ID: 9805-88

Date Sampled: 5/4/98 2:35:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
952	NH3	Ammonia Nitrogen	ND	mg/L	EPA 350.1	1	0.05	5/7/98		5/20/98	MW77862
953	BR	Bromide	0.092	mg/L	EPA 300.0 A	1	0.020	5/7/98		5/21/98	MW77800
954	CaHardM	Calcium Hardness	30	mg/L CaCO3	EPA 200.7	1	5	5/7/98		5/19/98	MW n/a
955	CaMW	Calcium, Total, ICAP	12	mg/L	EPA 200.7	1	1	5/7/98	5/15/98	5/15/98	MW77529
956	Cl2Dose	Chlorine Dose	2.70	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/7/98		5/7/98	n/a
957	Cl2Res	Chlorine Residual	0.84	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/7/98		5/7/98	n/a
958	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	104.8	%	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
959	HAA-ICR	2-Bromopropionic acid (Surrogate)	96.4	%	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
960	HAA-ICR	Bromochloroacetic acid	7.3	µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
961	HAA-ICR	Bromodichloroacetic acid	2.2	µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
962	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/7/98	5/19/98	5/20/98	0-129-0
963	HAA-ICR	Dibromoacetic acid	3.7	µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
964	HAA-ICR	Dichloroacetic acid	13.7	µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
965	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
966	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/7/98	5/19/98	5/20/98	0-129-0
967	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/7/98	5/19/98	5/20/98	0-129-0
968	HAA-ICR	Trichloroacetic acid	2.6	µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
969	MgMW	Magnesium, Total, ICAP	4	mg/L	EPA 200.7	1	0	5/7/98	5/15/98	5/15/98	MW77530
970	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	5/7/98		5/7/98	n/a
971	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	5/7/98		5/7/98	n/a
972	pH	pH	9.2	Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
973	TEMP	Cl2 Temperature	26.4	°C	SM 2550 B	1	n/a	5/7/98		5/7/98	n/a
974	TEMP	Temperature	17.5	°C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
975	TIME	Cl2 Incubation Time	6.2	hrs	n/a	1	n/a	5/7/98		5/7/98	n/a
976	TotHard	Total Hardness as CaCO3 by ICP	46	mg/L CaCO3	SM 2340B	1	5	5/7/98		5/19/98	MW n/a
977	TOC-ICR	TOC	4.20	mg/L	SM 5310 C	1	0.50	5/4/98		5/4/98	7-0-256

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

978	TOC-ICR TOC (Dupl)	4.21 mg/L 4.21 mg/L	SM 5310 C 0.2 % RPD	1	0.50	5/4/98	5/4/98	7-0-256
979	TOX-ICR TOX	225 µg Cl-/L	SM 5320 B	1	25	5/7/98	5/15/98	12-0-134
980	TOX-ICR TOX (Dupl)	208 µg Cl-/L 217 µg Cl-/L	SM 5320 B 7.8 % RPD	1	25	5/7/98	5/15/98	12-0-134
981	THM-ICR 1,2,3-Trichloropropane (Surrogate)	98.4 %	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98 0-128-0
982	THM-ICR Bromodichloromethane	20.7 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98 0-128-0
983	THM-ICR Bromoform	2.8 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98 0-128-0
984	THM-ICR Chloroform	25.3 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98 0-128-0
985	THM-ICR Dibromochloromethane	14.3 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98 0-128-0
986	TURB Turbidity	0.10 ntu	SM 2130 B	1	0.05	5/4/98	5/4/98	9-0-10
987	UV-ICR UV	0.088 1/cm	SM 5910 B	1	0.009	5/4/98	5/5/98	8-0-178
988	UV-ICR UV (Dupl)	0.088 1/cm 0.088 1/cm	SM 5910 B 0.0 % RPD	1	0.009	5/4/98	5/5/98	8-0-178

Sample ID: 107.10.Eff-20

S&H ID: 9805-91

Date Sampled: 5/4/98 5:55:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
989	pH	pH	8.5	Unit	SM 4500-H+ B	1	n/a	5/4/98		5/4/98	n/a
990	TEMP	Temperature	22.0	°C	SM 2550 B	1	n/a	5/4/98		5/4/98	n/a
991	TOC-ICR TOC		3.20	mg/L	SM 5310 C	1	0.50	5/4/98		5/4/98	7-0-256
992	TOC-ICR TOC (Dupl)		3.20 mg/L 3.20 mg/L		SM 5310 C 0.0 % RPD	1	0.50	5/4/98		5/4/98	7-0-256

Sample ID: 107.INF.A-2

S&H ID: 9805-92

Date Sampled: 5/4/98 6:05:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
993	ALK	Alkalinity	33	mg/L	SM 2320 B	1	5	5/4/98		5/5/98	1-0-20
994	ALK	Alkalinity (Dupl)	36 mg/L 35 mg/L		SM 2320 B 8.6 % RPD	1	5	5/4/98		5/5/98	1-0-20

Sample ID: 107.20.Eff-20

S&H ID: 9805-104

Date Sampled: 5/5/98 5:24:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
995	Cl2Dose	Chlorine Dose	1.76	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/7/98		5/7/98	n/a
996	Cl2Res	Chlorine Residual	0.85	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/7/98		5/7/98	n/a
997	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)		104.4 %		EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
998	HAA-ICR 2-Bromopropionic acid (Surrogate)		95.2 %		EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
999	HAA-ICR Bromochloroacetic acid		4.1 µg/L		EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1000	HAA-ICR Bromodichloroacetic acid		ND µg/L		EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

1001	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	5/7/98	5/19/98	5/20/98	0-129-0
1002	HAA-ICR	Dibromoacetic acid	4.4 µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1003	HAA-ICR	Dichloroacetic acid	6.4 µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1004	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1005	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/7/98	5/19/98	5/20/98	0-129-0
1006	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/7/98	5/19/98	5/20/98	0-129-0
1007	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1008	pH	Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/7/98		5/7/98	n/a
1009	pH	Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/7/98		5/7/98	n/a
1010	pH	pH	8.7 Unit	SM 4500-H+ B	1	n/a	5/5/98		5/5/98	n/a
1011	TEMP	Cl2 Temperature	26.4 °C	SM 2550 B	1	n/a	5/7/98		5/7/98	n/a
1012	TEMP	Temperature	21.6 °C	SM 2550 B	1	n/a	5/5/98		5/5/98	n/a
1013	TIME	Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	5/7/98		5/7/98	n/a
1014	TOC-ICR	TOC	2.27 mg/L	SM 5310 C	1	0.50	5/5/98		5/5/98	7-0-257
1015	TOC-ICR	TOC (Dupl)	2.27 mg/L	SM 5310 C	1	0.50	5/5/98		5/5/98	7-0-257
			2.27 mg/L	0.0 % RPD						
1016	TOX-ICR	TOX	71 µg Cl-/L	SM 5320 B	1	25	5/7/98		5/15/98	12-0-134
1017	TOX-ICR	TOX (Dupl)	78 µg Cl-/L	SM 5320 B	1	25	5/7/98		5/15/98	12-0-134
			75 µg Cl-/L	9.3 % RPD						
1018	THM-ICR	1,2,3-Trichloropropane (Surrogate)	91.6 %	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
1019	THM-ICR	Bromodichloromethane	9.2 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
1020	THM-ICR	Bromoform	10.4 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
1021	THM-ICR	Chloroform	3.4 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
1022	THM-ICR	Dibromochloromethane	17.0 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
1023	UV-ICR	UV	0.033 1/cm	SM 5910 B	1	0.009	5/5/98		5/5/98	8-0-178
1024	UV-ICR	UV (Dupl)	0.033 1/cm	SM 5910 B	1	0.009	5/5/98		5/5/98	8-0-178
			0.033 1/cm	0.0 % RPD						

Sample ID: 107.20.Eff-21

S&H ID: 9805-116

Date Sampled: 5/6/98 12:06:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1025	Cl2Dose	Chlorine Dose	1.82	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/7/98		5/7/98	n/a
1026	Cl2Res	Chlorine Residual	0.70	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/7/98		5/7/98	n/a
1027	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	109.2	%	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1028	HAA-ICR	2-Bromopropionic acid (Surrogate)	90.0	%	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1029	HAA-ICR	Bromochloroacetic acid	4.3	µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1030	HAA-ICR	Bromodichloroacetic acid	1.1	µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1031	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/7/98	5/19/98	5/20/98	0-129-0
1032	HAA-ICR	Dibromoacetic acid	4.4	µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

1033	HAA-ICR	Dichloroacetic acid	5.8 µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1034	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1035	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/7/98	5/19/98	5/20/98	0-129-0
1036	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/7/98	5/19/98	5/20/98	0-129-0
1037	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	5/7/98	5/19/98	5/20/98	0-129-0
1038	pH	Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/7/98		5/7/98	n/a
1039	pH	Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/7/98		5/7/98	n/a
1040	pH	pH	8.7 Unit	SM 4500-H+ B	1	n/a	5/6/98		5/6/98	n/a
1041	TEMP	Cl2 Temperature	26.4 °C	SM 2550 B	1	n/a	5/7/98		5/7/98	n/a
1042	TEMP	Temperature	21.9 °C	SM 2550 B	1	n/a	5/6/98		5/6/98	n/a
1043	TIME	Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	5/7/98		5/7/98	n/a
1044	TOC-ICR	TOC	2.45 mg/L	SM 5310 C	1	0.50	5/6/98		5/6/98	7-0-258
1045	TOC-ICR	TOC (Dupl)	2.47 mg/L	SM 5310 C	1	0.50	5/6/98		5/6/98	7-0-258
			2.46 mg/L	0.8 % RPD						
1046	TOX-ICR	TOX	87 µg Cl-/L	SM 5320 B	1	25	5/7/98		5/15/98	12-0-134
1047	TOX-ICR	TOX (Dupl)	88 µg Cl-/L	SM 5320 B	1	25	5/7/98		5/15/98	12-0-134
			88 µg Cl-/L	1.1 % RPD						
1048	THM-ICR	1,2,3-Trichloropropane (Surrogate)	96.4 %	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
1049	THM-ICR	Bromodichloromethane	10.5 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
1050	THM-ICR	Bromoform	9.8 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
1051	THM-ICR	Chloroform	4.1 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
1052	THM-ICR	Dibromochloromethane	17.9 µg/L	EPA 551.1	1	1.0	5/7/98	5/15/98	5/15/98	0-128-0
1053	UV-ICR	UV	0.036 1/cm	SM 5910 B	1	0.009	5/6/98		5/7/98	8-0-179
1054	UV-ICR	UV (Dupl)	0.036 1/cm	SM 5910 B	1	0.009	5/6/98		5/7/98	8-0-179
			0.036 1/cm	0.0 % RPD						

Sample ID: 107.20.Eff-23

S&H ID: 9805-138

Date Sampled: 5/8/98 1:35:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1055	Cl2Dose	Chlorine Dose	1.89	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/11/98		5/11/98	n/a
1056	Cl2Res	Chlorine Residual	0.69	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/11/98		5/11/98	n/a
1057	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	110.4	%	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1058	HAA-ICR	2-Bromopropionic acid (Surrogate)	89.2	%	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1059	HAA-ICR	Bromochloroacetic acid	3.7	µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1060	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1061	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/11/98	5/19/98	5/20/98	0-129-0
1062	HAA-ICR	Dibromoacetic acid	3.7	µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1063	HAA-ICR	Dichloroacetic acid	4.3	µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1064	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

1065	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	5/11/98	5/19/98	5/20/98	0-129-0
1066	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	5/11/98	5/19/98	5/20/98	0-129-0
1067	HAA-ICR	Trichloroacetic acid	1.0 µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1068	pH	Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/11/98		5/11/98	n/a
1069	pH	Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/11/98		5/11/98	n/a
1070	pH	pH	8.8 Unit	SM 4500-H+ B	1	n/a	5/8/98		5/8/98	n/a
1071	TEMP	Cl2 Temperature	26.4 °C	SM 2550 B	1	n/a	5/11/98		5/11/98	n/a
1072	TEMP	Temperature	21.3 °C	SM 2550 B	1	n/a	5/8/98		5/8/98	n/a
1073	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	5/11/98		5/11/98	n/a
1074	TOC-ICR	TOC	2.70 mg/L	SM 5310 C	1	0.50	5/8/98		5/8/98	7-0-260
1075	TOC-ICR	TOC (Dupl)	2.70 mg/L	SM 5310 C	1	0.50	5/8/98		5/8/98	7-0-260
			2.70 mg/L	0.0 % RPD						
1076	TOX-ICR	TOX	95 µg Cl-/L	SM 5320 B	1	25	5/11/98		5/18/98	12-0-135
1077	TOX-ICR	TOX (Dupl)	93 µg Cl-/L	SM 5320 B	1	25	5/11/98		5/18/98	12-0-135
			94 µg Cl-/L	2.1 % RPD						
1078	THM-ICR	1,2,3-Trichloropropane (Surrogate)	102.4 %	EPA 551.1	1	1.0	5/11/98	5/15/98	5/15/98	0-128-0
1079	THM-ICR	Bromodichloromethane	12.6 µg/L	EPA 551.1	1	1.0	5/11/98	5/15/98	5/15/98	0-128-0
1080	THM-ICR	Bromoform	8.4 µg/L	EPA 551.1	1	1.0	5/11/98	5/15/98	5/15/98	0-128-0
1081	THM-ICR	Chloroform	5.7 µg/L	EPA 551.1	1	1.0	5/11/98	5/15/98	5/15/98	0-128-0
1082	THM-ICR	Dibromochloromethane	18.5 µg/L	EPA 551.1	1	1.0	5/11/98	5/15/98	5/15/98	0-128-0
1083	UV-ICR	UV	0.043 1/cm	SM 5910 B	1	0.009	5/8/98		5/9/98	8-0-180
1084	UV-ICR	UV (Dupl)	0.043 1/cm	SM 5910 B	1	0.009	5/8/98		5/9/98	8-0-180
			0.043 1/cm	0.0 % RPD						

Sample ID: 107.20.Eff-23d

S&H ID: 9805-139

Date Sampled: 5/8/98 1:35:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1085	Cl2Dose	Chlorine Dose	1.90	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/11/98		5/11/98	n/a
1086	Cl2Res	Chlorine Residual	0.71	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/11/98		5/11/98	n/a
1087	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	111.6	%	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1088	HAA-ICR	2-Bromopropionic acid (Surrogate)	93.2	%	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1089	HAA-ICR	Bromochloroacetic acid	3.5	µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1090	HAA-ICR	Bromodichloroacetic acid	1.0	µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1091	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/11/98	5/19/98	5/20/98	0-129-0
1092	HAA-ICR	Dibromoacetic acid	3.4	µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1093	HAA-ICR	Dichloroacetic acid	4.2	µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1094	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1095	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/11/98	5/19/98	5/20/98	0-129-0
1096	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/11/98	5/19/98	5/20/98	0-129-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

1097	HAA-ICR	Trichloroacetic acid	1.0 µg/L	EPA 552.2	1	1.0	5/11/98	5/19/98	5/20/98	0-129-0
1098	pH	Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	5/11/98		5/11/98	n/a
1099	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	5/11/98		5/11/98	n/a
1100	pH	pH	8.9 Unit	SM 4500-H+ B	1	n/a	5/8/98		5/8/98	n/a
1101	TEMP	Cl2 Temperature	26.4 °C	SM 2550 B	1	n/a	5/11/98		5/11/98	n/a
1102	TEMP	Temperature	21.3 °C	SM 2550 B	1	n/a	5/8/98		5/8/98	n/a
1103	TIME	Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	5/11/98		5/11/98	n/a
1104	TOC-ICR	TOC	2.73 mg/L	SM 5310 C	1	0.50	5/8/98		5/8/98	7-0-260
1105	TOC-ICR	TOC (Dupl)	2.74 mg/L	SM 5310 C	1	0.50	5/8/98		5/8/98	7-0-260
			2.74 mg/L	0.4 % RPD						
1106	TOX-ICR	TOX	90 µg Cl-/L	SM 5320 B	1	25	5/11/98		5/18/98	12-0-135
1107	TOX-ICR	TOX (Dupl)	90 µg Cl-/L	SM 5320 B	1	25	5/11/98		5/18/98	12-0-135
			90 µg Cl-/L	0.0 % RPD						
1108	THM-ICR	1,2,3-Trichloropropane (Surrogate)	100.0 %	EPA 551.1	1	1.0	5/11/98	5/15/98	5/15/98	0-128-0
1109	THM-ICR	Bromodichloromethane	12.5 µg/L	EPA 551.1	1	1.0	5/11/98	5/15/98	5/15/98	0-128-0
1110	THM-ICR	Bromoform	8.4 µg/L	EPA 551.1	1	1.0	5/11/98	5/15/98	5/15/98	0-128-0
1111	THM-ICR	Chloroform	5.8 µg/L	EPA 551.1	1	1.0	5/11/98	5/15/98	5/15/98	0-128-0
1112	THM-ICR	Dibromochloromethane	18.3 µg/L	EPA 551.1	1	1.0	5/11/98	5/15/98	5/15/98	0-128-0
1113	UV-ICR	UV	0.043 1/cm	SM 5910 B	1	0.009	5/8/98		5/9/98	8-0-180
1114	UV-ICR	UV (Dupl)	0.043 1/cm	SM 5910 B	1	0.009	5/8/98		5/9/98	8-0-180
			0.043 1/cm	0.0 % RPD						

Sample ID: 107.20.Eff-28

S&H ID: 9805-175

Date Sampled: 5/11/98 8:52:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1115	Cl2Dose	Chlorine Dose	2.10	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/14/98		5/14/98	n/a
1116	Cl2Res	Chlorine Residual	0.62	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/14/98		5/14/98	n/a
1117	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	98.8	%	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1118	HAA-ICR	2-Bromopropionic acid (Surrogate)	101.2	%	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1119	HAA-ICR	Bromochloroacetic acid	6.5	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1120	HAA-ICR	Bromodichloroacetic acid	2.3	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1121	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/14/98	5/27/98	5/27/98	0-134-0
1122	HAA-ICR	Dibromoacetic acid	6.6	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1123	HAA-ICR	Dichloroacetic acid	7.3	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1124	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1125	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/14/98	5/27/98	5/27/98	0-134-0
1126	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/14/98	5/27/98	5/27/98	0-134-0
1127	HAA-ICR	Trichloroacetic acid	5.0	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1128	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	5/14/98		5/14/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

1129	pH	Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	5/14/98	5/14/98	n/a
1130	pH	pH	8.6 Unit	SM 4500-H+ B	1	n/a	5/11/98	5/11/98	n/a
1131	TEMP	Cl2 Temperature	26.5 °C	SM 2550 B	1	n/a	5/14/98	5/14/98	n/a
1132	TEMP	Temperature	21.3 °C	SM 2550 B	1	n/a	5/11/98	5/11/98	n/a
1133	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	5/14/98	5/14/98	n/a
1134	TOC-ICR	TOC	3.16 mg/L	SM 5310 C	1	0.50	5/11/98	5/11/98	7-0-263
1135	TOC-ICR	TOC (Dupl)	3.22 mg/L	SM 5310 C	1	0.50	5/11/98	5/11/98	7-0-263
			3.19 mg/L	1.9 % RPD					
1136	TOX-ICR	TOX	133 µg Cl-/L	SM 5320 B	1	25	5/14/98	5/19/98	12-0-136
1137	TOX-ICR	TOX (Dupl)	133 µg Cl-/L	SM 5320 B	1	25	5/14/98	5/19/98	12-0-136
			133 µg Cl-/L	0.0 % RPD					
1138	THM-ICR	1,2,3-Trichloropropane (Surrogate)	104.8 %	EPA 551.1	1	1.0	5/14/98	5/21/98	5/21/98 0-130-0
1139	THM-ICR	Bromodichloromethane	15.7 µg/L	EPA 551.1	1	1.0	5/14/98	5/21/98	5/21/98 0-130-0
1140	THM-ICR	Bromoform	6.0 µg/L	EPA 551.1	1	1.0	5/14/98	5/21/98	5/21/98 0-130-0
1141	THM-ICR	Chloroform	11.6 µg/L	EPA 551.1	1	1.0	5/14/98	5/21/98	5/21/98 0-130-0
1142	THM-ICR	Dibromochloromethane	17.7 µg/L	EPA 551.1	1	1.0	5/14/98	5/21/98	5/21/98 0-130-0
1143	UV-ICR	UV	0.055 1/cm	SM 5910 B	1	0.009	5/11/98	5/12/98	8-0-182
1144	UV-ICR	UV (Dupl)	0.055 1/cm	SM 5910 B	1	0.009	5/11/98	5/12/98	8-0-182
			0.055 1/cm	0.0 % RPD					

Sample ID: 107.INF.B-5

S&H ID: 9805-190

Date Sampled: 5/11/98 10:10:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1145	Cl2Dose	Chlorine Dose	2.55	mg/L as Cl2	SM 4500-Cl B	1	n/a	5/14/98		5/14/98	n/a
1146	Cl2Res	Chlorine Residual	0.70	mg/L as Cl2	SM 4500-Cl F	1	0.10	5/14/98		5/14/98	n/a
1147	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	96.0	%	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1148	HAA-ICR	2-Bromopropionic acid (Surrogate)	104.4	%	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1149	HAA-ICR	Bromochloroacetic acid	9.4	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1150	HAA-ICR	Bromodichloroacetic acid	2.9	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1151	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/14/98	5/27/98	5/27/98	0-134-0
1152	HAA-ICR	Dibromoacetic acid	5.3	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1153	HAA-ICR	Dichloroacetic acid	14.4	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1154	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1155	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	5/14/98	5/27/98	5/27/98	0-134-0
1156	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	5/14/98	5/27/98	5/27/98	0-134-0
1157	HAA-ICR	Trichloroacetic acid	3.9	µg/L	EPA 552.2	1	1.0	5/14/98	5/27/98	5/27/98	0-134-0
1158	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	5/14/98		5/14/98	n/a
1159	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	5/14/98		5/14/98	n/a
1160	pH	pH	9.2	Unit	SM 4500-H+ B	1	n/a	5/11/98		5/11/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 107
Study Title: ICR RSSCT #1

1161	TEMP	Cl2 Temperature	26.5 °C	SM 2550 B	1	n/a	5/14/98	5/14/98	n/a
1162	TEMP	Temperature	18.5 °C	SM 2550 B	1	n/a	5/11/98	5/11/98	n/a
1163	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	5/14/98	5/14/98	n/a
1164	TOC-ICR	TOC	4.06 mg/L	SM 5310 C	1	0.50	5/11/98	5/12/98	7-0-264
1165	TOC-ICR	TOC (Dupl)	3.94 mg/L	SM 5310 C	1	0.50	5/11/98	5/12/98	7-0-264
			4.00 mg/L	3.0 % RPD					
1166	TOX-ICR	TOX	211 µg Cl-/L	SM 5320 B	1	25	5/14/98	5/19/98	12-0-136
1167	TOX-ICR	TOX (Dupl)	210 µg Cl-/L	SM 5320 B	1	25	5/14/98	5/19/98	12-0-136
			211 µg Cl-/L	0.5 % RPD					
1168	THM-ICR	1,2,3-Trichloropropane (Surrogate)	103.2 %	EPA 551.1	1	1.0	5/14/98	5/21/98	5/21/98 0-130-0
1169	THM-ICR	Bromodichloromethane	19.9 µg/L	EPA 551.1	1	1.0	5/14/98	5/21/98	5/21/98 0-130-0
1170	THM-ICR	Bromoform	3.0 µg/L	EPA 551.1	1	1.0	5/14/98	5/21/98	5/21/98 0-130-0
1171	THM-ICR	Chloroform	24.0 µg/L	EPA 551.1	1	1.0	5/14/98	5/21/98	5/21/98 0-130-0
1172	THM-ICR	Dibromochloromethane	14.3 µg/L	EPA 551.1	1	1.0	5/14/98	5/21/98	5/21/98 0-130-0
1173	TURB	Turbidity	0.10 ntu	SM 2130 B	1	0.05	5/11/98	5/11/98	9-0-10
1174	UV-ICR	UV	0.089 1/cm	SM 5910 B	1	0.009	5/11/98	5/12/98	8-0-182
1175	UV-ICR	UV (Dupl)	0.090 1/cm	SM 5910 B	1	0.009	5/11/98	5/12/98	8-0-182
			0.089 1/cm	1.1 % RPD					

Sample ID: 107.20.Eff-29

S&H ID: 9805-216

Date Sampled: 5/12/98 12:00:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1176	TEMP	Temperature	21.7	°C	SM 2550 B	1	n/a	5/12/98		5/12/98	n/a
1177	TOC-ICR	TOC	3.28	mg/L	SM 5310 C	1	0.50	5/12/98		5/12/98	7-0-264
1178	TOC-ICR	TOC (Dupl)	3.33	mg/L	SM 5310 C	1	0.50	5/12/98		5/12/98	7-0-264
			3.30	mg/L	1.5 % RPD						

End of laboratory test results

Quality Control Report

Mr. Anthony Clemente
Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, FL 33146

Phone: 305-669-7602 Fax: 305-669-5796

Study#: 107
Study Title: ICR RSSCT #1

Analysis: ALK (Alkalinity)

Method: SM 2320 B

QC Batch ID: 1-0-19

										Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>Date Run</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	100	97	mg/L	97%		04/22/98	9804-371	5		
Matrix Spike (Dupl)	Matrix Spike	100	101	mg/L	101%		04/22/98	9804-371	5		
		100	99	mg/L	99%	4.0 %					
Method Blank	Method Blank		ND*	mg/L			04/22/98	9804-374	5		
Standard	Standard	100	100	mg/L	100%		04/22/98	9804-375	5		
Standard (Dupl)	Standard	100	101	mg/L	101%		04/22/98	9804-375	5		
		100	100	mg/L	100%	1.0 %					
Matrix Spike	Matrix Spike	100	92	mg/L	92%		04/30/98	9804-501	5		
Matrix Spike (Dupl)	Matrix Spike	100	96	mg/L	96%		04/30/98	9804-501	5		
		100	94	mg/L	94%	4.3 %					
Method Blank	Method Blank		ND*	mg/L			04/30/98	9804-526	5		
Standard	Standard	100	99	mg/L	99%		04/30/98	9804-527	5		
Standard (Dupl)	Standard	100	101	mg/L	101%		04/30/98	9804-527	5		
		100	100	mg/L	100%	2.0 %					

Analysis: ALK (Alkalinity)

Method: SM 2320 B

QC Batch ID: 1-0-20

										Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>Date Run</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	100	99	mg/L	99%		05/05/98	9805-93	5		
Matrix Spike (Dupl)	Matrix Spike	100	98	mg/L	98%		05/05/98	9805-93	5		
		100	98	mg/L	98%	1.0 %					
Method Blank	Method Blank		ND*	mg/L			05/05/98	9805-95	5		
Standard	Standard	100	100	mg/L	100%		05/05/98	9805-96	5		
Standard (Dupl)	Standard	100	101	mg/L	101%		05/05/98	9805-96	5		
		100	100	mg/L	100%	1.0 %					
Matrix Spike	Matrix Spike	100	98	mg/L	98%		05/09/98	9805-147	5		
Matrix Spike (Dupl)	Matrix Spike	100	98	mg/L	98%		05/09/98	9805-147	5		
		100	98	mg/L	98%	0.0 %					
Method Blank	Method Blank		ND*	mg/L			05/09/98	9805-152	5		
Standard	Standard	100	99	mg/L	99%		05/09/98	9805-153	5		
Standard (Dupl)	Standard	100	100	mg/L	100%		05/09/98	9805-153	5		
		100	100	mg/L	100%	1.0 %					

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Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-243

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.71	mg/L	93%		9804-340	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.60	mg/L	90%		9804-340	0.5		
		4.00	3.66	mg/L	92%	3.0 %				
Method Blank	Method Blank		ND*	mg/L			9804-351	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9804-351	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.43	mg/L	86%		9804-267	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.42	mg/L	84%		9804-267	0.5	50-150%	
		0.50	0.42	mg/L	84%	2.4 %			50-150%	20%
Standard	Standard	4.00	3.81	mg/L	95%		9804-268	0.5	90-110%	
Standard (Dupl)	Standard	4.00	3.83	mg/L	96%		9804-268	0.5	90-110%	
		4.00	3.82	mg/L	95%	0.5 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-249

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	4.29	mg/L	107%		9804-465	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.44	mg/L	111%		9804-465	0.5		
		4.00	4.37	mg/L	109%	3.4 %				
Method Blank	Method Blank		ND*	mg/L			9804-489	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9804-489	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.45	mg/L	90%		9804-267	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.45	mg/L	90%		9804-267	0.5	50-150%	
		0.50	0.45	mg/L	90%	0.0 %			50-150%	20%
Standard	Standard	4.00	3.96	mg/L	99%		9804-268	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.03	mg/L	101%		9804-268	0.5	90-110%	
		4.00	4.00	mg/L	100%	1.7 %			90-110%	10%
Standard	Standard	10.00	10.03	mg/L	100%		9804-73	0.5	90-110%	
Standard (Dupl)	Standard	10.00	9.97	mg/L	100%		9804-73	0.5	90-110%	
		10.00	10.00	mg/L	100%	0.6 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-251

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.92	mg/L	98%		9804-509	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.99	mg/L	100%		9804-509	0.5		
		4.00	3.95	mg/L	99%	1.8 %				

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Method Blank	Method Blank		ND*	mg/L		9804-521	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L		9804-521	0.5		
			ND*	mg/L					
Standard	Standard	0.50	0.50	mg/L	100%	9804-474	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.51	mg/L	102%	9804-474	0.5	50-150%	
		0.50	0.50	mg/L	100%			50-150%	20%
Standard	Standard	4.00	3.92	mg/L	98%	9804-475	0.5	90-110%	
Standard (Dupl)	Standard	4.00	3.96	mg/L	99%	9804-475	0.5	90-110%	
		4.00	3.94	mg/L	98%			90-110%	10%
Standard	Standard	10.00	10.09	mg/L	101%	9804-511	0.5	90-110%	
Standard (Dupl)	Standard	10.00	10.02	mg/L	100%	9804-511	0.5	90-110%	
		10.00	10.06	mg/L	101%			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-252

										Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.92	mg/L	98%		9805-6	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.91	mg/L	98%		9805-6	0.5		
		4.00	3.91	mg/L	98%	0.3 %				
Method Blank	Method Blank		ND*	mg/L			9805-22	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9805-22	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.50	mg/L	100%		9804-474	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.51	mg/L	102%		9804-474	0.5	50-150%	
		0.50	0.50	mg/L	100%	2.0 %			50-150%	20%
Standard	Standard	4.00	3.94	mg/L	98%		9804-475	0.5	90-110%	
Standard (Dupl)	Standard	4.00	3.96	mg/L	99%		9804-475	0.5	90-110%	
		4.00	3.95	mg/L	99%	0.5 %			90-110%	10%
Standard	Standard	10.00	10.20	mg/L	102%		9804-511	0.5	90-110%	
Standard (Dupl)	Standard	10.00	10.04	mg/L	100%		9804-511	0.5	90-110%	
		10.00	10.12	mg/L	101%	1.6 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-254

										Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.86	mg/L	96%		9805-29	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.91	mg/L	98%		9805-29	0.5		
		4.00	3.88	mg/L	97%	1.0 %				
Matrix Spike	Matrix Spike	4.00	4.09	mg/L	102%		9805-66	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.11	mg/L	103%		9805-66	0.5		
		4.00	4.10	mg/L	102%	0.5 %				
Method Blank	Method Blank		ND*	mg/L			9805-58	0.5		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Method Blank (Dupl)	Method Blank		ND* mg/L			9805-58	0.5		
			ND* mg/L						
Standard	Standard	0.50	0.53 mg/L	106%		9804-474	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.52 mg/L	104%		9804-474	0.5	50-150%	
		0.50	0.52 mg/L	104%	1.9 %			50-150%	20%
Standard	Standard	4.00	4.11 mg/L	103%		9804-475	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.07 mg/L	102%		9804-475	0.5	90-110%	
		4.00	4.09 mg/L	102%	1.0 %			90-110%	10%
Standard	Standard	4.00	4.13 mg/L	103%		9804-475	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.20 mg/L	105%		9804-475	0.5	90-110%	
		4.00	4.16 mg/L	104%	1.7 %			90-110%	10%
Standard	Standard	10.00	9.92 mg/L	99%		9804-511	0.5	90-110%	
Standard (Dupl)	Standard	10.00	9.98 mg/L	100%		9804-511	0.5	90-110%	
		10.00	9.95 mg/L	99%	0.6 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)**Method:** SM 5310 C**QC Batch ID:** 7-0-255

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	4.00	3.73	mg/L	93%		9805-68	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.75	mg/L	94%		9805-68	0.5		
		4.00	3.74	mg/L	94%	0.5 %				
Method Blank	Method Blank		ND*	mg/L			9805-69	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9805-69	0.5		
			ND* mg/L							
Standard	Standard	0.50	0.51	mg/L	102%		9804-474	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.50	mg/L	100%		9804-474	0.5	50-150%	
		0.50	0.50	mg/L	100%	2.0 %			50-150%	20%
Standard	Standard	4.00	3.77	mg/L	94%		9804-475	0.5	90-110%	
Standard (Dupl)	Standard	4.00	3.94	mg/L	98%		9804-475	0.5	90-110%	
		4.00	3.85	mg/L	96%	4.4 %			90-110%	10%
Standard	Standard	10.00	10.12	mg/L	101%		9804-511	0.5	90-110%	
Standard (Dupl)	Standard	10.00	10.20	mg/L	102%		9804-511	0.5	90-110%	
		10.00	10.16	mg/L	102%	0.8 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)**Method:** SM 5310 C**QC Batch ID:** 7-0-256

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	4.00	3.90	mg/L	97%		9805-77	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.91	mg/L	98%		9805-77	0.5		
		4.00	3.91	mg/L	98%	0.3 %				
Method Blank	Method Blank		ND*	mg/L			9805-83	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9805-83	0.5		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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		ND* mg/L							
Standard	Standard	0.50	0.50 mg/L	100%		9804-474	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.52 mg/L	104%		9804-474	0.5	50-150%	
		0.50	0.51 mg/L	102%	3.9 %			50-150%	20%
Standard	Standard	4.00	3.95 mg/L	99%		9804-475	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.02 mg/L	100%		9804-475	0.5	90-110%	
		4.00	3.98 mg/L	100%	1.8 %			90-110%	10%
Standard	Standard	10.00	10.24 mg/L	102%		9804-511	0.5	90-110%	
Standard (Dupl)	Standard	10.00	10.30 mg/L	103%		9804-511	0.5	90-110%	
		10.00	10.27 mg/L	103%	0.6 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-257

										Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.93	mg/L	98%		9805-103	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.90	mg/L	97%		9805-103	0.5		
		4.00	3.91	mg/L	98%	0.8 %				
Method Blank	Method Blank		ND*	mg/L			9805-94	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9805-94	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.52 mg/L	104%			9804-474	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.51 mg/L	102%			9804-474	0.5	50-150%	
		0.50	0.52 mg/L	104%	1.9 %				50-150%	20%
Standard	Standard	4.00	3.88 mg/L	97%			9804-475	0.5	90-110%	
Standard (Dupl)	Standard	4.00	3.96 mg/L	99%			9804-475	0.5	90-110%	
		4.00	3.92 mg/L	98%	2.0 %				90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-258

										Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	4.03	mg/L	101%		9805-110	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.09	mg/L	102%		9805-110	0.5		
		4.00	4.06	mg/L	101%	1.7 %				
Method Blank	Method Blank		ND*	mg/L			9805-108	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9805-108	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.51 mg/L	102%			9804-474	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.51 mg/L	102%			9804-474	0.5	50-150%	
		0.50	0.51 mg/L	102%	0.0 %				50-150%	20%
Standard	Standard	4.00	3.98 mg/L	100%			9804-475	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.03 mg/L	101%			9804-475	0.5	90-110%	
		4.00	4.00 mg/L	100%	1.3 %				90-110%	10%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable); RPD calculation is not applicable.

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Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-260

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Acceptance Criteria	
									Range	RPD
Matrix Spike	Matrix Spike	4.00	4.03	mg/L	101%		9805-134	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.08	mg/L	102%		9805-134	0.5		
		4.00	4.05	mg/L	101%	1.2 %				
Method Blank	Method Blank		ND*	mg/L			9805-145	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9805-145	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.52	mg/L	104%		9804-474	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.51	mg/L	102%		9804-474	0.5	50-150%	
		0.50	0.51	mg/L	102%	2.0 %			50-150%	20%
Standard	Standard	4.00	3.99	mg/L	100%		9804-475	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.00	mg/L	100%		9804-475	0.5	90-110%	
		4.00	4.00	mg/L	100%	0.2 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-263

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Acceptance Criteria	
									Range	RPD
Matrix Spike	Matrix Spike	4.00	3.99	mg/L	100%		9805-184	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.02	mg/L	100%		9805-184	0.5		
		4.00	4.00	mg/L	100%	1.0 %				
Method Blank	Method Blank		ND*	mg/L			9805-173	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9805-173	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.49	mg/L	98%		9804-474	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.49	mg/L	98%		9804-474	0.5	50-150%	
		0.50	0.49	mg/L	98%	0.0 %			50-150%	20%
Standard	Standard	4.00	3.94	mg/L	98%		9804-475	0.5	90-110%	
Standard (Dupl)	Standard	4.00	3.98	mg/L	100%		9804-475	0.5	90-110%	
		4.00	3.96	mg/L	99%	1.0 %			90-110%	10%
Standard	Standard	10.00	9.90	mg/L	99%		9804-511	0.5	90-110%	
Standard (Dupl)	Standard	10.00	10.22	mg/L	102%		9804-511	0.5	90-110%	
		10.00	10.06	mg/L	101%	3.2 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-264

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Acceptance Criteria	
									Range	RPD
Matrix Spike	Matrix Spike	4.00	3.92	mg/L	98%		9805-207	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.95	mg/L	99%		9805-207	0.5		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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		4.00	3.94 mg/L	98%	0.8 %				
Method Blank	Method Blank		ND* mg/L			9805-195	0.5		
Method Blank (Dupl)	Method Blank		ND* mg/L			9805-195	0.5		
			ND* mg/L						
Standard	Standard	0.50	0.48 mg/L	96%		9804-474	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.49 mg/L	98%		9804-474	0.5	50-150%	
		0.50	0.49 mg/L	98%	2.0 %			50-150%	20%
Standard	Standard	4.00	3.97 mg/L	99%		9804-475	0.5	90-110%	
Standard (Dupl)	Standard	4.00	3.99 mg/L	100%		9804-475	0.5	90-110%	
		4.00	3.98 mg/L	100%	0.5 %			90-110%	10%
Standard	Standard	10.00	9.97 mg/L	100%		9804-511	0.5	90-110%	
Standard (Dupl)	Standard	10.00	10.09 mg/L	101%		9804-511	0.5	90-110%	
		10.00	10.03 mg/L	100%	1.2 %			90-110%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-174

										Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9805-23	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-23	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9805-23	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-23	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9804-476	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9804-476	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.085	1/cm	97%		9804-477	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9804-477	0.009	85-115%	
		0.088	0.086	1/cm	98%	1.2 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-175

										Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9805-28	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-28	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9805-28	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-28	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.007	1/cm	78%		9804-476	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.007	1/cm	78%		9804-476	0.009	75-125%	
		0.009	0.007	1/cm	78%	0.0 %			75-125%	20%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Standard	Standard	0.088	0.084	1/cm	95%	9804-477	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.084	1/cm	95%	9804-477	0.009	85-115%	
		0.088	0.084	1/cm	95%				0.0 %
								85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-176

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9805-70	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-70	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9805-70	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-70	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.007	1/cm	78%		9804-476	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.007	1/cm	78%		9804-476	0.009	75-125%	
		0.009	0.007	1/cm	78%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%		9804-477	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9804-477	0.009	85-115%	
		0.088	0.086	1/cm	98%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-177

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9805-74	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-74	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9805-74	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-74	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.007	1/cm	78%		9804-476	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.007	1/cm	78%		9804-476	0.009	75-125%	
		0.009	0.007	1/cm	78%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.087	1/cm	99%		9804-477	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9804-477	0.009	85-115%	
		0.088	0.087	1/cm	99%	1.1 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-178

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9805-107	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-107	0.009		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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		ND* 1/cm							
Method Blank	Method Blank	ND*	1/cm			9805-107	0.009		
Method Blank (Dupl)	Method Blank	ND*	1/cm			9805-107	0.009		
		ND* 1/cm							
Standard	Standard	0.009	0.008 1/cm	89%		9804-476	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008 1/cm	89%		9804-476	0.009	75-125%	
		0.009	0.008 1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.086 1/cm	98%		9804-477	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.087 1/cm	99%		9804-477	0.009	85-115%	
		0.088	0.087 1/cm	99%	1.1 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-179

C Batch ID: 8-0-179									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9805-128	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-128	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9805-128	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-128	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.007	1/cm	78%		9804-476	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.007	1/cm	78%		9804-476	0.009	75-125%	
		0.009	0.007	1/cm	78%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.085	1/cm	97%		9804-477	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.085	1/cm	97%		9804-477	0.009	85-115%	
		0.088	0.085	1/cm	97%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-180

C Batch ID: 8-0-180										Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>	
Method Blank	Method Blank		ND*	1/cm			9805-151	0.009			
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-151	0.009			
			ND*	1/cm							
Method Blank	Method Blank		ND*	1/cm			9805-151	0.009			
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-151	0.009			
			ND*	1/cm							
Standard	Standard	0.009	0.007	1/cm	78%		9804-476	0.009	75-125%		
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9804-476	0.009	75-125%		
		0.009	0.007	1/cm	78%	14.3 %			75-125%	20%	
Standard	Standard	0.088	0.087	1/cm	99%		9804-477	0.009	85-115%		
Standard (Dupl)	Standard	0.088	0.087	1/cm	99%		9804-477	0.009	85-115%		
		0.088	0.087	1/cm	99%	0.0 %			85-115%	10%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Study Title: ICR RSSCT #1**Analysis:** UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-182

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Acceptance Criteria	
									Range	RPD
Method Blank	Method Blank		ND*	1/cm			9805-221	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-221	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9805-221	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9805-221	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9804-476	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9804-476	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.087	1/cm	99%		9804-477	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.087	1/cm	99%		9804-477	0.009	85-115%	
		0.088	0.087	1/cm	99%	0.0 %			85-115%	10%

Analysis: TURB (Turbidity)**Method:** SM 2130 B**QC Batch ID:** 9-0-10

QC Type		Spike	Recovery	Unit	Yield	RPD	Date Run	S&H ID	MRL	Acceptance Criteria	
										Range	RPD
Standard	Standard	4.51	4.54	ntu	101%		04/27/98	9902-79	0.05		
Standard	Standard	4.51	4.56	ntu	101%		04/29/98	9902-79	0.05		
Standard	Standard	4.51	4.56	ntu	101%		05/04/98	9902-79	0.05		
Standard	Standard	4.51	4.56	ntu	101%		05/06/98	9902-79	0.05		
Standard	Standard	4.51	4.56	ntu	101%		05/08/98	9902-79	0.05		
Standard	Standard	4.51	4.56	ntu	101%		05/11/98	9902-79	0.05		
Standard	Standard	4.51	4.54	ntu	101%		05/15/98	9902-79	0.05		

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-100

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Acceptance Criteria	
									Range	RPD
Standard - TCP Aqueous	Standard	25	28	µg Cl-/L	112%		9803-18	25	75-125%	
Standard - TCP Aqueous	Standard	200	194	µg Cl-/L	97%		9803-19	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L			9803-17	25		

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-128

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Acceptance Criteria	
									Range	RPD

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Matrix Spike	Matrix Spike	200	203	µg Cl-/L	101%	9804-399	25
Matrix Spike (Dupl)	Matrix Spike	200	203	µg Cl-/L	101%	9804-399	25
		200	203	µg Cl-/L	101%	0.0 %	
Standard - TCP Aqueous	Standard	25	24	µg Cl-/L	96%	9805-124	25 75-125%
Standard - TCP Aqueous	Standard	200	197	µg Cl-/L	98%	9805-123	25 85-115%
Standard - TCP Aqueous	Standard	500	491	µg Cl-/L	98%	9805-133	25 85-115%
System Blank	Blank		ND*	µg Cl-/L		9805-125	25

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-129

		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>	Acceptance Criteria
Standard - TCP Aqueous	Standard	25	23	µg Cl-/L	92%		9805-143	25	75-125%		
Standard - TCP Aqueous	Standard	200	199	µg Cl-/L	100%		9805-142	25	85-115%		
System Blank	Blank		ND*	µg Cl-/L			9805-144	25			

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-130

		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>	Acceptance Criteria
Matrix Spike	Matrix Spike	200	199	µg Cl-/L	100%		9804-510	25			
Matrix Spike (Dupl)	Matrix Spike	200	199	µg Cl-/L	100%		9804-510	25			
		200	199	µg Cl-/L	100%	0.5 %					
Standard - TCP Aqueous (Dupl)	Standard	25	20	µg Cl-/L	80%		9805-188	25	75-125%		
Standard - TCP Aqueous	Standard	200	212	µg Cl-/L	106%		9805-187	25	85-115%		
System Blank	Blank		ND*	µg Cl-/L			9805-189	25			

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-131

		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>	Acceptance Criteria
Standard - TCP Aqueous	Standard	25	22	µg Cl-/L	88%		9805-210	25	75-125%		
Standard - TCP Aqueous	Standard	200	203	µg Cl-/L	101%		9805-209	25	85-115%		
Standard - TCP Aqueous	Standard	500	538	µg Cl-/L	108%		9805-222	25	85-115%		
System Blank	Blank		ND*	µg Cl-/L			9805-211	25			

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-133

		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>	Acceptance Criteria
Standard - TCP Aqueous	Standard	25	24	µg Cl-/L	96%		9805-269	25	75-125%		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Standard - TCP Aqueous	Standard	200	207	µg Cl-/L	103%	9805-268	25	85-115%
Standard - TCP Aqueous	Standard	500	500	µg Cl-/L	100%	9805-274	25	85-115%
System Blank	Blank		ND*	µg Cl-/L		9805-270	25	

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-134

								Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>
Standard - TCP Aqueous	Standard	25	24	µg Cl-/L	96%		9805-286	25	75-125%
Standard - TCP Aqueous (Dupl)	Standard	200	176	µg Cl-/L	88%		9805-285	25	85-115%
System Blank	Blank		ND*	µg Cl-/L			9805-287	25	

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-135

								Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>
Matrix Spike	Matrix Spike	200	224	µg Cl-/L	112%		9805-138	25	
Matrix Spike (Dupl)	Matrix Spike	200	227	µg Cl-/L	114%		9805-138	25	
		200	226	µg Cl-/L	113%	1.3 %			
Standard - TCP Aqueous	Standard	25	23	µg Cl-/L	92%		9805-386	25	75-125%
Standard - TCP Aqueous	Standard	200	210	µg Cl-/L	105%		9805-385	25	85-115%
System Blank	Blank		ND*	µg Cl-/L			9805-387	25	

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-136

								Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>
Matrix Spike	Matrix Spike	200	229	µg Cl-/L	115%		9805-135	25	
Matrix Spike (Dupl)	Matrix Spike	200	248	µg Cl-/L	124%		9805-135	25	
		200	239	µg Cl-/L	120%	7.9 %			
Standard - TCP Aqueous	Standard	25	27	µg Cl-/L	108%		9805-408	25	75-125%
Standard - TCP Aqueous (Dupl)	Standard	200	203	µg Cl-/L	101%		9805-407	25	85-115%
System Blank	Blank		ND*	µg Cl-/L			9805-409	25	

Analysis: THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-122-0

								Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>
Bromodichloromethane	Duplicate	2.2	2.2	µg/L		0.0%	9804-502	1	
Bromodichloromethane	Matrix Spike	40.0	42.1	µg/L	105%		9804-456	1	
Bromodichloromethane	Method Blank		ND*	µg/L			9805-97	1	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Bromodichloromethane	Secondary Source Std	20.0	20.1 µg/L	101%	9805-98	1	70-130%
Bromodichloromethane	Standard	20.0	19.1 µg/L	96%	9805-99	1	80-120%
Bromodichloromethane	Standard	20.0	19.9 µg/L	99%	9805-99	1	80-120%
Bromodichloromethane	Standard	40.0	41.2 µg/L	103%	9805-100	1	80-120%
Bromoform	Duplicate	ND	ND µg/L	NA	9804-502	1	
Bromoform	Matrix Spike	40.0	40.1 µg/L	100%	9804-456	1	
Bromoform	Method Blank		ND* µg/L		9805-97	1	
Bromoform	Secondary Source Std	20.0	19.8 µg/L	99%	9805-98	1	70-130%
Bromoform	Standard	20.0	19.2 µg/L	96%	9805-99	1	80-120%
Bromoform	Standard	20.0	18.0 µg/L	90%	9805-99	1	80-120%
Bromoform	Standard	40.0	38.4 µg/L	96%	9805-100	1	80-120%
Chloroform	Duplicate	4.8	4.9 µg/L	2.1%	9804-502	1	
Chloroform	Matrix Spike	40.0	41.7 µg/L	104%	9804-456	1	
Chloroform	Method Blank		ND* µg/L		9805-97	1	
Chloroform	Secondary Source Std	20.0	20.4 µg/L	102%	9805-98	1	70-130%
Chloroform	Standard	20.0	18.8 µg/L	94%	9805-99	1	80-120%
Chloroform	Standard	20.0	20.4 µg/L	102%	9805-99	1	80-120%
Chloroform	Standard	40.0	41.0 µg/L	102%	9805-100	1	80-120%
Dibromochloromethane	Duplicate	ND	ND µg/L	NA	9804-502	1	
Dibromochloromethane	Matrix Spike	40.0	42.2 µg/L	106%	9804-456	1	
Dibromochloromethane	Method Blank		ND* µg/L		9805-97	1	
Dibromochloromethane	Secondary Source Std	20.0	19.9 µg/L	99%	9805-98	1	70-130%
Dibromochloromethane	Standard	20.0	19.1 µg/L	96%	9805-99	1	80-120%
Dibromochloromethane	Standard	20.0	19.9 µg/L	99%	9805-99	1	80-120%
Dibromochloromethane	Standard	40.0	41.4 µg/L	103%	9805-100	1	80-120%

Analysis: THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-125-0

								Acceptance Criteria		
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Bromodichloromethane	Duplicate	ND	ND	µg/L		NA	9805-24	1		
Bromodichloromethane	Matrix Spike	40.0	39.3	µg/L	98%		9805-53	1		
Bromodichloromethane	Method Blank		ND*	µg/L			9805-154	1		
Bromodichloromethane	Secondary Source Std	20.0	21.7	µg/L	109%		9805-155	1	70-130%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Bromodichloromethane	Standard	20.0	20.4 µg/L	102%	9805-156	1	80-120%
Bromodichloromethane	Standard	20.0	21.6 µg/L	108%	9805-156	1	80-120%
Bromodichloromethane	Standard	40.0	42.1 µg/L	105%	9805-157	1	80-120%
Bromoform	Duplicate	6.8	7.0 µg/L	2.9%	9805-24	1	
Bromoform	Matrix Spike	40.0	35.2 µg/L	88%	9805-53	1	
Bromoform	Method Blank		ND* µg/L		9805-154	1	
Bromoform	Secondary Source Std	20.0	20.9 µg/L	104%	9805-155	1	70-130%
Bromoform	Standard	20.0	20.5 µg/L	102%	9805-156	1	80-120%
Bromoform	Standard	20.0	19.5 µg/L	97%	9805-156	1	80-120%
Bromoform	Standard	40.0	37.8 µg/L	94%	9805-157	1	80-120%
Chloroform	Duplicate	ND	ND µg/L	NA	9805-24	1	
Chloroform	Matrix Spike	40.0	41.1 µg/L	103%	9805-53	1	
Chloroform	Method Blank		ND* µg/L		9805-154	1	
Chloroform	Secondary Source Std	20.0	22.6 µg/L	113%	9805-155	1	70-130%
Chloroform	Standard	20.0	20.5 µg/L	102%	9805-156	1	80-120%
Chloroform	Standard	20.0	22.6 µg/L	113%	9805-156	1	80-120%
Chloroform	Standard	40.0	43.2 µg/L	108%	9805-157	1	80-120%
Dibromochloromethane	Duplicate	3.1	3.2 µg/L	3.2%	9805-24	1	
Dibromochloromethane	Matrix Spike	40.0	38.9 µg/L	97%	9805-53	1	
Dibromochloromethane	Method Blank		ND* µg/L		9805-154	1	
Dibromochloromethane	Secondary Source Std	20.0	21.2 µg/L	106%	9805-155	1	70-130%
Dibromochloromethane	Standard	20.0	20.7 µg/L	103%	9805-156	1	80-120%
Dibromochloromethane	Standard	20.0	21.7 µg/L	109%	9805-156	1	80-120%
Dibromochloromethane	Standard	40.0	42.6 µg/L	106%	9805-157	1	80-120%

Analysis: THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-128-0

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD	
Bromodichloromethane	Duplicate	2.8	2.8	µg/L		0.0%	9805-106	1			
Bromodichloromethane	Matrix Spike	40.0	44.2	µg/L	111%		9805-139	1			
Bromodichloromethane	Method Blank		ND*	µg/L			9805-297	1			
Bromodichloromethane	Secondary Source Std	20.0	21.2	µg/L	106%		9805-298	1	70-130%		
Bromodichloromethane	Standard	20.0	20.5	µg/L	102%		9805-299	1	80-120%		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Study Title: ICR RSSCT #1

Bromodichloromethane	Standard	20.0	22.2 µg/L	111%	9805-299	1 80-120%
Bromodichloromethane	Standard	20.0	22.6 µg/L	113%	9805-299	1 80-120%
Bromodichloromethane	Standard	40.0	40.7 µg/L	102%	9805-300	1 80-120%
Bromodichloromethane	Standard	40.0	42.8 µg/L	107%	9805-300	1 80-120%
Bromoform	Duplicate	ND	ND µg/L	NA	9805-106	1
Bromoform	Matrix Spike	40.0	40.2 µg/L	101%	9805-139	1
Bromoform	Method Blank		ND* µg/L		9805-297	1
Bromoform	Secondary Source Std	20.0	20.0 µg/L	100%	9805-298	1 70-130%
Bromoform	Standard	20.0	21.0 µg/L	105%	9805-299	1 80-120%
Bromoform	Standard	20.0	20.2 µg/L	101%	9805-299	1 80-120%
Bromoform	Standard	20.0	23.1 µg/L	116%	9805-299	1 80-120%
Bromoform	Standard	40.0	40.9 µg/L	102%	9805-300	1 80-120%
Bromoform	Standard	40.0	44.7 µg/L	112%	9805-300	1 80-120%
Chloroform	Duplicate	2.9	3.0 µg/L	3.4%	9805-106	1
Chloroform	Matrix Spike	40.0	44.9 µg/L	112%	9805-139	1
Chloroform	Method Blank		ND* µg/L		9805-297	1
Chloroform	Secondary Source Std	20.0	21.5 µg/L	108%	9805-298	1 70-130%
Chloroform	Standard	20.0	20.2 µg/L	101%	9805-299	1 80-120%
Chloroform	Standard	20.0	22.4 µg/L	112%	9805-299	1 80-120%
Chloroform	Standard	20.0	21.6 µg/L	108%	9805-299	1 80-120%
Chloroform	Standard	40.0	40.3 µg/L	101%	9805-300	1 80-120%
Chloroform	Standard	40.0	43.8 µg/L	110%	9805-300	1 80-120%
Dibromochloromethane	Duplicate	1.6	1.6 µg/L	0.0%	9805-106	1
Dibromochloromethane	Matrix Spike	40.0	46.8 µg/L	117%	9805-139	1
Dibromochloromethane	Method Blank		ND* µg/L		9805-297	1
Dibromochloromethane	Secondary Source Std	20.0	20.1 µg/L	101%	9805-298	1 70-130%
Dibromochloromethane	Standard	20.0	21.1 µg/L	106%	9805-299	1 80-120%
Dibromochloromethane	Standard	20.0	22.6 µg/L	113%	9805-299	1 80-120%
Dibromochloromethane	Standard	20.0	23.3 µg/L	117%	9805-299	1 80-120%
Dibromochloromethane	Standard	40.0	41.2 µg/L	103%	9805-300	1 80-120%
Dibromochloromethane	Standard	40.0	43.3 µg/L	108%	9805-300	1 80-120%

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 107
Study Title: ICR RSSCT #1**Analysis:** THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-130-0

										Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>	
Bromodichloromethane	Duplicate	14.8	14.2	µg/L		4.1%	9805-214	1			
Bromodichloromethane	Matrix Spike	40.0	41.6	µg/L	104%		9805-261	1			
Bromodichloromethane	Method Blank		ND*	µg/L			9805-437	1			
Bromodichloromethane	Secondary Source Std	20.0	21.0	µg/L	105%		9805-438	1	70-130%		
Bromodichloromethane	Standard	20.0	18.1	µg/L	91%		9805-439	1	80-120%		
Bromodichloromethane	Standard	20.0	19.4	µg/L	97%		9805-439	1	80-120%		
Bromodichloromethane	Standard	20.0	18.8	µg/L	94%		9805-439	1	80-120%		
Bromodichloromethane	Standard	40.0	41.4	µg/L	103%		9805-440	1	80-120%		
Bromodichloromethane	Standard	40.0	41.1	µg/L	103%		9805-440	1	80-120%		
Bromoform	Duplicate	ND	ND	µg/L		NA	9805-214	1			
Bromoform	Matrix Spike	40.0	43.2	µg/L	108%		9805-261	1			
Bromoform	Method Blank		ND*	µg/L			9805-437	1			
Bromoform	Secondary Source Std	20.0	20.4	µg/L	102%		9805-438	1	70-130%		
Bromoform	Standard	20.0	17.6	µg/L	88%		9805-439	1	80-120%		
Bromoform	Standard	20.0	20.2	µg/L	101%		9805-439	1	80-120%		
Bromoform	Standard	20.0	19.3	µg/L	97%		9805-439	1	80-120%		
Bromoform	Standard	40.0	39.8	µg/L	99%		9805-440	1	80-120%		
Bromoform	Standard	40.0	43.0	µg/L	108%		9805-440	1	80-120%		
Chloroform	Duplicate	42.1	40.0	µg/L		5.1%	9805-214	1			
Chloroform	Matrix Spike	40.0	42.4	µg/L	106%		9805-261	1			
Chloroform	Method Blank		ND*	µg/L			9805-437	1			
Chloroform	Secondary Source Std	20.0	20.9	µg/L	104%		9805-438	1	70-130%		
Chloroform	Standard	20.0	18.1	µg/L	91%		9805-439	1	80-120%		
Chloroform	Standard	20.0	19.5	µg/L	97%		9805-439	1	80-120%		
Chloroform	Standard	20.0	19.4	µg/L	97%		9805-439	1	80-120%		
Chloroform	Standard	40.0	41.5	µg/L	104%		9805-440	1	80-120%		
Chloroform	Standard	40.0	42.3	µg/L	106%		9805-440	1	80-120%		
Dibromochloromethane	Duplicate	3.8	3.6	µg/L		5.4%	9805-214	1			
Dibromochloromethane	Matrix Spike	40.0	42.4	µg/L	106%		9805-261	1			
Dibromochloromethane	Method Blank		ND*	µg/L			9805-437	1			

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 107
Study Title: ICR RSSCT #1

Dibromochloromethane	Secondary Source Std	20.0	20.9 µg/L	104%	9805-438	1	70-130%
Dibromochloromethane	Standard	20.0	18.9 µg/L	94%	9805-439	1	80-120%
Dibromochloromethane	Standard	20.0	20.0 µg/L	100%	9805-439	1	80-120%
Dibromochloromethane	Standard	20.0	19.0 µg/L	95%	9805-439	1	80-120%
Dibromochloromethane	Standard	40.0	41.7 µg/L	104%	9805-440	1	80-120%
Dibromochloromethane	Standard	40.0	40.5 µg/L	101%	9805-440	1	80-120%

Analysis: THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-97-0

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD	
Bromodichloromethane	Duplicate	6.4	5.3	µg/L		18.8%	9803-111	1			
Bromodichloromethane	Matrix Spike	20.0	17.4	µg/L	87%		9803-136	1			
Bromodichloromethane	Method Blank		ND*	µg/L			9803-222	1			
Bromodichloromethane	Standard	20.0	19.1	µg/L	96%		9803-223	1	80-120%		
Bromodichloromethane	Standard	20.0	18.0	µg/L	90%		9803-223	1	80-120%		
Bromodichloromethane	Standard	40.0	44.2	µg/L	111%		9803-141	1	80-120%		
Bromoform	Duplicate	4.1	3.8	µg/L		7.6%	9803-111	1			
Bromoform	Matrix Spike	20.0	19.2	µg/L	96%		9803-136	1			
Bromoform	Method Blank		ND*	µg/L			9803-222	1			
Bromoform	Standard	20.0	20.1	µg/L	101%		9803-223	1	80-120%		
Bromoform	Standard	20.0	19.9	µg/L	99%		9803-223	1	80-120%		
Bromoform	Standard	40.0	45.5	µg/L	114%		9803-141	1	80-120%		
Chloroform	Duplicate	2.5	1.8	µg/L		32.6%	9803-111	1			
Chloroform	Matrix Spike	20.0	17.4	µg/L	87%		9803-136	1			
Chloroform	Method Blank		ND*	µg/L			9803-222	1			
Chloroform	Standard	20.0	17.4	µg/L	87%		9803-223	1	80-120%		
Chloroform	Standard	20.0	17.3	µg/L	86%		9803-223	1	80-120%		
Chloroform	Standard	40.0	43.2	µg/L	108%		9803-141	1	80-120%		
Dibromochloromethane	Duplicate	13.0	11.3	µg/L		14.0%	9803-111	1			
Dibromochloromethane	Matrix Spike	20.0	21.5	µg/L	108%		9803-136	1			
Dibromochloromethane	Method Blank		ND*	µg/L			9803-222	1			
Dibromochloromethane	Standard	20.0	22.2	µg/L	111%		9803-223	1	80-120%		
Dibromochloromethane	Standard	20.0	22.1	µg/L	111%		9803-223	1	80-120%		
Dibromochloromethane	Standard	40.0	41.5	µg/L	104%		9803-141	1	80-120%		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 107
Study Title: ICR RSSCT #1**Analysis:** HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-100-0

								Acceptance Criteria		
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Bromochloroacetic acid	Duplicate	1.2	1.2	µg/L		0.0%	9803-201	1		
Bromochloroacetic acid	Matrix Spike	40.0	36.3	µg/L	91%		9803-252	1		
Bromochloroacetic acid	Method Blank		ND*	µg/L			9803-292	1		
Bromochloroacetic acid	Secondary Source Std	20.0	22.4	µg/L	112%		9803-293	1	70-130%	
Bromochloroacetic acid	Standard	20.0	22.4	µg/L	112%		9803-294	1	80-120%	
Bromochloroacetic acid	Standard	20.0	21.7	µg/L	109%		9803-294	1	80-120%	
Bromochloroacetic acid	Standard	40.0	40.0	µg/L	100%		9803-295	1	80-120%	
Bromodichloroacetic acid	Duplicate	ND	ND	µg/L		NA	9803-201	1		
Bromodichloroacetic acid	Matrix Spike	40.0	38.1	µg/L	95%		9803-252	1		
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9803-292	1		
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9803-293	1		
Bromodichloroacetic acid	Standard	20.0	21.5	µg/L	108%		9803-294	1	80-120%	
Bromodichloroacetic acid	Standard	20.0	21.9	µg/L	110%		9803-294	1	80-120%	
Bromodichloroacetic acid	Standard	40.0	42.8	µg/L	107%		9803-295	1	80-120%	
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9803-201	2		
Chlorodibromoacetic acid	Matrix Spike	40.0	40.6	µg/L	102%		9803-252	2		
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9803-292	2		
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9803-293	2		
Chlorodibromoacetic acid	Standard	20.0	22.1	µg/L	111%		9803-294	2	80-120%	
Chlorodibromoacetic acid	Standard	20.0	23.0	µg/L	115%		9803-294	2	80-120%	
Chlorodibromoacetic acid	Standard	40.0	42.0	µg/L	105%		9803-295	2	80-120%	
Dibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9803-201	1		
Dibromoacetic acid	Matrix Spike	40.0	33.4	µg/L	83%		9803-252	1		
Dibromoacetic acid	Method Blank		ND*	µg/L			9803-292	1		
Dibromoacetic acid	Secondary Source Std	20.0	23.3	µg/L	117%		9803-293	1	70-130%	
Dibromoacetic acid	Standard	20.0	23.0	µg/L	115%		9803-294	1	80-120%	
Dibromoacetic acid	Standard	20.0	23.1	µg/L	116%		9803-294	1	80-120%	
Dibromoacetic acid	Standard	40.0	39.3	µg/L	98%		9803-295	1	80-120%	
Dichloroacetic acid	Duplicate	5.0	4.8	µg/L		4.1%	9803-201	1		
Dichloroacetic acid	Matrix Spike	40.0	40.2	µg/L	101%		9803-252	1		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 107
Study Title: ICR RSSCT #1

Dichloroacetic acid	Method Blank		ND*	µg/L		9803-292	1
Dichloroacetic acid	Secondary Source Std	20.0	21.3	µg/L	106%	9803-293	1 70-130%
Dichloroacetic acid	Standard	20.0	20.4	µg/L	102%	9803-294	1 80-120%
Dichloroacetic acid	Standard	20.0	20.5	µg/L	102%	9803-294	1 80-120%
Dichloroacetic acid	Standard	40.0	40.1	µg/L	100%	9803-295	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND	µg/L	NA	9803-201	1
Monobromoacetic acid	Matrix Spike	40.0	43.4	µg/L	109%	9803-252	1
Monobromoacetic acid	Method Blank		ND*	µg/L		9803-292	1
Monobromoacetic acid	Secondary Source Std	20.0	20.9	µg/L	104%	9803-293	1 70-130%
Monobromoacetic acid	Standard	20.0	20.4	µg/L	102%	9803-294	1 80-120%
Monobromoacetic acid	Standard	20.0	19.7	µg/L	98%	9803-294	1 80-120%
Monobromoacetic acid	Standard	40.0	38.7	µg/L	97%	9803-295	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND	µg/L	NA	9803-201	2
Monochloroacetic acid	Matrix Spike	40.0	38.9	µg/L	97%	9803-252	2
Monochloroacetic acid	Method Blank		ND*	µg/L		9803-292	2
Monochloroacetic acid	Secondary Source Std	20.0	23.6	µg/L	118%	9803-293	2 70-130%
Monochloroacetic acid	Standard	20.0	19.3	µg/L	97%	9803-294	2 80-120%
Monochloroacetic acid	Standard	20.0	20.6	µg/L	103%	9803-294	2 80-120%
Monochloroacetic acid	Standard	40.0	40.8	µg/L	102%	9803-295	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND	µg/L	NA	9803-201	4
Tribromoacetic acid	Matrix Spike	40.0	42.6	µg/L	106%	9803-252	4
Tribromoacetic acid	Method Blank		ND*	µg/L		9803-292	4
Tribromoacetic acid	Secondary Source Std		ND	µg/L		9803-293	4
Tribromoacetic acid	Standard	20.0	22.6	µg/L	113%	9803-294	4 80-120%
Tribromoacetic acid	Standard	20.0	23.9	µg/L	119%	9803-294	4 80-120%
Tribromoacetic acid	Standard	40.0	39.6	µg/L	99%	9803-295	4 80-120%
Trichloroacetic acid	Duplicate	ND	ND	µg/L	NA	9803-201	1
Trichloroacetic acid	Matrix Spike	40.0	34.1	µg/L	85%	9803-252	1
Trichloroacetic acid	Method Blank		ND*	µg/L		9803-292	1
Trichloroacetic acid	Secondary Source Std	20.0	22.6	µg/L	113%	9803-293	1 70-130%
Trichloroacetic acid	Standard	20.0	23.3	µg/L	117%	9803-294	1 80-120%
Trichloroacetic acid	Standard	20.0	23.1	µg/L	116%	9803-294	1 80-120%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 107
Study Title: ICR RSSCT #1

Trichloroacetic acid	Standard	40.0	38.6	µg/L	97%	9803-295	1	80-120%
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Analysis: HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-123-0

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD	
Bromochloroacetic acid	Duplicate	1.5	1.6	µg/L		6.5%	9804-453	1			
Bromochloroacetic acid	Matrix Spike	40.0	40.9	µg/L	102%		9804-507	1			
Bromochloroacetic acid	Method Blank		ND*	µg/L			9805-129	1			
Bromochloroacetic acid	Secondary Source Std	20.0	20.5	µg/L	102%		9805-130	1	70-130%		
Bromochloroacetic acid	Standard	20.0	20.6	µg/L	103%		9805-131	1	80-120%		
Bromochloroacetic acid	Standard	20.0	20.9	µg/L	104%		9805-131	1	80-120%		
Bromochloroacetic acid	Standard	40.0	40.5	µg/L	101%		9805-132	1	80-120%		
Bromodichloroacetic acid	Duplicate	1.5	1.5	µg/L		0.0%	9804-453	1			
Bromodichloroacetic acid	Matrix Spike	40.0	43.3	µg/L	108%		9804-507	1			
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9805-129	1			
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9805-130	1			
Bromodichloroacetic acid	Standard	20.0	20.6	µg/L	103%		9805-131	1	80-120%		
Bromodichloroacetic acid	Standard	20.0	20.3	µg/L	102%		9805-131	1	80-120%		
Bromodichloroacetic acid	Standard	40.0	40.8	µg/L	102%		9805-132	1	80-120%		
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9804-453	2			
Chlorodibromoacetic acid	Matrix Spike	40.0	42.8	µg/L	107%		9804-507	2			
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9805-129	2			
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9805-130	2			
Chlorodibromoacetic acid	Standard	20.0	20.9	µg/L	104%		9805-131	2	80-120%		
Chlorodibromoacetic acid	Standard	20.0	20.5	µg/L	102%		9805-131	2	80-120%		
Chlorodibromoacetic acid	Standard	40.0	41.1	µg/L	103%		9805-132	2	80-120%		
Dibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9804-453	1			
Dibromoacetic acid	Matrix Spike	40.0	42.7	µg/L	107%		9804-507	1			
Dibromoacetic acid	Method Blank		ND*	µg/L			9805-129	1			
Dibromoacetic acid	Secondary Source Std	20.0	21.4	µg/L	107%		9805-130	1	70-130%		
Dibromoacetic acid	Standard	20.0	20.8	µg/L	104%		9805-131	1	80-120%		
Dibromoacetic acid	Standard	20.0	21.4	µg/L	107%		9805-131	1	80-120%		
Dibromoacetic acid	Standard	40.0	41.0	µg/L	102%		9805-132	1	80-120%		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 107
Study Title: ICR RSSCT #1

Dichloroacetic acid	Duplicate	8.9	9.2 µg/L	3.3%	9804-453	1
Dichloroacetic acid	Matrix Spike	40.0	40.5 µg/L	101%	9804-507	1
Dichloroacetic acid	Method Blank		ND* µg/L		9805-129	1
Dichloroacetic acid	Secondary Source Std	20.0	22.4 µg/L	112%	9805-130	1 70-130%
Dichloroacetic acid	Standard	20.0	21.5 µg/L	108%	9805-131	1 80-120%
Dichloroacetic acid	Standard	20.0	21.5 µg/L	108%	9805-131	1 80-120%
Dichloroacetic acid	Standard	40.0	40.2 µg/L	101%	9805-132	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND µg/L	NA	9804-453	1
Monobromoacetic acid	Matrix Spike	40.0	40.4 µg/L	101%	9804-507	1
Monobromoacetic acid	Method Blank		ND* µg/L		9805-129	1
Monobromoacetic acid	Secondary Source Std	20.0	17.4 µg/L	87%	9805-130	1 70-130%
Monobromoacetic acid	Standard	20.0	21.5 µg/L	108%	9805-131	1 80-120%
Monobromoacetic acid	Standard	20.0	22.1 µg/L	111%	9805-131	1 80-120%
Monobromoacetic acid	Standard	40.0	38.5 µg/L	96%	9805-132	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND µg/L	NA	9804-453	2
Monochloroacetic acid	Matrix Spike	40.0	37.5 µg/L	94%	9804-507	2
Monochloroacetic acid	Method Blank		ND* µg/L		9805-129	2
Monochloroacetic acid	Secondary Source Std	20.0	19.0 µg/L	95%	9805-130	2 70-130%
Monochloroacetic acid	Standard	20.0	21.5 µg/L	108%	9805-131	2 80-120%
Monochloroacetic acid	Standard	20.0	18.8 µg/L	94%	9805-131	2 80-120%
Monochloroacetic acid	Standard	40.0	38.3 µg/L	96%	9805-132	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND µg/L	NA	9804-453	4
Tribromoacetic acid	Matrix Spike	40.0	40.9 µg/L	102%	9804-507	4
Tribromoacetic acid	Method Blank		ND* µg/L		9805-129	4
Tribromoacetic acid	Secondary Source Std		ND µg/L		9805-130	4
Tribromoacetic acid	Standard	20.0	21.0 µg/L	105%	9805-131	4 80-120%
Tribromoacetic acid	Standard	20.0	19.9 µg/L	99%	9805-131	4 80-120%
Tribromoacetic acid	Standard	40.0	40.3 µg/L	101%	9805-132	4 80-120%
Trichloroacetic acid	Duplicate	6.8	7.0 µg/L	2.9%	9804-453	1
Trichloroacetic acid	Matrix Spike	40.0	42.5 µg/L	106%	9804-507	1
Trichloroacetic acid	Method Blank		ND* µg/L		9805-129	1
Trichloroacetic acid	Secondary Source Std	20.0	23.6 µg/L	118%	9805-130	1 70-130%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Miami-Dade Water and Sewer Department**Study#:** 107
Study Title: ICR RSSCT #1

Trichloroacetic acid	Standard	20.0	20.5	µg/L	102%	9805-131	1	80-120%
Trichloroacetic acid	Standard	20.0	20.1	µg/L	101%	9805-131	1	80-120%
Trichloroacetic acid	Standard	40.0	40.4	µg/L	101%	9805-132	1	80-120%

Analysis: HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-127-0

										Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>	
Bromochloroacetic acid	Duplicate	3.8	3.6	µg/L		5.4%	9805-29	1			
Bromochloroacetic acid	Matrix Spike	40.0	40.5	µg/L	101%		9805-57	1			
Bromochloroacetic acid	Method Blank		ND*	µg/L			9805-97	1			
Bromochloroacetic acid	Secondary Source Std	20.0	19.5	µg/L	97%		9805-98	1	70-130%		
Bromochloroacetic acid	Standard	20.0	20.2	µg/L	101%		9805-99	1	80-120%		
Bromochloroacetic acid	Standard	20.0	20.4	µg/L	102%		9805-99	1	80-120%		
Bromochloroacetic acid	Standard	40.0	41.5	µg/L	104%		9805-100	1	80-120%		
Bromodichloroacetic acid	Duplicate	ND	ND	µg/L		NA	9805-29	1			
Bromodichloroacetic acid	Matrix Spike	40.0	36.9	µg/L	92%		9805-57	1			
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9805-97	1			
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9805-98	1			
Bromodichloroacetic acid	Standard	20.0	20.6	µg/L	103%		9805-99	1	80-120%		
Bromodichloroacetic acid	Standard	20.0	19.5	µg/L	97%		9805-99	1	80-120%		
Bromodichloroacetic acid	Standard	40.0	45.1	µg/L	113%		9805-100	1	80-120%		
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9805-29	2			
Chlorodibromoacetic acid	Matrix Spike	40.0	34.1	µg/L	85%		9805-57	2			
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9805-97	2			
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9805-98	2			
Chlorodibromoacetic acid	Standard	20.0	20.4	µg/L	102%		9805-99	2	80-120%		
Chlorodibromoacetic acid	Standard	20.0	18.2	µg/L	91%		9805-99	2	80-120%		
Chlorodibromoacetic acid	Standard	40.0	43.4	µg/L	109%		9805-100	2	80-120%		
Dibromoacetic acid	Duplicate	4.5	4.3	µg/L		4.5%	9805-29	1			
Dibromoacetic acid	Matrix Spike	40.0	41.4	µg/L	103%		9805-57	1			
Dibromoacetic acid	Method Blank		ND*	µg/L			9805-97	1			
Dibromoacetic acid	Secondary Source Std	20.0	20.5	µg/L	102%		9805-98	1	70-130%		
Dibromoacetic acid	Standard	20.0	20.3	µg/L	102%		9805-99	1	80-120%		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable); RPD calculation is not applicable.

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Dibromoacetic acid	Standard	20.0	21.0 µg/L	105%	9805-99	1 80-120%
Dibromoacetic acid	Standard	40.0	43.9 µg/L	110%	9805-100	1 80-120%
Dichloroacetic acid	Duplicate	7.9	7.5 µg/L	5.2%	9805-29	1
Dichloroacetic acid	Matrix Spike	40.0	39.5 µg/L	99%	9805-57	1
Dichloroacetic acid	Method Blank		ND* µg/L		9805-97	1
Dichloroacetic acid	Secondary Source Std	20.0	19.9 µg/L	99%	9805-98	1 70-130%
Dichloroacetic acid	Standard	20.0	19.9 µg/L	99%	9805-99	1 80-120%
Dichloroacetic acid	Standard	20.0	20.2 µg/L	101%	9805-99	1 80-120%
Dichloroacetic acid	Standard	40.0	39.5 µg/L	99%	9805-100	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND µg/L	NA	9805-29	1
Monobromoacetic acid	Matrix Spike	40.0	36.6 µg/L	92%	9805-57	1
Monobromoacetic acid	Method Blank		ND* µg/L		9805-97	1
Monobromoacetic acid	Secondary Source Std	20.0	18.1 µg/L	91%	9805-98	1 70-130%
Monobromoacetic acid	Standard	20.0	19.4 µg/L	97%	9805-99	1 80-120%
Monobromoacetic acid	Standard	20.0	18.1 µg/L	91%	9805-99	1 80-120%
Monobromoacetic acid	Standard	40.0	37.1 µg/L	93%	9805-100	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND µg/L	NA	9805-29	2
Monochloroacetic acid	Matrix Spike	40.0	41.2 µg/L	103%	9805-57	2
Monochloroacetic acid	Method Blank		ND* µg/L		9805-97	2
Monochloroacetic acid	Secondary Source Std	20.0	17.5 µg/L	88%	9805-98	2 70-130%
Monochloroacetic acid	Standard	20.0	19.1 µg/L	96%	9805-99	2 80-120%
Monochloroacetic acid	Standard	20.0	19.3 µg/L	97%	9805-99	2 80-120%
Monochloroacetic acid	Standard	40.0	35.1 µg/L	88%	9805-100	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND µg/L	NA	9805-29	4
Tribromoacetic acid	Matrix Spike	40.0	33.1 µg/L	83%	9805-57	4
Tribromoacetic acid	Method Blank		ND* µg/L		9805-97	4
Tribromoacetic acid	Secondary Source Std		ND µg/L		9805-98	4
Tribromoacetic acid	Standard	20.0	20.2 µg/L	101%	9805-99	4 80-120%
Tribromoacetic acid	Standard	20.0	17.7 µg/L	89%	9805-99	4 80-120%
Tribromoacetic acid	Standard	40.0	40.8 µg/L	102%	9805-100	4 80-120%
Trichloroacetic acid	Duplicate	ND	ND µg/L	NA	9805-29	1
Trichloroacetic acid	Matrix Spike	40.0	39.0 µg/L	97%	9805-57	1
Trichloroacetic acid	Method Blank		ND* µg/L		9805-97	1

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Miami-Dade Water and Sewer Department**Study#:** 107
Study Title: ICR RSSCT #1

Trichloroacetic acid	Secondary Source Std	20.0	19.7	µg/L	98%	9805-98	1	70-130%
Trichloroacetic acid	Standard	20.0	20.0	µg/L	100%	9805-99	1	80-120%
Trichloroacetic acid	Standard	20.0	21.5	µg/L	108%	9805-99	1	80-120%
Trichloroacetic acid	Standard	40.0	45.6	µg/L	114%	9805-100	1	80-120%

Analysis: HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-129-0

										Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Bromochloroacetic acid	Duplicate	1.3	1.2	µg/L		8.0%	9805-118	1		
Bromochloroacetic acid	Matrix Spike	40.0	40.9	µg/L	102%		9805-158	1		
Bromochloroacetic acid	Method Blank		ND*	µg/L			9805-413	1		
Bromochloroacetic acid	Secondary Source Std	20.0	18.7	µg/L	93%		9805-414	1	70-130%	
Bromochloroacetic acid	Standard	20.0	19.3	µg/L	97%		9805-415	1	80-120%	
Bromochloroacetic acid	Standard	20.0	19.3	µg/L	97%		9805-415	1	80-120%	
Bromochloroacetic acid	Standard	40.0	38.3	µg/L	96%		9805-416	1	80-120%	
Bromodichloroacetic acid	Duplicate	1.0	1.0	µg/L		0.0%	9805-118	1		
Bromodichloroacetic acid	Matrix Spike	40.0	35.6	µg/L	89%		9805-158	1		
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9805-413	1		
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9805-414	1		
Bromodichloroacetic acid	Standard	20.0	18.1	µg/L	91%		9805-415	1	80-120%	
Bromodichloroacetic acid	Standard	20.0	19.0	µg/L	95%		9805-415	1	80-120%	
Bromodichloroacetic acid	Standard	40.0	38.5	µg/L	96%		9805-416	1	80-120%	
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9805-118	2		
Chlorodibromoacetic acid	Matrix Spike	40.0	35.2	µg/L	88%		9805-158	2		
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9805-413	2		
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9805-414	2		
Chlorodibromoacetic acid	Standard	20.0	18.0	µg/L	90%		9805-415	2	80-120%	
Chlorodibromoacetic acid	Standard	20.0	19.9	µg/L	99%		9805-415	2	80-120%	
Chlorodibromoacetic acid	Standard	40.0	38.3	µg/L	96%		9805-416	2	80-120%	
Dibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9805-118	1		
Dibromoacetic acid	Matrix Spike	40.0	38.3	µg/L	96%		9805-158	1		
Dibromoacetic acid	Method Blank		ND*	µg/L			9805-413	1		
Dibromoacetic acid	Secondary Source Std	20.0	18.3	µg/L	92%		9805-414	1	70-130%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Miami-Dade Water and Sewer Department**Study#:** 107
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Dibromoacetic acid	Standard	20.0	19.0 µg/L	95%	9805-415	1 80-120%
Dibromoacetic acid	Standard	20.0	18.9 µg/L	94%	9805-415	1 80-120%
Dibromoacetic acid	Standard	40.0	37.7 µg/L	94%	9805-416	1 80-120%
Dichloroacetic acid	Duplicate	1.9	1.8 µg/L	5.4%	9805-118	1
Dichloroacetic acid	Matrix Spike	40.0	41.3 µg/L	103%	9805-158	1
Dichloroacetic acid	Method Blank		ND* µg/L		9805-413	1
Dichloroacetic acid	Secondary Source Std	20.0	20.0 µg/L	100%	9805-414	1 70-130%
Dichloroacetic acid	Standard	20.0	19.4 µg/L	97%	9805-415	1 80-120%
Dichloroacetic acid	Standard	20.0	19.5 µg/L	97%	9805-415	1 80-120%
Dichloroacetic acid	Standard	40.0	37.2 µg/L	93%	9805-416	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND µg/L	NA	9805-118	1
Monobromoacetic acid	Matrix Spike	40.0	39.4 µg/L	98%	9805-158	1
Monobromoacetic acid	Method Blank		ND* µg/L		9805-413	1
Monobromoacetic acid	Secondary Source Std	20.0	19.2 µg/L	96%	9805-414	1 70-130%
Monobromoacetic acid	Standard	20.0	18.5 µg/L	93%	9805-415	1 80-120%
Monobromoacetic acid	Standard	20.0	18.7 µg/L	93%	9805-415	1 80-120%
Monobromoacetic acid	Standard	40.0	37.1 µg/L	93%	9805-416	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND µg/L	NA	9805-118	2
Monochloroacetic acid	Matrix Spike	40.0	40.2 µg/L	101%	9805-158	2
Monochloroacetic acid	Method Blank		ND* µg/L		9805-413	2
Monochloroacetic acid	Secondary Source Std	20.0	18.1 µg/L	91%	9805-414	2 70-130%
Monochloroacetic acid	Standard	20.0	19.2 µg/L	96%	9805-415	2 80-120%
Monochloroacetic acid	Standard	20.0	19.4 µg/L	97%	9805-415	2 80-120%
Monochloroacetic acid	Standard	40.0	38.8 µg/L	97%	9805-416	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND µg/L	NA	9805-118	4
Tribromoacetic acid	Matrix Spike	40.0	35.1 µg/L	88%	9805-158	4
Tribromoacetic acid	Method Blank		ND* µg/L		9805-413	4
Tribromoacetic acid	Secondary Source Std		ND µg/L		9805-414	4
Tribromoacetic acid	Standard	20.0	18.5 µg/L	93%	9805-415	4 80-120%
Tribromoacetic acid	Standard	20.0	20.3 µg/L	102%	9805-415	4 80-120%
Tribromoacetic acid	Standard	40.0	37.9 µg/L	95%	9805-416	4 80-120%
Trichloroacetic acid	Duplicate	1.2	1.2 µg/L	0.0%	9805-118	1
Trichloroacetic acid	Matrix Spike	40.0	36.0 µg/L	90%	9805-158	1

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Miami-Dade Water and Sewer Department**Study#:** 107
Study Title: ICR RSSCT #1

Trichloroacetic acid	Method Blank		ND*	µg/L		9805-413	1
Trichloroacetic acid	Secondary Source Std	20.0	18.0	µg/L	90%	9805-414	1 70-130%
Trichloroacetic acid	Standard	20.0	19.2	µg/L	96%	9805-415	1 80-120%
Trichloroacetic acid	Standard	20.0	19.0	µg/L	95%	9805-415	1 80-120%
Trichloroacetic acid	Standard	40.0	38.0	µg/L	95%	9805-416	1 80-120%

Analysis: HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-134-0

												Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD		
Bromochloroacetic acid	Duplicate	4.9	4.5	µg/L		8.5%	9805-278	1				
Bromochloroacetic acid	Matrix Spike	40.0	39.5	µg/L	99%		9805-176	1				
Bromochloroacetic acid	Method Blank		ND*	µg/L			9805-483	1				
Bromochloroacetic acid	Secondary Source Std	20.0	21.2	µg/L	106%		9805-484	1	70-130%			
Bromochloroacetic acid	Standard	20.0	21.6	µg/L	108%		9805-485	1	80-120%			
Bromochloroacetic acid	Standard	20.0	21.7	µg/L	109%		9805-485	1	80-120%			
Bromochloroacetic acid	Standard	40.0	37.8	µg/L	94%		9805-486	1	80-120%			
Bromodichloroacetic acid	Duplicate	6.0	5.2	µg/L		14.3%	9805-278	1				
Bromodichloroacetic acid	Matrix Spike	40.0	39.1	µg/L	98%		9805-176	1				
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9805-483	1				
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9805-484	1				
Bromodichloroacetic acid	Standard	20.0	22.8	µg/L	114%		9805-485	1	80-120%			
Bromodichloroacetic acid	Standard	20.0	23.0	µg/L	115%		9805-485	1	80-120%			
Bromodichloroacetic acid	Standard	40.0	38.3	µg/L	96%		9805-486	1	80-120%			
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9805-278	2				
Chlorodibromoacetic acid	Matrix Spike	40.0	40.5	µg/L	101%		9805-176	2				
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9805-483	2				
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9805-484	2				
Chlorodibromoacetic acid	Standard	20.0	23.0	µg/L	115%		9805-485	2	80-120%			
Chlorodibromoacetic acid	Standard	20.0	23.2	µg/L	116%		9805-485	2	80-120%			
Chlorodibromoacetic acid	Standard	40.0	39.5	µg/L	99%		9805-486	2	80-120%			
Dibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9805-278	1				
Dibromoacetic acid	Matrix Spike	40.0	39.8	µg/L	99%		9805-176	1				
Dibromoacetic acid	Method Blank		ND*	µg/L			9805-483	1				

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Dibromoacetic acid	Secondary Source Std	20.0	22.8 µg/L	114%	9805-484	1	70-130%
Dibromoacetic acid	Standard	20.0	22.3 µg/L	112%	9805-485	1	80-120%
Dibromoacetic acid	Standard	20.0	22.4 µg/L	112%	9805-485	1	80-120%
Dibromoacetic acid	Standard	40.0	37.9 µg/L	95%	9805-486	1	80-120%
Dichloroacetic acid	Duplicate	22.7	21.2 µg/L	6.8%	9805-278	1	
Dichloroacetic acid	Matrix Spike	40.0	41.6 µg/L	104%	9805-176	1	
Dichloroacetic acid	Method Blank		ND* µg/L		9805-483	1	
Dichloroacetic acid	Secondary Source Std	20.0	22.3 µg/L	112%	9805-484	1	70-130%
Dichloroacetic acid	Standard	20.0	21.2 µg/L	106%	9805-485	1	80-120%
Dichloroacetic acid	Standard	20.0	22.8 µg/L	114%	9805-485	1	80-120%
Dichloroacetic acid	Standard	40.0	40.4 µg/L	101%	9805-486	1	80-120%
Monobromoacetic acid	Duplicate	ND	ND µg/L	NA	9805-278	1	
Monobromoacetic acid	Matrix Spike	40.0	37.9 µg/L	95%	9805-176	1	
Monobromoacetic acid	Method Blank		ND* µg/L		9805-483	1	
Monobromoacetic acid	Secondary Source Std	20.0	21.6 µg/L	108%	9805-484	1	70-130%
Monobromoacetic acid	Standard	20.0	19.4 µg/L	97%	9805-485	1	80-120%
Monobromoacetic acid	Standard	20.0	19.9 µg/L	99%	9805-485	1	80-120%
Monobromoacetic acid	Standard	40.0	39.5 µg/L	99%	9805-486	1	80-120%
Monochloroacetic acid	Duplicate	ND	ND µg/L	NA	9805-278	2	
Monochloroacetic acid	Matrix Spike	40.0	34.3 µg/L	86%	9805-176	2	
Monochloroacetic acid	Method Blank		ND* µg/L		9805-483	2	
Monochloroacetic acid	Secondary Source Std	20.0	20.0 µg/L	100%	9805-484	2	70-130%
Monochloroacetic acid	Standard	20.0	19.0 µg/L	95%	9805-485	2	80-120%
Monochloroacetic acid	Standard	20.0	20.6 µg/L	103%	9805-485	2	80-120%
Monochloroacetic acid	Standard	40.0	38.0 µg/L	95%	9805-486	2	80-120%
Tribromoacetic acid	Duplicate	ND	ND µg/L	NA	9805-278	4	
Tribromoacetic acid	Matrix Spike	40.0	40.5 µg/L	101%	9805-176	4	
Tribromoacetic acid	Method Blank		ND* µg/L		9805-483	4	
Tribromoacetic acid	Secondary Source Std		ND µg/L		9805-484	4	
Tribromoacetic acid	Standard	20.0	21.6 µg/L	108%	9805-485	4	80-120%
Tribromoacetic acid	Standard	20.0	22.1 µg/L	111%	9805-485	4	80-120%
Tribromoacetic acid	Standard	40.0	38.3 µg/L	96%	9805-486	4	80-120%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Trichloroacetic acid	Duplicate	29.0	27.3	µg/L	6.0%	9805-278	1
Trichloroacetic acid	Matrix Spike	40.0	36.9	µg/L	92%	9805-176	1
Trichloroacetic acid	Method Blank		ND*	µg/L		9805-483	1
Trichloroacetic acid	Secondary Source Std	20.0	22.7	µg/L	114%	9805-484	1 70-130%
Trichloroacetic acid	Standard	20.0	20.4	µg/L	102%	9805-485	1 80-120%
Trichloroacetic acid	Standard	20.0	20.5	µg/L	102%	9805-485	1 80-120%
Trichloroacetic acid	Standard	40.0	38.4	µg/L	96%	9805-486	1 80-120%

End of quality control report

QC Results from Montgomery Watson Laboratories

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Miami-Dade Water and Sewer Department
4200 Salzedo Street
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Study#: 107
Study Title: ICR RSSCT #1

Phone: 305-669-7602 Fax: 305-669-5796

QC Batch ID: 77529**Report #:** 42901**Analysis:** CA**Method:** EPA/ML 200.7

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Calcium, Total, ICAP	50	51.4	103.0%		(90 - 110)
LCS2	Calcium, Total, ICAP	50	53.4	107.0%		(90 - 110)
MBLK	Calcium, Total, ICAP	ND	ND			
MS	Calcium, Total, ICAP	50	52.7	105.0%		(80 - 120)

QC Batch ID: 77530**Report #:** 42901**Analysis:** MG**Method:** ML/EPA 200.7

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Magnesium, Total, ICAP	20	19.4	97.0%		(80 - 120)
LCS2	Magnesium, Total, ICAP	20	20.1	100.0%		(80 - 120)
MBLK	Magnesium, Total, ICAP	ND	ND			
MS	Magnesium, Total, ICAP	20	19.5	98.0%		(80 - 120)

QC Batch ID: 77862**Report #:** 42901**Analysis:** NH3**Method:** ML/EPA 350.1

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Ammonia Nitrogen	1	1.08	108.0%		(80 - 120)
LCS2	Ammonia Nitrogen	1	1.04	104.0%		(80 - 120)
MBLK	Ammonia Nitrogen	ND	ND			
MS	Ammonia Nitrogen	1	1.09	109.0%		(80 - 120)
MSD	Ammonia Nitrogen	1	1.12	112.0%		(80 - 120)

End of MW QC report

CommentsPage 1 of 1
Printed on 6/23/99

Mr. Anthony Clemente
Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, FL 33146

Phone: 305-669-7602 Fax: 305-669-5796

Study#: 107
Study Title: ICR RSSCT #1

Analysis comments**Analysis:** Turbidity**Method:** SM 2130 B

Reported turbidity data has been rounded following the requirements of SM 2130 B, reproduced in the table below (Standard Methods, 1995). Note that the reported digits are not necessarily significant.

Turbidity Range	Report to Nearest
0-1.0	0.05
1-10	0.1
10-40	1
40-100	5
100-400	10
400-1000	50
> 1000	100

End of comments

Laboratory Report

Client:

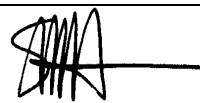
Mr. Anthony Clemente
Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, FL 33146

Phone: 305-669-7602 Fax: 305-669-5796

Study Title: ICR RSSCT #2

Study #: 123

Reviewed By: _____



Stuart M. Hooper

Date Reviewed: 7/13/99

Laboratory Test ResultsPage 1 of 57
Printed on 6/23/99Mr. Anthony Clemente
Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, FL 33146

Phone: 305-669-7602 Fax: 305-669-5796

Study#: 123
Study Title: ICR RSSCT #2

Sample ID: Plant Raw			S&H ID: 9806-720		Date Sampled: 6/19/98						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1	TOC-ICR	TOC	7.74	mg/L	SM 5310 C	1	0.50	6/19/98		7/13/98	7-0-338
2	TOC-ICR	TOC (Dupl)	7.73	mg/L	SM 5310 C	1	0.50	6/19/98		7/14/98	7-0-338
			7.74	mg/L	0.1 % RPD						

Note: Temperature limits

Sample ID:		123. Plant Settled-Drum		S&H ID: 9806-721		Date Sampled: 6/19/98					
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
3	TOC-ICR	TOC	4.64	mg/L	SM 5310 C	1	0.50	6/19/98		7/13/98	7-0-338
4	TOC-ICR	TOC (Dupl)	4.62	mg/L	SM 5310 C	1	0.50	6/19/98		7/13/98	7-0-338
			4.63	mg/L	0.4 % RPD						

Note: Temperature limits

Sample ID: 123. Plant Filtered			S&H ID: 9806-722		Date Sampled: 6/19/98						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
5	TOC-ICR	TOC	4.42	mg/L	SM 5310 C	1	0.50	6/19/98		7/13/98	7-0-338
6	TOC-ICR	TOC (Dupl)	4.45	mg/L	SM 5310 C	1	0.50	6/19/98		7/13/98	7-0-338
			4.44	mg/L	0.7 % RPD						

Note: Temperature limits

Sample ID: 123.Settled on Arrival			S&H ID: 9806-754		Date Sampled: 6/25/98 1:40:00 PM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
7	TOC-ICR	TOC	4.39	mg/L	SM 5310 C	1	0.50	6/25/98		7/13/98	7-0-338
8	TOC-ICR	TOC (Dupl)	4.34	mg/L	SM 5310 C	1	0.50	6/25/98		7/13/98	7-0-338
			4.37	mg/L	1.1 % RPD						

Sample ID: 123.Filtered Cartridge		S&H ID: 9806-755		Date Sampled: 6/25/98 3:15:00 PM						
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
9	TOC-ICR TOC	4.27	mg/L	SM 5310 C	1	0.50	6/25/98		7/13/98	7-0-338
10	TOC-ICR TOC (Dupl)	4.33	mg/L	SM 5310 C	1	0.50	6/25/98		7/13/98	7-0-338
		4.30	mg/L	1.4 % RPD						

Sample ID: 123.10.pH9.2.Eff-1			S&H ID: 9806-763		Date Sampled: 6/26/98 9:33:00 PM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
11	Cl2Dose	Chlorine Dose	1.74	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/1/98		7/1/98	n/a
12	Cl2Res	Chlorine Residual	1.20	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/1/98		7/1/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

13	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	92.4 %	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
14	HAA-ICR 2-Bromopropionic acid (Surrogate)	90.8 %	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
15	HAA-ICR Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
16	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
17	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
18	HAA-ICR Dibromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
19	HAA-ICR Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
20	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
21	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
22	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/1/98	7/9/98	7/10/98	0-170-0
23	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
24	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
25	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
26	pH pH	8.7 Unit	SM 4500-H+ B	1	n/a	6/26/98		6/26/98	n/a
27	TEMP Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/1/98		7/1/98	n/a
28	TEMP Temperature	26.7 °C	SM 2550 B	1	n/a	6/26/98		6/26/98	n/a
29	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	7/1/98		7/1/98	n/a
30	TOC-ICR TOC	ND mg/L	SM 5310 C	1	0.50	6/26/98		6/27/98	7-0-308
31	TOC-ICR TOC (Dupl)	ND mg/L	SM 5310 C	1	0.50	6/26/98		6/27/98	7-0-308
		ND mg/L							
32	TOX-ICR TOX	ND µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
33	TOX-ICR TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
		ND µg Cl-/L							
34	THM-ICR 1,2,3-Trichloropropane (Surrogate)	87.6 %	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
35	THM-ICR Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
36	THM-ICR Bromoform	ND µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
37	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
38	THM-ICR Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
39	UV-ICR UV	ND 1/cm	SM 5910 B	1	0.009	6/26/98		6/27/98	8-0-209
40	UV-ICR UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	6/26/98		6/27/98	8-0-209
		ND 1/cm							

Sample ID: 123.10.pH9.2.Eff-2

S&H ID: 9806-764

Date Sampled: 6/27/98 2:17:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
41	Cl2Dose	Chlorine Dose	1.92	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/1/98		7/1/98	n/a
42	Cl2Res	Chlorine Residual	1.12	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/1/98		7/1/98	n/a
43	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)		94.8	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

44	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.8 %	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
45	HAA-ICR	Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
46	HAA-ICR	Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
47	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
48	HAA-ICR	Dibromoacetic acid	1.0 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
49	HAA-ICR	Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
50	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
51	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
52	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/1/98	7/9/98	7/10/98	0-170-0
53	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
54	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
55	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
56	pH	pH	8.6 Unit	SM 4500-H+ B	1	n/a	6/27/98		6/27/98	n/a
57	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/1/98		7/1/98	n/a
58	TEMP	Temperature	25.3 °C	SM 2550 B	1	n/a	6/27/98		6/27/98	n/a
59	TIME	Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	7/1/98		7/1/98	n/a
60	TOC-ICR	TOC	0.66 mg/L	SM 5310 C	1	0.50	6/27/98		6/29/98	7-0-313
61	TOC-ICR	TOC (Dupl)	0.61 mg/L	SM 5310 C	1	0.50	6/27/98		6/29/98	7-0-313
			0.64 mg/L	7.8 % RPD						
62	TOX-ICR	TOX	ND µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
63	TOX-ICR	TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
			ND µg Cl-/L							
64	THM-ICR	1,2,3-Trichloropropane (Surrogate)	94.0 %	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
65	THM-ICR	Bromodichloromethane	1.1 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
66	THM-ICR	Bromoform	8.4 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
67	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
68	THM-ICR	Dibromochloromethane	3.9 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
69	UV-ICR	UV	ND 1/cm	SM 5910 B	1	0.009	6/27/98		6/28/98	8-0-210
70	UV-ICR	UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	6/27/98		6/28/98	8-0-210
			ND 1/cm							

Sample ID: 123.10.pH9.2.Eff-3

S&H ID: 9806-765

Date Sampled: 6/27/98 7:36:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
71	Cl2Dose	Chlorine Dose	2.16	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/1/98		7/1/98	n/a
72	Cl2Res	Chlorine Residual	1.18	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/1/98		7/1/98	n/a
73	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	92.4	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
74	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.8	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

75	HAA-ICR	Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
76	HAA-ICR	Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
77	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
78	HAA-ICR	Dibromoacetic acid	1.8 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
79	HAA-ICR	Dichloroacetic acid	1.7 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
80	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
81	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
82	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/1/98	7/9/98	7/10/98	0-170-0
83	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
84	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
85	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
86	pH	pH	8.8 Unit	SM 4500-H+ B	1	n/a	6/27/98		6/27/98	n/a
87	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/1/98		7/1/98	n/a
88	TEMP	Temperature	26.7 °C	SM 2550 B	1	n/a	6/27/98		6/27/98	n/a
89	TIME	Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	7/1/98		7/1/98	n/a
90	TOC-ICR	TOC	1.24 mg/L	SM 5310 C	1	0.50	6/27/98		6/29/98	7-0-313
91	TOC-ICR	TOC (Dupl)	1.29 mg/L	SM 5310 C	1	0.50	6/27/98		6/29/98	7-0-313
			1.27 mg/L	3.9 % RPD						
92	TOX-ICR	TOX	33 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
93	TOX-ICR	TOX (Dupl)	34 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
			34 µg Cl-/L	2.9 % RPD						
94	THM-ICR	1,2,3-Trichloropropane (Surrogate)	98.8 %	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
95	THM-ICR	Bromodichloromethane	2.8 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
96	THM-ICR	Bromoform	12.0 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
97	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
98	THM-ICR	Dibromochloromethane	8.9 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
99	UV-ICR	UV	0.013 1/cm	SM 5910 B	1	0.009	6/27/98		6/28/98	8-0-210
100	UV-ICR	UV (Dupl)	0.013 1/cm	SM 5910 B	1	0.009	6/27/98		6/28/98	8-0-210
			0.013 1/cm	0.0 % RPD						

Sample ID: 123.10.pH9.2.Eff-4

S&H ID: 9806-766

Date Sampled: 6/27/98 10:27:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
101	Cl2Dose	Chlorine Dose	2.25	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/1/98		7/1/98	n/a
102	Cl2Res	Chlorine Residual	1.28	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/1/98		7/1/98	n/a
103	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	94.8	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
104	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.4	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
105	HAA-ICR	Bromochloroacetic acid	1.2	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
106	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

107	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
108	HAA-ICR	Dibromoacetic acid	2.0 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
109	HAA-ICR	Dichloroacetic acid	4.2 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
110	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
111	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
112	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/1/98	7/9/98	7/10/98	0-170-0
113	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
114	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
115	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
116	pH	pH	8.5 Unit	SM 4500-H+ B	1	n/a	6/27/98		6/27/98	n/a
117	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/1/98		7/1/98	n/a
118	TEMP	Temperature	26.7 °C	SM 2550 B	1	n/a	6/27/98		6/27/98	n/a
119	TIME	Cl2 Incubation Time	6.3 hrs	n/a	1	n/a	7/1/98		7/1/98	n/a
120	TOC-ICR	TOC	1.49 mg/L	SM 5310 C	1	0.50	6/27/98		6/29/98	7-0-313
121	TOC-ICR	TOC (Dupl)	1.48 mg/L	SM 5310 C	1	0.50	6/27/98		6/29/98	7-0-313
			1.48 mg/L	0.7 % RPD						
122	TOX-ICR	TOX	45 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
123	TOX-ICR	TOX (Dupl)	47 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
			46 µg Cl-/L	4.3 % RPD						
124	THM-ICR	1,2,3-Trichloropropane (Surrogate)	85.2 %	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
125	THM-ICR	Bromodichloromethane	4.2 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
126	THM-ICR	Bromoform	12.7 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
127	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
128	THM-ICR	Dibromochloromethane	11.4 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
129	UV-ICR	UV	0.016 1/cm	SM 5910 B	1	0.009	6/27/98		6/28/98	8-0-210
130	UV-ICR	UV (Dupl)	0.017 1/cm	SM 5910 B	1	0.009	6/27/98		6/28/98	8-0-210
			0.017 1/cm	5.9 % RPD						

Sample ID: 123.10.pH9.2.Eff-5

S&H ID: 9806-767

Date Sampled: 6/28/98 3:45:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
131	Cl2Dose	Chlorine Dose	2.32	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/1/98		7/1/98	n/a
132	Cl2Res	Chlorine Residual	1.27	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/1/98		7/1/98	n/a
133	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	91.2	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
134	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.4	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
135	HAA-ICR	Bromochloroacetic acid	1.7	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
136	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
137	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
138	HAA-ICR	Dibromoacetic acid	2.4	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

139	HAA-ICR	Dichloroacetic acid	6.4 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
140	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
141	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
142	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/1/98	7/9/98	7/10/98	0-170-0
143	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
144	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
145	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
146	pH	pH	8.6 Unit	SM 4500-H+ B	1	n/a	6/28/98		6/28/98	n/a
147	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/1/98		7/1/98	n/a
148	TEMP	Temperature	25.0 °C	SM 2550 B	1	n/a	6/28/98		6/28/98	n/a
149	TIME	Cl2 Incubation Time	6.3 hrs	n/a	1	n/a	7/1/98		7/1/98	n/a
150	TOC-ICR	TOC	1.66 mg/L	SM 5310 C	1	0.50	6/28/98		6/29/98	7-0-313
151	TOC-ICR	TOC (Dupl)	1.63 mg/L	SM 5310 C	1	0.50	6/28/98		6/29/98	7-0-313
			1.65 mg/L	1.8 % RPD						
152	TOX-ICR	TOX	65 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
153	TOX-ICR	TOX (Dupl)	54 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
			60 µg Cl-/L	18.3 % RPD						
154	THM-ICR	1,2,3-Trichloropropane (Surrogate)	98.0 %	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
155	THM-ICR	Bromodichloromethane	5.6 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
156	THM-ICR	Bromoform	14.0 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
157	THM-ICR	Chloroform	1.2 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
158	THM-ICR	Dibromochloromethane	14.2 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
159	UV-ICR	UV	0.019 1/cm	SM 5910 B	1	0.009	6/28/98		6/29/98	8-0-211
160	UV-ICR	UV (Dupl)	0.019 1/cm	SM 5910 B	1	0.009	6/28/98		6/29/98	8-0-211
			0.019 1/cm	0.0 % RPD						

Sample ID: 123.10.pH9.2.Eff-7

S&H ID: 9806-769

Date Sampled: 6/28/98 12:08:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Sample	Prep.	Anal.	QC Batch
161	Cl2Dose	Chlorine Dose	2.44	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/1/98		7/1/98	n/a
162	Cl2Res	Chlorine Residual	1.32	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/1/98		7/1/98	n/a
163	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	96.8	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
164	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.8	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
165	HAA-ICR	Bromochloroacetic acid	2.7	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
166	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
167	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
168	HAA-ICR	Dibromoacetic acid	2.9	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
169	HAA-ICR	Dichloroacetic acid	6.6	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
170	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

171	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
172	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/1/98	7/9/98	7/10/98	0-170-0
173	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
174	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
175	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
176	pH	pH	8.6 Unit	SM 4500-H+ B	1	n/a	6/28/98		6/28/98	n/a
177	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/1/98		7/1/98	n/a
178	TEMP	Temperature	24.7 °C	SM 2550 B	1	n/a	6/28/98		6/28/98	n/a
179	TIME	Cl2 Incubation Time	6.3 hrs	n/a	1	n/a	7/1/98		7/1/98	n/a
180	TOC-ICR	TOC	1.97 mg/L	SM 5310 C	1	0.50	6/28/98		6/29/98	7-0-313
181	TOC-ICR	TOC (Dupl)	1.98 mg/L	SM 5310 C	1	0.50	6/28/98		6/29/98	7-0-313
			1.98 mg/L	0.5 % RPD						
182	TOX-ICR	TOX	65 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/7/98	12-0-162
183	TOX-ICR	TOX (Dupl)	63 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/7/98	12-0-162
			64 µg Cl-/L	3.1 % RPD						
184	THM-ICR	1,2,3-Trichloropropane (Surrogate)	90.8 %	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
185	THM-ICR	Bromodichloromethane	7.2 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
186	THM-ICR	Bromoform	14.3 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
187	THM-ICR	Chloroform	1.9 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
188	THM-ICR	Dibromochloromethane	16.2 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
189	UV-ICR	UV	0.023 1/cm	SM 5910 B	1	0.009	6/28/98		6/29/98	8-0-211
190	UV-ICR	UV (Dupl)	0.023 1/cm	SM 5910 B	1	0.009	6/28/98		6/29/98	8-0-211
			0.023 1/cm	0.0 % RPD						

Sample ID: 123.10.pH9.2.Eff-9

S&H ID: 9806-771

Date Sampled: 6/28/98 8:25:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
191	Cl2Dose	Chlorine Dose	2.57	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/1/98		7/1/98	n/a
192	Cl2Res	Chlorine Residual	1.33	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/1/98		7/1/98	n/a
193	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	93.6	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
194	HAA-ICR	2-Bromopropionic acid (Surrogate)	92.0	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
195	HAA-ICR	Bromochloroacetic acid	3.3	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
196	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
197	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
198	HAA-ICR	Dibromoacetic acid	2.8	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
199	HAA-ICR	Dichloroacetic acid	6.4	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
200	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
201	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
202	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/1/98	7/9/98	7/10/98	0-170-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

203	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
204	pH	Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
205	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
206	pH	pH	8.6 Unit	SM 4500-H+ B	1	n/a	6/28/98		6/28/98	n/a
207	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/1/98		7/1/98	n/a
208	TEMP	Temperature	26.3 °C	SM 2550 B	1	n/a	6/28/98		6/28/98	n/a
209	TIME	Cl2 Incubation Time	6.3 hrs	n/a	1	n/a	7/1/98		7/1/98	n/a
210	TOC-ICR	TOC	2.28 mg/L	SM 5310 C	1	0.50	6/28/98		6/29/98	7-0-313
211	TOC-ICR	TOC (Dupl)	2.27 mg/L	SM 5310 C	1	0.50	6/28/98		6/29/98	7-0-313
			2.27 mg/L	0.4 % RPD						
212	TOX-ICR	TOX	84 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/9/98	12-0-164
213	TOX-ICR	TOX (Dupl)	83 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/9/98	12-0-164
			84 µg Cl-/L	1.2 % RPD						
214	THM-ICR	1,2,3-Trichloropropane (Surrogate)	95.6 %	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
215	THM-ICR	Bromodichloromethane	9.5 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
216	THM-ICR	Bromoform	13.3 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
217	THM-ICR	Chloroform	2.9 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
218	THM-ICR	Dibromochloromethane	18.2 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
219	UV-ICR	UV	0.029 1/cm	SM 5910 B	1	0.009	6/28/98		6/29/98	8-0-211
220	UV-ICR	UV (Dupl)	0.029 1/cm	SM 5910 B	1	0.009	6/28/98		6/29/98	8-0-211
			0.029 1/cm	0.0 % RPD						

Sample ID: 123.10.pH9.2.Eff-14

S&H ID: 9806-776

Date Sampled: 6/29/98 6:49:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
221	Cl2Dose	Chlorine Dose	2.03	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/3/98		7/3/98	n/a
222	Cl2Res	Chlorine Residual	0.80	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/3/98		7/3/98	n/a
223	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	106.4	%	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
224	HAA-ICR	2-Bromopropionic acid (Surrogate)	99.2	%	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
225	HAA-ICR	Bromochloroacetic acid	5.7	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
226	HAA-ICR	Bromodichloroacetic acid	1.4	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
227	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/3/98	7/13/98	7/14/98	0-171-0
228	HAA-ICR	Dibromoacetic acid	6.6	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
229	HAA-ICR	Dichloroacetic acid	7.1	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
230	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
231	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/3/98	7/13/98	7/14/98	0-171-0
232	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/3/98	7/13/98	7/14/98	0-171-0
233	HAA-ICR	Trichloroacetic acid	1.1	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
234	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/3/98		7/3/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

235	pH	Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	7/3/98	7/3/98	n/a
236	pH	pH	8.4 Unit	SM 4500-H+ B	1	n/a	6/29/98	6/29/98	n/a
237	TEMP	Cl2 Temperature	27.3 °C	SM 2550 B	1	n/a	7/3/98	7/3/98	n/a
238	TEMP	Temperature	23.3 °C	SM 2550 B	1	n/a	6/29/98	6/29/98	n/a
239	TIME	Cl2 Incubation Time	5.7 hrs	n/a	1	n/a	7/3/98	7/3/98	n/a
240	TOC-ICR	TOC	2.40 mg/L	SM 5310 C	1	0.50	6/29/98	6/30/98	7-0-314
241	TOC-ICR	TOC (Dupl)	2.41 mg/L	SM 5310 C	1	0.50	6/29/98	6/30/98	7-0-314
			2.41 mg/L	0.4 % RPD					
242	TOX-ICR	TOX	82 µg Cl-/L	SM 5320 B	1	25	7/3/98	7/10/98	12-0-165
243	TOX-ICR	TOX (Dupl)	93 µg Cl-/L	SM 5320 B	1	25	7/3/98	7/10/98	12-0-165
			88 µg Cl-/L	12.5 % RPD					
244	THM-ICR	1,2,3-Trichloropropane (Surrogate)	92.0 %	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98 0-172-0
245	THM-ICR	Bromodichloromethane	10.8 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98 0-172-0
246	THM-ICR	Bromoform	13.5 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98 0-172-0
247	THM-ICR	Chloroform	3.6 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98 0-172-0
248	THM-ICR	Dibromochloromethane	20.1 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98 0-172-0
249	UV-ICR	UV	0.035 1/cm	SM 5910 B	1	0.009	6/29/98	6/30/98	8-0-212
250	UV-ICR	UV (Dupl)	0.035 1/cm	SM 5910 B	1	0.009	6/29/98	6/30/98	8-0-212
			0.035 1/cm	0.0 % RPD					

Sample ID: 123.10.pH9.2.Eff-16

S&H ID: 9806-778

Date Sampled: 6/30/98 6:03:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
251	Cl2Dose	Chlorine Dose	2.11	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/2/98		7/2/98	n/a
252	Cl2Res	Chlorine Residual	0.81	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/2/98		7/2/98	n/a
253	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	109.6	%	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
254	HAA-ICR	2-Bromopropionic acid (Surrogate)	92.0	%	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
255	HAA-ICR	Bromochloroacetic acid	4.6	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
256	HAA-ICR	Bromodichloroacetic acid	1.4	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
257	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/2/98	7/13/98	7/14/98	0-171-0
258	HAA-ICR	Dibromoacetic acid	5.0	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
259	HAA-ICR	Dichloroacetic acid	5.8	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
260	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
261	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/2/98	7/13/98	7/14/98	0-171-0
262	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/2/98	7/13/98	7/14/98	0-171-0
263	HAA-ICR	Trichloroacetic acid	1.0	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
264	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	7/2/98		7/2/98	n/a
265	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/2/98		7/2/98	n/a
266	pH	pH	8.9	Unit	SM 4500-H+ B	1	n/a	6/30/98		6/30/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

267	TEMP	Cl2 Temperature	27.3 °C	SM 2550 B	1	n/a	7/2/98	7/2/98	n/a
268	TEMP	Temperature	21.4 °C	SM 2550 B	1	n/a	6/30/98	6/30/98	n/a
269	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/2/98	7/2/98	n/a
270	TOC-ICR	TOC	2.56 mg/L	SM 5310 C	1	0.50	6/30/98	6/30/98	7-0-314
271	TOC-ICR	TOC (Dupl)	2.59 mg/L	SM 5310 C	1	0.50	6/30/98	6/30/98	7-0-314
			2.58 mg/L	1.2 % RPD					
272	TOX-ICR	TOX	104 µg Cl-/L	SM 5320 B	1	25	7/2/98	7/10/98	12-0-165
273	TOX-ICR	TOX (Dupl)	104 µg Cl-/L	SM 5320 B	1	25	7/2/98	7/10/98	12-0-165
			104 µg Cl-/L	0.0 % RPD					
274	THM-ICR	1,2,3-Trichloropropane (Surrogate)	92.4 %	EPA 551.1	1	1.0	7/2/98	7/14/98	0-172-0
275	THM-ICR	Bromodichloromethane	12.3 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	0-172-0
276	THM-ICR	Bromoform	12.1 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	0-172-0
277	THM-ICR	Chloroform	4.4 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	0-172-0
278	THM-ICR	Dibromochloromethane	21.2 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	0-172-0
279	UV-ICR	UV	0.039 1/cm	SM 5910 B	1	0.009	6/30/98	6/30/98	8-0-212
280	UV-ICR	UV (Dupl)	0.039 1/cm	SM 5910 B	1	0.009	6/30/98	6/30/98	8-0-212
			0.039 1/cm	0.0 % RPD					

Sample ID: 123.10.pH9.2.Eff-17 S&H ID: 9806-779 Date Sampled: 6/30/98 11:35:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
281	Cl2Dose	Chlorine Dose	2.16	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/2/98		7/2/98	n/a
282	Cl2Res	Chlorine Residual	0.79	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/2/98		7/2/98	n/a
283	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	105.2	%	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
284	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.8	%	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
285	HAA-ICR	Bromochloroacetic acid	5.3	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
286	HAA-ICR	Bromodichloroacetic acid	1.5	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
287	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/2/98	7/13/98	7/14/98	0-171-0
288	HAA-ICR	Dibromoacetic acid	5.8	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
289	HAA-ICR	Dichloroacetic acid	6.6	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
290	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
291	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/2/98	7/13/98	7/14/98	0-171-0
292	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/2/98	7/13/98	7/14/98	0-171-0
293	HAA-ICR	Trichloroacetic acid	1.2	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
294	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/2/98		7/2/98	n/a
295	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/2/98		7/2/98	n/a
296	pH	pH	8.5	Unit	SM 4500-H+ B	1	n/a	6/30/98		6/30/98	n/a
297	TEMP	Cl2 Temperature	27.3	°C	SM 2550 B	1	n/a	7/2/98		7/2/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

298	TEMP	Temperature	22.4 °C	SM 2550 B	1	n/a	6/30/98	6/30/98	n/a
299	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/2/98	7/2/98	n/a
300	TOC-ICR	TOC	2.73 mg/L	SM 5310 C	1	0.50	6/30/98	6/30/98	7-0-314
301	TOC-ICR	TOC (Dupl)	2.75 mg/L	SM 5310 C	1	0.50	6/30/98	6/30/98	7-0-314
			2.74 mg/L	0.7 % RPD					
302	TOX-ICR	TOX	104 µg Cl-/L	SM 5320 B	1	25	7/2/98	7/10/98	12-0-165
303	TOX-ICR	TOX (Dupl)	103 µg Cl-/L	SM 5320 B	1	25	7/2/98	7/10/98	12-0-165
			104 µg Cl-/L	1.0 % RPD					
304	THM-ICR	1,2,3-Trichloropropane (Surrogate)	99.2 %	EPA 551.1	1	1.0	7/2/98	7/14/98	7/14/98 0-172-0
305	THM-ICR	Bromodichloromethane	12.5 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	7/14/98 0-172-0
306	THM-ICR	Bromoform	11.7 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	7/14/98 0-172-0
307	THM-ICR	Chloroform	4.8 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	7/14/98 0-172-0
308	THM-ICR	Dibromochloromethane	20.8 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	7/14/98 0-172-0

Sample ID: 123.10.pH9.2.Eff-18

S&H ID: 9806-780

Date Sampled: 7/1/98 3:59:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
309	Cl2Dose	Chlorine Dose	2.18	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/3/98		7/3/98	n/a
310	Cl2Res	Chlorine Residual	0.70	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/3/98		7/3/98	n/a
311	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	104.0	%	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
312	HAA-ICR	2-Bromopropionic acid (Surrogate)	95.6	%	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
313	HAA-ICR	Bromochloroacetic acid	5.3	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
314	HAA-ICR	Bromodichloroacetic acid	1.6	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
315	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/3/98	7/13/98	7/14/98	0-171-0
316	HAA-ICR	Dibromoacetic acid	5.3	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
317	HAA-ICR	Dichloroacetic acid	6.9	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
318	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
319	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/3/98	7/13/98	7/14/98	0-171-0
320	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/3/98	7/13/98	7/14/98	0-171-0
321	HAA-ICR	Trichloroacetic acid	1.2	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
322	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	7/3/98		7/3/98	n/a
323	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/3/98		7/3/98	n/a
324	pH	pH	8.7	Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
325	TEMP	Cl2 Temperature	27.3	°C	SM 2550 B	1	n/a	7/3/98		7/3/98	n/a
326	TEMP	Temperature	22.5	°C	SM 2550 B	1	n/a	7/1/98		7/1/98	n/a
327	TIME	Cl2 Incubation Time	5.7	hrs	n/a	1	n/a	7/3/98		7/3/98	n/a
328	TOC-ICR	TOC	2.88	mg/L	SM 5310 C	1	0.50	7/1/98		7/1/98	7-0-315
329	TOC-ICR	TOC (Dupl)	2.88	mg/L	SM 5310 C	1	0.50	7/1/98		7/1/98	7-0-315

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

		2.88 mg/L	0.0 % RPD						
330	TOX-ICR TOX	117 µg Cl-/L	SM 5320 B	1	25	7/3/98		7/10/98	12-0-165
331	TOX-ICR TOX (Dupl)	104 µg Cl-/L	SM 5320 B	1	25	7/3/98		7/10/98	12-0-165
		111 µg Cl-/L	11.7 % RPD						
332	THM-ICR 1,2,3-Trichloropropane (Surrogate)	98.0 %	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
333	THM-ICR 1,2,3-Trichloropropane (Surrogate) (Lab Dupl)	94.8 %	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
		96.4 %	3.3 % RPD						
334	THM-ICR Bromodichloromethane	14.8 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
335	THM-ICR Bromodichloromethane (Lab Dupl)	15.0 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
		14.9 µg/L	1.3 % RPD						
336	THM-ICR Bromoform	11.0 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
337	THM-ICR Bromoform (Lab Dupl)	11.5 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
		11.3 µg/L	4.4 % RPD						
338	THM-ICR Chloroform	6.5 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
339	THM-ICR Chloroform (Lab Dupl)	6.6 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
		6.5 µg/L	1.5 % RPD						
340	THM-ICR Dibromochloromethane	22.0 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
341	THM-ICR Dibromochloromethane (Lab Dupl)	22.2 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
		22.1 µg/L	0.9 % RPD						
342	UV-ICR UV	0.046 1/cm	SM 5910 B	1	0.009	7/1/98		7/1/98	8-0-213
343	UV-ICR UV (Dupl)	0.046 1/cm	SM 5910 B	1	0.009	7/1/98		7/1/98	8-0-213
		0.046 1/cm	0.0 % RPD						

Sample ID: 123.10.pH9.2.Eff-19

S&H ID: 9806-781

Date Sampled: 7/2/98 7:43:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
344	Cl2Dose Chlorine Dose	2.25 mg/L as Cl2	SM 4500-Cl B	1	n/a	7/3/98		7/3/98	n/a
345	Cl2Res Chlorine Residual	0.68 mg/L as Cl2	SM 4500-Cl F	1	0.10	7/3/98		7/3/98	n/a
346	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	106.8 %	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
347	HAA-ICR 2-Bromopropionic acid (Surrogate)	98.4 %	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
348	HAA-ICR Bromochloroacetic acid	6.0 µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
349	HAA-ICR Bromodichloroacetic acid	1.8 µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
350	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/3/98	7/13/98	7/14/98	0-171-0
351	HAA-ICR Dibromoacetic acid	6.0 µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
352	HAA-ICR Dichloroacetic acid	7.2 µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
353	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
354	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/3/98	7/13/98	7/14/98	0-171-0
355	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/3/98	7/13/98	7/14/98	0-171-0
356	HAA-ICR Trichloroacetic acid	1.5 µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2

357	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	7/3/98	7/3/98	n/a
358	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/3/98	7/3/98	n/a
359	pH	pH	8.6	Unit	SM 4500-H+ B	1	n/a	7/2/98	7/2/98	n/a
360	TEMP	Cl2 Temperature	27.3	°C	SM 2550 B	1	n/a	7/3/98	7/3/98	n/a
361	TEMP	Temperature	21.7	°C	SM 2550 B	1	n/a	7/2/98	7/2/98	n/a
362	TIME	Cl2 Incubation Time	5.7	hrs	n/a	1	n/a	7/3/98	7/3/98	n/a
363	TOC-ICR	TOC	3.09	mg/L	SM 5310 C	1	0.50	7/2/98	7/2/98	7-0-318
364	TOC-ICR	TOC (Dupl)	3.12	mg/L	SM 5310 C	1	0.50	7/2/98	7/2/98	7-0-318
			3.11	mg/L	1.0 % RPD					
365	TOX-ICR	TOX	122	µg Cl-/L	SM 5320 B	1	25	7/3/98	7/13/98	12-0-166
366	TOX-ICR	TOX (Dupl)	122	µg Cl-/L	SM 5320 B	1	25	7/3/98	7/13/98	12-0-166
			122	µg Cl-/L	0.0 % RPD					
367	THM-ICR	1,2,3-Trichloropropane (Surrogate)	93.6	%	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98 0-172-0
368	THM-ICR	Bromodichloromethane	16.3	µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98 0-172-0
369	THM-ICR	Bromoform	10.4	µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98 0-172-0
370	THM-ICR	Chloroform	7.8	µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98 0-172-0
371	THM-ICR	Dibromochloromethane	22.5	µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98 0-172-0
372	UV-ICR	UV	0.052	1/cm	SM 5910 B	1	0.009	7/2/98	7/2/98	8-0-214
373	UV-ICR	UV (Dupl)	0.052	1/cm	SM 5910 B	1	0.009	7/2/98	7/2/98	8-0-214
			0.052	1/cm	0.0 % RPD					

Sample ID: 123.10.pH9.2.Eff-21**S&H ID:** 9806-783**Date Sampled:** 7/3/98 10:35:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
374	pH	pH	8.7	Unit	SM 4500-H+ B	1	n/a	7/3/98		7/3/98	n/a
375	TEMP	Temperature	23.6	°C	SM 2550 B	1	n/a	7/3/98		7/3/98	n/a
376	TOC-ICR	TOC	3.39	mg/L	SM 5310 C	1	0.50	7/3/98		7/4/98	7-0-323
377	TOC-ICR	TOC (Dupl)	3.37	mg/L	SM 5310 C	1	0.50	7/3/98		7/4/98	7-0-323
			3.38	mg/L	0.6 % RPD						

Sample ID: 123.10.pH9.2.Eff-5d**S&H ID:** 9806-793**Date Sampled:** 6/28/98 3:45:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
378	Cl2Dose	Chlorine Dose	2.33	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/1/98		7/1/98	n/a
379	Cl2Res	Chlorine Residual	1.24	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/1/98		7/1/98	n/a
380	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	93.6	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
381	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.8	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
382	HAA-ICR	Bromochloroacetic acid	1.6	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
383	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

384	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
385	HAA-ICR	Dibromoacetic acid	2.2 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
386	HAA-ICR	Dichloroacetic acid	5.9 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
387	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
388	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
389	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/1/98	7/9/98	7/10/98	0-170-0
390	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
391	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
392	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
393	pH	pH	8.6 Unit	SM 4500-H+ B	1	n/a	6/28/98		6/28/98	n/a
394	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/1/98		7/1/98	n/a
395	TEMP	Temperature	25.0 °C	SM 2550 B	1	n/a	6/28/98		6/28/98	n/a
396	TIME	Cl2 Incubation Time	6.3 hrs	n/a	1	n/a	7/1/98		7/1/98	n/a
397	TOC-ICR	TOC	1.70 mg/L	SM 5310 C	1	0.50	6/28/98		6/29/98	7-0-313
398	TOC-ICR	TOC (Dupl)	1.68 mg/L	SM 5310 C	1	0.50	6/28/98		6/29/98	7-0-313
			1.69 mg/L	1.2 % RPD						
399	TOX-ICR	TOX	56 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
400	TOX-ICR	TOX (Dupl)	52 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/8/98	12-0-163
			54 µg Cl-/L	7.4 % RPD						
401	THM-ICR	1,2,3-Trichloropropane (Surrogate)	90.8 %	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
402	THM-ICR	Bromodichloromethane	5.3 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
403	THM-ICR	Bromoform	14.1 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
404	THM-ICR	Chloroform	1.4 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
405	THM-ICR	Dibromochloromethane	13.8 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
406	UV-ICR	UV	0.019 1/cm	SM 5910 B	1	0.009	6/28/98		6/29/98	8-0-211
407	UV-ICR	UV (Dupl)	0.019 1/cm	SM 5910 B	1	0.009	6/28/98		6/29/98	8-0-211
			0.019 1/cm	0.0 % RPD						

Sample ID: 123.10.pH9.2.Eff-9d

S&H ID: 9806-794

Date Sampled: 6/28/98 8:25:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
408	Cl2Dose	Chlorine Dose	2.53	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/1/98		7/1/98	n/a
409	Cl2Res	Chlorine Residual	1.23	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/1/98		7/1/98	n/a
410	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	99.2	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
411	HAA-ICR	2-Bromopropionic acid (Surrogate)	91.2	%	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
412	HAA-ICR	Bromochloroacetic acid	3.2	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
413	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
414	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
415	HAA-ICR	Dibromoacetic acid	2.7	µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

416	HAA-ICR	Dichloroacetic acid	6.2 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
417	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
418	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
419	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/1/98	7/9/98	7/10/98	0-170-0
420	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
421	pH	Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
422	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
423	pH	pH	8.6 Unit	SM 4500-H+ B	1	n/a	6/28/98		6/28/98	n/a
424	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/1/98		7/1/98	n/a
425	TEMP	Temperature	26.2 °C	SM 2550 B	1	n/a	6/28/98		6/28/98	n/a
426	TIME	Cl2 Incubation Time	6.3 hrs	n/a	1	n/a	7/1/98		7/1/98	n/a
427	TOC-ICR	TOC	2.21 mg/L	SM 5310 C	1	0.50	6/28/98		6/30/98	7-0-314
428	TOC-ICR	TOC (Dupl)	2.17 mg/L	SM 5310 C	1	0.50	6/28/98		6/30/98	7-0-314
			2.19 mg/L	1.8 % RPD						
429	TOX-ICR	TOX	82 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/7/98	12-0-162
430	TOX-ICR	TOX (Dupl)	81 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/7/98	12-0-162
			82 µg Cl-/L	1.2 % RPD						
431	THM-ICR	1,2,3-Trichloropropane (Surrogate)	90.8 %	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
432	THM-ICR	Bromodichloromethane	10.1 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
433	THM-ICR	Bromoform	13.5 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
434	THM-ICR	Chloroform	3.1 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
435	THM-ICR	Dibromochloromethane	19.8 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
436	UV-ICR	UV	0.029 1/cm	SM 5910 B	1	0.009	6/28/98		6/29/98	8-0-211
437	UV-ICR	UV (Dupl)	0.029 1/cm	SM 5910 B	1	0.009	6/28/98		6/29/98	8-0-211
			0.029 1/cm	0.0 % RPD						

Sample ID: 123.10.pH9.2.Eff-17d S&H ID: 9806-797 Date Sampled: 6/30/98 11:35:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Sample	Prep.	Anal.	QC Batch
438	Cl2Dose	Chlorine Dose	2.16	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/2/98		7/2/98	n/a
439	Cl2Res	Chlorine Residual	0.80	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/2/98		7/2/98	n/a
440	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	100.8	%	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
441	HAA-ICR	2-Bromopropionic acid (Surrogate)	96.8	%	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
442	HAA-ICR	Bromochloroacetic acid	5.2	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
443	HAA-ICR	Bromodichloroacetic acid	1.3	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
444	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/2/98	7/13/98	7/14/98	0-171-0
445	HAA-ICR	Dibromoacetic acid	5.6	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
446	HAA-ICR	Dichloroacetic acid	6.9	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
447	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

448	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/2/98	7/13/98	7/14/98	0-171-0
449	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/2/98	7/13/98	7/14/98	0-171-0
450	HAA-ICR	Trichloroacetic acid	1.1 µg/L	EPA 552.2	1	1.0	7/2/98	7/13/98	7/14/98	0-171-0
451	pH	Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	7/2/98		7/2/98	n/a
452	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/2/98		7/2/98	n/a
453	pH	pH	8.5 Unit	SM 4500-H+ B	1	n/a	6/30/98		6/30/98	n/a
454	TEMP	Cl2 Temperature	27.3 °C	SM 2550 B	1	n/a	7/2/98		7/2/98	n/a
455	TEMP	Temperature	22.4 °C	SM 2550 B	1	n/a	6/30/98		6/30/98	n/a
456	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/2/98		7/2/98	n/a
457	TOC-ICR	TOC	2.66 mg/L	SM 5310 C	1	0.50	6/30/98		7/1/98	7-0-315
458	TOC-ICR	TOC (Dupl)	2.69 mg/L	SM 5310 C	1	0.50	6/30/98		7/1/98	7-0-315
			2.67 mg/L	1.1 % RPD						
459	TOX-ICR	TOX	103 µg Cl-/L	SM 5320 B	1	25	7/2/98		7/10/98	12-0-165
460	TOX-ICR	TOX (Dupl)	103 µg Cl-/L	SM 5320 B	1	25	7/2/98		7/10/98	12-0-165
			103 µg Cl-/L	0.0 % RPD						
461	THM-ICR	1,2,3-Trichloropropane (Surrogate)	92.4 %	EPA 551.1	1	1.0	7/2/98	7/14/98	7/14/98	0-172-0
462	THM-ICR	Bromodichloromethane	13.7 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	7/14/98	0-172-0
463	THM-ICR	Bromoform	12.5 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	7/14/98	0-172-0
464	THM-ICR	Chloroform	5.2 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	7/14/98	0-172-0
465	THM-ICR	Dibromochloromethane	22.3 µg/L	EPA 551.1	1	1.0	7/2/98	7/14/98	7/14/98	0-172-0

Sample ID: 123.10.pH9.2.Inf.A-1

S&H ID: 9806-803

Date Sampled: 6/26/98 5:45:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
466	ALK	Alkalinity	26	mg/L	SM 2320 B	1	5	6/26/98		6/27/98	1-0-26
467	ALK	Alkalinity (Dupl)	25	mg/L	SM 2320 B	1	5	6/26/98		6/27/98	1-0-26
			26 mg/L		3.8 % RPD						
468	NH3	Ammonia Nitrogen	0.20	mg/L	EPA 350.1	1	0.05	6/26/98		7/13/98	MW80526
469	BR	Bromide	0.100	mg/L	EPA 300.0 A	1	0.020	6/26/98		7/14/98	MW80607
470	CaHardM	Calcium Hardness	35	mg/L CaCO3	EPA 200.7	1	5	6/26/98		7/29/98	MW n/a
471	CaMW	Calcium, Total, ICAP	14	mg/L	EPA 200.7	1	1	6/26/98	7/29/98	7/29/98	MW81464
472	MgMW	Magnesium, Total, ICAP	5	mg/L	EPA 200.7	1	0	6/26/98	7/29/98	7/29/98	MW81465
473	TotHard	Total Hardness as CaCO3 by ICP	54	mg/L CaCO3	SM 2340B	1	7	6/26/98		7/29/98	MW n/a

Sample ID: 123.10.pH9.2.Inf.A-2

S&H ID: 9806-804

Date Sampled: 7/2/98 1:05:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
474	ALK	Alkalinity	30	mg/L	SM 2320 B	1	5	7/2/98		7/2/98	1-0-24
475	ALK	Alkalinity (Dupl)	28	mg/L	SM 2320 B	1	5	7/2/98		7/2/98	1-0-24

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

			29 mg/L	6.9 % RPD				
476	NH3	Ammonia Nitrogen	0.08 mg/L	EPA 350.1	1	0.05	7/2/98	7/13/98 MW80526
477	BR	Bromide	0.110 mg/L	EPA 300.0 A	2	0.040	7/2/98	7/15/98 MW80695
478	CaHardM	Calcium Hardness	35 mg/L CaCO3	EPA 200.7	1	5	7/2/98	7/29/98 MW n/a
479	CaMW	Calcium, Total, ICAP	14 mg/L	EPA 200.7	1	1	7/2/98 7/29/98	7/29/98 MW81464
480	MgMW	Magnesium, Total, ICAP	5 mg/L	EPA 200.7	1	0	7/2/98 7/29/98	7/29/98 MW81465
481	TotHard	Total Hardness as CaCO3 by ICP	54 mg/L CaCO3	SM 2340B	1	7	7/2/98	7/29/98 MW n/a

Sample ID: 123.10.pH9.2.Inf.B-1

S&H ID: 9806-805

Date Sampled: 6/26/98 5:45:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
482	Cl2Dose Chlorine Dose	4.43 mg/L as Cl2	SM 4500-Cl B	1	n/a	7/1/98		7/1/98	n/a
483	Cl2Res Chlorine Residual	2.11 mg/L as Cl2	SM 4500-Cl F	1	0.10	7/1/98		7/1/98	n/a
484	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	109.6 %	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
485	HAA-ICR 2-Bromopropionic acid (Surrogate)	89.6 %	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
486	HAA-ICR Bromochloroacetic acid	4.6 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
487	HAA-ICR Bromodichloroacetic acid	1.3 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
488	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
489	HAA-ICR Dibromoacetic acid	2.6 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
490	HAA-ICR Dichloroacetic acid	7.9 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
491	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
492	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/1/98	7/9/98	7/10/98	0-170-0
493	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/1/98	7/9/98	7/10/98	0-170-0
494	HAA-ICR Trichloroacetic acid	1.4 µg/L	EPA 552.2	1	1.0	7/1/98	7/9/98	7/10/98	0-170-0
495	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
496	pH Cl2 pH - Initial	9.2 Unit	SM 4500-H+ B	1	n/a	7/1/98		7/1/98	n/a
497	pH pH	9.2 Unit	SM 4500-H+ B	1	n/a	6/26/98		6/26/98	n/a
498	TEMP Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/1/98		7/1/98	n/a
499	TEMP Temperature	21.4 °C	SM 2550 B	1	n/a	6/26/98		6/26/98	n/a
500	TIME Cl2 Incubation Time	6.3 hrs	n/a	1	n/a	7/1/98		7/1/98	n/a
501	TOC-ICR TOC	4.14 mg/L	SM 5310 C	1	0.50	6/26/98		6/27/98	7-0-308
502	TOC-ICR TOC (Dupl)	4.20 mg/L	SM 5310 C	1	0.50	6/26/98		6/27/98	7-0-308
		4.17 mg/L	1.4 % RPD						
503	TOX-ICR TOX	230 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/7/98	12-0-162
504	TOX-ICR TOX (Dupl)	225 µg Cl-/L	SM 5320 B	1	25	7/1/98		7/7/98	12-0-162
		228 µg Cl-/L	2.2 % RPD						
505	THM-ICR 1,2,3-Trichloropropane (Surrogate)	94.0 %	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2

506	THM-ICR Bromodichloromethane	28.5 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
507	THM-ICR Bromoform	5.9 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
508	THM-ICR Chloroform	28.8 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
509	THM-ICR Dibromochloromethane	23.4 µg/L	EPA 551.1	1	1.0	7/1/98	7/8/98	7/8/98	0-166-0
510	TURB Turbidity	0.10 ntu	SM 2130 B	1	0.05	6/26/98		6/26/98	9-0-13
511	UV-ICR UV	0.083 1/cm	SM 5910 B	1	0.009	6/26/98		6/27/98	8-0-209
512	UV-ICR UV (Dupl)	0.083 1/cm	SM 5910 B	1	0.009	6/26/98		6/27/98	8-0-209
		0.083 1/cm	0.0 % RPD						

Sample ID: 123.10.pH9.2.Inf.B-2**S&H ID:** 9806-806**Date Sampled:** 6/29/98 3:00:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
513	pH	pH	9.2	Unit	SM 4500-H+ B	1	n/a	6/29/98		6/29/98	n/a
514	TEMP	Temperature	21.3	°C	SM 2550 B	1	n/a	6/29/98		6/29/98	n/a
515	TOC-ICR	TOC	4.02	mg/L	SM 5310 C	1	0.50	6/29/98		7/1/98	7-0-315
516	TOC-ICR	TOC (Dupl)	3.94	mg/L	SM 5310 C	1	0.50	6/29/98		7/1/98	7-0-315
			3.98 mg/L		2.0 % RPD						

Sample ID: 123.10.pH9.2.Inf.B-3**S&H ID:** 9806-807**Date Sampled:** 6/30/98 7:00:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
517	pH	pH	9.2	Unit	SM 4500-H+ B	1	n/a	6/30/98		6/30/98	n/a
518	TEMP	Temperature	20.4	°C	SM 2550 B	1	n/a	6/30/98		6/30/98	n/a
519	TOC-ICR	TOC	3.92	mg/L	SM 5310 C	1	0.50	6/30/98		7/1/98	7-0-315
520	TOC-ICR	TOC (Dupl)	3.96	mg/L	SM 5310 C	1	0.50	6/30/98		7/1/98	7-0-315
			3.94 mg/L		1.0 % RPD						

Sample ID: 123.10.pH9.2.Inf.B-4**S&H ID:** 9806-808**Date Sampled:** 7/2/98 1:00:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
521	Cl2Dose	Chlorine Dose	3.05	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/3/98		7/3/98	n/a
522	Cl2Res	Chlorine Residual	1.00	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/3/98		7/3/98	n/a
523	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	107.2	%	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
524	HAA-ICR	2-Bromopropionic acid (Surrogate)	97.2	%	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
525	HAA-ICR	Bromochloroacetic acid	8.7	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
526	HAA-ICR	Bromodichloroacetic acid	2.7	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
527	HAA-ICR	Chlorodibromoacetic acid	2.3	µg/L	EPA 552.2	1	2.0	7/3/98	7/13/98	7/14/98	0-171-0
528	HAA-ICR	Dibromoacetic acid	5.8	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
529	HAA-ICR	Dichloroacetic acid	12.4	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
530	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

531	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/3/98	7/13/98	7/14/98	0-171-0
532	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/3/98	7/13/98	7/14/98	0-171-0
533	HAA-ICR	Trichloroacetic acid	2.5 µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
534	pH	Cl2 pH - Final	9.2 Unit	SM 4500-H+ B	1	n/a	7/3/98		7/3/98	n/a
535	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/3/98		7/3/98	n/a
536	pH	pH	9.2 Unit	SM 4500-H+ B	1	n/a	7/2/98		7/2/98	n/a
537	TEMP	Cl2 Temperature	27.3 °C	SM 2550 B	1	n/a	7/3/98		7/3/98	n/a
538	TEMP	Temperature	19.1 °C	SM 2550 B	1	n/a	7/2/98		7/2/98	n/a
539	TIME	Cl2 Incubation Time	5.7 hrs	n/a	1	n/a	7/3/98		7/3/98	n/a
540	TOC-ICR	TOC	4.16 mg/L	SM 5310 C	1	0.50	7/2/98		7/2/98	7-0-318
541	TOC-ICR	TOC (Dupl)	4.02 mg/L	SM 5310 C	1	0.50	7/2/98		7/2/98	7-0-318
			4.09 mg/L	3.4 % RPD						
542	TOX-ICR	TOX	196 µg Cl-/L	SM 5320 B	1	25	7/3/98		7/13/98	12-0-166
543	TOX-ICR	TOX (Dupl)	195 µg Cl-/L	SM 5320 B	1	25	7/3/98		7/13/98	12-0-166
			196 µg Cl-/L	0.5 % RPD						
544	THM-ICR	1,2,3-Trichloropropane (Surrogate)	94.0 %	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
545	THM-ICR	Bromodichloromethane	25.7 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
546	THM-ICR	Bromoform	6.6 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
547	THM-ICR	Chloroform	22.6 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
548	THM-ICR	Dibromochloromethane	22.0 µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
549	TURB	Turbidity	0.10 ntu	SM 2130 B	1	0.05	7/2/98		7/2/98	9-0-13
550	UV-ICR	UV	0.084 1/cm	SM 5910 B	1	0.009	7/2/98		7/2/98	8-0-214
551	UV-ICR	UV (Dupl)	0.084 1/cm	SM 5910 B	1	0.009	7/2/98		7/2/98	8-0-214
			0.084 1/cm	0.0 % RPD						

Sample ID: 123.10.pH8.2.Eff-1

S&H ID: 9807-12

Date Sampled: 7/3/98 8:05:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
552	Cl2Dose	Chlorine Dose	1.35	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/7/98		7/7/98	n/a
553	Cl2Res	Chlorine Residual	0.73	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/7/98		7/7/98	n/a
554	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	95.6	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
555	HAA-ICR	2-Bromopropionic acid (Surrogate)	99.6	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
556	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
557	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
558	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/15/98	0-176-0
559	HAA-ICR	Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
560	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
561	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
562	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/15/98	0-176-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2

563	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/7/98	7/15/98	7/15/98	0-176-0
564	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
565	pH	Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	7/7/98		7/7/98	n/a
566	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/7/98		7/7/98	n/a
567	pH	pH	8.0 Unit	SM 4500-H+ B	1	n/a	7/3/98		7/3/98	n/a
568	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/7/98		7/7/98	n/a
569	TEMP	Temperature	21.3 °C	SM 2550 B	1	n/a	7/3/98		7/3/98	n/a
570	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/7/98		7/7/98	n/a
571	TOC-ICR	TOC	ND mg/L	SM 5310 C	1	0.50	7/3/98		7/3/98	7-0-321
572	TOC-ICR	TOC (Dupl)	ND mg/L	SM 5310 C	1	0.50	7/3/98		7/3/98	7-0-321
			ND mg/L							
573	TOX-ICR	TOX	ND µg Cl-/L	SM 5320 B	1	25	7/7/98		7/14/98	12-0-167
574	TOX-ICR	TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	7/7/98		7/14/98	12-0-167
			ND µg Cl-/L							
575	THM-ICR	1,2,3-Trichloropropane (Surrogate)	100.4 %	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
576	THM-ICR	Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
577	THM-ICR	Bromoform	2.2 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
578	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
579	THM-ICR	Dibromochloromethane	1.3 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
580	UV-ICR	UV	ND 1/cm	SM 5910 B	1	0.009	7/3/98		7/3/98	8-0-216
581	UV-ICR	UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	7/3/98		7/3/98	8-0-216
			ND 1/cm							

Sample ID: 123.10.pH8.2.Eff-5**S&H ID:** 9807-16**Date Sampled:** 7/3/98 11:11:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
582	Cl2Dose	Chlorine Dose	1.43	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/7/98		7/7/98	n/a
583	Cl2Res	Chlorine Residual	0.80	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/7/98		7/7/98	n/a
584	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	96.8	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
585	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.8	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
586	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
587	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
588	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/15/98	0-176-0
589	HAA-ICR	Dibromoacetic acid	1.0	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
590	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
591	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
592	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/15/98	0-176-0
593	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/7/98	7/15/98	7/15/98	0-176-0
594	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

595	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/7/98	7/7/98	n/a
596	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/7/98	7/7/98	n/a
597	pH	pH	8.2 Unit	SM 4500-H+ B	1	n/a	7/3/98	7/3/98	n/a
598	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/7/98	7/7/98	n/a
599	TEMP	Temperature	23.1 °C	SM 2550 B	1	n/a	7/3/98	7/3/98	n/a
600	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/7/98	7/7/98	n/a
601	TOC-ICR	TOC	ND mg/L	SM 5310 C	1	0.50	7/3/98	7/4/98	7-0-323
602	TOC-ICR	TOC (Dupl)	ND mg/L	SM 5310 C	1	0.50	7/3/98	7/4/98	7-0-323
			ND mg/L						
603	TOX-ICR	TOX	ND µg Cl-/L	SM 5320 B	1	25	7/7/98	7/14/98	12-0-167
604	TOX-ICR	TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	7/7/98	7/14/98	12-0-167
			ND µg Cl-/L						
605	THM-ICR	1,2,3-Trichloropropane (Surrogate)	107.2 %	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98 0-177-0
606	THM-ICR	Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98 0-177-0
607	THM-ICR	Bromoform	7.0 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98 0-177-0
608	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98 0-177-0
609	THM-ICR	Dibromochloromethane	2.4 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98 0-177-0
610	UV-ICR	UV	ND 1/cm	SM 5910 B	1	0.009	7/3/98	7/4/98	8-0-215
611	UV-ICR	UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	7/3/98	7/4/98	8-0-215
			ND 1/cm						

Sample ID: 123.10.pH8.2.Eff-6

S&H ID: 9807-17

Date Sampled: 7/4/98 1:43:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
612	Cl2Dose	Chlorine Dose	1.54	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/7/98		7/7/98	n/a
613	Cl2Res	Chlorine Residual	0.78	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/7/98		7/7/98	n/a
614	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	97.2	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
615	HAA-ICR	2-Bromopropionic acid (Surrogate)	103.2	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
616	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
617	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
618	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/15/98	0-176-0
619	HAA-ICR	Dibromoacetic acid	2.1	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
620	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
621	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
622	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/15/98	0-176-0
623	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/7/98	7/15/98	7/15/98	0-176-0
624	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
625	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/7/98		7/7/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

626	pH	Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	7/7/98	7/7/98	n/a
627	pH	pH	8.1 Unit	SM 4500-H+ B	1	n/a	7/4/98	7/4/98	n/a
628	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/7/98	7/7/98	n/a
629	TEMP	Temperature	22.2 °C	SM 2550 B	1	n/a	7/4/98	7/4/98	n/a
630	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/7/98	7/7/98	n/a
631	TOC-ICR	TOC	0.79 mg/L	SM 5310 C	1	0.50	7/4/98	7/4/98	7-0-323
632	TOC-ICR	TOC (Dupl)	0.79 mg/L	SM 5310 C	1	0.50	7/4/98	7/4/98	7-0-323
			0.79 mg/L	0.0 % RPD					
633	TOX-ICR	TOX	ND µg Cl-/L	SM 5320 B	1	25	7/7/98	7/14/98	12-0-167
634	TOX-ICR	TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	7/7/98	7/14/98	12-0-167
			ND µg Cl-/L						
635	THM-ICR	1,2,3-Trichloropropane (Surrogate)	110.0 %	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98 0-177-0
636	THM-ICR	Bromodichloromethane	1.2 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98 0-177-0
637	THM-ICR	Bromoform	9.6 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98 0-177-0
638	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98 0-177-0
639	THM-ICR	Dibromochloromethane	4.8 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98 0-177-0
640	UV-ICR	UV	ND 1/cm	SM 5910 B	1	0.009	7/4/98	7/4/98	8-0-215
641	UV-ICR	UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	7/4/98	7/4/98	8-0-215
			ND 1/cm						

Sample ID: 123.10.pH8.2.Eff-7

S&H ID: 9807-18

Date Sampled: 7/4/98 6:18:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
642	Cl2Dose	Chlorine Dose	1.85	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/7/98		7/7/98	n/a
643	Cl2Res	Chlorine Residual	1.04	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/7/98		7/7/98	n/a
644	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	97.6	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
645	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard) (Lab Dupl)	100.0	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
			98.8	%	2.4 % RPD						
646	HAA-ICR	2-Bromopropionic acid (Surrogate)	102.0	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
647	HAA-ICR	2-Bromopropionic acid (Surrogate) (Lab Dupl)	98.0	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
			100.0	%	4.0 % RPD						
648	HAA-ICR	Bromochloroacetic acid	1.0	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
649	HAA-ICR	Bromochloroacetic acid (Lab Dupl)	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
			ND	µg/L							
650	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
651	HAA-ICR	Bromodichloroacetic acid (Lab Dupl)	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
			ND	µg/L							

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

652	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/15/98	0-176-0
653	HAA-ICR	Chlorodibromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/15/98	0-176-0
			ND µg/L							
654	HAA-ICR	Dibromoacetic acid	3.1 µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
655	HAA-ICR	Dibromoacetic acid (Lab Dupl)	2.6 µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
			2.9 µg/L	17.2 % RPD						
656	HAA-ICR	Dichloroacetic acid	1.7 µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
657	HAA-ICR	Dichloroacetic acid (Lab Dupl)	1.4 µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
			1.5 µg/L	20.0 % RPD						
658	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
659	HAA-ICR	Monobromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
			ND µg/L							
660	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/15/98	0-176-0
661	HAA-ICR	Monochloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/15/98	0-176-0
			ND µg/L							
662	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/7/98	7/15/98	7/15/98	0-176-0
663	HAA-ICR	Tribromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	4.0	7/7/98	7/15/98	7/15/98	0-176-0
			ND µg/L							
664	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
665	HAA-ICR	Trichloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/15/98	0-176-0
			ND µg/L							
666	pH	Cl ₂ pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/7/98		7/7/98	n/a
667	pH	Cl ₂ pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/7/98		7/7/98	n/a
668	pH	pH	7.6 Unit	SM 4500-H+ B	1	n/a	7/4/98		7/4/98	n/a
669	TEMP	Cl ₂ Temperature	27.2 °C	SM 2550 B	1	n/a	7/7/98		7/7/98	n/a
670	TEMP	Temperature	21.9 °C	SM 2550 B	1	n/a	7/4/98		7/4/98	n/a
671	TIME	Cl ₂ Incubation Time	6.0 hrs	n/a	1	n/a	7/7/98		7/7/98	n/a
672	TOC-ICR	TOC	1.09 mg/L	SM 5310 C	1	0.50	7/4/98		7/4/98	7-0-323
673	TOC-ICR	TOC (Dupl)	1.08 mg/L	SM 5310 C	1	0.50	7/4/98		7/4/98	7-0-323
			1.09 mg/L	0.9 % RPD						
674	TOX-ICR	TOX	28 µg Cl-/L	SM 5320 B	1	25	7/7/98		7/15/98	12-0-168
675	TOX-ICR	TOX (Dupl)	28 µg Cl-/L	SM 5320 B	1	25	7/7/98		7/15/98	12-0-168
			28 µg Cl-/L	0.0 % RPD						
676	THM-ICR	1,2,3-Trichloropropane (Surrogate)	101.2 %	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
677	THM-ICR	Bromodichloromethane	1.9 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
678	THM-ICR	Bromoform	9.6 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
679	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
680	THM-ICR	Dibromochloromethane	6.4 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

681	UV-ICR	UV	0.011	1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-217
682	UV-ICR	UV (Dupl)	0.011	1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-217
			0.011	1/cm	0.0 % RPD						
<hr/>											
Sample ID: 123.10.pH8.2.Eff-8			S&H ID: 9807-19		Date Sampled: 7/4/98 9:04:00 AM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
683	Cl2Dose	Chlorine Dose	1.70	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/8/98		7/8/98	n/a
684	Cl2Res	Chlorine Residual	0.84	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/8/98		7/8/98	n/a
685	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	96.4	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
686	HAA-ICR	2-Bromopropionic acid (Surrogate)	96.4	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
687	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
688	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
689	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
690	HAA-ICR	Dibromoacetic acid	2.6	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
691	HAA-ICR	Dichloroacetic acid	2.5	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
692	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
693	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
694	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/8/98	7/15/98	7/16/98	0-176-0
695	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
696	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
697	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
698	pH	pH	7.8	Unit	SM 4500-H+ B	1	n/a	7/4/98		7/4/98	n/a
699	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	7/8/98		7/8/98	n/a
700	TEMP	Temperature	22.0	°C	SM 2550 B	1	n/a	7/4/98		7/4/98	n/a
701	TIME	Cl2 Incubation Time	6.1	hrs	n/a	1	n/a	7/8/98		7/8/98	n/a
702	TOC-ICR	TOC	1.34	mg/L	SM 5310 C	1	0.50	7/4/98		7/4/98	7-0-323
703	TOC-ICR	TOC (Dupl)	1.34	mg/L	SM 5310 C	1	0.50	7/4/98		7/4/98	7-0-323
			1.34	mg/L	0.0 % RPD						
704	TOX-ICR	TOX	34	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/15/98	12-0-168
705	TOX-ICR	TOX (Dupl)	35	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/15/98	12-0-168
			35	µg Cl-/L	2.9 % RPD						
706	THM-ICR	1,2,3-Trichloropropane (Surrogate)	89.6	%	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
707	THM-ICR	Bromodichloromethane	2.5	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
708	THM-ICR	Bromoform	12.0	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
709	THM-ICR	Chloroform	ND	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
710	THM-ICR	Dibromochloromethane	8.8	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
711	UV-ICR	UV	0.014	1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-217
712	UV-ICR	UV (Dupl)	0.014	1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-217

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

0.014 1/cm

0.0 % RPD

Sample ID: 123.10.pH8.2.Eff-9

S&H ID: 9807-20

Date Sampled: 7/4/98 2:11:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
713	Cl2Dose	Chlorine Dose	1.76	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/8/98		7/8/98	n/a
714	Cl2Res	Chlorine Residual	0.86	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/8/98		7/8/98	n/a
715	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	93.6	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
716	HAA-ICR	2-Bromopropionic acid (Surrogate)	97.2	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
717	HAA-ICR	Bromochloroacetic acid	1.4	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
718	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
719	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
720	HAA-ICR	Dibromoacetic acid	3.4	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
721	HAA-ICR	Dichloroacetic acid	4.4	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
722	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
723	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
724	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/8/98	7/15/98	7/16/98	0-176-0
725	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
726	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
727	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
728	pH	pH	8.1	Unit	SM 4500-H+ B	1	n/a	7/4/98		7/4/98	n/a
729	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	7/8/98		7/8/98	n/a
730	TEMP	Temperature	22.8	°C	SM 2550 B	1	n/a	7/4/98		7/4/98	n/a
731	TIME	Cl2 Incubation Time	6.2	hrs	n/a	1	n/a	7/8/98		7/8/98	n/a
732	TOC-ICR	TOC	1.51	mg/L	SM 5310 C	1	0.50	7/4/98		7/5/98	7-0-325
733	TOC-ICR	TOC (Dupl)	1.52	mg/L	SM 5310 C	1	0.50	7/4/98		7/5/98	7-0-325
			1.52	mg/L	0.7 % RPD						
734	TOX-ICR	TOX	41	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/16/98	12-0-169
735	TOX-ICR	TOX (Dupl)	43	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/16/98	12-0-169
			42	µg Cl-/L	4.8 % RPD						
736	THM-ICR	1,2,3-Trichloropropane (Surrogate)	94.4	%	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
737	THM-ICR	Bromodichloromethane	3.4	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
738	THM-ICR	Bromoform	12.9	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
739	THM-ICR	Chloroform	ND	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
740	THM-ICR	Dibromochloromethane	10.8	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
741	UV-ICR	UV	0.017	1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-217
742	UV-ICR	UV (Dupl)	0.017	1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-217
			0.017	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

Sample ID: 123.10.pH8.2.Eff-11

S&H ID: 9807-22

Date Sampled: 7/4/98 9:56:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
743	Cl2Dose	Chlorine Dose	1.85	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/8/98		7/8/98	n/a
744	Cl2Res	Chlorine Residual	0.83	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/8/98		7/8/98	n/a
745	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	94.4	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
746	HAA-ICR	2-Bromopropionic acid (Surrogate)	101.6	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
747	HAA-ICR	Bromochloroacetic acid	2.6	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
748	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
749	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
750	HAA-ICR	Dibromoacetic acid	4.9	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
751	HAA-ICR	Dichloroacetic acid	6.8	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
752	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
753	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
754	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/8/98	7/15/98	7/16/98	0-176-0
755	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
756	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
757	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
758	pH	pH	8.1	Unit	SM 4500-H+ B	1	n/a	7/4/98		7/4/98	n/a
759	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	7/8/98		7/8/98	n/a
760	TEMP	Temperature	23.0	°C	SM 2550 B	1	n/a	7/4/98		7/4/98	n/a
761	TIME	Cl2 Incubation Time	6.2	hrs	n/a	1	n/a	7/8/98		7/8/98	n/a
762	TOC-ICR	TOC	1.77	mg/L	SM 5310 C	1	0.50	7/4/98		7/5/98	7-0-325
763	TOC-ICR	TOC (Dupl)	1.79	mg/L	SM 5310 C	1	0.50	7/4/98		7/5/98	7-0-325
			1.78	mg/L	1.1 % RPD						
764	TOX-ICR	TOX	59	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/17/98	12-0-170
765	TOX-ICR	TOX (Dupl)	55	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/17/98	12-0-170
			57	µg Cl-/L	7.0 % RPD						
766	THM-ICR	1,2,3-Trichloropropane (Surrogate)	92.0	%	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
767	THM-ICR	Bromodichloromethane	5.0	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
768	THM-ICR	Bromoform	13.1	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
769	THM-ICR	Chloroform	ND	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
770	THM-ICR	Dibromochloromethane	13.5	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/16/98	0-177-0
771	UV-ICR	UV	0.021	1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-218
772	UV-ICR	UV (Dupl)	0.021	1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-218
			0.021	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

Sample ID: 123.10.pH8.2.Eff-13			S&H ID: 9807-24		Date Sampled: 7/5/98 7:20:00 AM				
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
773	Cl2Dose Chlorine Dose	1.95 mg/L as Cl2	SM 4500-Cl B	1	n/a	7/8/98		7/8/98	n/a
774	Cl2Res Chlorine Residual	0.88 mg/L as Cl2	SM 4500-Cl F	1	0.10	7/8/98		7/8/98	n/a
775	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	93.2 %	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
776	HAA-ICR 2-Bromopropionic acid (Surrogate)	101.2 %	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
777	HAA-ICR Bromochloroacetic acid	4.0 µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
778	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
779	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
780	HAA-ICR Dibromoacetic acid	6.1 µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
781	HAA-ICR Dichloroacetic acid	7.4 µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
782	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
783	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
784	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/8/98	7/15/98	7/16/98	0-176-0
785	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
786	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
787	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
788	pH pH	8.2 Unit	SM 4500-H+ B	1	n/a	7/5/98		7/5/98	n/a
789	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	7/8/98		7/8/98	n/a
790	TEMP Temperature	22.2 °C	SM 2550 B	1	n/a	7/5/98		7/5/98	n/a
791	TIME Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	7/8/98		7/8/98	n/a
792	TOC-ICR TOC	2.05 mg/L	SM 5310 C	1	0.50	7/5/98		7/5/98	7-0-325
793	TOC-ICR TOC (Dupl)	2.08 mg/L	SM 5310 C	1	0.50	7/5/98		7/5/98	7-0-325
		2.06 mg/L	1.5 % RPD						
794	TOX-ICR TOX	68 µg Cl-/L	SM 5320 B	1	25	7/8/98		7/15/98	12-0-168
795	TOX-ICR TOX (Dupl)	66 µg Cl-/L	SM 5320 B	1	25	7/8/98		7/15/98	12-0-168
		67 µg Cl-/L	3.0 % RPD						
796	THM-ICR 1,2,3-Trichloropropane (Surrogate)	98.0 %	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
797	THM-ICR Bromodichloromethane	6.7 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
798	THM-ICR Bromoform	13.7 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
799	THM-ICR Chloroform	1.6 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
800	THM-ICR Dibromochloromethane	16.1 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
801	UV-ICR UV	0.026 1/cm	SM 5910 B	1	0.009	7/5/98		7/5/98	8-0-218
802	UV-ICR UV (Dupl)	0.026 1/cm	SM 5910 B	1	0.009	7/5/98		7/5/98	8-0-218
		0.026 1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

Sample ID: 123.10.pH8.2.Eff-16			S&H ID: 9807-27		Date Sampled: 7/5/98 9:24:00 PM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
803	Cl2Dose	Chlorine Dose	2.04	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/8/98		7/8/98	n/a
804	Cl2Res	Chlorine Residual	0.83	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/8/98		7/8/98	n/a
805	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	97.6	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
806	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.4	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
807	HAA-ICR	Bromochloroacetic acid	4.3	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
808	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
809	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
810	HAA-ICR	Dibromoacetic acid	5.5	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
811	HAA-ICR	Dichloroacetic acid	6.1	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
812	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
813	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
814	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/8/98	7/15/98	7/16/98	0-176-0
815	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
816	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
817	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
818	pH	pH	8.2	Unit	SM 4500-H+ B	1	n/a	7/5/98		7/5/98	n/a
819	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	7/8/98		7/8/98	n/a
820	TEMP	Temperature	23.7	°C	SM 2550 B	1	n/a	7/5/98		7/5/98	n/a
821	TIME	Cl2 Incubation Time	6.2	hrs	n/a	1	n/a	7/8/98		7/8/98	n/a
822	TOC-ICR	TOC	2.28	mg/L	SM 5310 C	1	0.50	7/5/98		7/6/98	7-0-327
823	TOC-ICR	TOC (Dupl)	2.34	mg/L	SM 5310 C	1	0.50	7/5/98		7/6/98	7-0-327
			2.31	mg/L	2.6 % RPD						
824	TOX-ICR	TOX	84	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/16/98	12-0-169
825	TOX-ICR	TOX (Dupl)	82	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/16/98	12-0-169
			83	µg Cl-/L	2.4 % RPD						
826	THM-ICR	1,2,3-Trichloropropane (Surrogate)	95.2	%	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
827	THM-ICR	Bromodichloromethane	8.7	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
828	THM-ICR	Bromoform	12.9	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
829	THM-ICR	Chloroform	2.3	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
830	THM-ICR	Dibromochloromethane	18.4	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
831	UV-ICR	UV	0.032	1/cm	SM 5910 B	1	0.009	7/5/98		7/6/98	8-0-219
832	UV-ICR	UV (Dupl)	0.032	1/cm	SM 5910 B	1	0.009	7/5/98		7/6/98	8-0-219
			0.032	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

Sample ID: 123.10.pH8.2.Eff-19			S&H ID: 9807-30		Date Sampled: 7/6/98 12:08:00 PM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
833	Cl2Dose	Chlorine Dose	2.15	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/8/98		7/8/98	n/a
834	Cl2Res	Chlorine Residual	0.87	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/8/98		7/8/98	n/a
835	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	97.6	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
836	HAA-ICR	2-Bromopropionic acid (Surrogate)	95.2	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
837	HAA-ICR	Bromochloroacetic acid	4.5	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
838	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
839	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
840	HAA-ICR	Dibromoacetic acid	5.6	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
841	HAA-ICR	Dichloroacetic acid	5.5	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
842	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
843	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
844	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/8/98	7/15/98	7/16/98	0-176-0
845	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
846	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
847	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
848	pH	pH	7.6	Unit	SM 4500-H+ B	1	n/a	7/6/98		7/6/98	n/a
849	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	7/8/98		7/8/98	n/a
850	TEMP	Temperature	22.7	°C	SM 2550 B	1	n/a	7/6/98		7/6/98	n/a
851	TIME	Cl2 Incubation Time	6.2	hrs	n/a	1	n/a	7/8/98		7/8/98	n/a
852	TOC-ICR	TOC	2.62	mg/L	SM 5310 C	1	0.50	7/6/98		7/7/98	7-0-329
853	TOC-ICR	TOC (Dupl)	2.62	mg/L	SM 5310 C	1	0.50	7/6/98		7/7/98	7-0-329
			2.62	mg/L	0.0 % RPD						
854	TOX-ICR	TOX	97	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/16/98	12-0-169
855	TOX-ICR	TOX (Dupl)	97	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/16/98	12-0-169
			97	µg Cl-/L	0.0 % RPD						
856	THM-ICR	1,2,3-Trichloropropane (Surrogate)	97.2	%	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
857	THM-ICR	Bromodichloromethane	11.6	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
858	THM-ICR	Bromoform	13.5	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
859	THM-ICR	Chloroform	3.6	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
860	THM-ICR	Dibromochloromethane	21.9	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
861	UV-ICR	UV	0.038	1/cm	SM 5910 B	1	0.009	7/8/98		7/6/98	8-0-220
862	UV-ICR	UV (Dupl)	0.038	1/cm	SM 5910 B	1	0.009	7/8/98		7/6/98	8-0-220
			0.038	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

Sample ID: 123.10.pH8.2.Eff-20			S&H ID: 9807-31		Date Sampled: 7/6/98 9:24:00 PM				
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
863	Cl2Dose Chlorine Dose	2.23 mg/L as Cl2	SM 4500-Cl B	1	n/a	7/8/98		7/8/98	n/a
864	Cl2Res Chlorine Residual	0.89 mg/L as Cl2	SM 4500-Cl F	1	0.10	7/8/98		7/8/98	n/a
865	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	99.6 %	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
866	HAA-ICR 2-Bromopropionic acid (Surrogate)	95.2 %	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
867	HAA-ICR Bromochloroacetic acid	4.7 µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
868	HAA-ICR Bromodichloroacetic acid	1.2 µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
869	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
870	HAA-ICR Dibromoacetic acid	5.7 µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
871	HAA-ICR Dichloroacetic acid	5.5 µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
872	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
873	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
874	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/8/98	7/15/98	7/16/98	0-176-0
875	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
876	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
877	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
878	pH pH	7.7 Unit	SM 4500-H+ B	1	n/a	7/6/98		7/6/98	n/a
879	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	7/8/98		7/8/98	n/a
880	TEMP Temperature	23.3 °C	SM 2550 B	1	n/a	7/6/98		7/6/98	n/a
881	TIME Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	7/8/98		7/8/98	n/a
882	TOC-ICR TOC	2.80 mg/L	SM 5310 C	1	0.50	7/6/98		7/7/98	7-0-329
883	TOC-ICR TOC (Dupl)	2.90 mg/L	SM 5310 C	1	0.50	7/6/98		7/7/98	7-0-329
		2.85 mg/L	3.5 % RPD						
884	TOX-ICR TOX	105 µg Cl-/L	SM 5320 B	1	25	7/8/98		7/17/98	12-0-170
885	TOX-ICR TOX (Dupl)	103 µg Cl-/L	SM 5320 B	1	25	7/8/98		7/17/98	12-0-170
		104 µg Cl-/L	1.9 % RPD						
886	THM-ICR 1,2,3-Trichloropropane (Surrogate)	94.0 %	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
887	THM-ICR Bromodichloromethane	12.4 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
888	THM-ICR Bromoform	12.2 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
889	THM-ICR Chloroform	4.5 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
890	THM-ICR Dibromochloromethane	21.3 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
891	UV-ICR UV	0.040 1/cm	SM 5910 B	1	0.009	7/6/98		7/7/98	8-0-221
892	UV-ICR UV (Dupl)	0.041 1/cm	SM 5910 B	1	0.009	7/6/98		7/7/98	8-0-221
		0.041 1/cm	2.4 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

Sample ID: 123.10.pH8.2.Eff-23			S&H ID: 9807-34		Date Sampled: 7/7/98 9:23:00 PM				
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
893	Cl2Dose Chlorine Dose	2.22 mg/L as Cl2	SM 4500-Cl B	1	n/a	7/9/98		7/9/98	n/a
894	Cl2Res Chlorine Residual	0.79 mg/L as Cl2	SM 4500-Cl F	1	0.10	7/9/98		7/9/98	n/a
895	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	104.4 %	EPA 552.2	1	1.0	7/9/98	7/21/98	7/22/98	0-179-0
896	HAA-ICR 2-Bromopropionic acid (Surrogate)	100.8 %	EPA 552.2	1	1.0	7/9/98	7/21/98	7/22/98	0-179-0
897	HAA-ICR Bromochloroacetic acid	5.7 µg/L	EPA 552.2	1	1.0	7/9/98	7/21/98	7/22/98	0-179-0
898	HAA-ICR Bromodichloroacetic acid	1.8 µg/L	EPA 552.2	1	1.0	7/9/98	7/21/98	7/22/98	0-179-0
899	HAA-ICR Chlorodibromoacetic acid	2.1 µg/L	EPA 552.2	1	2.0	7/9/98	7/21/98	7/22/98	0-179-0
900	HAA-ICR Dibromoacetic acid	7.9 µg/L	EPA 552.2	1	1.0	7/9/98	7/21/98	7/22/98	0-179-0
901	HAA-ICR Dichloroacetic acid	4.9 µg/L	EPA 552.2	1	1.0	7/9/98	7/21/98	7/22/98	0-179-0
902	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/9/98	7/21/98	7/22/98	0-179-0
903	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/9/98	7/21/98	7/22/98	0-179-0
904	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/9/98	7/21/98	7/22/98	0-179-0
905	HAA-ICR Trichloroacetic acid	1.4 µg/L	EPA 552.2	1	1.0	7/9/98	7/21/98	7/22/98	0-179-0
906	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	7/9/98		7/9/98	n/a
907	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/9/98		7/9/98	n/a
908	pH pH	7.7 Unit	SM 4500-H+ B	1	n/a	7/7/98		7/7/98	n/a
909	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	7/9/98		7/9/98	n/a
910	TEMP Temperature	23.0 °C	SM 2550 B	1	n/a	7/7/98		7/7/98	n/a
911	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	7/9/98		7/9/98	n/a
912	TOC-ICR TOC	3.07 mg/L	SM 5310 C	1	0.50	7/7/98		7/8/98	7-0-330
913	TOC-ICR TOC (Dupl)	2.95 mg/L	SM 5310 C	1	0.50	7/7/98		7/8/98	7-0-330
		3.01 mg/L	4.0 % RPD						
914	TOX-ICR TOX	116 µg Cl-/L	SM 5320 B	1	25	7/9/98		7/21/98	12-0-172
915	TOX-ICR TOX (Dupl)	114 µg Cl-/L	SM 5320 B	1	25	7/9/98		7/21/98	12-0-172
		115 µg Cl-/L	1.7 % RPD						
916	THM-ICR 1,2,3-Trichloropropane (Surrogate)	104.0 %	EPA 551.1	1	1.0	7/9/98	7/20/98	7/20/98	0-178-0
917	THM-ICR Bromodichloromethane	14.3 µg/L	EPA 551.1	1	1.0	7/9/98	7/20/98	7/20/98	0-178-0
918	THM-ICR Bromoform	13.3 µg/L	EPA 551.1	1	1.0	7/9/98	7/20/98	7/20/98	0-178-0
919	THM-ICR Chloroform	5.6 µg/L	EPA 551.1	1	1.0	7/9/98	7/20/98	7/20/98	0-178-0
920	THM-ICR Dibromochloromethane	22.3 µg/L	EPA 551.1	1	1.0	7/9/98	7/20/98	7/20/98	0-178-0
921	UV-ICR UV	0.047 1/cm	SM 5910 B	1	0.009	7/7/98		7/8/98	8-0-222
922	UV-ICR UV (Dupl)	0.047 1/cm	SM 5910 B	1	0.009	7/7/98		7/8/98	8-0-222
		0.047 1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

Sample ID: 123.10.pH8.2.Eff-24			S&H ID: 9807-35		Date Sampled: 7/9/98 11:58:00 AM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
923	pH	pH	7.9	Unit	SM 4500-H+ B	1	n/a	7/9/98		7/9/98	n/a
924	TEMP	Temperature	22.5	°C	SM 2550 B	1	n/a	7/9/98		7/9/98	n/a
925	TOC-ICR	TOC	3.22	mg/L	SM 5310 C	1	0.50	7/9/98		7/9/98	7-0-332
926	TOC-ICR	TOC (Dupl)	3.24	mg/L	SM 5310 C	1	0.50	7/9/98		7/9/98	7-0-332
			3.23	mg/L	0.6 % RPD						
927	UV-ICR	UV	0.052	1/cm	SM 5910 B	1	0.009	7/9/98		7/9/98	8-0-223
928	UV-ICR	UV (Dupl)	0.052	1/cm	SM 5910 B	1	0.009	7/9/98		7/9/98	8-0-223
			0.052	1/cm	0.0 % RPD						

Sample ID: 123.10.pH8.2.Eff-7d			S&H ID: 9807-43		Date Sampled: 7/4/98 6:18:00 AM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
929	Cl2Dose	Chlorine Dose	1.85	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/7/98		7/7/98	n/a
930	Cl2Res	Chlorine Residual	1.01	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/7/98		7/7/98	n/a
931	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	97.6	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
932	HAA-ICR	2-Bromopropionic acid (Surrogate)	101.2	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
933	HAA-ICR	Bromochloroacetic acid	1.0	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
934	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
935	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/16/98	0-176-0
936	HAA-ICR	Dibromoacetic acid	3.1	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
937	HAA-ICR	Dichloroacetic acid	1.6	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
938	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
939	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/16/98	0-176-0
940	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/7/98	7/15/98	7/16/98	0-176-0
941	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
942	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	7/7/98		7/7/98	n/a
943	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/7/98		7/7/98	n/a
944	pH	pH	7.8	Unit	SM 4500-H+ B	1	n/a	7/4/98		7/4/98	n/a
945	TEMP	Cl2 Temperature	27.2	°C	SM 2550 B	1	n/a	7/7/98		7/7/98	n/a
946	TEMP	Temperature	21.9	°C	SM 2550 B	1	n/a	7/4/98		7/4/98	n/a
947	TIME	Cl2 Incubation Time	6.1	hrs	n/a	1	n/a	7/7/98		7/7/98	n/a
948	TOC-ICR	TOC	1.13	mg/L	SM 5310 C	1	0.50	7/4/98		7/4/98	7-0-323
949	TOC-ICR	TOC (Dupl)	1.12	mg/L	SM 5310 C	1	0.50	7/4/98		7/4/98	7-0-323
			1.13	mg/L	0.9 % RPD						
950	TOX-ICR	TOX	29	µg Cl-/L	SM 5320 B	1	25	7/7/98		7/15/98	12-0-168
951	TOX-ICR	TOX (Dupl)	29	µg Cl-/L	SM 5320 B	1	25	7/7/98		7/15/98	12-0-168
			29	µg Cl-/L	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

952	THM-ICR 1,2,3-Trichloropropane (Surrogate)	99.2 %	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
953	THM-ICR Bromodichloromethane	1.9 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
954	THM-ICR Bromoform	10.4 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
955	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
956	THM-ICR Dibromochloromethane	6.7 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
957	UV-ICR UV	0.011 1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-217
958	UV-ICR UV (Dupl)	0.011 1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-217
		0.011 1/cm	0.0 % RPD						

Sample ID: 123.10.pH8.2.Eff-11d

S&H ID: 9807-44

Date Sampled: 7/4/98 9:56:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
959	Cl2Dose Chlorine Dose	1.85 mg/L as Cl2	SM 4500-Cl B	1	n/a	7/8/98		7/8/98	n/a
960	Cl2Res Chlorine Residual	0.86 mg/L as Cl2	SM 4500-Cl F	1	0.10	7/8/98		7/8/98	n/a
961	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	96.0 %	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
962	HAA-ICR 2-Bromopropionic acid (Surrogate)	95.6 %	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
963	HAA-ICR Bromochloroacetic acid	2.3 µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
964	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
965	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
966	HAA-ICR Dibromoacetic acid	4.3 µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
967	HAA-ICR Dichloroacetic acid	6.1 µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
968	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
969	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
970	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/8/98	7/15/98	7/16/98	0-176-0
971	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
972	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
973	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
974	pH pH	8.1 Unit	SM 4500-H+ B	1	n/a	7/4/98		7/4/98	n/a
975	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	7/8/98		7/8/98	n/a
976	TEMP Temperature	23.1 °C	SM 2550 B	1	n/a	7/4/98		7/4/98	n/a
977	TIME Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	7/8/98		7/8/98	n/a
978	TOC-ICR TOC	1.74 mg/L	SM 5310 C	1	0.50	7/4/98		7/5/98	7-0-325
979	TOC-ICR TOC (Dupl)	1.80 mg/L	SM 5310 C	1	0.50	7/4/98		7/5/98	7-0-325
		1.77 mg/L	3.4 % RPD						
980	TOX-ICR TOX	57 µg Cl-/L	SM 5320 B	1	25	7/8/98		7/16/98	12-0-169
981	TOX-ICR TOX (Dupl)	57 µg Cl-/L	SM 5320 B	1	25	7/8/98		7/16/98	12-0-169
		57 µg Cl-/L	0.0 % RPD						
982	THM-ICR 1,2,3-Trichloropropane (Surrogate)	87.2 %	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

983	THM-ICR Bromodichloromethane	4.9 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
984	THM-ICR Bromoform	13.5 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
985	THM-ICR Chloroform	1.1 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
986	THM-ICR Dibromochloromethane	13.4 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
987	UV-ICR UV	0.021 1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-218
988	UV-ICR UV (Dupl)	0.021 1/cm	SM 5910 B	1	0.009	7/4/98		7/5/98	8-0-218
		0.021 1/cm	0.0 % RPD						

Sample ID: 123.10.pH8.2.Eff-20d

S&H ID: 9807-46

Date Sampled: 7/6/98 9:24:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
989	Cl2Dose	Chlorine Dose	2.23	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/8/98		7/8/98	n/a
990	Cl2Res	Chlorine Residual	0.91	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/8/98		7/8/98	n/a
991	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	94.8	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
992	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.8	%	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
993	HAA-ICR	Bromochloroacetic acid	5.1	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
994	HAA-ICR	Bromodichloroacetic acid	1.5	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
995	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
996	HAA-ICR	Dibromoacetic acid	6.3	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
997	HAA-ICR	Dichloroacetic acid	5.4	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
998	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
999	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/8/98	7/15/98	7/16/98	0-176-0
1000	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/8/98	7/15/98	7/16/98	0-176-0
1001	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/8/98	7/15/98	7/16/98	0-176-0
1002	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
1003	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
1004	pH	pH	7.8	Unit	SM 4500-H+ B	1	n/a	7/6/98		7/6/98	n/a
1005	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	7/8/98		7/8/98	n/a
1006	TEMP	Temperature	23.4	°C	SM 2550 B	1	n/a	7/6/98		7/6/98	n/a
1007	TIME	Cl2 Incubation Time	6.2	hrs	n/a	1	n/a	7/8/98		7/8/98	n/a
1008	TOC-ICR	TOC	2.86	mg/L	SM 5310 C	1	0.50	7/6/98		7/7/98	7-0-329
1009	TOC-ICR	TOC (Dupl)	2.86	mg/L	SM 5310 C	1	0.50	7/6/98		7/7/98	7-0-329
			2.86 mg/L		0.0 % RPD						
1010	TOX-ICR	TOX	104	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/16/98	12-0-169
1011	TOX-ICR	TOX (Dupl)	100	µg Cl-/L	SM 5320 B	1	25	7/8/98		7/16/98	12-0-169
			102 µg Cl-/L		3.9 % RPD						
1012	THM-ICR	1,2,3-Trichloropropane (Surrogate)	107.6	%	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
1013	THM-ICR	Bromodichloromethane	12.1	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
1014	THM-ICR	Bromoform	12.7	µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1015	THM-ICR Chloroform	4.0 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
1016	THM-ICR Dibromochloromethane	21.5 µg/L	EPA 551.1	1	1.0	7/8/98	7/16/98	7/17/98	0-177-0
1017	UV-ICR UV	0.040 1/cm	SM 5910 B	1	0.009	7/6/98		7/7/98	8-0-221
1018	UV-ICR UV (Dupl)	0.040 1/cm	SM 5910 B	1	0.009	7/6/98		7/7/98	8-0-221
		0.040 1/cm	0.0 % RPD						

Sample ID: 123.10.pH8.2.Inf.A-1

S&H ID: 9807-52

Date Sampled: 7/2/98 5:15:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1019	ALK	Alkalinity	22	mg/L	SM 2320 B	1	5	7/2/98		7/2/98	1-0-24
1020	ALK	Alkalinity (Dupl)	21	mg/L	SM 2320 B	1	5	7/2/98		7/2/98	1-0-24
			22	mg/L	4.5 % RPD						
1021	NH3	Ammonia Nitrogen	0.13	mg/L	EPA 350.1	1	0.05	7/2/98		7/13/98	MW80526
1022	BR	Bromide	0.110	mg/L	EPA 300.0 A	1	0.020	7/2/98		7/15/98	MW80695
1023	CaHardM	Calcium Hardness	35	mg/L CaCO3	EPA 200.7	1	5	7/2/98		7/29/98	MW n/a
1024	CaMW	Calcium, Total, ICAP	14	mg/L	EPA 200.7	1	1	7/2/98	7/29/98	7/29/98	MW81464
1025	MgMW	Magnesium, Total, ICAP	5	mg/L	EPA 200.7	1	0	7/2/98	7/29/98	7/29/98	MW81465
1026	TotHard	Total Hardness as CaCO3 by ICP	54	mg/L CaCO3	SM 2340B	1	7	7/2/98		7/29/98	MW n/a

Sample ID: 123.10.pH8.2.Inf.A-2

S&H ID: 9807-53

Date Sampled: 7/8/98 5:10:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1027	ALK	Alkalinity	26	mg/L	SM 2320 B	1	5	7/8/98		7/8/98	1-0-25
1028	ALK	Alkalinity (Dupl)	26	mg/L	SM 2320 B	1	5	7/8/98		7/8/98	1-0-25
			26	mg/L	0.0 % RPD						
1029	NH3	Ammonia Nitrogen	ND	mg/L	EPA 350.1	1	0.05	7/8/98		7/23/98	MW81184
1030	BR	Bromide	0.140	mg/L	EPA 300.0 A	1	0.020	7/8/98		7/22/98	MW81278
1031	CaHardM	Calcium Hardness	35	mg/L CaCO3	EPA 200.7	1	5	7/8/98		8/3/98	MW n/a
1032	CaMW	Calcium, Total, ICAP	14	mg/L	EPA 200.7	1	1	7/8/98	7/20/98	8/3/98	MW81668
1033	MgMW	Magnesium, Total, ICAP	5	mg/L	EPA 200.7	1	0	7/8/98	7/20/98	8/3/98	MW81673
1034	TotHard	Total Hardness as CaCO3 by ICP	54	mg/L CaCO3	SM 2340B	1	7	7/8/98		8/3/98	MW n/a

Sample ID: 123.pH8.2.Inf.B-1

S&H ID: 9807-54

Date Sampled: 7/2/98 5:25:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1035	Cl2Dose	Chlorine Dose	3.05	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/7/98		7/7/98	n/a
1036	Cl2Res	Chlorine Residual	0.88	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/7/98		7/7/98	n/a
1037	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	103.2	%	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1038	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.4 %	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
1039	HAA-ICR	Bromochloroacetic acid	10.7 µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
1040	HAA-ICR	Bromodichloroacetic acid	3.3 µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
1041	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/16/98	0-176-0
1042	HAA-ICR	Dibromoacetic acid	7.3 µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
1043	HAA-ICR	Dichloroacetic acid	13.9 µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
1044	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
1045	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/7/98	7/15/98	7/16/98	0-176-0
1046	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/7/98	7/15/98	7/16/98	0-176-0
1047	HAA-ICR	Trichloroacetic acid	2.9 µg/L	EPA 552.2	1	1.0	7/7/98	7/15/98	7/16/98	0-176-0
1048	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/7/98		7/7/98	n/a
1049	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/7/98		7/7/98	n/a
1050	pH	pH	8.3 Unit	SM 4500-H+ B	1	n/a	7/2/98		7/2/98	n/a
1051	TEMP	Cl2 Temperature	27.2 °C	SM 2550 B	1	n/a	7/7/98		7/7/98	n/a
1052	TEMP	Temperature	19.6 °C	SM 2550 B	1	n/a	7/2/98		7/2/98	n/a
1053	TIME	Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	7/7/98		7/7/98	n/a
1054	TOC-ICR	TOC	4.24 mg/L	SM 5310 C	1	0.50	7/2/98		7/3/98	7-0-321
1055	TOC-ICR	TOC (Dupl)	4.28 mg/L	SM 5310 C	1	0.50	7/2/98		7/3/98	7-0-321
			4.26 mg/L	0.9 % RPD						
1056	TOX-ICR	TOX	212 µg Cl-/L	SM 5320 B	1	25	7/7/98		7/15/98	12-0-168
1057	TOX-ICR	TOX (Dupl)	209 µg Cl-/L	SM 5320 B	1	25	7/7/98		7/15/98	12-0-168
			211 µg Cl-/L	1.4 % RPD						
1058	THM-ICR	1,2,3-Trichloropropane (Surrogate)	106.8 %	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
1059	THM-ICR	1,2,3-Trichloropropane (Surrogate) (Lab Dupl)	100.8 %	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
			103.8 %	5.8 % RPD						
1060	THM-ICR	Bromodichloromethane	26.0 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
1061	THM-ICR	Bromodichloromethane (Lab Dupl)	25.2 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
			25.6 µg/L	3.1 % RPD						
1062	THM-ICR	Bromoform	5.6 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
1063	THM-ICR	Bromoform (Lab Dupl)	5.5 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
			5.5 µg/L	1.8 % RPD						
1064	THM-ICR	Chloroform	24.1 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
1065	THM-ICR	Chloroform (Lab Dupl)	23.9 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
			24.0 µg/L	0.8 % RPD						
1066	THM-ICR	Dibromochloromethane	21.6 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
1067	THM-ICR	Dibromochloromethane (Lab Dupl)	21.2 µg/L	EPA 551.1	1	1.0	7/7/98	7/16/98	7/16/98	0-177-0
			21.4 µg/L	1.9 % RPD						
1068	TURB	Turbidity	0.20 ntu	SM 2130 B	1	0.05	7/2/98		7/2/98	9-0-13
1069	UV-ICR	UV	0.081 1/cm	SM 5910 B	1	0.009	7/2/98		7/2/98	8-0-214

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1070	UV-ICR	UV (Dupl)	0.081 1/cm	SM 5910 B	1	0.009	7/2/98	7/2/98	8-0-214
			0.081 1/cm	0.0 % RPD					

Sample ID: 123.pH8.2.Inf.B-2

S&H ID: 9807-55

Date Sampled: 7/4/98 1:00:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1071	pH	pH	8.2	Unit	SM 4500-H+ B	1	n/a	7/4/98		7/4/98	n/a
1072	TEMP	Temperature	21.9	°C	SM 2550 B	1	n/a	7/4/98		7/4/98	n/a
1073	TOC-ICR	TOC	4.11	mg/L	SM 5310 C	1	0.50	7/4/98		7/6/98	7-0-327
1074	TOC-ICR	TOC (Dupl)	4.11	mg/L	SM 5310 C	1	0.50	7/4/98		7/6/98	7-0-327
			4.11	mg/L	0.0 % RPD						

Sample ID: 123.pH8.2.Inf.B-3

S&H ID: 9807-56

Date Sampled: 7/6/98 12:55:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1075	pH	pH	8.2	Unit	SM 4500-H+ B	1	n/a	7/6/98		7/6/98	n/a
1076	TEMP	Temperature	19.9	°C	SM 2550 B	1	n/a	7/6/98		7/6/98	n/a
1077	TOC-ICR	TOC	4.12	mg/L	SM 5310 C	1	0.50	7/6/98		7/6/98	7-0-327
1078	TOC-ICR	TOC (Dupl)	4.09	mg/L	SM 5310 C	1	0.50	7/6/98		7/6/98	7-0-327
			4.11	mg/L	0.7 % RPD						

Sample ID: 123.inst.8.2.inf-1

S&H ID: 9807-74

Date Sampled: 7/3/98 12:45:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1079	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	106.4	%	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
1080	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.8	%	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
1081	HAA-ICR	Bromochloroacetic acid	2.4	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
1082	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
1083	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/3/98	7/13/98	7/14/98	0-171-0
1084	HAA-ICR	Dibromoacetic acid	1.1	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
1085	HAA-ICR	Dichloroacetic acid	5.8	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
1086	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
1087	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/3/98	7/13/98	7/14/98	0-171-0
1088	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/3/98	7/13/98	7/14/98	0-171-0
1089	HAA-ICR	Trichloroacetic acid	1.0	µg/L	EPA 552.2	1	1.0	7/3/98	7/13/98	7/14/98	0-171-0
1090	THM-ICR	1,2,3-Trichloropropane (Surrogate)	96.4	%	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
1091	THM-ICR	Bromodichloromethane	2.4	µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
1092	THM-ICR	Bromoform	ND	µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
1093	THM-ICR	Chloroform	3.5	µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0
1094	THM-ICR	Dibromochloromethane	1.3	µg/L	EPA 551.1	1	1.0	7/3/98	7/14/98	7/14/98	0-172-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

Sample ID: 123.inst.8.2.eff-2

S&H ID: 9807-75

Date Sampled: 7/4/98 9:15:00 AM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1095	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	106.0	%	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1096	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.0	%	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1097	HAA-ICR Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1098	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1099	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/4/98	7/13/98	7/14/98	0-171-0
1100	HAA-ICR Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1101	HAA-ICR Dichloroacetic acid	2.8	µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1102	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1103	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/4/98	7/13/98	7/14/98	0-171-0
1104	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/4/98	7/13/98	7/14/98	0-171-0
1105	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1106	THM-ICR 1,2,3-Trichloropropane (Surrogate)	92.8	%	EPA 551.1	1	1.0	7/4/98	7/14/98	7/14/98	0-172-0
1107	THM-ICR Bromodichloromethane	ND	µg/L	EPA 551.1	1	1.0	7/4/98	7/14/98	7/14/98	0-172-0
1108	THM-ICR Bromoform	ND	µg/L	EPA 551.1	1	1.0	7/4/98	7/14/98	7/14/98	0-172-0
1109	THM-ICR Chloroform	ND	µg/L	EPA 551.1	1	1.0	7/4/98	7/14/98	7/14/98	0-172-0
1110	THM-ICR Dibromochloromethane	ND	µg/L	EPA 551.1	1	1.0	7/4/98	7/14/98	7/14/98	0-172-0

Sample ID: 123.inst.8.2.eff-3

S&H ID: 9807-76

Date Sampled: 7/4/98 7:15:00 PM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1111	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	105.2	%	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1112	HAA-ICR 2-Bromopropionic acid (Surrogate)	94.0	%	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1113	HAA-ICR Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1114	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/4/98	7/13/98	7/14/98	0-171-0
1115	HAA-ICR Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1116	HAA-ICR Dichloroacetic acid	5.8	µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1117	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1118	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/4/98	7/13/98	7/14/98	0-171-0
1119	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/4/98	7/13/98	7/14/98	0-171-0
1120	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1121	THM-ICR 1,2,3-Trichloropropane (Surrogate)	92.8	%	EPA 551.1	1	1.0	7/4/98	7/14/98	7/14/98	0-172-0
1122	THM-ICR Bromodichloromethane	ND	µg/L	EPA 551.1	1	1.0	7/4/98	7/14/98	7/14/98	0-172-0
1123	THM-ICR Bromoform	ND	µg/L	EPA 551.1	1	1.0	7/4/98	7/14/98	7/14/98	0-172-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1124	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	7/4/98	7/14/98	7/14/98	0-172-0
1125	THM-ICR Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	7/4/98	7/14/98	7/14/98	0-172-0

Sample ID: 123.inst.8.2.eff-4

S&H ID: 9807-77

Date Sampled: 7/6/98 9:00:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1126	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	109.2 %	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1127	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.4 %	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1128	HAA-ICR Bromochloroacetic acid	1.8 µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1129	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1130	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/4/98	7/13/98	7/14/98	0-171-0
1131	HAA-ICR Dibromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1132	HAA-ICR Dichloroacetic acid	4.6 µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1133	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1134	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/4/98	7/13/98	7/14/98	0-171-0
1135	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/4/98	7/13/98	7/14/98	0-171-0
1136	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/4/98	7/13/98	7/14/98	0-171-0
1137	THM-ICR 1,2,3-Trichloropropane (Surrogate)	94.4 %	EPA 551.1	1	1.0	7/6/98	7/14/98	7/14/98	0-172-0
1138	THM-ICR Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	7/6/98	7/14/98	7/14/98	0-172-0
1139	THM-ICR Bromoform	ND µg/L	EPA 551.1	1	1.0	7/6/98	7/14/98	7/14/98	0-172-0
1140	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	7/6/98	7/14/98	7/14/98	0-172-0
1141	THM-ICR Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	7/6/98	7/14/98	7/14/98	0-172-0

Sample ID: 123.10.pH8.7.Eff-1

S&H ID: 9807-135

Date Sampled: 7/8/98 9:46:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1142	Cl2Dose Chlorine Dose	1.34 mg/L as Cl2	SM 4500-Cl B	1	n/a	7/11/98		7/11/98	n/a
1143	Cl2Res Chlorine Residual	0.90 mg/L as Cl2	SM 4500-Cl F	1	0.10	7/11/98		7/11/98	n/a
1144	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	103.2 %	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1145	HAA-ICR 2-Bromopropionic acid (Surrogate)	98.4 %	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1146	HAA-ICR Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1147	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1148	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1149	HAA-ICR Dibromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1150	HAA-ICR Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1151	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1152	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1153	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/11/98	7/21/98	7/22/98	0-179-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1154	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1155	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1156	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1157	pH	pH	8.5	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
1158	TEMP	Cl2 Temperature	26.5	°C	SM 2550 B	1	n/a	7/11/98		7/11/98	n/a
1159	TEMP	Temperature	23.6	°C	SM 2550 B	1	n/a	7/8/98		7/8/98	n/a
1160	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	7/11/98		7/11/98	n/a
1161	TOC-ICR	TOC	ND	mg/L	SM 5310 C	1	0.50	7/8/98		7/9/98	7-0-332
1162	TOC-ICR	TOC (Dupl)	ND	mg/L	SM 5310 C	1	0.50	7/8/98		7/9/98	7-0-332
			ND	mg/L							
1163	TOX-ICR	TOX	ND	µg Cl-/L	SM 5320 B	1	25	7/11/98		7/22/98	12-0-173
1164	TOX-ICR	TOX (Dupl)	ND	µg Cl-/L	SM 5320 B	1	25	7/11/98		7/22/98	12-0-173
			ND	µg Cl-/L							
1165	THM-ICR	1,2,3-Trichloropropane (Surrogate)	107.6	%	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1166	THM-ICR	1,2,3-Trichloropropane (Surrogate) (Lab Dupl)	104.0	%	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
			105.8	%	3.4 % RPD						
1167	THM-ICR	Bromodichloromethane	ND	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1168	THM-ICR	Bromodichloromethane (Lab Dupl)	ND	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
			ND	µg/L							
1169	THM-ICR	Bromoform	1.2	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1170	THM-ICR	Bromoform (Lab Dupl)	1.1	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
			1.1	µg/L	9.1 % RPD						
1171	THM-ICR	Chloroform	ND	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1172	THM-ICR	Chloroform (Lab Dupl)	ND	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
			ND	µg/L							
1173	THM-ICR	Dibromochloromethane	ND	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1174	THM-ICR	Dibromochloromethane (Lab Dupl)	ND	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
			ND	µg/L							
1175	UV-ICR	UV	ND	1/cm	SM 5910 B	1	0.009	7/8/98		7/9/98	8-0-223
1176	UV-ICR	UV (Dupl)	ND	1/cm	SM 5910 B	1	0.009	7/8/98		7/9/98	8-0-223
			ND	1/cm							

Sample ID: 123.10.pH8.7.Eff-3

S&H ID: 9807-137

Date Sampled: 7/9/98 3:57:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1177	Cl2Dose	Chlorine Dose	1.42	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/11/98		7/11/98	n/a
1178	Cl2Res	Chlorine Residual	0.84	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/11/98		7/11/98	n/a
1179	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	103.2	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1180	HAA-ICR	2-Bromopropionic acid (Surrogate)	101.6	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1181	HAA-ICR	Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1182	HAA-ICR	Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1183	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1184	HAA-ICR	Dibromoacetic acid	1.7 µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1185	HAA-ICR	Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1186	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1187	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1188	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/11/98	7/21/98	7/22/98	0-179-0
1189	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1190	pH	Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1191	pH	Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1192	pH	pH	8.1 Unit	SM 4500-H+ B	1	n/a	7/9/98		7/9/98	n/a
1193	TEMP	Cl2 Temperature	26.5 °C	SM 2550 B	1	n/a	7/11/98		7/11/98	n/a
1194	TEMP	Temperature	23.5 °C	SM 2550 B	1	n/a	7/9/98		7/9/98	n/a
1195	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/11/98		7/11/98	n/a
1196	TOC-ICR	TOC	ND mg/L	SM 5310 C	1	0.50	7/9/98		7/9/98	7-0-332
1197	TOC-ICR	TOC (Dupl)	0.51 mg/L 0.50 mg/L	SM 5310 C	1	0.50	7/9/98		7/9/98	7-0-332
				4.0 % RPD						
1198	TOX-ICR	TOX	ND µg Cl-/L	SM 5320 B	1	25	7/11/98		7/22/98	12-0-173
1199	TOX-ICR	TOX (Dupl)	ND µg Cl-/L ND µg Cl-/L	SM 5320 B	1	25	7/11/98		7/22/98	12-0-173
1200	THM-ICR	1,2,3-Trichloropropane (Surrogate)	102.0 %	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1201	THM-ICR	Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1202	THM-ICR	Bromoform	8.4 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1203	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1204	THM-ICR	Dibromochloromethane	2.2 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1205	UV-ICR	UV	ND 1/cm	SM 5910 B	1	0.009	7/9/98		7/10/98	8-0-225
1206	UV-ICR	UV (Dupl)	ND 1/cm ND 1/cm	SM 5910 B	1	0.009	7/9/98		7/10/98	8-0-225

Sample ID: 123.10.pH8.7.Eff-4

S&H ID: 9807-138

Date Sampled: 7/9/98 9:21:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1207	Cl2Dose	Chlorine Dose	1.57	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/11/98		7/11/98	n/a
1208	Cl2Res	Chlorine Residual	0.85	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/11/98		7/11/98	n/a
1209	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	104.0	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1210	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.0	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1211	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1212	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1213	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1214	HAA-ICR	Dibromoacetic acid	2.6 µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1215	HAA-ICR	Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1216	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1217	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1218	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/11/98	7/21/98	7/22/98	0-179-0
1219	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1220	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1221	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1222	pH	pH	8.2 Unit	SM 4500-H+ B	1	n/a	7/9/98		7/9/98	n/a
1223	TEMP	Cl2 Temperature	26.5 °C	SM 2550 B	1	n/a	7/11/98		7/11/98	n/a
1224	TEMP	Temperature	23.5 °C	SM 2550 B	1	n/a	7/9/98		7/9/98	n/a
1225	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/11/98		7/11/98	n/a
1226	TOC-ICR	TOC	0.96 mg/L	SM 5310 C	1	0.50	7/9/98		7/10/98	7-0-334
1227	TOC-ICR	TOC (Dupl)	0.98 mg/L	SM 5310 C	1	0.50	7/9/98		7/10/98	7-0-334
1228	TOC-ICR	TOC (Dupl)	0.95 mg/L	SM 5310 C	1	0.50	7/9/98		7/10/98	7-0-334
			0.96 mg/L	1.6 % RPD						
1229	TOX-ICR	TOX	ND µg Cl-/L	SM 5320 B	1	25	7/11/98		7/22/98	12-0-173
1230	TOX-ICR	TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	7/11/98		7/22/98	12-0-173
			ND µg Cl-/L							
1231	THM-ICR	1,2,3-Trichloropropane (Surrogate)	100.4 %	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1232	THM-ICR	Bromodichloromethane	1.2 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1233	THM-ICR	Bromoform	11.7 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1234	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1235	THM-ICR	Dibromochloromethane	4.9 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1236	UV-ICR	UV	ND 1/cm	SM 5910 B	1	0.009	7/9/98		7/10/98	8-0-225
1237	UV-ICR	UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	7/9/98		7/10/98	8-0-225
			ND 1/cm							

Sample ID: 123.10.pH8.7.Eff-5

S&H ID: 9807-139

Date Sampled: 7/10/98 12:25:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1238	Cl2Dose	Chlorine Dose	1.66	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/11/98		7/11/98	n/a
1239	Cl2Res	Chlorine Residual	0.90	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/11/98		7/11/98	n/a
1240	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	109.2	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1241	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.4	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1242	HAA-ICR	Bromochloroacetic acid	1.1	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1243	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1244	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1245	HAA-ICR	Dibromoacetic acid	3.3 µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1246	HAA-ICR	Dichloroacetic acid	1.3 µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1247	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1248	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1249	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/11/98	7/21/98	7/22/98	0-179-0
1250	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1251	pH	Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1252	pH	Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1253	pH	pH	8.3 Unit	SM 4500-H+ B	1	n/a	7/9/98		7/9/98	n/a
1254	TEMP	Cl2 Temperature	26.5 °C	SM 2550 B	1	n/a	7/11/98		7/11/98	n/a
1255	TEMP	Temperature	22.6 °C	SM 2550 B	1	n/a	7/9/98		7/9/98	n/a
1256	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/11/98		7/11/98	n/a
1257	TOC-ICR	TOC	1.30 mg/L	SM 5310 C	1	0.50	7/9/98		7/10/98	7-0-334
1258	TOC-ICR	TOC (Dupl)	1.29 mg/L	SM 5310 C	1	0.50	7/9/98		7/10/98	7-0-334
			1.29 mg/L	0.8 % RPD						
1259	TOX-ICR	TOX	28 µg Cl-/L	SM 5320 B	1	25	7/11/98		7/22/98	12-0-173
1260	TOX-ICR	TOX (Dupl)	26 µg Cl-/L	SM 5320 B	1	25	7/11/98		7/22/98	12-0-173
			27 µg Cl-/L	7.4 % RPD						
1261	THM-ICR	1,2,3-Trichloropropane (Surrogate)	103.6 %	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1262	THM-ICR	Bromodichloromethane	1.9 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1263	THM-ICR	Bromoform	13.1 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1264	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1265	THM-ICR	Dibromochloromethane	7.4 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1266	UV-ICR	UV	0.011 1/cm	SM 5910 B	1	0.009	7/9/98		7/10/98	8-0-225
1267	UV-ICR	UV (Dupl)	0.011 1/cm	SM 5910 B	1	0.009	7/9/98		7/10/98	8-0-225
			0.011 1/cm	0.0 % RPD						

Sample ID: 123.10.pH8.7.Eff-6

S&H ID: 9807-140

Date Sampled: 7/10/98 3:26:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1268	Cl2Dose	Chlorine Dose	1.73	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/11/98		7/11/98	n/a
1269	Cl2Res	Chlorine Residual	0.89	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/11/98		7/11/98	n/a
1270	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	105.6	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1271	HAA-ICR	2-Bromopropionic acid (Surrogate)	99.6	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1272	HAA-ICR	Bromochloroacetic acid	1.4	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1273	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1274	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1275	HAA-ICR	Dibromoacetic acid	3.9	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1276	HAA-ICR	Dichloroacetic acid	1.8	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1277	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1278	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1279	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/11/98	7/21/98	7/22/98	0-179-0
1280	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1281	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1282	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1283	pH	pH	8.3 Unit	SM 4500-H+ B	1	n/a	7/10/98		7/10/98	n/a
1284	TEMP	Cl2 Temperature	26.5 °C	SM 2550 B	1	n/a	7/11/98		7/11/98	n/a
1285	TEMP	Temperature	22.1 °C	SM 2550 B	1	n/a	7/10/98		7/10/98	n/a
1286	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/11/98		7/11/98	n/a
1287	TOC-ICR	TOC	1.51 mg/L	SM 5310 C	1	0.50	7/10/98		7/10/98	7-0-334
1288	TOC-ICR	TOC (Dupl)	1.52 mg/L	SM 5310 C	1	0.50	7/10/98		7/10/98	7-0-334
			1.52 mg/L	0.7 % RPD						
1289	TOX-ICR	TOX	34 µg Cl-/L	SM 5320 B	1	25	7/11/98		7/22/98	12-0-173
1290	TOX-ICR	TOX (Dupl)	36 µg Cl-/L	SM 5320 B	1	25	7/11/98		7/22/98	12-0-173
			35 µg Cl-/L	5.7 % RPD						
1291	THM-ICR	1,2,3-Trichloropropane (Surrogate)	102.8 %	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1292	THM-ICR	Bromodichloromethane	2.7 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1293	THM-ICR	Bromoform	14.5 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1294	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1295	THM-ICR	Dibromochloromethane	9.2 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1296	UV-ICR	UV	0.013 1/cm	SM 5910 B	1	0.009	7/10/98		7/10/98	8-0-225
1297	UV-ICR	UV (Dupl)	0.013 1/cm	SM 5910 B	1	0.009	7/10/98		7/10/98	8-0-225
			0.013 1/cm	0.0 % RPD						

Sample ID: 123.10.pH8.7.Eff-7

S&H ID: 9807-141

Date Sampled: 7/10/98 6:29:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1298	Cl2Dose	Chlorine Dose	1.77	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/11/98		7/11/98	n/a
1299	Cl2Res	Chlorine Residual	0.86	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/11/98		7/11/98	n/a
1300	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	109.2	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1301	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.0	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1302	HAA-ICR	Bromochloroacetic acid	1.5	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1303	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1304	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1305	HAA-ICR	Dibromoacetic acid	4.1	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1306	HAA-ICR	Dichloroacetic acid	2.2	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1307	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1308	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1309	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/11/98	7/21/98	7/22/98	0-179-0
1310	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1311	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1312	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1313	pH	pH	8.2 Unit	SM 4500-H+ B	1	n/a	7/10/98		7/10/98	n/a
1314	TEMP	Cl2 Temperature	26.5 °C	SM 2550 B	1	n/a	7/11/98		7/11/98	n/a
1315	TEMP	Temperature	22.0 °C	SM 2550 B	1	n/a	7/10/98		7/10/98	n/a
1316	TIME	Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	7/11/98		7/11/98	n/a
1317	TOC-ICR	TOC	1.65 mg/L	SM 5310 C	1	0.50	7/10/98		7/10/98	7-0-334
1318	TOC-ICR	TOC (Dupl)	1.66 mg/L	SM 5310 C	1	0.50	7/10/98		7/10/98	7-0-334
			1.65 mg/L	0.6 % RPD						
1319	TOX-ICR	TOX	38 µg Cl-/L	SM 5320 B	1	25	7/11/98		7/21/98	12-0-172
1320	TOX-ICR	TOX (Dupl)	38 µg Cl-/L	SM 5320 B	1	25	7/11/98		7/21/98	12-0-172
			38 µg Cl-/L	0.0 % RPD						
1321	THM-ICR	1,2,3-Trichloropropane (Surrogate)	100.8 %	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1322	THM-ICR	Bromodichloromethane	3.4 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1323	THM-ICR	Bromoform	16.0 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1324	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1325	THM-ICR	Dibromochloromethane	10.8 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1326	UV-ICR	UV	0.016 1/cm	SM 5910 B	1	0.009	7/10/98		7/10/98	8-0-225
1327	UV-ICR	UV (Dupl)	0.016 1/cm	SM 5910 B	1	0.009	7/10/98		7/10/98	8-0-225
			0.016 1/cm	0.0 % RPD						

Sample ID: 123.10.pH8.7.Eff-8

S&H ID: 9807-142

Date Sampled: 7/10/98 9:31:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1328	Cl2Dose	Chlorine Dose	1.82	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/11/98		7/11/98	n/a
1329	Cl2Res	Chlorine Residual	0.88	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/11/98		7/11/98	n/a
1330	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	107.6	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1331	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.4	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1332	HAA-ICR	Bromochloroacetic acid	2.4	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1333	HAA-ICR	Bromodichloroacetic acid	1.1	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1334	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1335	HAA-ICR	Dibromoacetic acid	6.0	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1336	HAA-ICR	Dichloroacetic acid	2.8	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1337	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1338	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1339	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/11/98	7/21/98	7/22/98	0-179-0
1340	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1341	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	7/11/98	7/11/98	n/a
1342	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/11/98	7/11/98	n/a
1343	pH	pH	8.0 Unit	SM 4500-H+ B	1	n/a	7/10/98	7/10/98	n/a
1344	TEMP	Cl2 Temperature	26.5 °C	SM 2550 B	1	n/a	7/11/98	7/11/98	n/a
1345	TEMP	Temperature	22.4 °C	SM 2550 B	1	n/a	7/10/98	7/10/98	n/a
1346	TIME	Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	7/11/98	7/11/98	n/a
1347	TOC-ICR	TOC	1.82 mg/L	SM 5310 C	1	0.50	7/10/98	7/10/98	7-0-334
1348	TOC-ICR	TOC (Dupl)	1.83 mg/L	SM 5310 C	1	0.50	7/10/98	7/10/98	7-0-334
			1.83 mg/L	0.5 % RPD					
1349	TOX-ICR	TOX	46 µg Cl-/L	SM 5320 B	1	25	7/11/98	7/21/98	12-0-172
1350	TOX-ICR	TOX (Dupl)	46 µg Cl-/L	SM 5320 B	1	25	7/11/98	7/21/98	12-0-172
			46 µg Cl-/L	0.0 % RPD					
1351	THM-ICR	1,2,3-Trichloropropane (Surrogate)	96.4 %	EPA 551.1	1	1.0	7/11/98	7/20/98	0-178-0
1352	THM-ICR	Bromodichloromethane	4.4 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	0-178-0
1353	THM-ICR	Bromoform	15.5 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	0-178-0
1354	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	0-178-0
1355	THM-ICR	Dibromochloromethane	12.9 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	0-178-0
1356	UV-ICR	UV	0.018 1/cm	SM 5910 B	1	0.009	7/10/98	7/10/98	8-0-225
1357	UV-ICR	UV (Dupl)	0.018 1/cm	SM 5910 B	1	0.009	7/10/98	7/10/98	8-0-225
			0.018 1/cm	0.0 % RPD					

Sample ID: 123.10.pH8.7.Eff-9

S&H ID: 9807-143

Date Sampled: 7/10/98 3:00:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Sample	Prep.	Anal.	QC Batch
1358	Cl2Dose	Chlorine Dose	1.89	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/13/98		7/13/98	n/a
1359	Cl2Res	Chlorine Residual	0.90	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/13/98		7/13/98	n/a
1360	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	113.6	%	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1361	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.0	%	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1362	HAA-ICR	Bromochloroacetic acid	2.2	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1363	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1364	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/21/98	7/22/98	0-179-0
1365	HAA-ICR	Dibromoacetic acid	5.3	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1366	HAA-ICR	Dichloroacetic acid	2.3	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1367	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1368	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/21/98	7/22/98	0-179-0
1369	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/13/98	7/21/98	7/22/98	0-179-0
1370	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1371	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1372	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2

1373	pH	pH	8.1	Unit	SM 4500-H+ B	1	n/a	7/10/98	7/10/98	n/a
1374	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	7/13/98	7/13/98	n/a
1375	TEMP	Temperature	23.0	°C	SM 2550 B	1	n/a	7/10/98	7/10/98	n/a
1376	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	7/13/98	7/13/98	n/a
1377	TOC-ICR	TOC	2.05	mg/L	SM 5310 C	1	0.50	7/10/98	7/10/98	7-0-334
1378	TOC-ICR	TOC (Dupl)	2.05	mg/L	SM 5310 C	1	0.50	7/10/98	7/10/98	7-0-334
			2.05	mg/L	0.0 % RPD					
1379	TOX-ICR	TOX	53	µg Cl-/L	SM 5320 B	1	25	7/13/98	7/22/98	12-0-173
1380	TOX-ICR	TOX (Dupl)	55	µg Cl-/L	SM 5320 B	1	25	7/13/98	7/22/98	12-0-173
			54	µg Cl-/L	3.7 % RPD					
1381	THM-ICR	1,2,3-Trichloropropane (Surrogate)	102.8	%	EPA 551.1	1	1.0	7/13/98	7/20/98	7/20/98 0-178-0
1382	THM-ICR	Bromodichloromethane	5.4	µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/20/98 0-178-0
1383	THM-ICR	Bromoform	15.9	µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/20/98 0-178-0
1384	THM-ICR	Chloroform	ND	µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/20/98 0-178-0
1385	THM-ICR	Dibromochloromethane	15.2	µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/20/98 0-178-0
1386	UV-ICR	UV	0.021	1/cm	SM 5910 B	1	0.009	7/10/98	7/11/98	8-0-224
1387	UV-ICR	UV (Dupl)	0.021	1/cm	SM 5910 B	1	0.009	7/10/98	7/11/98	8-0-224
			0.021	1/cm	0.0 % RPD					

Sample ID: 123.10.pH8.7.Eff-12**S&H ID:** 9807-146**Date Sampled:** 7/11/98 2:28:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1388	Cl2Dose	Chlorine Dose	1.96	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/13/98		7/13/98	n/a
1389	Cl2Res	Chlorine Residual	0.85	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/13/98		7/13/98	n/a
1390	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	110.8	%	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1391	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.0	%	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1392	HAA-ICR	Bromochloroacetic acid	2.8	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1393	HAA-ICR	Bromodichloroacetic acid	1.2	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1394	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/21/98	7/22/98	0-179-0
1395	HAA-ICR	Dibromoacetic acid	5.9	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1396	HAA-ICR	Dichloroacetic acid	2.1	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1397	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1398	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/21/98	7/22/98	0-179-0
1399	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/13/98	7/21/98	7/22/98	0-179-0
1400	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1401	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1402	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1403	pH	pH	8.3	Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1404	TEMP	Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	7/13/98	7/13/98	n/a
1405	TEMP	Temperature	22.1 °C	SM 2550 B	1	n/a	7/11/98	7/11/98	n/a
1406	TIME	Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	7/13/98	7/13/98	n/a
1407	TOC-ICR	TOC	2.30 mg/L	SM 5310 C	1	0.50	7/11/98	7/11/98	7-0-335
1408	TOC-ICR	TOC (Dupl)	2.31 mg/L	SM 5310 C	1	0.50	7/11/98	7/11/98	7-0-335
			2.30 mg/L	0.4 % RPD					
1409	TOX-ICR	TOX	68 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/23/98	12-0-174
1410	TOX-ICR	TOX (Dupl)	69 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/23/98	12-0-174
			69 µg Cl-/L	1.4 % RPD					
1411	THM-ICR	1,2,3-Trichloropropane (Surrogate)	106.4 %	EPA 551.1	1	1.0	7/13/98	7/20/98	7/20/98 0-178-0
1412	THM-ICR	Bromodichloromethane	8.1 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/20/98 0-178-0
1413	THM-ICR	Bromoform	15.9 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/20/98 0-178-0
1414	THM-ICR	Chloroform	2.1 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/20/98 0-178-0
1415	THM-ICR	Dibromochloromethane	18.5 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/20/98 0-178-0
1416	UV-ICR	UV	0.027 1/cm	SM 5910 B	1	0.009	7/11/98	7/11/98	8-0-224
1417	UV-ICR	UV (Dupl)	0.027 1/cm	SM 5910 B	1	0.009	7/11/98	7/11/98	8-0-224
			0.027 1/cm	0.0 % RPD					

Sample ID: 123.10.pH8.7.Eff-14

S&H ID: 9807-148

Date Sampled: 7/11/98 10:52:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1418	Cl2Dose	Chlorine Dose	2.03	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/13/98		7/13/98	n/a
1419	Cl2Res	Chlorine Residual	0.84	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/13/98		7/13/98	n/a
1420	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	111.6	%	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1421	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.4	%	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1422	HAA-ICR	Bromochloroacetic acid	3.4	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1423	HAA-ICR	Bromodichloroacetic acid	1.4	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1424	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/21/98	7/22/98	0-179-0
1425	HAA-ICR	Dibromoacetic acid	6.9	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1426	HAA-ICR	Dichloroacetic acid	2.1	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1427	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1428	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/21/98	7/22/98	0-179-0
1429	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/13/98	7/21/98	7/22/98	0-179-0
1430	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1431	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1432	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1433	pH	pH	8.5	Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1434	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	7/13/98		7/13/98	n/a
1435	TEMP	Temperature	22.8	°C	SM 2550 B	1	n/a	7/11/98		7/11/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1436	TIME	Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	7/13/98	7/13/98	n/a
1437	TOC-ICR	TOC	2.51 mg/L	SM 5310 C	1	0.50	7/11/98	7/11/98	7-0-335
1438	TOC-ICR	TOC (Dupl)	2.48 mg/L	SM 5310 C	1	0.50	7/11/98	7/11/98	7-0-335
			2.50 mg/L	1.2 % RPD					
1439	TOX-ICR	TOX	78 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/23/98	12-0-174
1440	TOX-ICR	TOX (Dupl)	77 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/23/98	12-0-174
			78 µg Cl-/L	1.3 % RPD					
1441	THM-ICR	1,2,3-Trichloropropane (Surrogate)	104.8 %	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1442	THM-ICR	Bromodichloromethane	9.6 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1443	THM-ICR	Bromoform	15.4 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1444	THM-ICR	Chloroform	2.7 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1445	THM-ICR	Dibromochloromethane	20.4 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1446	UV-ICR	UV	0.030 1/cm	SM 5910 B	1	0.009	7/11/98	7/11/98	8-0-224
1447	UV-ICR	UV (Dupl)	0.030 1/cm	SM 5910 B	1	0.009	7/11/98	7/11/98	8-0-224
			0.030 1/cm	0.0 % RPD					

Sample ID: 123.10.pH8.7.Eff-16

S&H ID: 9807-150

Date Sampled: 7/11/98 7:28:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1448	Cl2Dose	Chlorine Dose	2.09	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/13/98		7/13/98	n/a
1449	Cl2Res	Chlorine Residual	0.82	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/13/98		7/13/98	n/a
1450	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	103.2	%	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1451	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.4	%	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1452	HAA-ICR	Bromochloroacetic acid	3.8	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1453	HAA-ICR	Bromodichloroacetic acid	1.6	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1454	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/21/98	7/22/98	0-179-0
1455	HAA-ICR	Dibromoacetic acid	7.1	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1456	HAA-ICR	Dichloroacetic acid	2.2	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1457	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1458	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/21/98	7/22/98	0-179-0
1459	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/13/98	7/21/98	7/22/98	0-179-0
1460	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1461	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1462	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1463	pH	pH	8.2	Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1464	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	7/13/98		7/13/98	n/a
1465	TEMP	Temperature	22.4	°C	SM 2550 B	1	n/a	7/11/98		7/11/98	n/a
1466	TIME	Cl2 Incubation Time	6.1	hrs	n/a	1	n/a	7/13/98		7/13/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1467	TOC-ICR TOC	2.68 mg/L	SM 5310 C	1	0.50	7/11/98	7/12/98	7-0-336
1468	TOC-ICR TOC (Dupl)	2.71 mg/L	SM 5310 C	1	0.50	7/11/98	7/12/98	7-0-336
		2.70 mg/L	1.1 % RPD					
1469	TOX-ICR TOX	91 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/24/98	12-0-175
1470	TOX-ICR TOX (Dupl)	91 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/24/98	12-0-175
		91 µg Cl-/L	0.0 % RPD					
1471	THM-ICR 1,2,3-Trichloropropane (Surrogate)	109.6 %	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1472	THM-ICR Bromodichloromethane	11.3 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1473	THM-ICR Bromoform	14.6 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1474	THM-ICR Chloroform	3.6 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1475	THM-ICR Dibromochloromethane	21.8 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1476	UV-ICR UV	0.035 1/cm	SM 5910 B	1	0.009	7/11/98	7/12/98	8-0-226
1477	UV-ICR UV (Dupl)	0.035 1/cm	SM 5910 B	1	0.009	7/11/98	7/12/98	8-0-226
		0.035 1/cm	0.0 % RPD					

Sample ID: 123.10.pH8.7.Eff-19

S&H ID: 9807-153

Date Sampled: 7/12/98 12:29:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1478	Cl2Dose Chlorine Dose	2.18 mg/L as Cl2	SM 4500-Cl B	1	n/a	7/13/98		7/13/98	n/a
1479	Cl2Res Chlorine Residual	0.83 mg/L as Cl2	SM 4500-Cl F	1	0.10	7/13/98		7/13/98	n/a
1480	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	92.0 %	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1481	HAA-ICR 2-Bromopropionic acid (Surrogate)	103.2 %	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1482	HAA-ICR Bromochloroacetic acid	3.2 µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1483	HAA-ICR Bromodichloroacetic acid	1.4 µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1484	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	7/13/98	7/23/98	7/23/98	0-181-0
1485	HAA-ICR Dibromoacetic acid	4.6 µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1486	HAA-ICR Dichloroacetic acid	1.9 µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1487	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1488	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	7/13/98	7/23/98	7/23/98	0-181-0
1489	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	7/13/98	7/23/98	7/23/98	0-181-0
1490	HAA-ICR Trichloroacetic acid	1.0 µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1491	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1492	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1493	pH pH	8.2 Unit	SM 4500-H+ B	1	n/a	7/12/98		7/12/98	n/a
1494	TEMP Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	7/13/98		7/13/98	n/a
1495	TEMP Temperature	22.8 °C	SM 2550 B	1	n/a	7/12/98		7/12/98	n/a
1496	TIME Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	7/13/98		7/13/98	n/a
1497	TOC-ICR TOC	2.94 mg/L	SM 5310 C	1	0.50	7/12/98		7/12/98	7-0-336
1498	TOC-ICR TOC (Dupl)	2.98 mg/L	SM 5310 C	1	0.50	7/12/98		7/12/98	7-0-336

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

		2.96 mg/L	1.4 % RPD						
1499	TOX-ICR TOX	105 µg Cl-/L	SM 5320 B	1	25	7/13/98		7/23/98	12-0-174
1500	TOX-ICR TOX (Dupl)	102 µg Cl-/L	SM 5320 B	1	25	7/13/98		7/23/98	12-0-174
		104 µg Cl-/L	2.9 % RPD						
1501	THM-ICR 1,2,3-Trichloropropane (Surrogate)	94.8 %	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98	0-182-0
1502	THM-ICR Bromodichloromethane	12.6 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98	0-182-0
1503	THM-ICR Bromoform	11.9 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98	0-182-0
1504	THM-ICR Chloroform	4.6 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98	0-182-0
1505	THM-ICR Dibromochloromethane	20.8 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98	0-182-0
1506	UV-ICR UV	0.041 1/cm	SM 5910 B	1	0.009	7/12/98		7/13/98	8-0-227
1507	UV-ICR UV (Dupl)	0.041 1/cm	SM 5910 B	1	0.009	7/12/98		7/13/98	8-0-227
		0.041 1/cm	0.0 % RPD						

Sample ID: 123.10.pH8.7.Eff-21

S&H ID: 9807-155

Date Sampled: 7/14/98 3:14:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1508	pH	pH	8.5	Unit	SM 4500-H+ B	1	n/a	7/14/98		7/14/98	n/a
1509	TEMP	Temperature	22.4	°C	SM 2550 B	1	n/a	7/14/98		7/14/98	n/a
1510	TOC-ICR TOC		3.19	mg/L	SM 5310 C	1	0.50	7/14/98		7/14/98	7-0-339
1511	TOC-ICR TOC (Dupl)		3.11	mg/L	SM 5310 C	1	0.50	7/14/98		7/14/98	7-0-339
			3.15 mg/L		2.5 % RPD						

Sample ID: 123.10.pH8.7.Eff-4d

S&H ID: 9807-165

Date Sampled: 7/9/98 9:21:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1512	Cl2Dose	Chlorine Dose	1.57	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/11/98		7/11/98	n/a
1513	Cl2Res	Chlorine Residual	0.89	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/11/98		7/11/98	n/a
1514	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)		105.6	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1515	HAA-ICR 2-Bromopropionic acid (Surrogate)		100.0	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1516	HAA-ICR Bromochloroacetic acid		ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1517	HAA-ICR Bromodichloroacetic acid		ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1518	HAA-ICR Chlorodibromoacetic acid		ND	µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1519	HAA-ICR Dibromoacetic acid		2.7	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1520	HAA-ICR Dichloroacetic acid		ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1521	HAA-ICR Monobromoacetic acid		ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1522	HAA-ICR Monochloroacetic acid		ND	µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1523	HAA-ICR Tribromoacetic acid		ND	µg/L	EPA 552.2	1	4.0	7/11/98	7/21/98	7/22/98	0-179-0
1524	HAA-ICR Trichloroacetic acid		ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1525	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1526	pH	Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	7/11/98	7/11/98	n/a
1527	pH	pH	8.3 Unit	SM 4500-H+ B	1	n/a	7/9/98	7/9/98	n/a
1528	TEMP	Cl2 Temperature	26.5 °C	SM 2550 B	1	n/a	7/11/98	7/11/98	n/a
1529	TEMP	Temperature	23.5 °C	SM 2550 B	1	n/a	7/9/98	7/9/98	n/a
1530	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/11/98	7/11/98	n/a
1531	TOC-ICR	TOC	1.01 mg/L	SM 5310 C	1	0.50	7/9/98	7/10/98	7-0-334
1532	TOC-ICR	TOC (Dupl)	1.03 mg/L	SM 5310 C	1	0.50	7/9/98	7/10/98	7-0-334
			1.02 mg/L	2.0 % RPD					
1533	TOX-ICR	TOX	ND µg Cl-/L	SM 5320 B	1	25	7/11/98	7/22/98	12-0-173
1534	TOX-ICR	TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	7/11/98	7/22/98	12-0-173
			ND µg Cl-/L						
1535	THM-ICR	1,2,3-Trichloropropane (Surrogate)	102.0 %	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98 0-178-0
1536	THM-ICR	Bromodichloromethane	1.2 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98 0-178-0
1537	THM-ICR	Bromoform	11.8 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98 0-178-0
1538	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98 0-178-0
1539	THM-ICR	Dibromochloromethane	5.4 µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98 0-178-0
1540	UV-ICR	UV	ND 1/cm	SM 5910 B	1	0.009	7/9/98	7/10/98	8-0-225
1541	UV-ICR	UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	7/9/98	7/10/98	8-0-225
			ND 1/cm						

Sample ID: 123.10.pH8.7.Eff-9d

S&H ID: 9807-166

Date Sampled: 7/10/98 3:00:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1542	Cl2Dose	Chlorine Dose	1.89	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/13/98		7/13/98	n/a
1543	Cl2Res	Chlorine Residual	0.85	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/13/98		7/13/98	n/a
1544	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	102.8	%	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1545	HAA-ICR	2-Bromopropionic acid (Surrogate)	102.8	%	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1546	HAA-ICR	Bromochloroacetic acid	2.4	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1547	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1548	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/21/98	7/22/98	0-179-0
1549	HAA-ICR	Dibromoacetic acid	5.4	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1550	HAA-ICR	Dichloroacetic acid	2.4	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1551	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1552	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/21/98	7/22/98	0-179-0
1553	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/13/98	7/21/98	7/22/98	0-179-0
1554	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/21/98	7/22/98	0-179-0
1555	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1556	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1557	pH	pH	8.2	Unit	SM 4500-H+ B	1	n/a	7/10/98		7/10/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1558	TEMP	Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	7/13/98	7/13/98	n/a
1559	TEMP	Temperature	22.9 °C	SM 2550 B	1	n/a	7/10/98	7/10/98	n/a
1560	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	7/13/98	7/13/98	n/a
1561	TOC-ICR	TOC	2.07 mg/L	SM 5310 C	1	0.50	7/10/98	7/10/98	7-0-334
1562	TOC-ICR	TOC (Dupl)	2.09 mg/L	SM 5310 C	1	0.50	7/10/98	7/10/98	7-0-334
			2.08 mg/L	1.0 % RPD					
1563	TOX-ICR	TOX	55 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/23/98	12-0-174
1564	TOX-ICR	TOX (Dupl)	54 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/23/98	12-0-174
			55 µg Cl-/L	1.8 % RPD					
1565	THM-ICR	1,2,3-Trichloropropane (Surrogate)	111.6 %	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1566	THM-ICR	Bromodichloromethane	6.0 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1567	THM-ICR	Bromoform	17.4 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1568	THM-ICR	Chloroform	1.2 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1569	THM-ICR	Dibromochloromethane	16.8 µg/L	EPA 551.1	1	1.0	7/13/98	7/20/98	7/21/98 0-178-0
1570	UV-ICR	UV	0.021 1/cm	SM 5910 B	1	0.009	7/10/98	7/11/98	8-0-224
1571	UV-ICR	UV (Dupl)	0.021 1/cm	SM 5910 B	1	0.009	7/10/98	7/11/98	8-0-224
			0.021 1/cm	0.0 % RPD					

Sample ID: 123.10.pH8.7.Eff-16d

S&H ID: 9807-168

Date Sampled: 7/11/98 7:28:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1572	Cl2Dose	Chlorine Dose	2.09	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/13/98		7/13/98	n/a
1573	Cl2Res	Chlorine Residual	0.85	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/13/98		7/13/98	n/a
1574	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	94.4	%	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1575	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.0	%	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1576	HAA-ICR	Bromochloroacetic acid	2.9	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1577	HAA-ICR	Bromodichloroacetic acid	1.2	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1578	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/23/98	7/23/98	0-181-0
1579	HAA-ICR	Dibromoacetic acid	4.6	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1580	HAA-ICR	Dichloroacetic acid	1.5	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1581	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1582	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/23/98	7/23/98	0-181-0
1583	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/13/98	7/23/98	7/23/98	0-181-0
1584	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1585	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1586	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1587	pH	pH	8.2	Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1588	TEMP	Cl2 Temperature	26.6	°C	SM 2550 B	1	n/a	7/13/98		7/13/98	n/a
1589	TEMP	Temperature	22.5	°C	SM 2550 B	1	n/a	7/11/98		7/11/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1590	TIME	Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	7/13/98	7/13/98	n/a
1591	TOC-ICR	TOC	2.68 mg/L	SM 5310 C	1	0.50	7/11/98	7/12/98	7-0-336
1592	TOC-ICR	TOC (Dupl)	2.72 mg/L	SM 5310 C	1	0.50	7/11/98	7/12/98	7-0-336
			2.70 mg/L	1.5 % RPD					
1593	TOX-ICR	TOX	88 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/24/98	12-0-175
1594	TOX-ICR	TOX (Dupl)	89 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/24/98	12-0-175
			89 µg Cl-/L	1.1 % RPD					
1595	THM-ICR	1,2,3-Trichloropropane (Surrogate)	92.8 %	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98 0-182-0
1596	THM-ICR	Bromodichloromethane	10.9 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98 0-182-0
1597	THM-ICR	Bromoform	13.6 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98 0-182-0
1598	THM-ICR	Chloroform	3.5 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98 0-182-0
1599	THM-ICR	Dibromochloromethane	20.5 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98 0-182-0
1600	UV-ICR	UV	0.035 1/cm	SM 5910 B	1	0.009	7/11/98	7/12/98	8-0-226
1601	UV-ICR	UV (Dupl)	0.035 1/cm	SM 5910 B	1	0.009	7/11/98	7/12/98	8-0-226
			0.035 1/cm	0.0 % RPD					

Sample ID: 123.10.pH8.7.Inf.A-1

S&H ID: 9807-175

Date Sampled: 7/8/98 3:55:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1602	ALK	Alkalinity	28	mg/L	SM 2320 B	1	5	7/8/98		7/8/98	1-0-25
1603	ALK	Alkalinity (Dupl)	29	mg/L	SM 2320 B	1	5	7/8/98		7/8/98	1-0-25
			29 mg/L		3.4 % RPD						
1604	NH3	Ammonia Nitrogen	ND	mg/L	EPA 350.1	1	0.05	7/8/98		7/23/98	MW81184
1605	BR	Bromide	0.140	mg/L	EPA 300.0 A	1	0.020	7/8/98		7/22/98	MW81278
1606	CaHardM	Calcium Hardness	35	mg/L CaCO3	EPA 200.7	1	5	7/8/98		8/3/98	MW n/a
1607	CaMW	Calcium, Total, ICAP	14	mg/L	EPA 200.7	1	1	7/8/98	7/20/98	8/3/98	MW81668
1608	MgMW	Magnesium, Total, ICAP	4	mg/L	EPA 200.7	1	0	7/8/98	7/20/98	8/3/98	MW81673
1609	TotHard	Total Hardness as CaCO3 by ICP	53	mg/L CaCO3	SM 2340B	1	7	7/8/98		8/3/98	MW n/a

Sample ID: 123.10.pH8.7.Inf.A-2

S&H ID: 9807-176

Date Sampled: 7/13/98 11:50:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1610	ALK	Alkalinity	33	mg/L	SM 2320 B	1	5	7/13/98		7/13/98	1-0-27
1611	ALK	Alkalinity (Dupl)	32	mg/L	SM 2320 B	1	5	7/13/98		7/13/98	1-0-27
			33 mg/L		3.0 % RPD						
1612	NH3	Ammonia Nitrogen	ND	mg/L	EPA 350.1	1	0.05	7/13/98		7/23/98	MW81184
1613	BR	Bromide	0.140	mg/L	EPA 300.0 A	1	0.020	7/13/98		7/24/98	MW81281
1614	CaHardM	Calcium Hardness	35	mg/L CaCO3	EPA 200.7	1	5	7/13/98		8/3/98	MW n/a
1615	CaMW	Calcium, Total, ICAP	14	mg/L	EPA 200.7	1	1	7/13/98	7/23/98	8/3/98	MW81668

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1616	MgMW	Magnesium, Total, ICAP	4 mg/L	EPA 200.7	1	0	7/13/98	7/23/98	8/3/98	MW81073
1617	TotHard	Total Hardness as CaCO3 by ICP	54 mg/L CaCO3	SM 2340B	1	7	7/13/98		8/3/98	MW n/a

Sample ID: 123.pH8.7.Inf.B-1

S&H ID: 9807-177

Date Sampled: 7/8/98 4:00:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1618	Cl2Dose	Chlorine Dose	2.85	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/11/98		7/11/98	n/a
1619	Cl2Res	Chlorine Residual	0.92	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/11/98		7/11/98	n/a
1620	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	106.0	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1621	HAA-ICR	2-Bromopropionic acid (Surrogate)	97.6	%	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1622	HAA-ICR	Bromochloroacetic acid	8.1	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1623	HAA-ICR	Bromodichloroacetic acid	3.2	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1624	HAA-ICR	Chlorodibromoacetic acid	2.2	µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1625	HAA-ICR	Dibromoacetic acid	6.7	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1626	HAA-ICR	Dichloroacetic acid	9.8	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1627	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1628	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/11/98	7/21/98	7/22/98	0-179-0
1629	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/11/98	7/21/98	7/22/98	0-179-0
1630	HAA-ICR	Trichloroacetic acid	2.7	µg/L	EPA 552.2	1	1.0	7/11/98	7/21/98	7/22/98	0-179-0
1631	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1632	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1633	pH	pH	8.7	Unit	SM 4500-H+ B	1	n/a	7/8/98		7/8/98	n/a
1634	TEMP	Cl2 Temperature	26.5	°C	SM 2550 B	1	n/a	7/11/98		7/11/98	n/a
1635	TEMP	Temperature	19.1	°C	SM 2550 B	1	n/a	7/8/98		7/8/98	n/a
1636	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	7/11/98		7/11/98	n/a
1637	TOC-ICR	TOC	4.07	mg/L	SM 5310 C	1	0.50	7/8/98		7/9/98	7-0-332
1638	TOC-ICR	TOC (Dupl)	4.09	mg/L	SM 5310 C	1	0.50	7/8/98		7/9/98	7-0-332
			4.08	mg/L	0.5 % RPD						
1639	TOX-ICR	TOX	194	µg Cl-/L	SM 5320 B	1	25	7/11/98		7/21/98	12-0-172
1640	TOX-ICR	TOX (Dupl)	191	µg Cl-/L	SM 5320 B	1	25	7/11/98		7/21/98	12-0-172
			193	µg Cl-/L	1.6 % RPD						
1641	THM-ICR	1,2,3-Trichloropropane (Surrogate)	110.4	%	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1642	THM-ICR	Bromodichloromethane	24.5	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1643	THM-ICR	Bromoform	6.5	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1644	THM-ICR	Chloroform	22.0	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1645	THM-ICR	Dibromochloromethane	22.6	µg/L	EPA 551.1	1	1.0	7/11/98	7/20/98	7/20/98	0-178-0
1646	TURB	Turbidity	0.10	ntu	SM 2130 B	1	0.05	7/8/98		7/8/98	9-0-14

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1647	UV-ICR	UV	0.082	1/cm	SM 5910 B	1	0.009	7/8/98	7/9/98	8-0-223
1648	UV-ICR	UV (Dupl)	0.082	1/cm	SM 5910 B	1	0.009	7/8/98	7/9/98	8-0-223
			0.082	1/cm	0.0 % RPD					

Sample ID: 123.pH8.7.Inf.B-2

S&H ID: 9807-178

Date Sampled: 7/10/98 5:10:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1649	pH	pH	8.7	Unit	SM 4500-H+ B	1	n/a	7/10/98		7/10/98	n/a
1650	TEMP	Temperature	18.5	°C	SM 2550 B	1	n/a	7/10/98		7/10/98	n/a
1651	TOC-ICR	TOC	4.17	mg/L	SM 5310 C	1	0.50	7/10/98		7/11/98	7-0-335
1652	TOC-ICR	TOC (Dupl)	4.28	mg/L	SM 5310 C	1	0.50	7/10/98		7/11/98	7-0-335
			4.22	mg/L	2.6 % RPD						

Sample ID: 123.pH8.7.Inf.B-3

S&H ID: 9807-179

Date Sampled: 7/11/98 7:50:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1653	pH	pH	8.7	Unit	SM 4500-H+ B	1	n/a	7/11/98		7/11/98	n/a
1654	TEMP	Temperature	17.9	°C	SM 2550 B	1	n/a	7/11/98		7/11/98	n/a
1655	TOC-ICR	TOC	4.26	mg/L	SM 5310 C	1	0.50	7/11/98		7/12/98	7-0-336
1656	TOC-ICR	TOC (Dupl)	4.24	mg/L	SM 5310 C	1	0.50	7/11/98		7/12/98	7-0-336
			4.25	mg/L	0.5 % RPD						

Sample ID: 123.pH8.7.Inf.B-4

S&H ID: 9807-180

Date Sampled: 7/13/98 11:45:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1657	Cl2Dose	Chlorine Dose	2.65	mg/L as Cl2	SM 4500-Cl B	1	n/a	7/13/98		7/13/98	n/a
1658	Cl2Res	Chlorine Residual	0.72	mg/L as Cl2	SM 4500-Cl F	1	0.10	7/13/98		7/13/98	n/a
1659	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	96.8	%	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1660	HAA-ICR	2-Bromopropionic acid (Surrogate)	97.6	%	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1661	HAA-ICR	Bromochloroacetic acid	6.7	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1662	HAA-ICR	Bromodichloroacetic acid	2.3	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1663	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/23/98	7/23/98	0-181-0
1664	HAA-ICR	Dibromoacetic acid	4.5	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1665	HAA-ICR	Dichloroacetic acid	9.4	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1666	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1667	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	7/13/98	7/23/98	7/23/98	0-181-0
1668	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	7/13/98	7/23/98	7/23/98	0-181-0
1669	HAA-ICR	Trichloroacetic acid	2.0	µg/L	EPA 552.2	1	1.0	7/13/98	7/23/98	7/23/98	0-181-0
1670	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a
1671	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	7/13/98		7/13/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

1672	pH	pH	8.7 Unit	SM 4500-H+ B	1	n/a	7/13/98	7/13/98	n/a
1673	TEMP	Cl2 Temperature	26.6 °C	SM 2550 B	1	n/a	7/13/98	7/13/98	n/a
1674	TEMP	Temperature	17.2 °C	SM 2550 B	1	n/a	7/13/98	7/13/98	n/a
1675	TIME	Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	7/13/98	7/13/98	n/a
1676	TOC-ICR	TOC	4.24 mg/L	SM 5310 C	1	0.50	7/13/98	7/13/98	7-0-338
1677	TOC-ICR	TOC (Dupl)	4.28 mg/L	SM 5310 C	1	0.50	7/13/98	7/13/98	7-0-338
			4.26 mg/L	0.9 % RPD					
1678	TOX-ICR	TOX	196 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/23/98	12-0-174
1679	TOX-ICR	TOX (Dupl)	194 µg Cl-/L	SM 5320 B	1	25	7/13/98	7/23/98	12-0-174
			195 µg Cl-/L	1.0 % RPD					
1680	THM-ICR	1,2,3-Trichloropropane (Surrogate)	92.4 %	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98 0-182-0
1681	THM-ICR	Bromodichloromethane	22.7 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98 0-182-0
1682	THM-ICR	Bromoform	5.8 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98 0-182-0
1683	THM-ICR	Chloroform	20.0 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98 0-182-0
1684	THM-ICR	Dibromochloromethane	20.2 µg/L	EPA 551.1	1	1.0	7/13/98	7/27/98	7/27/98 0-182-0
1685	TURB	Turbidity	0.10 ntu	SM 2130 B	1	0.05	7/13/98	7/13/98	9-0-14
1686	UV-ICR	UV	0.083 1/cm	SM 5910 B	1	0.009	7/13/98	7/13/98	8-0-227
1687	UV-ICR	UV (Dupl)	0.083 1/cm	SM 5910 B	1	0.009	7/13/98	7/13/98	8-0-227
			0.083 1/cm	0.0 % RPD					

End of laboratory test results

Quality Control Report

Mr. Anthony Clemente
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Study#: 123
Study Title: ICR RSSCT #2

Analysis: ALK (Alkalinity)**Method:** SM 2320 B**QC Batch ID:** 1-0-24

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	Date Run	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	100	94	mg/L	94%		06/21/98	9806-698	5		
Matrix Spike (Dupl)	Matrix Spike	100	95	mg/L	95%		06/21/98	9806-698	5		
		100	94	mg/L	94%	1.1 %					
Method Blank	Method Blank		ND*	mg/L			06/21/98	9806-711	5		
Standard	Standard	100	94	mg/L	94%		06/21/98	9806-713	5		
Standard (Dupl)	Standard	100	96	mg/L	96%		06/21/98	9806-713	5		
		100	95	mg/L	95%	2.1 %					
Matrix Spike	Matrix Spike	100	98	mg/L	98%		07/02/98	9806-804	5		
Matrix Spike (Dupl)	Matrix Spike	100	99	mg/L	99%		07/02/98	9806-804	5		
		100	99	mg/L	99%	1.0 %					
Matrix Spike	Matrix Spike	100	99	mg/L	99%		07/02/98	9807-67	5		
Matrix Spike (Dupl)	Matrix Spike	100	96	mg/L	96%		07/02/98	9807-67	5		
		100	98	mg/L	98%	3.1 %					
Matrix Spike	Matrix Spike	100	99	mg/L	99%		07/02/98	9807-52	5		
Matrix Spike (Dupl)	Matrix Spike	100	100	mg/L	100%		07/02/98	9807-52	5		
		100	100	mg/L	100%	2.0 %					
Method Blank	Method Blank		ND*	mg/L			07/02/98	9807-66	5		
Standard	Standard	100	99	mg/L	99%		07/02/98	9807-68	5		
Standard (Dupl)	Standard	100	100	mg/L	100%		07/02/98	9807-68	5		
		100	99	mg/L	99%	1.0 %					

Analysis: ALK (Alkalinity)**Method:** SM 2320 B**QC Batch ID:** 1-0-25

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	Date Run	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	100	99	mg/L	99%		07/07/98	9806-699	5		
Matrix Spike (Dupl)	Matrix Spike	100	99	mg/L	99%		07/07/98	9806-699	5		
		100	99	mg/L	99%	0.0 %					
Method Blank	Method Blank		ND*	mg/L			07/07/98	9807-118	5		
Standard	Standard	100	99	mg/L	99%		07/07/98	9807-119	5		
Standard (Dupl)	Standard	100	100	mg/L	100%		07/07/98	9807-119	5		
		100	100	mg/L	100%	1.0 %					
Matrix Spike	Matrix Spike	100	96	mg/L	96%		07/08/98	9807-175	5		
Matrix Spike (Dupl)	Matrix Spike	100	97	mg/L	97%		07/08/98	9807-175	5		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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		100	97 mg/L	97%	1.0 %		
Matrix Spike	Matrix Spike	100	97 mg/L	97%	07/08/98	9807-53	5
Matrix Spike (Dupl)	Matrix Spike	100	98 mg/L	98%	07/08/98	9807-53	5
		100	98 mg/L	98%	1.0 %		
Method Blank	Method Blank		ND* mg/L		07/08/98	9807-181	5
Standard	Standard	100	101 mg/L	101%	07/08/98	9807-182	5
Standard (Dupl)	Standard	100	100 mg/L	100%	07/08/98	9807-182	5
		100	101 mg/L	101%	1.0 %		

Analysis: ALK (Alkalinity)

Method: SM 2320 B

QC Batch ID: 1-0-26

C Batch ID: 1-0-26

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	Date Run	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	100	92	mg/L	92%		06/24/98	9806-472	5		
Matrix Spike (Dupl)	Matrix Spike	100	93	mg/L	93%		06/24/98	9806-472	5		
		100	93	mg/L	93%	1.1 %					
Method Blank	Method Blank		ND*	mg/L			06/24/98	9806-745	5		
Standard	Standard	100	96	mg/L	96%		06/24/98	9806-746	5		
Standard (Dupl)	Standard	100	97	mg/L	97%		06/24/98	9806-746	5		
		100	96	mg/L	96%	1.0 %					
Matrix Spike	Matrix Spike	100	97	mg/L	97%		06/27/98	9806-803	5		
Matrix Spike (Dupl)	Matrix Spike	100	97	mg/L	97%		06/27/98	9806-803	5		
		100	97	mg/L	97%	0.0 %					
Method Blank	Method Blank		ND*	mg/L			06/27/98	9806-811	5		
Standard	Standard	100	100	mg/L	100%		06/27/98	9806-812	5		
Standard (Dupl)	Standard	100	102	mg/L	102%		06/27/98	9806-812	5		
		100	101	mg/L	101%	2.0 %					

Analysis: ALK (Alkalinity)

Method: SM 2320 B

QC Batch ID: 1-0-27

C Batch ID: 1-0-27										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	Date Run	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	100	98	mg/L	98%		07/13/98	9807-176	5		
Matrix Spike (Dupl)	Matrix Spike	100	97	mg/L	97%		07/13/98	9807-176	5		
		100	98	mg/L	98%	0.0 %					
Method Blank	Method Blank		ND*	mg/L			07/13/98	9807-219	5		
Standard	Standard	100	100	mg/L	100%		07/13/98	9807-220	5		
Standard (Dupl)	Standard	100	98	mg/L	98%		07/13/98	9807-220	5		
		100	99	mg/L	99%	2.0 %					

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Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-308

C Batch ID: 7-0-308

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD	
Matrix Spike	Matrix Spike	4.00	3.76	mg/L	94%		9806-763	0.5			
Matrix Spike (Dupl)	Matrix Spike	4.00	3.77	mg/L	94%		9806-763	0.5			
		4.00	3.77	mg/L	94%	0.3 %					
Method Blank	Method Blank		ND*	mg/L			9806-815	0.5			
Method Blank (Dupl)	Method Blank		ND*	mg/L			9806-815	0.5			
			ND*	mg/L							
Standard	Standard	0.50	0.56	mg/L	112%		9806-111	0.5	50-150%		
Standard (Dupl)	Standard	0.50	0.55	mg/L	110%		9806-111	0.5	50-150%		
		0.50	0.56	mg/L	112%	1.8 %			50-150%	20%	
Standard	Standard	4.00	4.00	mg/L	100%		9806-751	0.5	90-110%		
Standard (Dupl)	Standard	4.00	3.99	mg/L	100%		9806-751	0.5	90-110%		
		4.00	4.00	mg/L	100%	0.2 %			90-110%	10%	

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-313

C Batch ID: 7-0-313

									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	4.66	mg/L	117%		9806-768	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.55	mg/L	114%		9806-768	0.5		
		4.00	4.61	mg/L	115%	2.6 %				
Method Blank	Method Blank		ND*	mg/L			9806-822	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9806-822	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.59	mg/L	118%		9806-615	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.62	mg/L	124%		9806-615	0.5	50-150%	
		0.50	0.61	mg/L	122%	4.9 %			50-150%	20%
Standard	Standard	4.00	4.02	mg/L	100%		9806-751	0.5	90-110%	
Standard (Dupl)	Standard	4.00	3.93	mg/L	98%		9806-751	0.5	90-110%	
		4.00	3.98	mg/L	100%	2.3 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-314

C Batch ID: 7-0-314									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	5.68	mg/L	142%		9806-779	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	5.74	mg/L	144%		9806-779	0.5		
		4.00	5.71	mg/L	143%	1.1 %				
Method Blank	Method Blank		ND*	mg/L			9806-837	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9806-837	0.5		
			ND*	mg/L						

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2

Standard	Standard	0.50	0.55 mg/L	110%		9806-615	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.55 mg/L	110%		9806-615	0.5	50-150%	
		0.50	0.55 mg/L	110%	0.0 %			50-150%	20%
Standard	Standard	4.00	4.26 mg/L	106%		9806-751	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.24 mg/L	106%		9806-751	0.5	90-110%	
		4.00	4.25 mg/L	106%	0.5 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)**Method:** SM 5310 C**QC Batch ID:** 7-0-315

		Acceptance Criteria							
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u> <u>RPD</u>
Matrix Spike	Matrix Spike	4.00	3.75	mg/L	94%		9806-780	0.5	
Matrix Spike (Dupl)	Matrix Spike	4.00	3.81	mg/L	95%		9806-780	0.5	
		4.00	3.78	mg/L	94%	1.3 %			
Method Blank	Method Blank		ND*	mg/L			9807-2	0.5	
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-2	0.5	
			ND*	mg/L					
Standard	Standard	0.50	0.61	mg/L	122%		9806-615	0.5	50-150%
Standard (Dupl)	Standard	0.50	0.61	mg/L	122%		9806-615	0.5	50-150%
		0.50	0.61	mg/L	122%	0.0 %			50-150% 20%
Standard	Standard	4.00	3.94	mg/L	98%		9806-751	0.5	90-110%
Standard (Dupl)	Standard	4.00	3.94	mg/L	98%		9806-751	0.5	90-110%
		4.00	3.94	mg/L	98%	0.0 %			90-110% 10%

Analysis: TOC-ICR (Total Organic Carbon)**Method:** SM 5310 C**QC Batch ID:** 7-0-318

		Acceptance Criteria							
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u> <u>RPD</u>
Matrix Spike	Matrix Spike	4.00	4.07	mg/L	102%		9806-781	0.5	
Matrix Spike (Dupl)	Matrix Spike	4.00	4.08	mg/L	102%		9806-781	0.5	
		4.00	4.07	mg/L	102%	0.2 %			
Method Blank	Method Blank		ND*	mg/L			9807-3	0.5	
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-3	0.5	
			ND*	mg/L					
Standard	Standard	0.50	0.58	mg/L	116%		9806-615	0.5	50-150%
Standard (Dupl)	Standard	0.50	0.58	mg/L	116%		9806-615	0.5	50-150%
		0.50	0.58	mg/L	116%	0.0 %			50-150% 20%
Standard	Standard	4.00	3.99	mg/L	100%		9806-751	0.5	90-110%
Standard (Dupl)	Standard	4.00	3.99	mg/L	100%		9806-751	0.5	90-110%
		4.00	3.99	mg/L	100%	0.0 %			90-110% 10%
Standard	Standard	10.00	9.76	mg/L	98%		9806-118	0.5	90-110%
Standard (Dupl)	Standard	10.00	9.82	mg/L	98%		9806-118	0.5	90-110%
		10.00	9.79	mg/L	98%	0.6 %			90-110% 10%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-321

C Batch ID: 7-0-321

									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	4.19	mg/L	105%		9807-12	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.13	mg/L	103%		9807-12	0.5		
		4.00	4.16	mg/L	104%	1.4 %				
Method Blank	Method Blank		ND*	mg/L			9807-69	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-69	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.60	mg/L	120%		9806-615	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.60	mg/L	120%		9806-615	0.5	50-150%	
		0.50	0.60	mg/L	120%	0.0 %			50-150%	20%
Standard	Standard	4.00	4.16	mg/L	104%		9806-751	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.18	mg/L	104%		9806-751	0.5	90-110%	
		4.00	4.17	mg/L	104%	0.5 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-323

C Batch ID: 7-0-323

									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.81	mg/L	95%		9806-783	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.85	mg/L	96%		9806-783	0.5		
		4.00	3.83	mg/L	96%	1.0 %				
Method Blank	Method Blank		ND*	mg/L			9807-80	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-80	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.60	mg/L	120%		9806-615	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.60	mg/L	120%		9806-615	0.5	50-150%	
		0.50	0.60	mg/L	120%	0.0 %			50-150%	20%
Standard	Standard	4.00	4.11	mg/L	103%		9806-751	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.12	mg/L	103%		9806-751	0.5	90-110%	
		4.00	4.12	mg/L	103%	0.2 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-325

C Batch ID: 7-0-325									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.95	mg/L	99%		9807-23	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.00	mg/L	100%		9807-23	0.5		
		4.00	3.97	mg/L	99%	1.0 %				
Method Blank	Method Blank		ND*	mg/L			9807-88	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-88	0.5		
			ND*	mg/L						

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Miami-Dade Water and Sewer Department**Study#:** 123
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Standard	Standard	0.50	0.57 mg/L	114%		9806-615	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.60 mg/L	120%		9806-615	0.5	50-150%	
		0.50	0.58 mg/L	116%	5.2 %			50-150%	20%
Standard	Standard	4.00	4.42 mg/L	111%		9806-751	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.34 mg/L	109%		9806-751	0.5	90-110%	
		4.00	4.38 mg/L	110%	1.8 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)**Method:** SM 5310 C**QC Batch ID:** 7-0-327

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	4.00	3.90	mg/L	97%		9807-27	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.86	mg/L	96%		9807-27	0.5		
		4.00	3.88	mg/L	97%	1.3 %				
Method Blank	Method Blank		ND*	mg/L			9807-100	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-100	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.60	mg/L	120%		9806-615	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.60	mg/L	120%		9806-615	0.5	50-150%	
		0.50	0.60	mg/L	120%	0.0 %			50-150%	20%
Standard	Standard	4.00	4.09	mg/L	102%		9807-101	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.09	mg/L	102%		9807-101	0.5	90-110%	
		4.00	4.09	mg/L	102%	0.0 %			90-110%	10%
Standard	Standard	10.00	9.96	mg/L	100%		9807-78	0.5	90-110%	
Standard (Dupl)	Standard	10.00	10.02	mg/L	100%		9807-78	0.5	90-110%	
		10.00	9.99	mg/L	100%	0.6 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)**Method:** SM 5310 C**QC Batch ID:** 7-0-329

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	4.00	3.86	mg/L	96%		9807-33	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.90	mg/L	97%		9807-33	0.5		
		4.00	3.88	mg/L	97%	0.8 %				
Method Blank	Method Blank		ND*	mg/L			9807-121	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-121	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.59	mg/L	118%		9806-615	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.60	mg/L	120%		9806-615	0.5	50-150%	
		0.50	0.60	mg/L	120%	1.7 %			50-150%	20%
Standard	Standard	4.00	4.13	mg/L	103%		9807-101	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.10	mg/L	102%		9807-101	0.5	90-110%	
		4.00	4.11	mg/L	103%	0.7 %			90-110%	10%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-330

C Batch ID: 7-0-330

									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.84	mg/L	96%		9807-34	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.79	mg/L	95%		9807-34	0.5		
		4.00	3.82	mg/L	95%	1.3 %				
Method Blank	Method Blank		ND*	mg/L			9807-130	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-130	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.56	mg/L	112%		9807-92	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.57	mg/L	114%		9807-92	0.5	50-150%	
		0.50	0.56	mg/L	112%	1.8 %			50-150%	20%
Standard	Standard	4.00	3.98	mg/L	100%		9807-101	0.5	90-110%	
Standard (Dupl)	Standard	4.00	3.97	mg/L	99%		9807-101	0.5	90-110%	
		4.00	3.98	mg/L	100%	0.3 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-332

C Batch ID: 7-0-332

									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.87	mg/L	97%		9807-135	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.91	mg/L	98%		9807-135	0.5		
		4.00	3.89	mg/L	97%	1.0 %				
Method Blank	Method Blank		ND*	mg/L			9807-183	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-183	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.58	mg/L	116%		9807-92	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.58	mg/L	116%		9807-92	0.5	50-150%	
		0.50	0.58	mg/L	116%	0.0 %			50-150%	20%
Standard	Standard	4.00	4.06	mg/L	101%		9807-101	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.07	mg/L	102%		9807-101	0.5	90-110%	
		4.00	4.06	mg/L	101%	0.2 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-334

C Batch ID: 7-0-334									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	4.04	mg/L	101%		9807-140	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.07	mg/L	102%		9807-140	0.5		
		4.00	4.05	mg/L	101%	0.7 %				
Method Blank	Method Blank		ND*	mg/L			9807-196	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-196	0.5		
			ND*	mg/L						

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Standard	Standard	0.50	0.55 mg/L	110%		9807-92	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.56 mg/L	112%		9807-92	0.5	50-150%	
		0.50	0.56 mg/L	112%	1.8 %			50-150%	20%
Standard	Standard	4.00	4.18 mg/L	104%		9807-101	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.20 mg/L	105%		9807-101	0.5	90-110%	
		4.00	4.19 mg/L	105%	0.5 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)**Method:** SM 5310 C**QC Batch ID:** 7-0-335

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	4.00	3.90	mg/L	97%		9807-144	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.94	mg/L	98%		9807-144	0.5		
		4.00	3.92	mg/L	98%	1.0 %				
Method Blank	Method Blank		ND*	mg/L			9807-202	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-202	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.56 mg/L	112%			9807-92	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.55 mg/L	110%			9807-92	0.5	50-150%	
		0.50	0.56 mg/L	112%	1.8 %				50-150%	20%
Standard	Standard	4.00	4.04 mg/L	101%			9807-101	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.07 mg/L	102%			9807-101	0.5	90-110%	
		4.00	4.06 mg/L	101%	0.7 %				90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)**Method:** SM 5310 C**QC Batch ID:** 7-0-336

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	4.00	4.15	mg/L	104%		9807-151	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.98	mg/L	100%		9807-151	0.5		
		4.00	4.06	mg/L	101%	4.2 %				
Method Blank	Method Blank		ND*	mg/L			9807-206	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-206	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.57 mg/L	114%			9807-92	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.56 mg/L	112%			9807-92	0.5	50-150%	
		0.50	0.56 mg/L	112%	1.8 %				50-150%	20%
Standard	Standard	4.00	4.03 mg/L	101%			9807-101	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.01 mg/L	100%			9807-101	0.5	90-110%	
		4.00	4.02 mg/L	100%	0.5 %				90-110%	10%

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Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-338

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.71	mg/L	93%		9807-154	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	3.66	mg/L	92%		9807-154	0.5		
		4.00	3.69	mg/L	92%	1.4 %				
Method Blank	Method Blank		ND*	mg/L			9807-213	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-213	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.57	mg/L	114%		9807-92	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.57	mg/L	114%		9807-92	0.5	50-150%	
		0.50	0.57	mg/L	114%	0.0 %			50-150%	20%
Standard	Standard	4.00	4.10	mg/L	102%		9807-101	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.15	mg/L	104%		9807-101	0.5	90-110%	
		4.00	4.12	mg/L	103%	1.2 %			90-110%	10%
Standard	Standard	10.00	10.20	mg/L	102%		9807-78	0.5	90-110%	
Standard (Dupl)	Standard	10.00	10.07	mg/L	101%		9807-78	0.5	90-110%	
		10.00	10.14	mg/L	101%	1.3 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-339

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.96	mg/L	99%		9807-155	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.06	mg/L	101%		9807-155	0.5		
		4.00	4.01	mg/L	100%	2.5 %				
Method Blank	Method Blank		ND*	mg/L			9807-222	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9807-222	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.56	mg/L	112%		9807-92	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.58	mg/L	116%		9807-92	0.5	50-150%	
		0.50	0.57	mg/L	114%	3.5 %			50-150%	20%
Standard	Standard	4.00	4.02	mg/L	100%		9807-101	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.06	mg/L	101%		9807-101	0.5	90-110%	
		4.00	4.04	mg/L	101%	1.0 %			90-110%	10%

Analysis: UV-ICR (UV-254)

Method: SM 5910 B

QC Batch ID: 8-0-209

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9806-813	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9806-813	0.009		
			ND*	1/cm						

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Method Blank	Method Blank	ND*	1/cm			9806-813	0.009		
Method Blank (Dupl)	Method Blank	ND*	1/cm			9806-813	0.009		
		ND*	1/cm						
Standard	Standard	0.009	0.009	1/cm	100%	9806-736	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.009	1/cm	100%	9806-736	0.009	75-125%	
		0.009	0.009	1/cm	100%			75-125%	20%
Standard	Standard	0.088	0.085	1/cm	97%	9806-737	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.085	1/cm	97%	9806-737	0.009	85-115%	
		0.088	0.085	1/cm	97%			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-210

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank	ND*	1/cm				9806-817	0.009		
Method Blank (Dupl)	Method Blank	ND*	1/cm				9806-817	0.009		
		ND*	1/cm							
Method Blank	Method Blank	ND*	1/cm				9806-817	0.009		
Method Blank (Dupl)	Method Blank	ND*	1/cm				9806-817	0.009		
		ND*	1/cm							
Standard	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.084	1/cm	95%		9806-737	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.084	1/cm	95%		9806-737	0.009	85-115%	
		0.088	0.084	1/cm	95%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-211

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank	ND*	1/cm				9806-829	0.009		
Method Blank (Dupl)	Method Blank	ND*	1/cm				9806-829	0.009		
		ND*	1/cm							
Method Blank	Method Blank	ND*	1/cm				9806-829	0.009		
Method Blank (Dupl)	Method Blank	ND*	1/cm				9806-829	0.009		
		ND*	1/cm							
Standard	Standard	0.009	0.009	1/cm	100%		9806-736	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
		0.009	0.009	1/cm	100%	11.1 %			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%		9806-737	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.085	1/cm	97%		9806-737	0.009	85-115%	
		0.088	0.086	1/cm	98%	1.2 %			85-115%	10%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Study Title: ICR RSSCT #2

Analysis: UV-ICR (UV-254)

Method: SM 5910 B

QC Batch ID: 8-0-212

C Batch ID: 8-0-212

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD	
Method Blank	Method Blank		ND*	1/cm			9806-838	0.009			
Method Blank (Dupl)	Method Blank		ND*	1/cm			9806-838	0.009			
			ND*	1/cm							
Method Blank	Method Blank		ND*	1/cm			9806-838	0.009			
Method Blank (Dupl)	Method Blank		ND*	1/cm			9806-838	0.009			
			ND*	1/cm							
Standard	Standard	0.009	0.009	1/cm	100%		9806-736	0.009	75-125%		
Standard (Dupl)	Standard	0.009	0.009	1/cm	100%		9806-736	0.009	75-125%		
		0.009	0.009	1/cm	100%	0.0 %			75-125%	20%	
Standard	Standard	0.088	0.085	1/cm	97%		9806-737	0.009	85-115%		
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9806-737	0.009	85-115%		
		0.088	0.086	1/cm	98%	1.2 %			85-115%	10%	

Analysis: UV-ICR (UV-254)

Method: SM 5910 B

QC Batch ID: 8-0-213

C Batch ID: 8-0-213

									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9807-1	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-1	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-1	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-1	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%		9806-859	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9806-859	0.009	85-115%	
		0.088	0.086	1/cm	98%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)

Method: SM 5910 B

QC Batch ID: 8-0-214

C Batch ID: 8-0-214									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9807-65	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-65	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-65	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-65	0.009		
			ND*	1/cm						

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Standard	Standard	0.009	0.007	1/cm	78%	9806-736	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.007	1/cm	78%	9806-736	0.009	75-125%	
		0.009	0.007	1/cm	78%			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%	9806-859	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%	9806-859	0.009	85-115%	
		0.088	0.086	1/cm	98%			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-215

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank		ND*	1/cm			9807-81	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-81	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-81	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-81	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%		9806-859	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.087	1/cm	99%		9806-859	0.009	85-115%	
		0.088	0.086	1/cm	98%	1.2 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-216

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank		ND*	1/cm			9807-71	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-71	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-71	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-71	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%		9806-859	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9806-859	0.009	85-115%	
		0.088	0.086	1/cm	98%	0.0 %			85-115%	10%

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Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2**Analysis:** UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-217

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Acceptance Criteria	
									Range	RPD
Method Blank	Method Blank		ND*	1/cm			9807-90	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-90	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-90	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-90	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.087	1/cm	99%		9806-859	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.087	1/cm	99%		9806-859	0.009	85-115%	
		0.088	0.087	1/cm	99%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-218

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Acceptance Criteria	
									Range	RPD
Method Blank	Method Blank		ND*	1/cm			9807-91	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-91	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-91	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-91	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9806-736	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%		9806-859	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9806-859	0.009	85-115%	
		0.088	0.086	1/cm	98%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-219

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Acceptance Criteria	
									Range	RPD
Method Blank	Method Blank		ND*	1/cm			9807-99	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-99	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-99	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-99	0.009		
			ND*	1/cm						

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Standard	Standard	0.009	0.008	1/cm	89%	9807-93	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.007	1/cm	78%	9807-93	0.009	75-125%	
		0.009	0.008	1/cm	89%			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%	9806-859	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%	9806-859	0.009	85-115%	
		0.088	0.086	1/cm	98%			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-220

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank		ND*	1/cm			9807-107	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-107	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-107	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-107	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%		9806-859	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.087	1/cm	99%		9806-859	0.009	85-115%	
		0.088	0.086	1/cm	98%	1.2 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-221

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank		ND*	1/cm			9807-120	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-120	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-120	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-120	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.087	1/cm	99%		9806-859	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.087	1/cm	99%		9806-859	0.009	85-115%	
		0.088	0.087	1/cm	99%	0.0 %			85-115%	10%

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Analysis: UV-ICR (UV-254)

Method: SM 5910 B

QC Batch ID: 8-0-222

C Batch ID: 8-0-222

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD	
Method Blank	Method Blank		ND*	1/cm			9807-123	0.009			
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-123	0.009			
			ND*	1/cm							
Method Blank	Method Blank		ND*	1/cm			9807-123	0.009			
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-123	0.009			
			ND*	1/cm							
Standard	Standard	0.009	0.007	1/cm	78%		9807-93	0.009	75-125%		
Standard (Dupl)	Standard	0.009	0.007	1/cm	78%		9807-93	0.009	75-125%		
		0.009	0.007	1/cm	78%	0.0 %			75-125%	20%	
Standard	Standard	0.088	0.086	1/cm	98%		9807-98	0.009	85-115%		
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9807-98	0.009	85-115%		
		0.088	0.086	1/cm	98%	0.0 %			85-115%	10%	

Analysis: UV-ICR (UV-254)

Method: SM 5910 B

QC Batch ID: 8-0-223

C Batch ID: 8-0-223

									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9807-192	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-192	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-192	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-192	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%		9807-98	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9807-98	0.009	85-115%	
		0.088	0.086	1/cm	98%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)

Method: SM 5910 B

QC Batch ID: 8-0-224

C Batch ID: 8-0-224									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9807-204	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-204	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-204	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-204	0.009		
			ND*	1/cm						

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Standard	Standard	0.009	0.008	1/cm	89%	9807-93	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%	9807-93	0.009	75-125%	
		0.009	0.008	1/cm	89%			75-125%	20%
Standard	Standard	0.088	0.085	1/cm	97%	9807-98	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.085	1/cm	97%	9807-98	0.009	85-115%	
		0.088	0.085	1/cm	97%			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-225

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank		ND*	1/cm			9807-201	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-201	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-201	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-201	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%		9807-98	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9807-98	0.009	85-115%	
		0.088	0.086	1/cm	98%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-226

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank		ND*	1/cm			9807-207	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-207	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9807-207	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-207	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.086	1/cm	98%		9807-98	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9807-98	0.009	85-115%	
		0.088	0.086	1/cm	98%	0.0 %			85-115%	10%

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Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2**Analysis:** UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-227

C Batch ID: 8-0-227

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD	
Method Blank	Method Blank		ND*	1/cm			9807-218	0.009			
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-218	0.009			
			ND*	1/cm							
Method Blank	Method Blank		ND*	1/cm			9807-218	0.009			
Method Blank (Dupl)	Method Blank		ND*	1/cm			9807-218	0.009			
			ND*	1/cm							
Standard	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%		
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9807-93	0.009	75-125%		
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%	
Standard	Standard	0.088	0.086	1/cm	98%		9807-98	0.009	85-115%		
Standard (Dupl)	Standard	0.088	0.086	1/cm	98%		9807-98	0.009	85-115%		
		0.088	0.086	1/cm	98%	0.0 %			85-115%	10%	

Analysis: TURB (Turbidity)**Method:** SM 2130 B**QC Batch ID:** 9-0-13

										Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>Date Run</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Standard	Standard	5.41	5.50	ntu	102%		06/20/98	9807-108	0.05		
Standard	Standard	5.41	5.50	ntu	102%		06/21/98	9807-108	0.05		
Standard	Standard	5.41	5.50	ntu	102%		06/24/98	9807-108	0.05		
Standard	Standard	5.41	5.52	ntu	102%		06/26/98	9807-108	0.05		
Standard	Standard	5.41	5.45	ntu	101%		07/02/98	9807-108	0.05		
Standard	Standard	5.41	5.48	ntu	101%		07/02/98	9807-108	0.05		

Analysis: TURB (Turbidity)**Method:** SM 2130 B**QC Batch ID:** 9-0-14

										Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>Date Run</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Standard	Standard	5.41	5.49	ntu	101%		07/08/98	9807-108	0.05		
Standard	Standard	5.41	5.48	ntu	101%		07/10/98	9807-108	0.05		
Standard	Standard	5.41	5.47	ntu	101%		07/13/98	9807-108	0.05		
Standard	Standard	5.41	5.46	ntu	101%		07/16/98	9807-108	0.05		
Standard	Standard	5.41	5.46	ntu	101%		07/20/98	9807-108	0.05		
Standard	Standard	5.41	5.48	ntu	101%		07/24/98	9807-108	0.05		
Standard	Standard	5.41	5.45	ntu	101%		07/27/98	9807-108	0.05		
Standard	Standard	5.41	5.47	ntu	101%		07/27/98	9807-108	0.05		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Study Title: ICR RSSCT #2**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-162

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Standard - TCP Aqueous		25	25	µg Cl-/L	100%		9807-116	25	75-125%	
Standard - TCP Aqueous (Dupl)		200	212	µg Cl-/L	106%		9807-115	25	85-115%	
System Blank			ND*	µg Cl-/L			9807-117	25		

Acceptance
Criteria**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-163

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike		200	222	µg Cl-/L	111%		9806-767	25		
Matrix Spike (Dupl)		200	218	µg Cl-/L	109%		9806-767	25		
		200	220	µg Cl-/L	110%	2.3 %				
Standard - TCP Aqueous		25	28	µg Cl-/L	112%		9807-133	25	75-125%	
Standard - TCP Aqueous		200	216	µg Cl-/L	108%		9807-132	25	85-115%	
System Blank			ND*	µg Cl-/L			9807-134	25		

Acceptance
Criteria**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-164

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Standard - TCP Aqueous		25	20	µg Cl-/L	80%		9807-186	25	75-125%	
Standard - TCP Aqueous		200	208	µg Cl-/L	104%		9807-185	25	85-115%	
System Blank			ND*	µg Cl-/L			9807-187	25		

Acceptance
Criteria**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-165

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike		200	229	µg Cl-/L	115%		9806-688	25		
Matrix Spike (Dupl)		200	232	µg Cl-/L	116%		9806-688	25		
		200	231	µg Cl-/L	116%	1.7 %				
Standard - TCP Aqueous		25	28	µg Cl-/L	112%		9807-199	25	75-125%	
Standard - TCP Aqueous		200	227	µg Cl-/L	114%		9807-198	25	85-115%	
System Blank			ND*	µg Cl-/L			9807-200	25		

Acceptance
Criteria**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-166

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
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Acceptance
Criteria

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Matrix Spike	Matrix Spike	200	230	µg Cl-/L	115%		9806-646	25
Matrix Spike (Dupl)	Matrix Spike	200	233	µg Cl-/L	117%		9806-646	25
		200	232	µg Cl-/L	116%	1.3 %		
Standard - TCP Aqueous	Standard	25	26	µg Cl-/L	104%		9807-216	25 75-125%
Standard - TCP Aqueous	Standard	200	227	µg Cl-/L	114%		9807-215	25 85-115%
System Blank	Blank		ND*	µg Cl-/L			9807-217	25

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-167

		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
QC Type										
Standard - TCP Aqueous	Standard	25	24	µg Cl-/L	96%		9807-225	25	75-125%	
Standard - TCP Aqueous	Standard	200	194	µg Cl-/L	97%		9807-224	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L			9807-226	25		

Acceptance
Criteria**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-168

		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
QC Type										
Matrix Spike	Matrix Spike	200	199	µg Cl-/L	100%		9807-18	25		
Matrix Spike (Dupl)	Matrix Spike	200	200	µg Cl-/L	100%		9807-18	25		
		200	199	µg Cl-/L	100%	0.5 %				
Standard - TCP Aqueous	Standard	25	23	µg Cl-/L	92%		9807-233	25	75-125%	
Standard - TCP Aqueous	Standard	200	195	µg Cl-/L	97%		9807-232	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L			9807-234	25		

Acceptance
Criteria**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-169

		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
QC Type										
Standard - TCP Aqueous	Standard	25	23	µg Cl-/L	92%		9807-245	25	75-125%	
Standard - TCP Aqueous	Standard	200	198	µg Cl-/L	99%		9807-244	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L			9807-246	25		

Acceptance
Criteria**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-170

		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
QC Type										
Matrix Spike	Matrix Spike	200	200	µg Cl-/L	100%		9806-596	25		
Matrix Spike (Dupl)	Matrix Spike	200	192	µg Cl-/L	96%		9806-596	25		
		200	196	µg Cl-/L	98%	4.1 %				

Acceptance
Criteria

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Study Title: ICR RSSCT #2

Standard - TCP Aqueous	Standard	25	23	µg Cl-/L	92%	9807-396	25	75-125%
Standard - TCP Aqueous	Standard	200	197	µg Cl-/L	98%	9807-395	25	85-115%
System Blank	Blank		ND*	µg Cl-/L		9807-397	25	

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-172

<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Standard - TCP Aqueous	Standard	25	23	µg Cl-/L	92%		9807-421	25	75-125%	
Standard - TCP Aqueous	Standard	200	199	µg Cl-/L	100%		9807-420	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L			9807-422	25		

Acceptance
Criteria**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-173

<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	200	198	µg Cl-/L	99%		9807-165	25		
Matrix Spike (Dupl)	Matrix Spike	200	198	µg Cl-/L	99%		9807-165	25		
		200	198	µg Cl-/L	99%	0.0 %				
Standard - TCP Aqueous	Standard	25	24	µg Cl-/L	96%		9807-439	25	75-125%	
Standard - TCP Aqueous	Standard	200	206	µg Cl-/L	103%		9807-438	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L			9807-440	25		

Acceptance
Criteria**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-174

<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Standard - TCP Aqueous	Standard	25	24	µg Cl-/L	96%		9807-444	25	75-125%	
Standard - TCP Aqueous	Standard	200	204	µg Cl-/L	102%		9807-443	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L			9807-445	25		

Acceptance
Criteria**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-175

<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Standard - TCP Aqueous	Standard	25	24	µg Cl-/L	96%		9807-454	25	75-125%	
Standard - TCP Aqueous	Standard	200	202	µg Cl-/L	101%		9807-453	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L			9807-455	25		

Acceptance
Criteria

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2**Analysis:** THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-166-0

										Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>	
Bromodichloromethane	Duplicate	5.8	5.9	µg/L		1.7%	9806-630	1			
Bromodichloromethane	Matrix Spike	40.0	40.5	µg/L	101%		9806-771	1			
Bromodichloromethane	Method Blank		ND*	µg/L			9807-125	1			
Bromodichloromethane	Secondary Source Std	20.0	20.8	µg/L	104%		9807-126	1	70-130%		
Bromodichloromethane	Standard	20.0	20.0	µg/L	100%		9807-127	1	80-120%		
Bromodichloromethane	Standard	20.0	20.5	µg/L	102%		9807-127	1	80-120%		
Bromodichloromethane	Standard	40.0	40.5	µg/L	101%		9807-128	1	80-120%		
Bromoform	Duplicate	ND	ND	µg/L		NA	9806-630	1			
Bromoform	Matrix Spike	40.0	45.7	µg/L	114%		9806-771	1			
Bromoform	Method Blank		ND*	µg/L			9807-125	1			
Bromoform	Secondary Source Std	20.0	19.8	µg/L	99%		9807-126	1	70-130%		
Bromoform	Standard	20.0	19.3	µg/L	97%		9807-127	1	80-120%		
Bromoform	Standard	20.0	18.3	µg/L	92%		9807-127	1	80-120%		
Bromoform	Standard	40.0	38.2	µg/L	96%		9807-128	1	80-120%		
Chloroform	Duplicate	6.8	6.9	µg/L		1.5%	9806-630	1			
Chloroform	Matrix Spike	40.0	43.9	µg/L	110%		9806-771	1			
Chloroform	Method Blank		ND*	µg/L			9807-125	1			
Chloroform	Secondary Source Std	20.0	20.7	µg/L	103%		9807-126	1	70-130%		
Chloroform	Standard	20.0	19.3	µg/L	97%		9807-127	1	80-120%		
Chloroform	Standard	20.0	19.9	µg/L	99%		9807-127	1	80-120%		
Chloroform	Standard	40.0	41.2	µg/L	103%		9807-128	1	80-120%		
Dibromochloromethane	Duplicate	2.8	2.9	µg/L		3.5%	9806-630	1			
Dibromochloromethane	Matrix Spike	40.0	41.9	µg/L	105%		9806-771	1			
Dibromochloromethane	Method Blank		ND*	µg/L			9807-125	1			
Dibromochloromethane	Secondary Source Std	20.0	20.4	µg/L	102%		9807-126	1	70-130%		
Dibromochloromethane	Standard	20.0	20.1	µg/L	101%		9807-127	1	80-120%		
Dibromochloromethane	Standard	20.0	21.1	µg/L	106%		9807-127	1	80-120%		
Dibromochloromethane	Standard	40.0	41.2	µg/L	103%		9807-128	1	80-120%		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable); RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2**Analysis:** THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-172-0

										Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>	
Bromodichloromethane	Duplicate	14.8	15.0	µg/L		1.3%	9806-780	1			
Bromodichloromethane	Matrix Spike	40.0	40.4	µg/L	101%		9806-667	1			
Bromodichloromethane	Method Blank		ND*	µg/L			9807-227	1			
Bromodichloromethane	Secondary Source Std	20.0	21.9	µg/L	110%		9807-228	1	70-130%		
Bromodichloromethane	Standard	20.0	19.4	µg/L	97%		9807-229	1	80-120%		
Bromodichloromethane	Standard	20.0	19.8	µg/L	99%		9807-229	1	80-120%		
Bromodichloromethane	Standard	40.0	40.8	µg/L	102%		9807-230	1	80-120%		
Bromoform	Duplicate	11.0	11.5	µg/L		4.4%	9806-780	1			
Bromoform	Matrix Spike	40.0	38.8	µg/L	97%		9806-667	1			
Bromoform	Method Blank		ND*	µg/L			9807-227	1			
Bromoform	Secondary Source Std	20.0	18.4	µg/L	92%		9807-228	1	70-130%		
Bromoform	Standard	20.0	17.1	µg/L	86%		9807-229	1	80-120%		
Bromoform	Standard	20.0	17.7	µg/L	89%		9807-229	1	80-120%		
Bromoform	Standard	40.0	37.3	µg/L	93%		9807-230	1	80-120%		
Chloroform	Duplicate	6.5	6.6	µg/L		1.5%	9806-780	1			
Chloroform	Matrix Spike	40.0	41.6	µg/L	104%		9806-667	1			
Chloroform	Method Blank		ND*	µg/L			9807-227	1			
Chloroform	Secondary Source Std	20.0	22.2	µg/L	111%		9807-228	1	70-130%		
Chloroform	Standard	20.0	18.6	µg/L	93%		9807-229	1	80-120%		
Chloroform	Standard	20.0	19.1	µg/L	96%		9807-229	1	80-120%		
Chloroform	Standard	40.0	41.2	µg/L	103%		9807-230	1	80-120%		
Dibromochloromethane	Duplicate	22.0	22.2	µg/L		0.9%	9806-780	1			
Dibromochloromethane	Matrix Spike	40.0	41.6	µg/L	104%		9806-667	1			
Dibromochloromethane	Method Blank		ND*	µg/L			9807-227	1			
Dibromochloromethane	Secondary Source Std	20.0	21.6	µg/L	108%		9807-228	1	70-130%		
Dibromochloromethane	Standard	20.0	19.6	µg/L	98%		9807-229	1	80-120%		
Dibromochloromethane	Standard	20.0	20.4	µg/L	102%		9807-229	1	80-120%		
Dibromochloromethane	Standard	40.0	41.2	µg/L	103%		9807-230	1	80-120%		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2**Analysis:** THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-177-0

										Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>	
Bromodichloromethane	Duplicate	26.0	25.2	µg/L		3.1%	9807-54	1			
Bromodichloromethane	Matrix Spike	40.0	40.7	µg/L	102%		9807-24	1			
Bromodichloromethane	Method Blank		ND*	µg/L			9807-239	1			
Bromodichloromethane	Secondary Source Std	20.0	21.4	µg/L	107%		9807-240	1	70-130%		
Bromodichloromethane	Standard	20.0	20.8	µg/L	104%		9807-241	1	80-120%		
Bromodichloromethane	Standard	20.0	21.0	µg/L	105%		9807-241	1	80-120%		
Bromodichloromethane	Standard	40.0	39.2	µg/L	98%		9807-242	1	80-120%		
Bromoform	Duplicate	5.6	5.5	µg/L		1.8%	9807-54	1			
Bromoform	Matrix Spike	40.0	36.6	µg/L	92%		9807-24	1			
Bromoform	Method Blank		ND*	µg/L			9807-239	1			
Bromoform	Secondary Source Std	20.0	20.9	µg/L	104%		9807-240	1	70-130%		
Bromoform	Standard	20.0	21.0	µg/L	105%		9807-241	1	80-120%		
Bromoform	Standard	20.0	18.4	µg/L	92%		9807-241	1	80-120%		
Bromoform	Standard	40.0	34.4	µg/L	86%		9807-242	1	80-120%		
Chloroform	Duplicate	24.1	23.9	µg/L		0.8%	9807-54	1			
Chloroform	Matrix Spike	40.0	41.8	µg/L	104%		9807-24	1			
Chloroform	Method Blank		ND*	µg/L			9807-239	1			
Chloroform	Secondary Source Std	20.0	21.4	µg/L	107%		9807-240	1	70-130%		
Chloroform	Standard	20.0	20.1	µg/L	101%		9807-241	1	80-120%		
Chloroform	Standard	20.0	20.3	µg/L	102%		9807-241	1	80-120%		
Chloroform	Standard	40.0	39.9	µg/L	100%		9807-242	1	80-120%		
Dibromochloromethane	Duplicate	21.6	21.2	µg/L		1.9%	9807-54	1			
Dibromochloromethane	Matrix Spike	40.0	42.6	µg/L	106%		9807-24	1			
Dibromochloromethane	Method Blank		ND*	µg/L			9807-239	1			
Dibromochloromethane	Secondary Source Std	20.0	21.1	µg/L	106%		9807-240	1	70-130%		
Dibromochloromethane	Standard	20.0	21.2	µg/L	106%		9807-241	1	80-120%		
Dibromochloromethane	Standard	20.0	21.8	µg/L	109%		9807-241	1	80-120%		
Dibromochloromethane	Standard	40.0	40.0	µg/L	100%		9807-242	1	80-120%		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2**Analysis:** THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-178-0

								Acceptance Criteria		
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Bromodichloromethane	Duplicate	ND	ND	µg/L		NA	9807-135	1		
Bromodichloromethane	Matrix Spike	40.0	41.3	µg/L	103%		9807-150	1		
Bromodichloromethane	Method Blank		ND*	µg/L			9807-412	1		
Bromodichloromethane	Secondary Source Std	20.0	20.9	µg/L	104%		9807-413	1	70-130%	
Bromodichloromethane	Standard	20.0	19.7	µg/L	98%		9807-414	1	80-120%	
Bromodichloromethane	Standard	20.0	21.2	µg/L	106%		9807-414	1	80-120%	
Bromodichloromethane	Standard	40.0	37.8	µg/L	94%		9807-415	1	80-120%	
Bromoform	Duplicate	1.2	1.1	µg/L		8.7%	9807-135	1		
Bromoform	Matrix Spike	40.0	43.2	µg/L	108%		9807-150	1		
Bromoform	Method Blank		ND*	µg/L			9807-412	1		
Bromoform	Secondary Source Std	20.0	19.8	µg/L	99%		9807-413	1	70-130%	
Bromoform	Standard	20.0	19.9	µg/L	99%		9807-414	1	80-120%	
Bromoform	Standard	20.0	21.6	µg/L	108%		9807-414	1	80-120%	
Bromoform	Standard	40.0	39.5	µg/L	99%		9807-415	1	80-120%	
Chloroform	Duplicate	ND	ND	µg/L		NA	9807-135	1		
Chloroform	Matrix Spike	40.0	44.0	µg/L	110%		9807-150	1		
Chloroform	Method Blank		ND*	µg/L			9807-412	1		
Chloroform	Secondary Source Std	20.0	21.1	µg/L	106%		9807-413	1	70-130%	
Chloroform	Standard	20.0	19.5	µg/L	97%		9807-414	1	80-120%	
Chloroform	Standard	20.0	21.1	µg/L	106%		9807-414	1	80-120%	
Chloroform	Standard	40.0	38.1	µg/L	95%		9807-415	1	80-120%	
Dibromochloromethane	Duplicate	ND	ND	µg/L		NA	9807-135	1		
Dibromochloromethane	Matrix Spike	40.0	42.7	µg/L	107%		9807-150	1		
Dibromochloromethane	Method Blank		ND*	µg/L			9807-412	1		
Dibromochloromethane	Secondary Source Std	20.0	20.3	µg/L	102%		9807-413	1	70-130%	
Dibromochloromethane	Standard	20.0	19.9	µg/L	99%		9807-414	1	80-120%	
Dibromochloromethane	Standard	20.0	21.6	µg/L	108%		9807-414	1	80-120%	
Dibromochloromethane	Standard	40.0	38.8	µg/L	97%		9807-415	1	80-120%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2**Analysis:** THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-182-0

								Acceptance Criteria		
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Bromodichloromethane	Duplicate	7.2	7.4	µg/L		2.7%	9806-686	1		
Bromodichloromethane	Matrix Spike	40.0	45.5	µg/L	114%		9807-333	1		
Bromodichloromethane	Method Blank		ND*	µg/L			9807-466	1		
Bromodichloromethane	Secondary Source Std	20.0	22.1	µg/L	111%		9807-467	1	70-130%	
Bromodichloromethane	Standard	20.0	20.7	µg/L	103%		9807-468	1	80-120%	
Bromodichloromethane	Standard	20.0	20.4	µg/L	102%		9807-468	1	80-120%	
Bromodichloromethane	Standard	40.0	36.4	µg/L	91%		9807-469	1	80-120%	
Bromoform	Duplicate	ND	ND	µg/L		NA	9806-686	1		
Bromoform	Matrix Spike	40.0	39.3	µg/L	98%		9807-333	1		
Bromoform	Method Blank		ND*	µg/L			9807-466	1		
Bromoform	Secondary Source Std	20.0	18.9	µg/L	94%		9807-467	1	70-130%	
Bromoform	Standard	20.0	18.3	µg/L	92%		9807-468	1	80-120%	
Bromoform	Standard	20.0	16.9	µg/L	84%		9807-468	1	80-120%	
Bromoform	Standard	40.0	38.0	µg/L	95%		9807-469	1	80-120%	
Chloroform	Duplicate	11.1	11.5	µg/L		3.5%	9806-686	1		
Chloroform	Matrix Spike	40.0	44.4	µg/L	111%		9807-333	1		
Chloroform	Method Blank		ND*	µg/L			9807-466	1		
Chloroform	Secondary Source Std	20.0	22.1	µg/L	111%		9807-467	1	70-130%	
Chloroform	Standard	20.0	20.4	µg/L	102%		9807-468	1	80-120%	
Chloroform	Standard	20.0	20.1	µg/L	101%		9807-468	1	80-120%	
Chloroform	Standard	40.0	36.2	µg/L	91%		9807-469	1	80-120%	
Dibromochloromethane	Duplicate	2.7	2.7	µg/L		0.0%	9806-686	1		
Dibromochloromethane	Matrix Spike	40.0	45.8	µg/L	115%		9807-333	1		
Dibromochloromethane	Method Blank		ND*	µg/L			9807-466	1		
Dibromochloromethane	Secondary Source Std	20.0	21.5	µg/L	108%		9807-467	1	70-130%	
Dibromochloromethane	Standard	20.0	20.8	µg/L	104%		9807-468	1	80-120%	
Dibromochloromethane	Standard	20.0	20.3	µg/L	102%		9807-468	1	80-120%	
Dibromochloromethane	Standard	40.0	37.7	µg/L	94%		9807-469	1	80-120%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable); RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2**Analysis:** HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-170-0

								Acceptance Criteria		
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Bromochloroacetic acid	Duplicate	1.3	1.2	µg/L		8.0%	9806-648	1		
Bromochloroacetic acid	Matrix Spike	20.0	23.6	µg/L	118%		9806-664	1		
Bromochloroacetic acid	Method Blank		ND*	µg/L			9807-188	1		
Bromochloroacetic acid	Secondary Source Std	20.0	18.2	µg/L	91%		9807-189	1	70-130%	
Bromochloroacetic acid	Standard	20.0	19.6	µg/L	98%		9807-190	1	80-120%	
Bromochloroacetic acid	Standard	20.0	19.7	µg/L	98%		9807-190	1	80-120%	
Bromochloroacetic acid	Standard	40.0	39.6	µg/L	99%		9807-191	1	80-120%	
Bromodichloroacetic acid	Duplicate	1.1	1.1	µg/L		0.0%	9806-648	1		
Bromodichloroacetic acid	Matrix Spike	20.0	17.3	µg/L	86%		9806-664	1		
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9807-188	1		
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9807-189	1	70-130%	
Bromodichloroacetic acid	Standard	20.0	19.0	µg/L	95%		9807-190	1	80-120%	
Bromodichloroacetic acid	Standard	20.0	18.5	µg/L	93%		9807-190	1	80-120%	
Bromodichloroacetic acid	Standard	40.0	39.9	µg/L	100%		9807-191	1	80-120%	
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9806-648	2		
Chlorodibromoacetic acid	Matrix Spike	20.0	15.1	µg/L	76%		9806-664	2		
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9807-188	2		
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9807-189	2	70-130%	
Chlorodibromoacetic acid	Standard	20.0	19.1	µg/L	96%		9807-190	2	80-120%	
Chlorodibromoacetic acid	Standard	20.0	18.6	µg/L	93%		9807-190	2	80-120%	
Chlorodibromoacetic acid	Standard	40.0	39.8	µg/L	99%		9807-191	2	80-120%	
Dibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9806-648	1		
Dibromoacetic acid	Matrix Spike	20.0	22.8	µg/L	114%		9806-664	1		
Dibromoacetic acid	Method Blank		ND*	µg/L			9807-188	1		
Dibromoacetic acid	Secondary Source Std	20.0	17.8	µg/L	89%		9807-189	1	70-130%	
Dibromoacetic acid	Standard	20.0	19.6	µg/L	98%		9807-190	1	80-120%	
Dibromoacetic acid	Standard	20.0	19.7	µg/L	98%		9807-190	1	80-120%	
Dibromoacetic acid	Standard	40.0	39.8	µg/L	99%		9807-191	1	80-120%	
Dichloroacetic acid	Duplicate	1.3	1.1	µg/L		16.7%	9806-648	1		
Dichloroacetic acid	Matrix Spike	20.0	22.0	µg/L	110%		9806-664	1		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2

Dichloroacetic acid	Method Blank		ND*	µg/L		9807-188	1
Dichloroacetic acid	Secondary Source Std	20.0	19.9	µg/L	99%	9807-189	1 70-130%
Dichloroacetic acid	Standard	20.0	19.8	µg/L	99%	9807-190	1 80-120%
Dichloroacetic acid	Standard	20.0	19.7	µg/L	98%	9807-190	1 80-120%
Dichloroacetic acid	Standard	40.0	38.4	µg/L	96%	9807-191	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND	µg/L	NA	9806-648	1
Monobromoacetic acid	Matrix Spike	20.0	23.2	µg/L	116%	9806-664	1
Monobromoacetic acid	Method Blank		ND*	µg/L		9807-188	1
Monobromoacetic acid	Secondary Source Std	20.0	20.9	µg/L	104%	9807-189	1 70-130%
Monobromoacetic acid	Standard	20.0	20.2	µg/L	101%	9807-190	1 80-120%
Monobromoacetic acid	Standard	20.0	20.1	µg/L	101%	9807-190	1 80-120%
Monobromoacetic acid	Standard	40.0	39.0	µg/L	97%	9807-191	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND	µg/L	NA	9806-648	2
Monochloroacetic acid	Matrix Spike	20.0	18.3	µg/L	92%	9806-664	2
Monochloroacetic acid	Method Blank		ND*	µg/L		9807-188	2
Monochloroacetic acid	Secondary Source Std	20.0	20.6	µg/L	103%	9807-189	2 70-130%
Monochloroacetic acid	Standard	20.0	20.7	µg/L	103%	9807-190	2 80-120%
Monochloroacetic acid	Standard	20.0	22.7	µg/L	114%	9807-190	2 80-120%
Monochloroacetic acid	Standard	40.0	38.1	µg/L	95%	9807-191	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND	µg/L	NA	9806-648	4
Tribromoacetic acid	Matrix Spike	20.0	15.1	µg/L	76%	9806-664	4
Tribromoacetic acid	Method Blank		ND*	µg/L		9807-188	4
Tribromoacetic acid	Secondary Source Std		ND	µg/L		9807-189	4 70-130%
Tribromoacetic acid	Standard	20.0	19.8	µg/L	99%	9807-190	4 80-120%
Tribromoacetic acid	Standard	20.0	18.8	µg/L	94%	9807-190	4 80-120%
Tribromoacetic acid	Standard	40.0	38.7	µg/L	97%	9807-191	4 80-120%
Trichloroacetic acid	Duplicate	ND	ND	µg/L	NA	9806-648	1
Trichloroacetic acid	Matrix Spike	20.0	20.4	µg/L	102%	9806-664	1
Trichloroacetic acid	Method Blank		ND*	µg/L		9807-188	1
Trichloroacetic acid	Secondary Source Std	20.0	16.2	µg/L	81%	9807-189	1 70-130%
Trichloroacetic acid	Standard	20.0	19.6	µg/L	98%	9807-190	1 80-120%
Trichloroacetic acid	Standard	20.0	19.7	µg/L	98%	9807-190	1 80-120%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Study Title: ICR RSSCT #2

Trichloroacetic acid	Standard	40.0	39.5	µg/L	99%	9807-191	1	80-120%
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Analysis: HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-171-0

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD	
Bromochloroacetic acid	Duplicate	1.0	1.0	µg/L		0.0%	9806-688	1			
Bromochloroacetic acid	Matrix Spike	40.0	39.0	µg/L	97%		9806-808	1			
Bromochloroacetic acid	Method Blank		ND*	µg/L			9807-209	1			
Bromochloroacetic acid	Secondary Source Std	20.0	19.7	µg/L	98%		9807-210	1	70-130%		
Bromochloroacetic acid	Standard	20.0	18.6	µg/L	93%		9807-211	1	80-120%		
Bromochloroacetic acid	Standard	20.0	18.7	µg/L	93%		9807-211	1	80-120%		
Bromochloroacetic acid	Standard	40.0	41.0	µg/L	102%		9807-212	1	80-120%		
Bromodichloroacetic acid	Duplicate	1.0	1.1	µg/L		9.5%	9806-688	1			
Bromodichloroacetic acid	Matrix Spike	40.0	41.9	µg/L	105%		9806-808	1			
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9807-209	1			
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9807-210	1	70-130%		
Bromodichloroacetic acid	Standard	20.0	18.1	µg/L	91%		9807-211	1	80-120%		
Bromodichloroacetic acid	Standard	20.0	18.6	µg/L	93%		9807-211	1	80-120%		
Bromodichloroacetic acid	Standard	40.0	42.5	µg/L	106%		9807-212	1	80-120%		
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9806-688	2			
Chlorodibromoacetic acid	Matrix Spike	40.0	42.5	µg/L	106%		9806-808	2			
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9807-209	2			
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9807-210	2	70-130%		
Chlorodibromoacetic acid	Standard	20.0	18.1	µg/L	91%		9807-211	2	80-120%		
Chlorodibromoacetic acid	Standard	20.0	19.2	µg/L	96%		9807-211	2	80-120%		
Chlorodibromoacetic acid	Standard	40.0	43.0	µg/L	108%		9807-212	2	80-120%		
Dibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9806-688	1			
Dibromoacetic acid	Matrix Spike	40.0	38.4	µg/L	96%		9806-808	1			
Dibromoacetic acid	Method Blank		ND*	µg/L			9807-209	1			
Dibromoacetic acid	Secondary Source Std	20.0	20.8	µg/L	104%		9807-210	1	70-130%		
Dibromoacetic acid	Standard	20.0	18.4	µg/L	92%		9807-211	1	80-120%		
Dibromoacetic acid	Standard	20.0	18.6	µg/L	93%		9807-211	1	80-120%		
Dibromoacetic acid	Standard	40.0	41.3	µg/L	103%		9807-212	1	80-120%		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Dichloroacetic acid	Duplicate	ND	ND	µg/L	NA	9806-688	1
Dichloroacetic acid	Matrix Spike	40.0	38.8	µg/L	97%	9806-808	1
Dichloroacetic acid	Method Blank		ND*	µg/L		9807-209	1
Dichloroacetic acid	Secondary Source Std	20.0	20.2	µg/L	101%	9807-210	1 70-130%
Dichloroacetic acid	Standard	20.0	19.2	µg/L	96%	9807-211	1 80-120%
Dichloroacetic acid	Standard	20.0	19.0	µg/L	95%	9807-211	1 80-120%
Dichloroacetic acid	Standard	40.0	40.7	µg/L	102%	9807-212	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND	µg/L	NA	9806-688	1
Monobromoacetic acid	Matrix Spike	40.0	41.3	µg/L	103%	9806-808	1
Monobromoacetic acid	Method Blank		ND*	µg/L		9807-209	1
Monobromoacetic acid	Secondary Source Std	20.0	18.7	µg/L	93%	9807-210	1 70-130%
Monobromoacetic acid	Standard	20.0	20.1	µg/L	101%	9807-211	1 80-120%
Monobromoacetic acid	Standard	20.0	20.1	µg/L	101%	9807-211	1 80-120%
Monobromoacetic acid	Standard	40.0	39.3	µg/L	98%	9807-212	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND	µg/L	NA	9806-688	2
Monochloroacetic acid	Matrix Spike	40.0	43.7	µg/L	109%	9806-808	2
Monochloroacetic acid	Method Blank		ND*	µg/L		9807-209	2
Monochloroacetic acid	Secondary Source Std	20.0	20.2	µg/L	101%	9807-210	2 70-130%
Monochloroacetic acid	Standard	20.0	21.3	µg/L	106%	9807-211	2 80-120%
Monochloroacetic acid	Standard	20.0	21.0	µg/L	105%	9807-211	2 80-120%
Monochloroacetic acid	Standard	40.0	41.0	µg/L	102%	9807-212	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND	µg/L	NA	9806-688	4
Tribromoacetic acid	Matrix Spike	40.0	44.2	µg/L	111%	9806-808	4
Tribromoacetic acid	Method Blank		ND*	µg/L		9807-209	4
Tribromoacetic acid	Secondary Source Std		ND	µg/L		9807-210	4 70-130%
Tribromoacetic acid	Standard	20.0	18.2	µg/L	91%	9807-211	4 80-120%
Tribromoacetic acid	Standard	20.0	19.5	µg/L	97%	9807-211	4 80-120%
Tribromoacetic acid	Standard	40.0	42.4	µg/L	106%	9807-212	4 80-120%
Trichloroacetic acid	Duplicate	ND	ND	µg/L	NA	9806-688	1
Trichloroacetic acid	Matrix Spike	40.0	37.6	µg/L	94%	9806-808	1
Trichloroacetic acid	Method Blank		ND*	µg/L		9807-209	1
Trichloroacetic acid	Secondary Source Std	20.0	20.0	µg/L	100%	9807-210	1 70-130%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Trichloroacetic acid	Standard	20.0	18.1	µg/L	91%	9807-211	1	80-120%
Trichloroacetic acid	Standard	20.0	18.2	µg/L	91%	9807-211	1	80-120%
Trichloroacetic acid	Standard	40.0	41.3	µg/L	103%	9807-212	1	80-120%

Analysis: HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-176-0

									Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Bromochloroacetic acid	Duplicate	ND	ND	µg/L		NA	9807-18	1		
Bromochloroacetic acid	Matrix Spike	40.0	38.0	µg/L	95%		9806-593	1		
Bromochloroacetic acid	Method Blank		ND*	µg/L			9807-235	1		
Bromochloroacetic acid	Secondary Source Std	20.0	18.4	µg/L	92%		9807-236	1	70-130%	
Bromochloroacetic acid	Standard	20.0	19.1	µg/L	96%		9807-237	1	80-120%	
Bromochloroacetic acid	Standard	20.0	19.4	µg/L	97%		9807-237	1	80-120%	
Bromochloroacetic acid	Standard	40.0	40.4	µg/L	101%		9807-238	1	80-120%	
Bromodichloroacetic acid	Duplicate	ND	ND	µg/L		NA	9807-18	1		
Bromodichloroacetic acid	Matrix Spike	40.0	39.8	µg/L	99%		9806-593	1		
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9807-235	1		
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9807-236	1	70-130%	
Bromodichloroacetic acid	Standard	20.0	18.5	µg/L	93%		9807-237	1	80-120%	
Bromodichloroacetic acid	Standard	20.0	18.2	µg/L	91%		9807-237	1	80-120%	
Bromodichloroacetic acid	Standard	40.0	41.4	µg/L	103%		9807-238	1	80-120%	
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9807-18	2		
Chlorodibromoacetic acid	Matrix Spike	40.0	37.7	µg/L	94%		9806-593	2		
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9807-235	2		
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9807-236	2	70-130%	
Chlorodibromoacetic acid	Standard	20.0	18.1	µg/L	91%		9807-237	2	80-120%	
Chlorodibromoacetic acid	Standard	20.0	17.8	µg/L	89%		9807-237	2	80-120%	
Chlorodibromoacetic acid	Standard	40.0	41.7	µg/L	104%		9807-238	2	80-120%	
Dibromoacetic acid	Duplicate	3.1	2.6	µg/L		17.5%	9807-18	1		
Dibromoacetic acid	Matrix Spike	40.0	38.6	µg/L	97%		9806-593	1		
Dibromoacetic acid	Method Blank		ND*	µg/L			9807-235	1		
Dibromoacetic acid	Secondary Source Std	20.0	18.9	µg/L	94%		9807-236	1	70-130%	
Dibromoacetic acid	Standard	20.0	19.2	µg/L	96%		9807-237	1	80-120%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Dibromoacetic acid	Standard	20.0	19.3 µg/L	97%	9807-237	1 80-120%
Dibromoacetic acid	Standard	40.0	41.0 µg/L	102%	9807-238	1 80-120%
Dichloroacetic acid	Duplicate	1.7	1.4 µg/L	19.4%	9807-18	1
Dichloroacetic acid	Matrix Spike	40.0	39.0 µg/L	97%	9806-593	1
Dichloroacetic acid	Method Blank		ND* µg/L		9807-235	1
Dichloroacetic acid	Secondary Source Std	20.0	18.7 µg/L	93%	9807-236	1 70-130%
Dichloroacetic acid	Standard	20.0	18.8 µg/L	94%	9807-237	1 80-120%
Dichloroacetic acid	Standard	20.0	19.7 µg/L	98%	9807-237	1 80-120%
Dichloroacetic acid	Standard	40.0	39.6 µg/L	99%	9807-238	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND µg/L	NA	9807-18	1
Monobromoacetic acid	Matrix Spike	40.0	40.5 µg/L	101%	9806-593	1
Monobromoacetic acid	Method Blank		ND* µg/L		9807-235	1
Monobromoacetic acid	Secondary Source Std	20.0	18.9 µg/L	94%	9807-236	1 70-130%
Monobromoacetic acid	Standard	20.0	19.6 µg/L	98%	9807-237	1 80-120%
Monobromoacetic acid	Standard	20.0	19.9 µg/L	99%	9807-237	1 80-120%
Monobromoacetic acid	Standard	40.0	39.9 µg/L	100%	9807-238	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND µg/L	NA	9807-18	2
Monochloroacetic acid	Matrix Spike	40.0	37.7 µg/L	94%	9806-593	2
Monochloroacetic acid	Method Blank		ND* µg/L		9807-235	2
Monochloroacetic acid	Secondary Source Std	20.0	18.6 µg/L	93%	9807-236	2 70-130%
Monochloroacetic acid	Standard	20.0	19.7 µg/L	98%	9807-237	2 80-120%
Monochloroacetic acid	Standard	20.0	18.7 µg/L	93%	9807-237	2 80-120%
Monochloroacetic acid	Standard	40.0	40.0 µg/L	100%	9807-238	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND µg/L	NA	9807-18	4
Tribromoacetic acid	Matrix Spike	40.0	36.3 µg/L	91%	9806-593	4
Tribromoacetic acid	Method Blank		ND* µg/L		9807-235	4
Tribromoacetic acid	Secondary Source Std		ND µg/L		9807-236	4 70-130%
Tribromoacetic acid	Standard	20.0	18.1 µg/L	91%	9807-237	4 80-120%
Tribromoacetic acid	Standard	20.0	17.8 µg/L	89%	9807-237	4 80-120%
Tribromoacetic acid	Standard	40.0	41.0 µg/L	102%	9807-238	4 80-120%
Trichloroacetic acid	Duplicate	ND	ND µg/L	NA	9807-18	1
Trichloroacetic acid	Matrix Spike	40.0	38.5 µg/L	96%	9806-593	1
Trichloroacetic acid	Method Blank		ND* µg/L		9807-235	1

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Trichloroacetic acid	Secondary Source Std	20.0	17.8 µg/L	89%	9807-236	1	70-130%
Trichloroacetic acid	Standard	20.0	18.5 µg/L	93%	9807-237	1	80-120%
Trichloroacetic acid	Standard	20.0	18.7 µg/L	93%	9807-237	1	80-120%
Trichloroacetic acid	Standard	40.0	40.5 µg/L	101%	9807-238	1	80-120%

Analysis: HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-179-0

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD	
Bromochloroacetic acid	Duplicate	ND	ND	µg/L		NA	9806-574	1			
Bromochloroacetic acid	Matrix Spike	40.0	43.9	µg/L	110%		9807-142	1			
Bromochloroacetic acid	Method Blank		ND*	µg/L			9807-424	1			
Bromochloroacetic acid	Secondary Source Std	20.0	19.0	µg/L	95%		9807-425	1	70-130%		
Bromochloroacetic acid	Standard	20.0	18.5	µg/L	93%		9807-426	1	80-120%		
Bromochloroacetic acid	Standard	20.0	18.2	µg/L	91%		9807-426	1	80-120%		
Bromochloroacetic acid	Standard	40.0	40.0	µg/L	100%		9807-427	1	80-120%		
Bromodichloroacetic acid	Duplicate	ND	ND	µg/L		NA	9806-574	1			
Bromodichloroacetic acid	Matrix Spike	40.0	49.4	µg/L	123%		9807-142	1			
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9807-424	1			
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9807-425	1	70-130%		
Bromodichloroacetic acid	Standard	20.0	18.0	µg/L	90%		9807-426	1	80-120%		
Bromodichloroacetic acid	Standard	20.0	17.5	µg/L	88%		9807-426	1	80-120%		
Bromodichloroacetic acid	Standard	40.0	42.0	µg/L	105%		9807-427	1	80-120%		
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9806-574	2			
Chlorodibromoacetic acid	Matrix Spike	40.0	46.9	µg/L	117%		9807-142	2			
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9807-424	2			
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9807-425	2	70-130%		
Chlorodibromoacetic acid	Standard	20.0	17.7	µg/L	89%		9807-426	2	80-120%		
Chlorodibromoacetic acid	Standard	20.0	17.3	µg/L	86%		9807-426	2	80-120%		
Chlorodibromoacetic acid	Standard	40.0	42.8	µg/L	107%		9807-427	2	80-120%		
Dibromoacetic acid	Duplicate	4.5	4.3	µg/L		4.5%	9806-574	1			
Dibromoacetic acid	Matrix Spike	40.0	46.8	µg/L	117%		9807-142	1			
Dibromoacetic acid	Method Blank		ND*	µg/L			9807-424	1			
Dibromoacetic acid	Secondary Source Std	20.0	20.4	µg/L	102%		9807-425	1	70-130%		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Dibromoacetic acid	Standard	20.0	18.5 µg/L	93%	9807-426	1 80-120%
Dibromoacetic acid	Standard	20.0	18.5 µg/L	93%	9807-426	1 80-120%
Dibromoacetic acid	Standard	40.0	40.9 µg/L	102%	9807-427	1 80-120%
Dichloroacetic acid	Duplicate	ND	ND µg/L	NA	9806-574	1
Dichloroacetic acid	Matrix Spike	40.0	40.7 µg/L	102%	9807-142	1
Dichloroacetic acid	Method Blank		ND* µg/L		9807-424	1
Dichloroacetic acid	Secondary Source Std	20.0	19.1 µg/L	96%	9807-425	1 70-130%
Dichloroacetic acid	Standard	20.0	19.0 µg/L	95%	9807-426	1 80-120%
Dichloroacetic acid	Standard	20.0	17.6 µg/L	88%	9807-426	1 80-120%
Dichloroacetic acid	Standard	40.0	38.8 µg/L	97%	9807-427	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND µg/L	NA	9806-574	1
Monobromoacetic acid	Matrix Spike	40.0	37.8 µg/L	94%	9807-142	1
Monobromoacetic acid	Method Blank		ND* µg/L		9807-424	1
Monobromoacetic acid	Secondary Source Std	20.0	17.3 µg/L	86%	9807-425	1 70-130%
Monobromoacetic acid	Standard	20.0	19.4 µg/L	97%	9807-426	1 80-120%
Monobromoacetic acid	Standard	20.0	19.6 µg/L	98%	9807-426	1 80-120%
Monobromoacetic acid	Standard	40.0	39.6 µg/L	99%	9807-427	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND µg/L	NA	9806-574	2
Monochloroacetic acid	Matrix Spike	40.0	37.0 µg/L	93%	9807-142	2
Monochloroacetic acid	Method Blank		ND* µg/L		9807-424	2
Monochloroacetic acid	Secondary Source Std	20.0	18.2 µg/L	91%	9807-425	2 70-130%
Monochloroacetic acid	Standard	20.0	18.9 µg/L	94%	9807-426	2 80-120%
Monochloroacetic acid	Standard	20.0	18.6 µg/L	93%	9807-426	2 80-120%
Monochloroacetic acid	Standard	40.0	38.4 µg/L	96%	9807-427	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND µg/L	NA	9806-574	4
Tribromoacetic acid	Matrix Spike	40.0	47.8 µg/L	119%	9807-142	4
Tribromoacetic acid	Method Blank		ND* µg/L		9807-424	4
Tribromoacetic acid	Secondary Source Std		ND µg/L		9807-425	4 70-130%
Tribromoacetic acid	Standard	20.0	18.0 µg/L	90%	9807-426	4 80-120%
Tribromoacetic acid	Standard	20.0	17.2 µg/L	86%	9807-426	4 80-120%
Tribromoacetic acid	Standard	40.0	43.1 µg/L	108%	9807-427	4 80-120%
Trichloroacetic acid	Duplicate	ND	ND µg/L	NA	9806-574	1
Trichloroacetic acid	Matrix Spike	40.0	48.4 µg/L	121%	9807-142	1

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Trichloroacetic acid	Method Blank		ND*	µg/L		9807-424	1
Trichloroacetic acid	Secondary Source Std	20.0	19.4	µg/L	97%	9807-425	1 70-130%
Trichloroacetic acid	Standard	20.0	17.9	µg/L	89%	9807-426	1 80-120%
Trichloroacetic acid	Standard	20.0	17.0	µg/L	85%	9807-426	1 80-120%
Trichloroacetic acid	Standard	40.0	39.6	µg/L	99%	9807-427	1 80-120%

Analysis: HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-181-0

												Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD		
Bromochloroacetic acid	Duplicate	2.0	2.0	µg/L		0.0%	9806-685	1				
Bromochloroacetic acid	Matrix Spike	40.0	40.4	µg/L	101%		9807-402	1				
Bromochloroacetic acid	Method Blank		ND*	µg/L			9807-447	1				
Bromochloroacetic acid	Secondary Source Std	20.0	17.7	µg/L	89%		9807-448	1	70-130%			
Bromochloroacetic acid	Standard	20.0	18.8	µg/L	94%		9807-449	1	80-120%			
Bromochloroacetic acid	Standard	20.0	18.9	µg/L	94%		9807-449	1	80-120%			
Bromochloroacetic acid	Standard	20.0	18.9	µg/L	94%		9807-449	1	80-120%			
Bromochloroacetic acid	Standard	40.0	40.8	µg/L	102%		9807-450	1	80-120%			
Bromochloroacetic acid	Standard	40.0	42.6	µg/L	106%		9807-450	1	80-120%			
Bromodichloroacetic acid	Duplicate	2.0	2.2	µg/L		9.5%	9806-685	1				
Bromodichloroacetic acid	Matrix Spike	40.0	44.0	µg/L	110%		9807-402	1				
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9807-447	1				
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9807-448	1	70-130%			
Bromodichloroacetic acid	Standard	20.0	18.2	µg/L	91%		9807-449	1	80-120%			
Bromodichloroacetic acid	Standard	20.0	19.1	µg/L	96%		9807-449	1	80-120%			
Bromodichloroacetic acid	Standard	20.0	18.3	µg/L	92%		9807-449	1	80-120%			
Bromodichloroacetic acid	Standard	40.0	43.2	µg/L	108%		9807-450	1	80-120%			
Bromodichloroacetic acid	Standard	40.0	40.4	µg/L	101%		9807-450	1	80-120%			
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9806-685	2				
Chlorodibromoacetic acid	Matrix Spike	40.0	42.6	µg/L	106%		9807-402	2				
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9807-447	2				
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9807-448	2	70-130%			
Chlorodibromoacetic acid	Standard	20.0	18.4	µg/L	92%		9807-449	2	80-120%			
Chlorodibromoacetic acid	Standard	20.0	19.5	µg/L	97%		9807-449	2	80-120%			

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

Chlorodibromoacetic acid	Standard	20.0	18.8 µg/L	94%	9807-449	2 80-120%
Chlorodibromoacetic acid	Standard	40.0	43.4 µg/L	109%	9807-450	2 80-120%
Chlorodibromoacetic acid	Standard	40.0	40.9 µg/L	102%	9807-450	2 80-120%
Dibromoacetic acid	Duplicate	ND	ND µg/L	NA	9806-685	1
Dibromoacetic acid	Matrix Spike	40.0	40.5 µg/L	101%	9807-402	1
Dibromoacetic acid	Method Blank		ND* µg/L		9807-447	1
Dibromoacetic acid	Secondary Source Std	20.0	18.5 µg/L	93%	9807-448	1 70-130%
Dibromoacetic acid	Standard	20.0	18.3 µg/L	92%	9807-449	1 80-120%
Dibromoacetic acid	Standard	20.0	18.4 µg/L	92%	9807-449	1 80-120%
Dibromoacetic acid	Standard	20.0	18.3 µg/L	92%	9807-449	1 80-120%
Dibromoacetic acid	Standard	40.0	41.0 µg/L	102%	9807-450	1 80-120%
Dibromoacetic acid	Standard	40.0	42.4 µg/L	106%	9807-450	1 80-120%
Dichloroacetic acid	Duplicate	3.8	4.0 µg/L	5.1%	9806-685	1
Dichloroacetic acid	Matrix Spike	40.0	38.8 µg/L	97%	9807-402	1
Dichloroacetic acid	Method Blank		ND* µg/L		9807-447	1
Dichloroacetic acid	Secondary Source Std	20.0	18.2 µg/L	91%	9807-448	1 70-130%
Dichloroacetic acid	Standard	20.0	18.9 µg/L	94%	9807-449	1 80-120%
Dichloroacetic acid	Standard	20.0	19.0 µg/L	95%	9807-449	1 80-120%
Dichloroacetic acid	Standard	20.0	19.3 µg/L	97%	9807-449	1 80-120%
Dichloroacetic acid	Standard	40.0	38.9 µg/L	97%	9807-450	1 80-120%
Dichloroacetic acid	Standard	40.0	42.0 µg/L	105%	9807-450	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND µg/L	NA	9806-685	1
Monobromoacetic acid	Matrix Spike	40.0	40.3 µg/L	101%	9807-402	1
Monobromoacetic acid	Method Blank		ND* µg/L		9807-447	1
Monobromoacetic acid	Secondary Source Std	20.0	18.4 µg/L	92%	9807-448	1 70-130%
Monobromoacetic acid	Standard	20.0	19.4 µg/L	97%	9807-449	1 80-120%
Monobromoacetic acid	Standard	20.0	19.4 µg/L	97%	9807-449	1 80-120%
Monobromoacetic acid	Standard	20.0	19.6 µg/L	98%	9807-449	1 80-120%
Monobromoacetic acid	Standard	40.0	39.8 µg/L	99%	9807-450	1 80-120%
Monobromoacetic acid	Standard	40.0	41.6 µg/L	104%	9807-450	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND µg/L	NA	9806-685	2
Monochloroacetic acid	Matrix Spike	40.0	41.9 µg/L	105%	9807-402	2
Monochloroacetic acid	Method Blank		ND* µg/L		9807-447	2

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 123
Study Title: ICR RSSCT #2

Monochloroacetic acid	Secondary Source Std	20.0	19.9 µg/L	99%	9807-448	2 70-130%
Monochloroacetic acid	Standard	20.0	19.3 µg/L	97%	9807-449	2 80-120%
Monochloroacetic acid	Standard	20.0	19.0 µg/L	95%	9807-449	2 80-120%
Monochloroacetic acid	Standard	20.0	19.4 µg/L	97%	9807-449	2 80-120%
Monochloroacetic acid	Standard	40.0	38.1 µg/L	95%	9807-450	2 80-120%
Monochloroacetic acid	Standard	40.0	40.9 µg/L	102%	9807-450	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND µg/L	NA	9806-685	4
Tribromoacetic acid	Matrix Spike	40.0	41.6 µg/L	104%	9807-402	4
Tribromoacetic acid	Method Blank		ND* µg/L		9807-447	4
Tribromoacetic acid	Secondary Source Std		ND µg/L		9807-448	4 70-130%
Tribromoacetic acid	Standard	20.0	19.1 µg/L	96%	9807-449	4 80-120%
Tribromoacetic acid	Standard	20.0	20.5 µg/L	102%	9807-449	4 80-120%
Tribromoacetic acid	Standard	20.0	20.2 µg/L	101%	9807-449	4 80-120%
Tribromoacetic acid	Standard	40.0	44.0 µg/L	110%	9807-450	4 80-120%
Tribromoacetic acid	Standard	40.0	42.7 µg/L	107%	9807-450	4 80-120%
Trichloroacetic acid	Duplicate	3.2	3.4 µg/L	6.1%	9806-685	1
Trichloroacetic acid	Matrix Spike	40.0	41.5 µg/L	104%	9807-402	1
Trichloroacetic acid	Method Blank		ND* µg/L		9807-447	1
Trichloroacetic acid	Secondary Source Std	20.0	18.1 µg/L	91%	9807-448	1 70-130%
Trichloroacetic acid	Standard	20.0	17.7 µg/L	89%	9807-449	1 80-120%
Trichloroacetic acid	Standard	20.0	17.9 µg/L	89%	9807-449	1 80-120%
Trichloroacetic acid	Standard	20.0	17.7 µg/L	89%	9807-449	1 80-120%
Trichloroacetic acid	Standard	40.0	41.6 µg/L	104%	9807-450	1 80-120%
Trichloroacetic acid	Standard	40.0	42.7 µg/L	107%	9807-450	1 80-120%

End of quality control report

QC Results from Montgomery Watson Laboratories

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Mr. Anthony Clemente
Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, FL 33146

Study#: 123
Study Title: ICR RSSCT #2

Phone: 305-669-7602 Fax: 305-669-5796

QC Batch ID: 80526 **Report #:** 44848
44849

Analysis: NH3 **Method:** ML/EPA 350.1

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Ammonia Nitrogen	1	1.05	105.0%		(80 - 120)
LCS2	Ammonia Nitrogen	1	1.05	105.0%		(80 - 120)
MS	Ammonia Nitrogen	1	0.93	93.0%		(80 - 120)
MSD	Ammonia Nitrogen	1	0.83	83.0%		(80 - 120)

QC Batch ID: 80607 **Report #:** 44848

Analysis: BR **Method:** ML/EPA 300

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Bromide	0.02	0.021	105.0%		(50 - 150)
LCS2	Bromide	0.1	0.104	104.0%		(90 - 110)
MS	Bromide	0.1	0.096	96.0%		(80 - 120)
MSD	Bromide	0.1	0.094	94.0%		(80 - 120)

QC Batch ID: 80695 **Report #:** 44848
44849
44850

Analysis: BR **Method:** ML/EPA 300

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Bromide	0.02	0.02	100.0%		(50 - 150)
LCS2	Bromide	0.1	0.099	99.0%		(90 - 110)
MS	Bromide	0.3	0.305	102.0%		(80 - 120)
MSD	Bromide	0.3	0.305	102.0%		(80 - 120)

QC Batch ID: 81073 **Report #:** 45023

Analysis: MG **Method:** ML/EPA 200.7

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Magnesium, Total, ICAP	20	22.4	112.0%		(85 - 115)
LCS2	Magnesium, Total, ICAP	20	21.4	107.0%		(85 - 115)
MBLK	Magnesium, Total, ICAP	ND	ND			
MS	Magnesium, Total, ICAP	20	21.1	106.0%		(70 - 130)

ND (non-detect): Result is below 1/2 minimum reporting level (MRL).

QC Results from Montgomery Watson LaboratoriesMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2

QC Batch ID: 81184

Report #: 45023

Analysis: NH3

Method: ML/EPA 350.1

QC	Analyte	Spike	Recovery	Yield	RPD	Acceptance Criteria Range
LCS1	Ammonia Nitrogen	1	1.11	111.0%		(80 - 120)
LCS2	Ammonia Nitrogen	1	1.08	108.0%		(80 - 120)
MBLK	Ammonia Nitrogen	ND	ND			
MS	Ammonia Nitrogen	1	1.33	133.0%		(80 - 120)
MSD	Ammonia Nitrogen	1	1.32	132.0%		(80 - 120)

QC Batch ID: 81278

Report #: 45023

Analysis: BR

Method: ML/EPA 300

QC	Analyte	Spike	Recovery	Yield	RPD	Acceptance Criteria Range
LCS1	Bromide	0.02	0.025	125.0%		(50 - 150)
LCS2	Bromide	0.1	0.107	107.0%		(90 - 110)
MBLK	Bromide	ND	ND			(70 - 130)
MS	Bromide	0.1	0.096	96.0%		(80 - 120)
MSD	Bromide	0.1	0.097	97.0%		(80 - 120)

QC Batch ID: 81281

Report #: 45023

Analysis: BR

Method: ML/EPA 300

QC	Analyte	Spike	Recovery	Yield	RPD	Acceptance Criteria Range
LCS1	Bromide	0.02	0.026	130.0%		(50 - 150)
LCS2	Bromide	0.1	0.107	107.0%		(90 - 110)
MBLK	Bromide	ND	ND			(70 - 130)
MS	Bromide	0.1	0.11	110.0%		(80 - 120)
MSD	Bromide	0.1	0.11	110.0%		(80 - 120)

QC Batch ID: 81464

Report #: 44848

44849

44850

Analysis: CA

Method: EPA/ML 200.7

QC	Analyte	Spike	Recovery	Yield	RPD	Acceptance Criteria Range
LCS1	Calcium, Total, ICAP	50	48	96.0%		(90 - 110)
LCS2	Calcium, Total, ICAP	50	48.3	97.0%		(90 - 110)
MS	Calcium, Total, ICAP	50	49.7	99.0%		(80 - 120)

ND (non-detect): Result is below 1/2 minimum reporting level (MRL).

QC Results from Montgomery Watson LaboratoriesMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 123
Study Title: ICR RSSCT #2QC Batch ID: 81465 Report #: 44848
44849
44850

Analysis: MG		Method: ML/EPA 200.7					Acceptance Criteria
QC	Analyte	Spike	Recovery	Yield	RPD		Range
LCS1	Magnesium, Total, ICAP	20	19.7	98.0%			(85 - 115)
LCS2	Magnesium, Total, ICAP	20	20	100.0%			(85 - 115)
MS	Magnesium, Total, ICAP	20	20.7	104.0%			(70 - 130)

QC Batch ID: 81668 Report #: 45023

Analysis: CA		Method: EPA/ML 200.7					Acceptance Criteria
QC	Analyte	Spike	Recovery	Yield	RPD		Range
LCS1	Calcium, Total, ICAP	50	49.3	99.0%			(90 - 110)
LCS2	Calcium, Total, ICAP	50	49.2	98.0%			(90 - 110)
MBLK	Calcium, Total, ICAP	ND	ND				
MS	Calcium, Total, ICAP	50	50	100.0%			(80 - 120)

QC Batch ID: 81673 Report #: 45023

Analysis: MG		Method: ML/EPA 200.7					Acceptance Criteria
QC	Analyte	Spike	Recovery	Yield	RPD		Range
LCS1	Magnesium, Total, ICAP	20	19.8	99.0%			(85 - 115)
LCS2	Magnesium, Total, ICAP	20	19.8	99.0%			(85 - 115)
MBLK	Magnesium, Total, ICAP	ND	ND				
MS	Magnesium, Total, ICAP	20	20	100.0%			(70 - 130)

End of MW QC report

Comments

Mr. Anthony Clemente
Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, FL 33146

Phone: 305-669-7602 Fax: 305-669-5796

Study#: 123
Study Title: ICR RSSCT #2

Study comments

After consultation with the USEPA, it was decided to chlorinate a total of 5 influents from the 3 different pHs.

Analysis comments

Analysis: Turbidity

Method: SM 2130 B

Reported turbidity data has been rounded following the requirements of SM 2130 B, reproduced in the table below (Standard Methods, 1995). Note that the reported digits are not necessarily significant.

Turbidity Range	Report to Nearest
0-1.0	0.05
1-10	0.1
10-40	1
40-100	5
100-400	10
400-1000	50
> 1000	100

QC comments

QCBatch: 0-202-0

Description: MW Labs Report # 45023

QC Comments from MW Labs: "Ammonia-N Other ample was spiked for MS/MSD. The high bias recovery suggests matrix effect for the spiked sample. All other associated QC's were within the internal limits."

End of comments

Laboratory Report

Client:

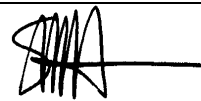
Mr. Anthony Clemente
Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, FL 33146

Phone: 305-669-7602 Fax: 305-669-5796

Study Title: ICR RSSCT #3

Study #: 128

Reviewed By: _____



Stuart M. Hooper

Date Reviewed: 7/13/99

Laboratory Test Results

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Printed on 6/23/99

Mr. Anthony Clemente
Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, FL 33146

Phone: 305-669-7602 Fax: 305-669-5796

Study#: 128**Study Title:** ICR RSSCT #3**Sample ID:** 128.SettledOnArrival.Miami **S&H ID:** 9807-581 **Date Sampled:** 7/29/98

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1	TOC-ICR TOC	5.30	mg/L	SM 5310 C	1	0.50	7/29/98		8/7/98	7-0-362
2	TOC-ICR TOC (Dupl)	5.39	mg/L	SM 5310 C	1	0.50	7/29/98		8/7/98	7-0-362
		5.34	mg/L	1.7 % RPD						

Sample ID: 128.Filtered.Miami **S&H ID:** 9807-582 **Date Sampled:** 7/29/98

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
3	TOC-ICR TOC	4.69	mg/L	SM 5310 C	1	0.50	7/29/98		8/7/98	7-0-362
4	TOC-ICR TOC (Dupl)	4.83	mg/L	SM 5310 C	1	0.50	7/29/98		8/7/98	7-0-362
		4.76	mg/L	2.9 % RPD						

Sample ID: 128.5.Eff-1 **S&H ID:** 9808-21 **Date Sampled:** 8/5/98 2:32:00 PM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
5	Cl2Dose Chlorine Dose	1.70	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/7/98		8/7/98	n/a
6	Cl2Res Chlorine Residual	0.42	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/7/98		8/7/98	n/a
7	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	100.4	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
8	HAA-ICR 2-Bromopropionic acid (Surrogate)	98.8	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
9	HAA-ICR Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
10	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
11	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/13/98	0-194-0
12	HAA-ICR Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
13	HAA-ICR Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
14	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
15	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/13/98	0-194-0
16	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/7/98	8/13/98	8/13/98	0-194-0
17	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
18	pH Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
19	pH Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
20	pH pH	9.1	Unit	SM 4500-H+ B	1	n/a	8/5/98		8/5/98	n/a
21	TEMP Cl2 Temperature	25.1	°C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
22	TEMP Temperature	22.6	°C	SM 2550 B	1	n/a	8/5/98		8/5/98	n/a
23	TIME Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	8/7/98		8/7/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

24	TOC-ICR TOC	ND mg/L	SM 5310 C	1	0.50	8/5/98	8/6/98	7-0-362
25	TOC-ICR TOC (Dupl)	ND mg/L	SM 5310 C	1	0.50	8/5/98	8/6/98	7-0-362
		ND mg/L						
26	TOX-ICR TOX	ND µg Cl-/L	SM 5320 B	1	25	8/7/98	8/10/98	12-0-186
27	TOX-ICR TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	8/7/98	8/10/98	12-0-186
		ND µg Cl-/L						
28	THM-ICR 1,2,3-Trichloropropane (Surrogate)	102.8 %	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
29	THM-ICR Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
30	THM-ICR Bromoform	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
31	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
32	THM-ICR Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
33	UV-ICR UV	ND 1/cm	SM 5910 B	1	0.009	8/5/98	8/6/98	8-0-252
34	UV-ICR UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	8/5/98	8/6/98	8-0-252
		ND 1/cm						

Sample ID: 128.5.Eff-2

S&H ID: 9808-22

Date Sampled: 8/5/98 4:26:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
35	Cl2Dose Chlorine Dose	1.72 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/7/98		8/7/98	n/a
36	Cl2Res Chlorine Residual	0.61 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/7/98		8/7/98	n/a
37	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	98.0 %	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
38	HAA-ICR 2-Bromopropionic acid (Surrogate)	100.8 %	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
39	HAA-ICR Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
40	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
41	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/13/98	0-194-0
42	HAA-ICR Dibromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
43	HAA-ICR Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
44	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
45	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/13/98	0-194-0
46	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/7/98	8/13/98	8/13/98	0-194-0
47	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
48	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
49	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
50	pH pH	8.8 Unit	SM 4500-H+ B	1	n/a	8/5/98		8/5/98	n/a
51	TEMP Cl2 Temperature	25.1 °C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
52	TEMP Temperature	22.9 °C	SM 2550 B	1	n/a	8/5/98		8/5/98	n/a
53	TIME Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	8/7/98		8/7/98	n/a
54	TOC-ICR TOC	ND mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362
55	TOC-ICR TOC (Dupl)	ND mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

		ND mg/L						
56	TOX-ICR TOX	ND µg Cl-/L	SM 5320 B	1	25	8/7/98	8/10/98	12-0-186
57	TOX-ICR TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	8/7/98	8/10/98	12-0-186
		ND µg Cl-/L						
58	THM-ICR 1,2,3-Trichloropropane (Surrogate)	105.2 %	EPA 551.1	1	1.0	8/7/98	8/11/98	0-193-0
59	THM-ICR Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	0-193-0
60	THM-ICR Bromoform	1.9 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	0-193-0
61	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	0-193-0
62	THM-ICR Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	0-193-0
63	UV-ICR UV	ND 1/cm	SM 5910 B	1	0.009	8/5/98	8/6/98	8-0-252
64	UV-ICR UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	8/5/98	8/6/98	8-0-252
		ND 1/cm						

Sample ID: 128.5.Eff-3

S&H ID: 9808-23

Date Sampled: 8/5/98 6:20:00 PM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
65	Cl2Dose Chlorine Dose	1.77	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/7/98		8/7/98	n/a
66	Cl2Res Chlorine Residual	0.63	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/7/98		8/7/98	n/a
67	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	103.6	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
68	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard) (Lab Dupl)	107.2	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
		105.4	%	3.4 % RPD						
69	HAA-ICR 2-Bromopropionic acid (Surrogate)	94.8	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
70	HAA-ICR 2-Bromopropionic acid (Surrogate) (Lab Dupl)	96.0	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
		95.4	%	1.3 % RPD						
71	HAA-ICR Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
72	HAA-ICR Bromochloroacetic acid (Lab Dupl)	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
		ND	µg/L							
73	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
74	HAA-ICR Bromodichloroacetic acid (Lab Dupl)	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
		ND	µg/L							
75	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/13/98	0-194-0
76	HAA-ICR Chlorodibromoacetic acid (Lab Dupl)	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98	0-194-0
		ND	µg/L							
77	HAA-ICR Dibromoacetic acid	1.1	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
78	HAA-ICR Dibromoacetic acid (Lab Dupl)	1.0	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
		1.1	µg/L	9.1 % RPD						
79	HAA-ICR Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

80	HAA-ICR	Dichloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
			ND µg/L							
81	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
82	HAA-ICR	Monobromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
			ND µg/L							
83	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/13/98	0-194-0
84	HAA-ICR	Monochloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98	0-194-0
			ND µg/L							
85	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/7/98	8/13/98	8/13/98	0-194-0
86	HAA-ICR	Tribromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	4.0	8/7/98	8/13/98	8/14/98	0-194-0
			ND µg/L							
87	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/13/98	0-194-0
88	HAA-ICR	Trichloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
			ND µg/L							
89	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
90	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
91	pH	pH	9.0 Unit	SM 4500-H+ B	1	n/a	8/5/98		8/5/98	n/a
92	TEMP	Cl2 Temperature	25.1 °C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
93	TEMP	Temperature	23.0 °C	SM 2550 B	1	n/a	8/5/98		8/5/98	n/a
94	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	8/7/98		8/7/98	n/a
95	TOC-ICR	TOC	ND mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362
96	TOC-ICR	TOC (Dupl)	ND mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362
			ND mg/L							
97	TOX-ICR	TOX	ND µg Cl-/L	SM 5320 B	1	25	8/7/98		8/10/98	12-0-186
98	TOX-ICR	TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	8/7/98		8/10/98	12-0-186
			ND µg Cl-/L							
99	THM-ICR	1,2,3-Trichloropropane (Surrogate)	92.4 %	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
100	THM-ICR	Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
101	THM-ICR	Bromoform	4.4 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
102	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
103	THM-ICR	Dibromochloromethane	2.0 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
104	UV-ICR	UV	ND 1/cm	SM 5910 B	1	0.009	8/5/98		8/6/98	8-0-252
105	UV-ICR	UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	8/5/98		8/6/98	8-0-252
			ND 1/cm							

Sample ID: 128.5.Eff-4

S&H ID: 9808-24

Date Sampled: 8/5/98 10:19:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
106	Cl2Dose Chlorine Dose	2.01 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/7/98		8/7/98	n/a

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

107	Cl2Res	Chlorine Residual	0.62 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/7/98	8/7/98	n/a
108	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	108.4 %	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
109	HAA-ICR	2-Bromopropionic acid (Surrogate)	94.8 %	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
110	HAA-ICR	Bromochloroacetic acid	1.3 µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
111	HAA-ICR	Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
112	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98 0-194-0
113	HAA-ICR	Dibromoacetic acid	2.8 µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
114	HAA-ICR	Dichloroacetic acid	1.6 µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
115	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
116	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98 0-194-0
117	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/7/98	8/13/98	8/14/98 0-194-0
118	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
119	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/7/98	8/7/98	n/a
120	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/7/98	8/7/98	n/a
121	pH	pH	9.2 Unit	SM 4500-H+ B	1	n/a	8/5/98	8/5/98	n/a
122	TEMP	Cl2 Temperature	25.1 °C	SM 2550 B	1	n/a	8/7/98	8/7/98	n/a
123	TEMP	Temperature	22.8 °C	SM 2550 B	1	n/a	8/5/98	8/5/98	n/a
124	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	8/7/98	8/7/98	n/a
125	TOC-ICR	TOC	1.33 mg/L	SM 5310 C	1	0.50	8/5/98	8/6/98	7-0-362
126	TOC-ICR	TOC (Dupl)	1.37 mg/L	SM 5310 C	1	0.50	8/5/98	8/7/98	7-0-362
			1.35 mg/L	3.0 % RPD					
127	TOX-ICR	TOX	31 µg Cl-/L	SM 5320 B	1	25	8/7/98	8/10/98	12-0-186
128	TOX-ICR	TOX (Dupl)	31 µg Cl-/L	SM 5320 B	1	25	8/7/98	8/10/98	12-0-186
			31 µg Cl-/L	0.0 % RPD					
129	THM-ICR	1,2,3-Trichloropropane (Surrogate)	90.0 %	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
130	THM-ICR	1,2,3-Trichloropropane (Surrogate) (Lab Dupl)	100.4 %	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
			95.2 %	10.9 % RPD					
131	THM-ICR	Bromodichloromethane	2.9 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
132	THM-ICR	Bromodichloromethane (Lab Dupl)	3.0 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
			3.0 µg/L	3.3 % RPD					
133	THM-ICR	Bromoform	9.6 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
134	THM-ICR	Bromoform (Lab Dupl)	10.0 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
			9.8 µg/L	4.1 % RPD					
135	THM-ICR	Chloroform	1.1 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
136	THM-ICR	Chloroform (Lab Dupl)	1.1 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
			1.1 µg/L	0.0 % RPD					
137	THM-ICR	Dibromochloromethane	7.3 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
138	THM-ICR	Dibromochloromethane (Lab Dupl)	7.4 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

			7.3 µg/L		1.4 % RPD					
139	UV-ICR	UV	0.013	1/cm	SM 5910 B	1	0.009	8/5/98	8/6/98	8-0-252
140	UV-ICR	UV (Dupl)	0.013	1/cm	SM 5910 B	1	0.009	8/5/98	8/6/98	8-0-252
			0.013	1/cm	0.0 % RPD					
<hr/>										
Sample ID: 128.5.Eff-5			S&H ID: 9808-25		Date Sampled: 8/6/98 12:15:00 AM					
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal. QC Batch
141	Cl2Dose	Chlorine Dose	2.16	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/7/98		8/7/98 n/a
142	Cl2Res	Chlorine Residual	0.59	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/7/98		8/7/98 n/a
143	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	102.4	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
144	HAA-ICR	2-Bromopropionic acid (Surrogate)	91.6	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
145	HAA-ICR	Bromochloroacetic acid	2.2	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
146	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
147	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98 0-194-0
148	HAA-ICR	Dibromoacetic acid	4.1	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
149	HAA-ICR	Dichloroacetic acid	4.2	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
150	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
151	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98 0-194-0
152	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/7/98	8/13/98	8/14/98 0-194-0
153	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
154	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98 n/a
155	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98 n/a
156	pH	pH	9.0	Unit	SM 4500-H+ B	1	n/a	8/6/98		8/6/98 n/a
157	TEMP	Cl2 Temperature	25.1	°C	SM 2550 B	1	n/a	8/7/98		8/7/98 n/a
158	TEMP	Temperature	22.3	°C	SM 2550 B	1	n/a	8/6/98		8/6/98 n/a
159	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	8/7/98		8/7/98 n/a
160	TOC-ICR	TOC	1.92	mg/L	SM 5310 C	1	0.50	8/6/98		8/7/98 7-0-362
161	TOC-ICR	TOC (Dupl)	1.95	mg/L	SM 5310 C	1	0.50	8/6/98		8/7/98 7-0-362
			1.94	mg/L	1.5 % RPD					
162	TOX-ICR	TOX	52	µg Cl-/L	SM 5320 B	1	25	8/7/98		8/10/98 12-0-186
163	TOX-ICR	TOX (Dupl)	53	µg Cl-/L	SM 5320 B	1	25	8/7/98		8/10/98 12-0-186
			53	µg Cl-/L	1.9 % RPD					
164	THM-ICR	1,2,3-Trichloropropane (Surrogate)	96.4	%	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
165	THM-ICR	Bromodichloromethane	5.9	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
166	THM-ICR	Bromoform	11.3	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
167	THM-ICR	Chloroform	2.3	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
168	THM-ICR	Dibromochloromethane	12.2	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
169	UV-ICR	UV	0.023	1/cm	SM 5910 B	1	0.009	8/6/98		8/6/98 8-0-252

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 128
Study Title: ICR RSSCT #3

170	UV-ICR	UV (Dupl)	0.023	1/cm	SM 5910 B	1	0.009	8/6/98	8/6/98	8-0-252
			0.023	1/cm	0.0 % RPD					
Sample ID: 128.5.Eff-6			S&H ID: 9808-26		Date Sampled: 8/6/98 2:07:00 AM					
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal. QC Batch
171	Cl2Dose	Chlorine Dose	2.22	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/7/98		8/7/98 n/a
172	Cl2Res	Chlorine Residual	0.53	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/7/98		8/7/98 n/a
173	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	102.8	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
174	HAA-ICR	2-Bromopropionic acid (Surrogate)	91.6	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
175	HAA-ICR	Bromochloroacetic acid	2.9	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
176	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
177	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98 0-194-0
178	HAA-ICR	Dibromoacetic acid	4.8	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
179	HAA-ICR	Dichloroacetic acid	5.4	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
180	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
181	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98 0-194-0
182	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/7/98	8/13/98	8/14/98 0-194-0
183	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98 0-194-0
184	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98 n/a
185	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98 n/a
186	pH	pH	9.1	Unit	SM 4500-H+ B	1	n/a	8/6/98		8/6/98 n/a
187	TEMP	Cl2 Temperature	25.1	°C	SM 2550 B	1	n/a	8/7/98		8/7/98 n/a
188	TEMP	Temperature	21.9	°C	SM 2550 B	1	n/a	8/6/98		8/6/98 n/a
189	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	8/7/98		8/7/98 n/a
190	TOC-ICR	TOC	2.20	mg/L	SM 5310 C	1	0.50	8/6/98		8/7/98 7-0-362
191	TOC-ICR	TOC (Dupl)	2.21	mg/L	SM 5310 C	1	0.50	8/6/98		8/7/98 7-0-362
			2.21	mg/L	0.5 % RPD					
192	TOX-ICR	TOX	62	µg Cl-/L	SM 5320 B	1	25	8/7/98		8/10/98 12-0-186
193	TOX-ICR	TOX (Dupl)	65	µg Cl-/L	SM 5320 B	1	25	8/7/98		8/10/98 12-0-186
			64	µg Cl-/L	4.7 % RPD					
194	THM-ICR	1,2,3-Trichloropropane (Surrogate)	95.6	%	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
195	THM-ICR	Bromodichloromethane	7.7	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
196	THM-ICR	Bromoform	11.1	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
197	THM-ICR	Chloroform	3.1	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
198	THM-ICR	Dibromochloromethane	14.2	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98 0-193-0
199	UV-ICR	UV	0.027	1/cm	SM 5910 B	1	0.009	8/6/98		8/6/98 8-0-252
200	UV-ICR	UV (Dupl)	0.027	1/cm	SM 5910 B	1	0.009	8/6/98		8/6/98 8-0-252
			0.027	1/cm	0.0 % RPD					

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.5.Eff-7

S&H ID: 9808-27

Date Sampled: 8/6/98 4:44:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
201	Cl2Dose	Chlorine Dose	2.27	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/7/98		8/7/98	n/a
202	Cl2Res	Chlorine Residual	0.50	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/7/98		8/7/98	n/a
203	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	103.2	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
204	HAA-ICR	2-Bromopropionic acid (Surrogate)	85.6	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
205	HAA-ICR	Bromochloroacetic acid	3.1	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
206	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
207	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98	0-194-0
208	HAA-ICR	Dibromoacetic acid	4.2	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
209	HAA-ICR	Dichloroacetic acid	5.7	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
210	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
211	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98	0-194-0
212	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/7/98	8/13/98	8/14/98	0-194-0
213	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
214	pH	Cl2 pH - Final	9.2	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
215	pH	Cl2 pH - Initial	9.2	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
216	pH	pH	9.2	Unit	SM 4500-H+ B	1	n/a	8/6/98		8/6/98	n/a
217	TEMP	Cl2 Temperature	25.1	°C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
218	TEMP	Temperature	21.6	°C	SM 2550 B	1	n/a	8/6/98		8/6/98	n/a
219	TIME	Cl2 Incubation Time	5.9	hrs	n/a	1	n/a	8/7/98		8/7/98	n/a
220	TOC-ICR	TOC	2.43	mg/L	SM 5310 C	1	0.50	8/6/98		8/6/98	7-0-362
221	TOC-ICR	TOC (Dupl)	2.40	mg/L	SM 5310 C	1	0.50	8/6/98		8/6/98	7-0-362
			2.42	mg/L	1.2 % RPD						
222	TOX-ICR	TOX	80	µg Cl-/L	SM 5320 B	1	25	8/7/98		8/11/98	12-0-187
223	TOX-ICR	TOX (Dupl)	76	µg Cl-/L	SM 5320 B	1	25	8/7/98		8/11/98	12-0-187
			78	µg Cl-/L	5.1 % RPD						
224	THM-ICR	1,2,3-Trichloropropane (Surrogate)	103.6	%	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
225	THM-ICR	Bromodichloromethane	9.9	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
226	THM-ICR	Bromoform	10.0	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
227	THM-ICR	Chloroform	4.3	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
228	THM-ICR	Dibromochloromethane	16.1	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
229	UV-ICR	UV	0.033	1/cm	SM 5910 B	1	0.009	8/6/98		8/6/98	8-0-252
230	UV-ICR	UV (Dupl)	0.033	1/cm	SM 5910 B	1	0.009	8/6/98		8/6/98	8-0-252
			0.033	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.5.Eff-8			S&H ID: 9808-28		Date Sampled: 8/6/98 8:54:00 AM				
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
231	Cl2Dose Chlorine Dose	2.51 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
232	Cl2Res Chlorine Residual	0.59 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
233	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	102.0 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
234	HAA-ICR 2-Bromopropionic acid (Surrogate)	94.4 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
235	HAA-ICR Bromochloroacetic acid	3.6 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
236	HAA-ICR Bromodichloroacetic acid	1.1 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
237	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/18/98	0-196-0
238	HAA-ICR Dibromoacetic acid	4.5 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
239	HAA-ICR Dichloroacetic acid	6.4 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
240	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
241	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/18/98	0-196-0
242	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/18/98	0-196-0
243	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
244	pH Cl2 pH - Final	9.2 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
245	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
246	pH pH	9.1 Unit	SM 4500-H+ B	1	n/a	8/6/98		8/6/98	n/a
247	TEMP Cl2 Temperature	25.3 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
248	TEMP Temperature	21.8 °C	SM 2550 B	1	n/a	8/6/98		8/6/98	n/a
249	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
250	TOC-ICR TOC	2.52 mg/L	SM 5310 C	1	0.50	8/6/98		8/8/98	7-0-366
251	TOC-ICR TOC (Dupl)	2.54 mg/L	SM 5310 C	1	0.50	8/6/98		8/8/98	7-0-366
		2.53 mg/L	0.8 % RPD						
252	TOX-ICR TOX	89 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
253	TOX-ICR TOX (Dupl)	95 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
		92 µg Cl-/L	6.5 % RPD						
254	THM-ICR 1,2,3-Trichloropropane (Surrogate)	102.4 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
255	THM-ICR Bromodichloromethane	13.2 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
256	THM-ICR Bromoform	10.0 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
257	THM-ICR Chloroform	6.1 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
258	THM-ICR Dibromochloromethane	18.7 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
259	UV-ICR UV	0.038 1/cm	SM 5910 B	1	0.009	8/6/98		8/6/98	8-0-252
260	UV-ICR UV (Dupl)	0.039 1/cm	SM 5910 B	1	0.009	8/6/98		8/6/98	8-0-252
		0.039 1/cm	2.6 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.5.Eff-9			S&H ID: 9808-29		Date Sampled: 8/6/98 1:09:00 PM				
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
261	Cl2Dose Chlorine Dose	2.56 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
262	Cl2Res Chlorine Residual	0.58 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
263	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	105.6 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
264	HAA-ICR 2-Bromopropionic acid (Surrogate)	89.2 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
265	HAA-ICR Bromochloroacetic acid	4.0 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
266	HAA-ICR Bromodichloroacetic acid	1.2 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
267	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/18/98	0-196-0
268	HAA-ICR Dibromoacetic acid	4.5 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
269	HAA-ICR Dichloroacetic acid	6.4 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
270	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
271	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/18/98	0-196-0
272	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/18/98	0-196-0
273	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
274	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
275	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
276	pH pH	8.9 Unit	SM 4500-H+ B	1	n/a	8/6/98		8/6/98	n/a
277	TEMP Cl2 Temperature	25.3 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
278	TEMP Temperature	22.2 °C	SM 2550 B	1	n/a	8/6/98		8/6/98	n/a
279	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
280	TOC-ICR TOC	2.74 mg/L	SM 5310 C	1	0.50	8/6/98		8/8/98	7-0-366
281	TOC-ICR TOC (Dupl)	2.73 mg/L	SM 5310 C	1	0.50	8/6/98		8/9/98	7-0-366
		2.74 mg/L	0.4 % RPD						
282	TOX-ICR TOX	102 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
283	TOX-ICR TOX (Dupl)	103 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
		103 µg Cl-/L	1.0 % RPD						
284	THM-ICR 1,2,3-Trichloropropane (Surrogate)	99.2 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
285	THM-ICR Bromodichloromethane	15.1 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
286	THM-ICR Bromoform	8.7 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
287	THM-ICR Chloroform	7.7 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
288	THM-ICR Dibromochloromethane	19.6 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
289	UV-ICR UV	0.044 1/cm	SM 5910 B	1	0.009	8/6/98		8/6/98	8-0-252
290	UV-ICR UV (Dupl)	0.045 1/cm	SM 5910 B	1	0.009	8/6/98		8/6/98	8-0-252
		0.044 1/cm	2.3 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.5.Eff-13			S&H ID: 9808-33		Date Sampled: 8/7/98 6:14:00 AM				
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
291	Cl2Dose Chlorine Dose	2.78 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/10/98		8/10/98	n/a
292	Cl2Res Chlorine Residual	0.60 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/10/98		8/10/98	n/a
293	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	95.6 %	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
294	HAA-ICR 2-Bromopropionic acid (Surrogate)	99.2 %	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
295	HAA-ICR Bromochloroacetic acid	5.5 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
296	HAA-ICR Bromodichloroacetic acid	2.0 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
297	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
298	HAA-ICR Dibromoacetic acid	5.1 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
299	HAA-ICR Dichloroacetic acid	8.3 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
300	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
301	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
302	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/10/98	8/18/98	8/19/98	0-196-0
303	HAA-ICR Trichloroacetic acid	1.5 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
304	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
305	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
306	pH pH	8.7 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
307	TEMP Cl2 Temperature	25.3 °C	SM 2550 B	1	n/a	8/10/98		8/10/98	n/a
308	TEMP Temperature	21.8 °C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
309	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	8/10/98		8/10/98	n/a
310	TOC-ICR TOC	3.13 mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-366
311	TOC-ICR TOC (Dupl)	3.14 mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-366
		3.13 mg/L	0.3 % RPD						
312	TOX-ICR TOX	123 µg Cl-/L	SM 5320 B	1	25	8/10/98		8/17/98	12-0-191
313	TOX-ICR TOX (Dupl)	129 µg Cl-/L	SM 5320 B	1	25	8/10/98		8/17/98	12-0-191
		126 µg Cl-/L	4.8 % RPD						
314	THM-ICR 1,2,3-Trichloropropane (Surrogate)	86.8 %	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
315	THM-ICR Bromodichloromethane	19.7 µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
316	THM-ICR Bromoform	7.2 µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
317	THM-ICR Chloroform	12.3 µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
318	THM-ICR Dibromochloromethane	22.2 µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
319	UV-ICR UV	0.056 1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-259
320	UV-ICR UV (Dupl)	0.056 1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-259
		0.056 1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.5.Eff-16			S&H ID: 9808-36		Date Sampled: 8/7/98 6:39:00 PM				
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
321	Cl2Dose Chlorine Dose	2.87 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/10/98		8/10/98	n/a
322	Cl2Res Chlorine Residual	0.66 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/10/98		8/10/98	n/a
323	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	96.4 %	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
324	HAA-ICR 2-Bromopropionic acid (Surrogate)	101.2 %	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
325	HAA-ICR Bromochloroacetic acid	6.4 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
326	HAA-ICR Bromodichloroacetic acid	2.4 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
327	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
328	HAA-ICR Dibromoacetic acid	5.5 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
329	HAA-ICR Dichloroacetic acid	9.4 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
330	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
331	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
332	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/10/98	8/18/98	8/19/98	0-196-0
333	HAA-ICR Trichloroacetic acid	2.0 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
334	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
335	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
336	pH pH	8.4 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
337	TEMP Cl2 Temperature	25.3 °C	SM 2550 B	1	n/a	8/10/98		8/10/98	n/a
338	TEMP Temperature	23.2 °C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
339	TIME Cl2 Incubation Time	6.2 hrs	n/a	1	n/a	8/10/98		8/10/98	n/a
340	TOC-ICR TOC	3.44 mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
341	TOC-ICR TOC (Dupl)	3.44 mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
		3.44 mg/L	0.0 % RPD						
342	TOX-ICR TOX	131 µg Cl-/L	SM 5320 B	1	25	8/10/98		8/17/98	12-0-191
343	TOX-ICR TOX (Dupl)	138 µg Cl-/L	SM 5320 B	1	25	8/10/98		8/17/98	12-0-191
		135 µg Cl-/L	5.2 % RPD						
344	THM-ICR 1,2,3-Trichloropropane (Surrogate)	92.4 %	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
345	THM-ICR Bromodichloromethane	21.1 µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
346	THM-ICR Bromoform	6.2 µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
347	THM-ICR Chloroform	15.0 µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
348	THM-ICR Dibromochloromethane	21.6 µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
349	UV-ICR UV	0.063 1/cm	SM 5910 B	1	0.009	8/7/98		8/8/98	8-0-253
350	UV-ICR UV (Dupl)	0.063 1/cm	SM 5910 B	1	0.009	8/7/98		8/8/98	8-0-253
		0.063 1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.5.Eff-18		S&H ID: 9808-38		Date Sampled: 8/9/98 12:26:00 PM						
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
351	Cl2Dose Chlorine Dose	3.06	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/11/98		8/11/98	n/a
352	Cl2Res Chlorine Residual	0.60	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/11/98		8/11/98	n/a
353	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	98.8	%	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
354	HAA-ICR 2-Bromopropionic acid (Surrogate)	98.8	%	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
355	HAA-ICR Bromochloroacetic acid	7.3	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
356	HAA-ICR Bromodichloroacetic acid	2.0	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
357	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/24/98	0-198-0
358	HAA-ICR Dibromoacetic acid	5.3	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
359	HAA-ICR Dichloroacetic acid	10.7	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
360	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
361	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/24/98	0-198-0
362	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/11/98	8/24/98	8/24/98	0-198-0
363	HAA-ICR Trichloroacetic acid	2.4	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
364	pH Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
365	pH Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
366	pH pH	8.5	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
367	TEMP Cl2 Temperature	25.4	°C	SM 2550 B	1	n/a	8/11/98		8/11/98	n/a
368	TEMP Temperature	22.4	°C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
369	TIME Cl2 Incubation Time	5.8	hrs	n/a	1	n/a	8/11/98		8/11/98	n/a
370	TOC-ICR TOC	3.87	mg/L	SM 5310 C	1	0.50	8/9/98		8/9/98	7-0-368
371	TOC-ICR TOC (Dupl)	3.94	mg/L	SM 5310 C	1	0.50	8/9/98		8/9/98	7-0-368
		3.91	mg/L	1.8 % RPD						
372	TOX-ICR TOX	155	µg Cl-/L	SM 5320 B	1	25	8/11/98		8/18/98	12-0-192
373	TOX-ICR TOX (Dupl)	156	µg Cl-/L	SM 5320 B	1	25	8/11/98		8/18/98	12-0-192
		156	µg Cl-/L	0.6 % RPD						
374	THM-ICR 1,2,3-Trichloropropane (Surrogate)	88.8	%	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
375	THM-ICR 1,2,3-Trichloropropane (Surrogate) (Lab Dupl)	87.6	%	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
		88.2	%	1.4 % RPD						
376	THM-ICR Bromodichloromethane	24.4	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
377	THM-ICR Bromodichloromethane (Lab Dupl)	22.7	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
		23.5	µg/L	7.2 % RPD						
378	THM-ICR Bromoform	5.3	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
379	THM-ICR Bromoform (Lab Dupl)	4.8	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
		5.0	µg/L	10.0 % RPD						
380	THM-ICR Chloroform	21.6	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
381	THM-ICR Chloroform (Lab Dupl)	20.2	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

		20.9 µg/L	6.7 % RPD						
382	THM-ICR Dibromochloromethane	20.7 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
383	THM-ICR Dibromochloromethane (Lab Dupl)	19.4 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
		20.0 µg/L	6.5 % RPD						
384	UV-ICR UV	0.073 1/cm	SM 5910 B	1	0.009	8/9/98		8/10/98	8-0-257
385	UV-ICR UV (Dupl)	0.073 1/cm	SM 5910 B	1	0.009	8/9/98		8/10/98	8-0-257
		0.073 1/cm	0.0 % RPD						

Sample ID: 128.5.Eff-4d		S&H ID: 9808-51	Date Sampled: 8/5/98 10:19:00 PM						
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
386	Cl2Dose Chlorine Dose	2.01 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/7/98		8/7/98	n/a
387	Cl2Res Chlorine Residual	0.58 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/7/98		8/7/98	n/a
388	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	99.2 %	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
389	HAA-ICR 2-Bromopropionic acid (Surrogate)	92.8 %	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
390	HAA-ICR Bromochloroacetic acid	1.2 µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
391	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
392	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98	0-194-0
393	HAA-ICR Dibromoacetic acid	2.7 µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
394	HAA-ICR Dichloroacetic acid	1.9 µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
395	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
396	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98	0-194-0
397	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/7/98	8/13/98	8/14/98	0-194-0
398	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
399	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
400	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
401	pH pH	9.0 Unit	SM 4500-H+ B	1	n/a	8/5/98		8/5/98	n/a
402	TEMP Cl2 Temperature	25.1 °C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
403	TEMP Temperature	22.8 °C	SM 2550 B	1	n/a	8/5/98		8/5/98	n/a
404	TIME Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	8/7/98		8/7/98	n/a
405	TOC-ICR TOC	1.38 mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362
406	TOC-ICR TOC (Dupl)	1.35 mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362
		1.37 mg/L	2.2 % RPD						
407	TOX-ICR TOX	30 µg Cl-/L	SM 5320 B	1	25	8/7/98		8/10/98	12-0-186
408	TOX-ICR TOX (Dupl)	31 µg Cl-/L	SM 5320 B	1	25	8/7/98		8/10/98	12-0-186
		31 µg Cl-/L	3.2 % RPD						
409	THM-ICR 1,2,3-Trichloropropane (Surrogate)	92.8 %	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
410	THM-ICR Bromodichloromethane	3.1 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
411	THM-ICR Bromoform	10.7 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

412	THM-ICR Chloroform	1.1 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
413	THM-ICR Dibromochloromethane	7.6 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
414	UV-ICR UV	0.014 1/cm	SM 5910 B	1	0.009	8/5/98		8/6/98	8-0-258
415	UV-ICR UV (Dupl)	0.014 1/cm	SM 5910 B	1	0.009	8/5/98		8/6/98	8-0-258
		0.014 1/cm	0.0 % RPD						

Sample ID: 128.5.Eff-8d

S&H ID: 9808-52

Date Sampled: 8/6/98 8:54:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
416	Cl2Dose Chlorine Dose	2.56 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
417	Cl2Res Chlorine Residual	0.61 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
418	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	108.8 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
419	HAA-ICR 2-Bromopropionic acid (Surrogate)	97.6 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
420	HAA-ICR Bromochloroacetic acid	4.7 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
421	HAA-ICR Bromodichloroacetic acid	1.4 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
422	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/18/98	0-196-0
423	HAA-ICR Dibromoacetic acid	6.4 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
424	HAA-ICR Dichloroacetic acid	7.2 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
425	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
426	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/18/98	0-196-0
427	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/18/98	0-196-0
428	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
429	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
430	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
431	pH pH	9.1 Unit	SM 4500-H+ B	1	n/a	8/6/98		8/6/98	n/a
432	TEMP Cl2 Temperature	25.3 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
433	TEMP Temperature	21.9 °C	SM 2550 B	1	n/a	8/6/98		8/6/98	n/a
434	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
435	TOC-ICR TOC	2.53 mg/L	SM 5310 C	1	0.50	8/6/98		8/8/98	7-0-366
436	TOC-ICR TOC (Dupl)	2.52 mg/L	SM 5310 C	1	0.50	8/6/98		8/8/98	7-0-366
		2.52 mg/L	0.4 % RPD						
437	TOX-ICR TOX	90 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
438	TOX-ICR TOX (Dupl)	91 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
		91 µg Cl-/L	1.1 % RPD						
439	THM-ICR 1,2,3-Trichloropropane (Surrogate)	102.0 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
440	THM-ICR Bromodichloromethane	13.2 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
441	THM-ICR Bromoform	10.2 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
442	THM-ICR Chloroform	6.1 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
443	THM-ICR Dibromochloromethane	18.9 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.5.Eff-13d

S&H ID: 9808-55

Date Sampled: 8/7/98 6:14:00 AM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
444	Cl2Dose Chlorine Dose	2.78	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/10/98		8/10/98	n/a
445	Cl2Res Chlorine Residual	0.62	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/10/98		8/10/98	n/a
446	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	97.2	%	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
447	HAA-ICR 2-Bromopropionic acid (Surrogate)	98.4	%	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
448	HAA-ICR Bromochloroacetic acid	5.5	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
449	HAA-ICR Bromodichloroacetic acid	2.0	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
450	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
451	HAA-ICR Dibromoacetic acid	5.1	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
452	HAA-ICR Dichloroacetic acid	8.3	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
453	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
454	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
455	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/10/98	8/18/98	8/19/98	0-196-0
456	HAA-ICR Trichloroacetic acid	1.6	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
457	pH Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
458	pH Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
459	pH pH	8.7	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
460	TEMP Cl2 Temperature	25.3	°C	SM 2550 B	1	n/a	8/10/98		8/10/98	n/a
461	TEMP Temperature	21.8	°C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
462	TIME Cl2 Incubation Time	6.2	hrs	n/a	1	n/a	8/10/98		8/10/98	n/a
463	TOC-ICR TOC	3.18	mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
464	TOC-ICR TOC (Dupl)	3.14	mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
		3.16	mg/L	1.3 % RPD						
465	TOX-ICR TOX	138	µg Cl-/L	SM 5320 B	1	25	8/10/98		8/17/98	12-0-191
466	TOX-ICR TOX (Dupl)	140	µg Cl-/L	SM 5320 B	1	25	8/10/98		8/17/98	12-0-191
		139	µg Cl-/L	1.4 % RPD						
467	THM-ICR 1,2,3-Trichloropropane (Surrogate)	95.2	%	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
468	THM-ICR Bromodichloromethane	20.0	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
469	THM-ICR Bromoform	7.4	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
470	THM-ICR Chloroform	12.5	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
471	THM-ICR Dibromochloromethane	22.4	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
472	UV-ICR UV	0.056	1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-259
473	UV-ICR UV (Dupl)	0.056	1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-259
		0.056	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.12.5.Eff-1		S&H ID: 9808-61		Date Sampled: 8/5/98 9:02:00 PM						
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
474	Cl2Dose Chlorine Dose	1.70	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/7/98		8/7/98	n/a
475	Cl2Res Chlorine Residual	0.64	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/7/98		8/7/98	n/a
476	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	102.0	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
477	HAA-ICR 2-Bromopropionic acid (Surrogate)	94.0	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
478	HAA-ICR Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
479	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
480	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98	0-194-0
481	HAA-ICR Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
482	HAA-ICR Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
483	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
484	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98	0-194-0
485	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/7/98	8/13/98	8/14/98	0-194-0
486	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
487	pH Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
488	pH Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
489	pH pH	9.1	Unit	SM 4500-H+ B	1	n/a	8/5/98		8/5/98	n/a
490	TEMP Cl2 Temperature	25.1	°C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
491	TEMP Temperature	23.7	°C	SM 2550 B	1	n/a	8/5/98		8/5/98	n/a
492	TIME Cl2 Incubation Time	5.9	hrs	n/a	1	n/a	8/7/98		8/7/98	n/a
493	TOC-ICR TOC	ND	mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362
494	TOC-ICR TOC (Dupl)	ND	mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362
		ND	mg/L							
495	TOX-ICR TOX	ND	µg Cl-/L	SM 5320 B	1	25	8/7/98		8/11/98	12-0-187
496	TOX-ICR TOX (Dupl)	ND	µg Cl-/L	SM 5320 B	1	25	8/7/98		8/11/98	12-0-187
		ND	µg Cl-/L							
497	THM-ICR 1,2,3-Trichloropropane (Surrogate)	93.6	%	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
498	THM-ICR Bromodichloromethane	ND	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
499	THM-ICR Bromoform	ND	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
500	THM-ICR Chloroform	ND	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
501	THM-ICR Dibromochloromethane	ND	µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
502	UV-ICR UV	ND	1/cm	SM 5910 B	1	0.009	8/5/98		8/6/98	8-0-258
503	UV-ICR UV (Dupl)	ND	1/cm	SM 5910 B	1	0.009	8/5/98		8/6/98	8-0-258
		ND	1/cm							

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.12.5.Eff-6			S&H ID: 9808-66		Date Sampled: 8/6/98 5:08:00 PM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
504	Cl2Dose	Chlorine Dose	1.94	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
505	Cl2Res	Chlorine Residual	0.75	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
506	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	98.4	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
507	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.4	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
508	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
509	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
510	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/18/98	0-196-0
511	HAA-ICR	Dibromoacetic acid	1.3	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
512	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
513	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
514	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/18/98	0-196-0
515	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/18/98	0-196-0
516	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/18/98	0-196-0
517	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
518	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
519	pH	pH	8.7	Unit	SM 4500-H+ B	1	n/a	8/6/98		8/6/98	n/a
520	TEMP	Cl2 Temperature	25.3	°C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
521	TEMP	Temperature	23.7	°C	SM 2550 B	1	n/a	8/6/98		8/6/98	n/a
522	TIME	Cl2 Incubation Time	6.1	hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
523	TOC-ICR	TOC	ND	mg/L	SM 5310 C	1	0.50	8/6/98		8/9/98	7-0-366
524	TOC-ICR	TOC (Dupl)	ND	mg/L	SM 5310 C	1	0.50	8/6/98		8/9/98	7-0-366
			ND	mg/L							
525	TOX-ICR	TOX	ND	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
526	TOX-ICR	TOX (Dupl)	ND	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
			ND	µg Cl-/L							
527	THM-ICR	1,2,3-Trichloropropane (Surrogate)	106.0	%	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
528	THM-ICR	Bromodichloromethane	ND	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
529	THM-ICR	Bromoform	3.2	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
530	THM-ICR	Chloroform	ND	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
531	THM-ICR	Dibromochloromethane	2.0	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
532	UV-ICR	UV	ND	1/cm	SM 5910 B	1	0.009	8/6/98		8/7/98	8-0-260
533	UV-ICR	UV (Dupl)	ND	1/cm	SM 5910 B	1	0.009	8/6/98		8/7/98	8-0-260
			ND	1/cm							

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.12.5.Eff-7			S&H ID: 9808-67		Date Sampled: 8/6/98 9:18:00 PM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
534	Cl2Dose	Chlorine Dose	2.04	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
535	Cl2Res	Chlorine Residual	0.88	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
536	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	93.2	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
537	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.4	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
538	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
539	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
540	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
541	HAA-ICR	Dibromoacetic acid	2.2	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
542	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
543	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
544	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
545	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
546	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
547	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
548	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
549	pH	pH	8.8	Unit	SM 4500-H+ B	1	n/a	8/6/98		8/6/98	n/a
550	TEMP	Cl2 Temperature	25.3	°C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
551	TEMP	Temperature	24.0	°C	SM 2550 B	1	n/a	8/6/98		8/6/98	n/a
552	TIME	Cl2 Incubation Time	6.1	hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
553	TOC-ICR	TOC	0.78	mg/L	SM 5310 C	1	0.50	8/6/98		8/9/98	7-0-366
554	TOC-ICR	TOC (Dupl)	0.76	mg/L	SM 5310 C	1	0.50	8/6/98		8/9/98	7-0-366
			0.77	mg/L	2.6 % RPD						
555	TOX-ICR	TOX	ND	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
556	TOX-ICR	TOX (Dupl)	ND	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
			ND	µg Cl-/L							
557	THM-ICR	1,2,3-Trichloropropane (Surrogate)	92.4	%	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
558	THM-ICR	1,2,3-Trichloropropane (Surrogate) (Lab Dupl)	93.2	%	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
			92.8	%	0.9 % RPD						
559	THM-ICR	Bromodichloromethane	1.2	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
560	THM-ICR	Bromodichloromethane (Lab Dupl)	1.1	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
			1.1	µg/L	9.1 % RPD						
561	THM-ICR	Bromoform	5.9	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
562	THM-ICR	Bromoform (Lab Dupl)	5.5	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
			5.7	µg/L	7.0 % RPD						
563	THM-ICR	Chloroform	ND	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
564	THM-ICR	Chloroform (Lab Dupl)	ND	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

		ND µg/L							
565	THM-ICR Dibromochloromethane	3.7 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
566	THM-ICR Dibromochloromethane (Lab Dupl)	3.5 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
		3.6 µg/L	5.6 % RPD						
567	UV-ICR UV	ND 1/cm	SM 5910 B	1	0.009	8/6/98		8/7/98	8-0-260
568	UV-ICR UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	8/6/98		8/7/98	8-0-260
		ND 1/cm							

Sample ID: 128.12.5.Eff-8		S&H ID: 9808-68	Date Sampled: 8/6/98 11:37:00 PM						
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
569	Cl2Dose Chlorine Dose	2.12 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/10/98		8/10/98	n/a
570	Cl2Res Chlorine Residual	0.85 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/10/98		8/10/98	n/a
571	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	94.8 %	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
572	HAA-ICR 2-Bromopropionic acid (Surrogate)	97.6 %	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
573	HAA-ICR Bromochloroacetic acid	1.1 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
574	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
575	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
576	HAA-ICR Dibromoacetic acid	2.3 µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
577	HAA-ICR Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
578	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
579	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
580	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/10/98	8/18/98	8/19/98	0-196-0
581	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
582	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
583	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
584	pH pH	8.8 Unit	SM 4500-H+ B	1	n/a	8/6/98		8/6/98	n/a
585	TEMP Cl2 Temperature	25.3 °C	SM 2550 B	1	n/a	8/10/98		8/10/98	n/a
586	TEMP Temperature	23.8 °C	SM 2550 B	1	n/a	8/6/98		8/6/98	n/a
587	TIME Cl2 Incubation Time	5.9 hrs	n/a	1	n/a	8/10/98		8/10/98	n/a
588	TOC-ICR TOC	1.11 mg/L	SM 5310 C	1	0.50	8/6/98		8/9/98	7-0-368
589	TOC-ICR TOC (Dupl)	1.13 mg/L	SM 5310 C	1	0.50	8/6/98		8/9/98	7-0-368
		1.12 mg/L	1.8 % RPD						
590	TOX-ICR TOX	ND µg Cl-/L	SM 5320 B	1	25	8/10/98		8/18/98	12-0-192
591	TOX-ICR TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	8/10/98		8/18/98	12-0-192
		ND µg Cl-/L							
592	THM-ICR 1,2,3-Trichloropropane (Surrogate)	88.0 %	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
593	THM-ICR Bromodichloromethane	2.3 µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
594	THM-ICR Bromoform	8.9 µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

595	THM-ICR Chloroform	ND	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
596	THM-ICR Dibromochloromethane	6.7	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
597	UV-ICR UV	0.010	1/cm	SM 5910 B	1	0.009	8/6/98		8/7/98	8-0-260
598	UV-ICR UV (Dupl)	0.010	1/cm	SM 5910 B	1	0.009	8/6/98		8/7/98	8-0-260
		0.010	1/cm	0.0 % RPD						

Sample ID: 128.12.5.Eff-9

S&H ID: 9808-69

Date Sampled: 8/7/98 3:50:00 AM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
599	Cl2Dose Chlorine Dose	2.19	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/10/98		8/10/98	n/a
600	Cl2Res Chlorine Residual	0.75	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/10/98		8/10/98	n/a
601	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	97.2	%	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
602	HAA-ICR 2-Bromopropionic acid (Surrogate)	99.2	%	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
603	HAA-ICR Bromochloroacetic acid	1.3	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
604	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
605	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
606	HAA-ICR Dibromoacetic acid	2.9	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
607	HAA-ICR Dichloroacetic acid	1.4	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
608	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
609	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
610	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/10/98	8/18/98	8/19/98	0-196-0
611	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
612	pH Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
613	pH Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
614	pH pH	9.0	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
615	TEMP Cl2 Temperature	25.3	°C	SM 2550 B	1	n/a	8/10/98		8/10/98	n/a
616	TEMP Temperature	22.8	°C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
617	TIME Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	8/10/98		8/10/98	n/a
618	TOC-ICR TOC	1.35	mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
619	TOC-ICR TOC (Dupl)	1.35	mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
		1.35	mg/L	0.0 % RPD						
620	TOX-ICR TOX	28	µg Cl-/L	SM 5320 B	1	25	8/10/98		8/18/98	12-0-192
621	TOX-ICR TOX (Dupl)	29	µg Cl-/L	SM 5320 B	1	25	8/10/98		8/18/98	12-0-192
		29	µg Cl-/L	3.4 % RPD						
622	THM-ICR 1,2,3-Trichloropropane (Surrogate)	97.6	%	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
623	THM-ICR Bromodichloromethane	3.2	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
624	THM-ICR Bromoform	10.7	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
625	THM-ICR Chloroform	ND	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
626	THM-ICR Dibromochloromethane	8.6	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

627	UV-ICR	UV	0.014	1/cm	SM 5910 B	1	0.009	8/7/98	8/7/98	8-0-260
628	UV-ICR	UV (Dupl)	0.013	1/cm	SM 5910 B	1	0.009	8/7/98	8/7/98	8-0-260
			0.014	1/cm	7.1 % RPD					

Sample ID: 128.12.5.Eff-10

S&H ID: 9808-70

Date Sampled: 8/7/98 8:10:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
629	Cl2Dose	Chlorine Dose	2.27	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/10/98		8/10/98	n/a
630	Cl2Res	Chlorine Residual	0.85	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/10/98		8/10/98	n/a
631	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	91.2	%	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
632	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.4	%	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
633	HAA-ICR	Bromochloroacetic acid	1.6	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
634	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
635	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
636	HAA-ICR	Dibromoacetic acid	3.3	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
637	HAA-ICR	Dichloroacetic acid	2.7	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
638	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
639	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/10/98	8/18/98	8/19/98	0-196-0
640	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/10/98	8/18/98	8/19/98	0-196-0
641	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/18/98	8/19/98	0-196-0
642	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
643	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
644	pH	pH	8.9	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
645	TEMP	Cl2 Temperature	25.3	°C	SM 2550 B	1	n/a	8/10/98		8/10/98	n/a
646	TEMP	Temperature	22.8	°C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
647	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	8/10/98		8/10/98	n/a
648	TOC-ICR	TOC	1.58	mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
649	TOC-ICR	TOC (Dupl)	1.57	mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
			1.58	mg/L	0.6 % RPD						
650	TOX-ICR	TOX	35	µg Cl-/L	SM 5320 B	1	25	8/10/98		8/18/98	12-0-192
651	TOX-ICR	TOX (Dupl)	37	µg Cl-/L	SM 5320 B	1	25	8/10/98		8/18/98	12-0-192
			36	µg Cl-/L	5.6 % RPD						
652	THM-ICR	1,2,3-Trichloropropane (Surrogate)	100.0	%	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
653	THM-ICR	Bromodichloromethane	4.7	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
654	THM-ICR	Bromoform	12.5	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
655	THM-ICR	Chloroform	1.5	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
656	THM-ICR	Dibromochloromethane	11.8	µg/L	EPA 551.1	1	1.0	8/10/98	8/17/98	8/17/98	0-195-0
657	UV-ICR	UV	0.017	1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261
658	UV-ICR	UV (Dupl)	0.016	1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

0.017 1/cm

5.9 % RPD

Sample ID: 128.12.5.Eff-11

S&H ID: 9808-71

Date Sampled: 8/7/98 12:24:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
659	Cl2Dose	Chlorine Dose	2.34	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/10/98		8/10/98	n/a
660	Cl2Res	Chlorine Residual	0.83	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/10/98		8/10/98	n/a
661	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	95.2	%	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
662	HAA-ICR	2-Bromopropionic acid (Surrogate)	102.0	%	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
663	HAA-ICR	Bromochloroacetic acid	1.9	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
664	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
665	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/10/98	8/24/98	8/24/98	0-198-0
666	HAA-ICR	Dibromoacetic acid	3.8	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
667	HAA-ICR	Dichloroacetic acid	4.5	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
668	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
669	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/10/98	8/24/98	8/24/98	0-198-0
670	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/10/98	8/24/98	8/24/98	0-198-0
671	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
672	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
673	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
674	pH	pH	8.6	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
675	TEMP	Cl2 Temperature	25.3	°C	SM 2550 B	1	n/a	8/10/98		8/10/98	n/a
676	TEMP	Temperature	23.3	°C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
677	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	8/10/98		8/10/98	n/a
678	TOC-ICR	TOC	1.81	mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
679	TOC-ICR	TOC (Dupl)	1.80	mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
			1.81	mg/L	0.6 % RPD						
680	TOX-ICR	TOX	44	µg Cl-/L	SM 5320 B	1	25	8/10/98		8/18/98	12-0-192
681	TOX-ICR	TOX (Dupl)	45	µg Cl-/L	SM 5320 B	1	25	8/10/98		8/18/98	12-0-192
			45	µg Cl-/L	2.2 % RPD						
682	THM-ICR	1,2,3-Trichloropropane (Surrogate)	96.8	%	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
683	THM-ICR	Bromodichloromethane	6.1	µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
684	THM-ICR	Bromoform	12.7	µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
685	THM-ICR	Chloroform	1.8	µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
686	THM-ICR	Dibromochloromethane	13.5	µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
687	UV-ICR	UV	0.020	1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261
688	UV-ICR	UV (Dupl)	0.020	1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261
			0.020	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.12.5.Eff-13

S&H ID: 9808-73

Date Sampled: 8/7/98 8:53:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
689	Cl2Dose	Chlorine Dose	2.42	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/10/98		8/10/98	n/a
690	Cl2Res	Chlorine Residual	0.85	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/10/98		8/10/98	n/a
691	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	96.8	%	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
692	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.4	%	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
693	HAA-ICR	Bromochloroacetic acid	2.8	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
694	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
695	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/10/98	8/24/98	8/24/98	0-198-0
696	HAA-ICR	Dibromoacetic acid	5.1	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
697	HAA-ICR	Dichloroacetic acid	5.6	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
698	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
699	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/10/98	8/24/98	8/24/98	0-198-0
700	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/10/98	8/24/98	8/24/98	0-198-0
701	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
702	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
703	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
704	pH	pH	8.8	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
705	TEMP	Cl2 Temperature	25.3	°C	SM 2550 B	1	n/a	8/10/98		8/10/98	n/a
706	TEMP	Temperature	23.9	°C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
707	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	8/10/98		8/10/98	n/a
708	TOC-ICR	TOC	2.05	mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
709	TOC-ICR	TOC (Dupl)	2.04	mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
			2.04	mg/L	0.5 % RPD						
710	TOX-ICR	TOX	55	µg Cl-/L	SM 5320 B	1	25	8/10/98		8/17/98	12-0-191
711	TOX-ICR	TOX (Dupl)	60	µg Cl-/L	SM 5320 B	1	25	8/10/98		8/17/98	12-0-191
			58	µg Cl-/L	8.6 % RPD						
712	THM-ICR	1,2,3-Trichloropropane (Surrogate)	88.8	%	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
713	THM-ICR	Bromodichloromethane	8.2	µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
714	THM-ICR	Bromoform	12.3	µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
715	THM-ICR	Chloroform	2.9	µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
716	THM-ICR	Dibromochloromethane	16.0	µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
717	UV-ICR	UV	0.025	1/cm	SM 5910 B	1	0.009	8/7/98		8/8/98	8-0-253
718	UV-ICR	UV (Dupl)	0.025	1/cm	SM 5910 B	1	0.009	8/7/98		8/8/98	8-0-253
			0.025	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.12.5.Eff-16			S&H ID: 9808-76		Date Sampled: 8/8/98 9:42:00 AM				
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
719	Cl2Dose Chlorine Dose	2.51 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/11/98		8/11/98	n/a
720	Cl2Res Chlorine Residual	0.76 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/11/98		8/11/98	n/a
721	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	100.0 %	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
722	HAA-ICR 2-Bromopropionic acid (Surrogate)	98.0 %	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
723	HAA-ICR Bromochloroacetic acid	3.4 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
724	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
725	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/24/98	0-198-0
726	HAA-ICR Dibromoacetic acid	4.8 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
727	HAA-ICR Dichloroacetic acid	6.6 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
728	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
729	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/24/98	0-198-0
730	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/11/98	8/24/98	8/24/98	0-198-0
731	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
732	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
733	pH Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
734	pH pH	9.0 Unit	SM 4500-H+ B	1	n/a	8/8/98		8/8/98	n/a
735	TEMP Cl2 Temperature	25.4 °C	SM 2550 B	1	n/a	8/11/98		8/11/98	n/a
736	TEMP Temperature	22.4 °C	SM 2550 B	1	n/a	8/8/98		8/8/98	n/a
737	TIME Cl2 Incubation Time	5.8 hrs	n/a	1	n/a	8/11/98		8/11/98	n/a
738	TOC-ICR TOC	2.27 mg/L	SM 5310 C	1	0.50	8/8/98		8/9/98	7-0-368
739	TOC-ICR TOC (Dupl)	2.28 mg/L	SM 5310 C	1	0.50	8/8/98		8/9/98	7-0-368
		2.27 mg/L	0.4 % RPD						
740	TOX-ICR TOX	70 µg Cl-/L	SM 5320 B	1	25	8/11/98		8/18/98	12-0-192
741	TOX-ICR TOX (Dupl)	72 µg Cl-/L	SM 5320 B	1	25	8/11/98		8/18/98	12-0-192
		71 µg Cl-/L	2.8 % RPD						
742	THM-ICR 1,2,3-Trichloropropane (Surrogate)	84.0 %	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
743	THM-ICR Bromodichloromethane	10.3 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
744	THM-ICR Bromoform	11.7 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
745	THM-ICR Chloroform	4.0 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
746	THM-ICR Dibromochloromethane	17.3 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
747	UV-ICR UV	0.029 1/cm	SM 5910 B	1	0.009	8/8/98		8/8/98	8-0-254
748	UV-ICR UV (Dupl)	0.029 1/cm	SM 5910 B	1	0.009	8/8/98		8/8/98	8-0-254
		0.029 1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.12.5.Eff-20			S&H ID: 9808-80		Date Sampled: 8/9/98 2:41:00 AM				
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
749	Cl2Dose Chlorine Dose	2.60 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/11/98		8/11/98	n/a
750	Cl2Res Chlorine Residual	0.76 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/11/98		8/11/98	n/a
751	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	96.4 %	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
752	HAA-ICR 2-Bromopropionic acid (Surrogate)	100.4 %	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
753	HAA-ICR Bromochloroacetic acid	4.3 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
754	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
755	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/24/98	0-198-0
756	HAA-ICR Dibromoacetic acid	5.3 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
757	HAA-ICR Dichloroacetic acid	6.7 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
758	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
759	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/24/98	0-198-0
760	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/11/98	8/24/98	8/24/98	0-198-0
761	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
762	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
763	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
764	pH pH	8.6 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
765	TEMP Cl2 Temperature	25.4 °C	SM 2550 B	1	n/a	8/11/98		8/11/98	n/a
766	TEMP Temperature	23.3 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
767	TIME Cl2 Incubation Time	5.8 hrs	n/a	1	n/a	8/11/98		8/11/98	n/a
768	TOC-ICR TOC	2.55 mg/L	SM 5310 C	1	0.50	8/9/98		8/9/98	7-0-368
769	TOC-ICR TOC (Dupl)	2.54 mg/L	SM 5310 C	1	0.50	8/9/98		8/9/98	7-0-368
		2.54 mg/L	0.4 % RPD						
770	TOX-ICR TOX	89 µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
771	TOX-ICR TOX (Dupl)	88 µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
		89 µg Cl-/L	1.1 % RPD						
772	THM-ICR 1,2,3-Trichloropropane (Surrogate)	82.8 %	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
773	THM-ICR Bromodichloromethane	12.5 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
774	THM-ICR Bromoform	10.2 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
775	THM-ICR Chloroform	5.3 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
776	THM-ICR Dibromochloromethane	18.7 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
777	UV-ICR UV	0.035 1/cm	SM 5910 B	1	0.009	8/9/98		8/9/98	8-0-255
778	UV-ICR UV (Dupl)	0.035 1/cm	SM 5910 B	1	0.009	8/9/98		8/9/98	8-0-255
		0.035 1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.12.5.Eff-23			S&H ID: 9808-83		Date Sampled: 8/9/98 7:54:00 PM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
779	Cl2Dose	Chlorine Dose	2.73	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/11/98		8/11/98	n/a
780	Cl2Res	Chlorine Residual	0.70	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/11/98		8/11/98	n/a
781	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	98.8	%	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
782	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.8	%	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
783	HAA-ICR	Bromochloroacetic acid	4.7	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
784	HAA-ICR	Bromodichloroacetic acid	1.2	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
785	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/24/98	0-198-0
786	HAA-ICR	Dibromoacetic acid	4.8	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
787	HAA-ICR	Dichloroacetic acid	7.1	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
788	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
789	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/24/98	0-198-0
790	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/11/98	8/24/98	8/24/98	0-198-0
791	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/24/98	0-198-0
792	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
793	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
794	pH	pH	8.5	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
795	TEMP	Cl2 Temperature	25.4	°C	SM 2550 B	1	n/a	8/11/98		8/11/98	n/a
796	TEMP	Temperature	23.8	°C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
797	TIME	Cl2 Incubation Time	5.8	hrs	n/a	1	n/a	8/11/98		8/11/98	n/a
798	TOC-ICR	TOC	2.95	mg/L	SM 5310 C	1	0.50	8/9/98		8/10/98	7-0-368
799	TOC-ICR	TOC (Dupl)	2.93	mg/L	SM 5310 C	1	0.50	8/9/98		8/10/98	7-0-368
			2.94	mg/L	0.7 % RPD						
800	TOX-ICR	TOX	114	µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
801	TOX-ICR	TOX (Dupl)	107	µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
			111	µg Cl-/L	6.3 % RPD						
802	THM-ICR	1,2,3-Trichloropropane (Surrogate)	97.6	%	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
803	THM-ICR	Bromodichloromethane	16.6	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
804	THM-ICR	Bromoform	8.7	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
805	THM-ICR	Chloroform	8.9	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
806	THM-ICR	Dibromochloromethane	20.8	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
807	UV-ICR	UV	0.044	1/cm	SM 5910 B	1	0.009	8/9/98		8/10/98	8-0-257
808	UV-ICR	UV (Dupl)	0.044	1/cm	SM 5910 B	1	0.009	8/9/98		8/10/98	8-0-257
			0.044	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.12.5.Eff-26			S&H ID: 9808-86		Date Sampled: 8/11/98 7:22:00 PM				
#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
809	Cl2Dose Chlorine Dose	2.96 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/13/98		8/13/98	n/a
810	Cl2Res Chlorine Residual	0.72 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/13/98		8/13/98	n/a
811	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	96.8 %	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
812	HAA-ICR 2-Bromopropionic acid (Surrogate)	97.2 %	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
813	HAA-ICR Bromochloroacetic acid	6.0 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
814	HAA-ICR Bromodichloroacetic acid	1.4 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
815	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/13/98	8/24/98	8/25/98	0-198-0
816	HAA-ICR Dibromoacetic acid	5.0 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
817	HAA-ICR Dichloroacetic acid	9.0 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
818	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
819	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/13/98	8/24/98	8/25/98	0-198-0
820	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/13/98	8/24/98	8/25/98	0-198-0
821	HAA-ICR Trichloroacetic acid	1.5 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
822	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
823	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
824	pH pH	8.5 Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
825	TEMP Cl2 Temperature	25.3 °C	SM 2550 B	1	n/a	8/13/98		8/13/98	n/a
826	TEMP Temperature	23.4 °C	SM 2550 B	1	n/a	8/11/98		8/11/98	n/a
827	TIME Cl2 Incubation Time	5.9 hrs	n/a	1	n/a	8/13/98		8/13/98	n/a
828	TOC-ICR TOC	3.53 mg/L	SM 5310 C	1	0.50	8/11/98		8/12/98	7-0-371
829	TOC-ICR TOC (Dupl)	3.53 mg/L	SM 5310 C	1	0.50	8/11/98		8/13/98	7-0-371
		3.53 mg/L	0.0 % RPD						
830	TOX-ICR TOX	140 µg Cl-/L	SM 5320 B	1	25	8/13/98		8/20/98	12-0-194
831	TOX-ICR TOX (Dupl)	143 µg Cl-/L	SM 5320 B	1	25	8/13/98		8/20/98	12-0-194
		142 µg Cl-/L	2.1 % RPD						
832	THM-ICR 1,2,3-Trichloropropane (Surrogate)	94.8 %	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
833	THM-ICR Bromodichloromethane	22.1 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
834	THM-ICR Bromoform	7.2 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
835	THM-ICR Chloroform	15.6 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
836	THM-ICR Dibromochloromethane	22.6 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
837	UV-ICR UV	0.058 1/cm	SM 5910 B	1	0.009	8/11/98		8/12/98	8-0-263
838	UV-ICR UV (Dupl)	0.058 1/cm	SM 5910 B	1	0.009	8/11/98		8/12/98	8-0-263
		0.058 1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.12.5.Eff-29			S&H ID: 9808-89		Date Sampled: 8/13/98 10:19:00 AM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
839	pH	pH	8.9	Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
840	TEMP	Temperature	22.6	°C	SM 2550 B	1	n/a	8/13/98		8/13/98	n/a
841	TOC-ICR	TOC	3.68	mg/L	SM 5310 C	1	0.50	8/13/98		8/13/98	7-0-373
842	TOC-ICR	TOC (Dupl)	3.67	mg/L	SM 5310 C	1	0.50	8/13/98		8/13/98	7-0-373
			3.67	mg/L	0.3 % RPD						
843	UV-ICR	UV	0.063	1/cm	SM 5910 B	1	0.009	8/13/98		8/14/98	8-0-265
844	UV-ICR	UV (Dupl)	0.063	1/cm	SM 5910 B	1	0.009	8/13/98		8/14/98	8-0-265
			0.063	1/cm	0.0 % RPD						

Sample ID: 128.12.5.Eff-7d			S&H ID: 9808-93		Date Sampled: 8/6/98 9:18:00 PM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
845	Cl2Dose	Chlorine Dose	2.04	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
846	Cl2Res	Chlorine Residual	0.88	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
847	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	95.2	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
848	HAA-ICR	2-Bromopropionic acid (Surrogate)	99.2	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
849	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
850	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
851	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
852	HAA-ICR	Dibromoacetic acid	2.1	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
853	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
854	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
855	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
856	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
857	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
858	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
859	pH	Cl2 pH - Initial	9.0	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
860	pH	pH	8.8	Unit	SM 4500-H+ B	1	n/a	8/6/98		8/6/98	n/a
861	TEMP	Cl2 Temperature	25.3	°C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
862	TEMP	Temperature	24.0	°C	SM 2550 B	1	n/a	8/6/98		8/6/98	n/a
863	TIME	Cl2 Incubation Time	5.9	hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
864	TOC-ICR	TOC	0.74	mg/L	SM 5310 C	1	0.50	8/6/98		8/9/98	7-0-368
865	TOC-ICR	TOC (Dupl)	0.76	mg/L	SM 5310 C	1	0.50	8/6/98		8/9/98	7-0-368
			0.75	mg/L	2.7 % RPD						
866	TOX-ICR	TOX	ND	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/12/98	12-0-188
867	TOX-ICR	TOX (Dupl)	ND	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/12/98	12-0-188
			ND	µg Cl-/L							

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

868	THM-ICR 1,2,3-Trichloropropane (Surrogate)	98.0 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
869	THM-ICR Bromodichloromethane	1.2 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
870	THM-ICR Bromoform	5.6 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
871	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
872	THM-ICR Dibromochloromethane	3.7 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
873	UV-ICR UV	ND 1/cm	SM 5910 B	1	0.009	8/6/98		8/7/98	8-0-260
874	UV-ICR UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	8/6/98		8/7/98	8-0-260
		ND 1/cm							

Sample ID: 128.12.5.Eff-13d

S&H ID: 9808-95

Date Sampled: 8/7/98 8:53:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
875	Cl2Dose Chlorine Dose	2.42 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/10/98		8/10/98	n/a
876	Cl2Res Chlorine Residual	0.80 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/10/98		8/10/98	n/a
877	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	97.2 %	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
878	HAA-ICR 2-Bromopropionic acid (Surrogate)	97.6 %	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
879	HAA-ICR Bromochloroacetic acid	2.7 µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
880	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
881	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/10/98	8/24/98	8/24/98	0-198-0
882	HAA-ICR Dibromoacetic acid	4.7 µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
883	HAA-ICR Dichloroacetic acid	5.7 µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
884	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
885	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/10/98	8/24/98	8/24/98	0-198-0
886	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/10/98	8/24/98	8/24/98	0-198-0
887	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/10/98	8/24/98	8/24/98	0-198-0
888	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
889	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
890	pH pH	8.8 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
891	TEMP Cl2 Temperature	25.3 °C	SM 2550 B	1	n/a	8/10/98		8/10/98	n/a
892	TEMP Temperature	23.6 °C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
893	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	8/10/98		8/10/98	n/a
894	TOC-ICR TOC	2.05 mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
895	TOC-ICR TOC (Dupl)	2.06 mg/L	SM 5310 C	1	0.50	8/7/98		8/9/98	7-0-368
		2.05 mg/L	0.5 % RPD						
896	TOX-ICR TOX	63 µg Cl-/L	SM 5320 B	1	25	8/10/98		8/17/98	12-0-191
897	TOX-ICR TOX (Dupl)	58 µg Cl-/L	SM 5320 B	1	25	8/10/98		8/17/98	12-0-191
		61 µg Cl-/L	8.2 % RPD						
898	THM-ICR 1,2,3-Trichloropropane (Surrogate)	94.8 %	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

899	THM-ICR Bromodichloromethane	8.8 µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
900	THM-ICR Bromoform	12.9 µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
901	THM-ICR Chloroform	3.1 µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
902	THM-ICR Dibromochloromethane	16.9 µg/L	EPA 551.1	1	1.0	8/10/98	8/20/98	8/20/98	0-197-0
903	UV-ICR UV	0.025 1/cm	SM 5910 B	1	0.009	8/7/98		8/8/98	8-0-253
904	UV-ICR UV (Dupl)	0.025 1/cm	SM 5910 B	1	0.009	8/7/98		8/8/98	8-0-253
		0.025 1/cm	0.0 % RPD						

Sample ID: 128.12.5.Eff-20d

S&H ID: 9808-97

Date Sampled: 8/9/98 2:41:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
905	Cl2Dose Chlorine Dose	2.60 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/11/98		8/11/98	n/a
906	Cl2Res Chlorine Residual	0.71 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/11/98		8/11/98	n/a
907	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	97.6 %	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
908	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard) (Lab Dupl)	98.0 %	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
		97.8 %	0.4 % RPD						
909	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.4 %	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
910	HAA-ICR 2-Bromopropionic acid (Surrogate) (Lab Dupl)	97.2 %	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
		96.8 %	0.8 % RPD						
911	HAA-ICR Bromochloroacetic acid	3.8 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
912	HAA-ICR Bromochloroacetic acid (Lab Dupl)	3.9 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
		3.8 µg/L	2.6 % RPD						
913	HAA-ICR Bromodichloroacetic acid	1.0 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
914	HAA-ICR Bromodichloroacetic acid (Lab Dupl)	1.1 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
		1.1 µg/L	9.1 % RPD						
915	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/25/98	0-198-0
916	HAA-ICR Chlorodibromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/25/98	0-198-0
		ND µg/L							
917	HAA-ICR Dibromoacetic acid	4.5 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
918	HAA-ICR Dibromoacetic acid (Lab Dupl)	4.7 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
		4.6 µg/L	4.3 % RPD						
919	HAA-ICR Dichloroacetic acid	6.0 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
920	HAA-ICR Dichloroacetic acid (Lab Dupl)	6.4 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
		6.2 µg/L	6.5 % RPD						
921	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
922	HAA-ICR Monobromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
		ND µg/L							

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

923	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/25/98	0-198-0
924	HAA-ICR	Monochloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/25/98	0-198-0
			ND µg/L							
925	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/11/98	8/24/98	8/25/98	0-198-0
926	HAA-ICR	Tribromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	4.0	8/11/98	8/24/98	8/25/98	0-198-0
			ND µg/L							
927	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
928	HAA-ICR	Trichloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
			ND µg/L							
929	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
930	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
931	pH	pH	8.5 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
932	TEMP	Cl2 Temperature	25.4 °C	SM 2550 B	1	n/a	8/11/98		8/11/98	n/a
933	TEMP	Temperature	23.1 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
934	TIME	Cl2 Incubation Time	5.9 hrs	n/a	1	n/a	8/11/98		8/11/98	n/a
935	TOC-ICR	TOC	2.55 mg/L	SM 5310 C	1	0.50	8/9/98		8/9/98	7-0-368
936	TOC-ICR	TOC (Dupl)	2.56 mg/L	SM 5310 C	1	0.50	8/9/98		8/9/98	7-0-368
			2.55 mg/L	0.4 % RPD						
937	TOX-ICR	TOX	84 µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
938	TOX-ICR	TOX (Dupl)	85 µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
			85 µg Cl-/L	1.2 % RPD						
939	THM-ICR	1,2,3-Trichloropropane (Surrogate)	96.4 %	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
940	THM-ICR	Bromodichloromethane	14.3 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
941	THM-ICR	Bromoform	11.5 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
942	THM-ICR	Chloroform	6.3 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
943	THM-ICR	Dibromochloromethane	21.0 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
944	UV-ICR	UV	0.035 1/cm	SM 5910 B	1	0.009	8/9/98		8/9/98	8-0-255
945	UV-ICR	UV (Dupl)	0.035 1/cm	SM 5910 B	1	0.009	8/9/98		8/9/98	8-0-255
			0.035 1/cm	0.0 % RPD						

Sample ID: 128.15.Eff-1

S&H ID: 9808-101

Date Sampled: 8/5/98 2:33:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
946	Cl2Dose	Chlorine Dose	1.87	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
947	Cl2Res	Chlorine Residual	0.81	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
948	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	100.8	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
949	HAA-ICR	2-Bromopropionic acid (Surrogate)	96.8	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
950	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

951	HAA-ICR	Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
952	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
953	HAA-ICR	Dibromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
954	HAA-ICR	Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
955	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
956	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
957	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
958	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
959	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
960	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
961	pH	pH	9.3 Unit	SM 4500-H+ B	1	n/a	8/5/98		8/5/98	n/a
962	TEMP	Cl2 Temperature	25.5 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
963	TEMP	Temperature	22.6 °C	SM 2550 B	1	n/a	8/5/98		8/5/98	n/a
964	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
965	TOC-ICR	TOC	ND mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362
966	TOC-ICR	TOC (Dupl)	ND mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362
			ND mg/L							
967	TOX-ICR	TOX	ND µg Cl-/L	SM 5320 B	1	25	8/9/98		8/18/98	12-0-192
968	TOX-ICR	TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	8/9/98		8/18/98	12-0-192
			ND µg Cl-/L							
969	THM-ICR	1,2,3-Trichloropropane (Surrogate)	98.8 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
970	THM-ICR	Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
971	THM-ICR	Bromoform	ND µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
972	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
973	THM-ICR	Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
974	UV-ICR	UV	ND 1/cm	SM 5910 B	1	0.009	8/5/98		8/6/98	8-0-258
975	UV-ICR	UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	8/5/98		8/6/98	8-0-258
			ND 1/cm							

Sample ID: 128.15.Eff-3

S&H ID: 9808-103

Date Sampled: 8/6/98 8:16:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
976	Cl2Dose	Chlorine Dose	1.96	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
977	Cl2Res	Chlorine Residual	0.83	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
978	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	96.0	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
979	HAA-ICR	2-Bromopropionic acid (Surrogate)	99.6	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
980	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
981	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
982	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 128
Study Title: ICR RSSCT #3

983	HAA-ICR	Dibromoacetic acid	1.5 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
984	HAA-ICR	Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
985	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
986	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
987	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
988	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
989	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
990	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
991	pH	pH	8.5 Unit	SM 4500-H+ B	1	n/a	8/6/98		8/6/98	n/a
992	TEMP	Cl2 Temperature	25.5 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
993	TEMP	Temperature	23.2 °C	SM 2550 B	1	n/a	8/6/98		8/6/98	n/a
994	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
995	TOC-ICR	TOC	0.50 mg/L	SM 5310 C	1	0.50	8/6/98		8/8/98	7-0-366
996	TOC-ICR	TOC (Dupl)	ND mg/L	SM 5310 C	1	0.50	8/6/98		8/8/98	7-0-366
			ND mg/L							
997	TOX-ICR	TOX	ND µg Cl-/L	SM 5320 B	1	25	8/9/98		8/17/98	12-0-191
998	TOX-ICR	TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	8/9/98		8/17/98	12-0-191
			ND µg Cl-/L							
999	THM-ICR	1,2,3-Trichloropropane (Surrogate)	104.0 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1000	THM-ICR	Bromodichloromethane	1.0 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1001	THM-ICR	Bromoform	5.6 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1002	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1003	THM-ICR	Dibromochloromethane	2.9 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1004	UV-ICR	UV	ND 1/cm	SM 5910 B	1	0.009	8/6/98		8/7/98	8-0-261
1005	UV-ICR	UV (Dupl)	ND 1/cm	SM 5910 B	1	0.009	8/6/98		8/7/98	8-0-261
			ND 1/cm							

Sample ID: 128.15.Eff-4**S&H ID:** 9808-104**Date Sampled:** 8/7/98 12:23:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1006	Cl2Dose	Chlorine Dose	2.05	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
1007	Cl2Res	Chlorine Residual	0.82	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
1008	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	95.2	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1009	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard) (Lab Dupl)	92.0	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
			93.6	%	3.4 % RPD						
1010	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.8	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1011	HAA-ICR	2-Bromopropionic acid (Surrogate) (Lab Dupl)	99.6	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

			100.2 %	1.2 % RPD							
1012	HAA-ICR	Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
1013	HAA-ICR	Bromochloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
			ND µg/L								
1014	HAA-ICR	Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
1015	HAA-ICR	Bromodichloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
			ND µg/L								
1016	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0	
1017	HAA-ICR	Chlorodibromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0	
			ND µg/L								
1018	HAA-ICR	Dibromoacetic acid	2.2 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
1019	HAA-ICR	Dibromoacetic acid (Lab Dupl)	2.2 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
			2.2 µg/L	0.0 % RPD							
1020	HAA-ICR	Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
1021	HAA-ICR	Dichloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
			ND µg/L								
1022	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
1023	HAA-ICR	Monobromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
			ND µg/L								
1024	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0	
1025	HAA-ICR	Monochloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0	
			ND µg/L								
1026	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0	
1027	HAA-ICR	Tribromoacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0	
			ND µg/L								
1028	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
1029	HAA-ICR	Trichloroacetic acid (Lab Dupl)	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0	
			ND µg/L								
1030	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a	
1031	pH	Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a	
1032	pH	pH	8.7 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a	
1033	TEMP	Cl2 Temperature	25.5 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a	
1034	TEMP	Temperature	23.0 °C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a	
1035	TIME	Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	8/9/98		8/9/98	n/a	
1036	TOC-ICR	TOC	0.81 mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366	
1037	TOC-ICR	TOC (Dupl)	0.80 mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366	
			0.81 mg/L	1.2 % RPD							
1038	TOX-ICR	TOX	ND µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190	
1039	TOX-ICR	TOX (Dupl)	ND µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190	

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

		ND	µg Cl-/L						
1040	THM-ICR 1,2,3-Trichloropropane (Surrogate)	96.4	%	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98 0-195-0
1041	THM-ICR Bromodichloromethane	1.8	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98 0-195-0
1042	THM-ICR Bromoform	7.2	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98 0-195-0
1043	THM-ICR Chloroform	ND	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98 0-195-0
1044	THM-ICR Dibromochloromethane	5.0	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98 0-195-0
1045	UV-ICR UV	ND	1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98 8-0-261
1046	UV-ICR UV (Dupl)	ND	1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98 8-0-261
		ND	1/cm						

Sample ID: 128.15.Eff-5			S&H ID: 9808-105		Date Sampled: 8/7/98 4:34:00 AM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1047	Cl2Dose	Chlorine Dose	2.13	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
1048	Cl2Res	Chlorine Residual	0.77	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
1049	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	97.6	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1050	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.0	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1051	HAA-ICR	Bromochloroacetic acid	1.1	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1052	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1053	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1054	HAA-ICR	Dibromoacetic acid	2.8	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1055	HAA-ICR	Dichloroacetic acid	1.1	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1056	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1057	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1058	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
1059	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1060	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1061	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1062	pH	pH	8.8	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
1063	TEMP	Cl2 Temperature	25.5	°C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
1064	TEMP	Temperature	22.0	°C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
1065	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
1066	TOC-ICR	TOC	1.14	mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
1067	TOC-ICR	TOC (Dupl)	1.10	mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
			1.12	mg/L	3.6 % RPD						
1068	TOX-ICR	TOX	29	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190
1069	TOX-ICR	TOX (Dupl)	28	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190
			29	µg Cl-/L	3.4 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1070	THM-ICR 1,2,3-Trichloropropane (Surrogate)	98.0 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1071	THM-ICR Bromodichloromethane	2.6 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1072	THM-ICR Bromoform	10.1 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1073	THM-ICR Chloroform	ND µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1074	THM-ICR Dibromochloromethane	6.8 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1075	UV-ICR UV	0.011 1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261
1076	UV-ICR UV (Dupl)	0.011 1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261
		0.011 1/cm	0.0 % RPD						

Sample ID: 128.15.Eff-6

S&H ID: 9808-106

Date Sampled: 8/7/98 8:47:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1077	Cl2Dose Chlorine Dose	2.19 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
1078	Cl2Res Chlorine Residual	0.83 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
1079	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	90.8 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1080	HAA-ICR 2-Bromopropionic acid (Surrogate)	100.0 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1081	HAA-ICR Bromochloroacetic acid	1.5 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1082	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1083	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1084	HAA-ICR Dibromoacetic acid	3.6 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1085	HAA-ICR Dichloroacetic acid	1.7 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1086	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1087	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1088	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
1089	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1090	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1091	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1092	pH pH	8.8 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
1093	TEMP Cl2 Temperature	25.5 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
1094	TEMP Temperature	22.1 °C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
1095	TIME Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
1096	TOC-ICR TOC	1.34 mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
1097	TOC-ICR TOC (Dupl)	1.39 mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
		1.37 mg/L	3.6 % RPD						
1098	TOX-ICR TOX	28 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190
1099	TOX-ICR TOX (Dupl)	32 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190
		30 µg Cl-/L	13.3 % RPD						
1100	THM-ICR 1,2,3-Trichloropropane (Surrogate)	100.8 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1101	THM-ICR Bromodichloromethane	3.6 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1102	THM-ICR Bromoform	11.1 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1103	THM-ICR Chloroform	1.3 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1104	THM-ICR Dibromochloromethane	9.2 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1105	UV-ICR UV	0.014 1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261
1106	UV-ICR UV (Dupl)	0.014 1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261
		0.014 1/cm	0.0 % RPD						

Sample ID: 128.15.Eff-7

S&H ID: 9808-107

Date Sampled: 8/7/98 12:55:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1107	Cl2Dose Chlorine Dose	2.26 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
1108	Cl2Res Chlorine Residual	0.78 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
1109	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	89.6 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1110	HAA-ICR 2-Bromopropionic acid (Surrogate)	100.0 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1111	HAA-ICR Bromochloroacetic acid	1.8 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1112	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1113	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1114	HAA-ICR Dibromoacetic acid	4.0 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1115	HAA-ICR Dichloroacetic acid	2.9 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1116	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1117	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1118	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
1119	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1120	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1121	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1122	pH pH	8.5 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
1123	TEMP Cl2 Temperature	25.5 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
1124	TEMP Temperature	22.6 °C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
1125	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
1126	TOC-ICR TOC	1.58 mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
1127	TOC-ICR TOC (Dupl)	1.62 mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
		1.60 mg/L	2.5 % RPD						
1128	TOX-ICR TOX	34 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/17/98	12-0-191
1129	TOX-ICR TOX (Dupl)	36 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/17/98	12-0-191
		35 µg Cl-/L	5.7 % RPD						
1130	THM-ICR 1,2,3-Trichloropropane (Surrogate)	99.6 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1131	THM-ICR Bromodichloromethane	4.7 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1132	THM-ICR Bromoform	11.5 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1133	THM-ICR Chloroform	1.4 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1134	THM-ICR Dibromochloromethane	11.5 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1135	UV-ICR UV	0.017 1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261
1136	UV-ICR UV (Dupl)	0.017 1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261
		0.017 1/cm	0.0 % RPD						

Sample ID: 128.15.Eff-9

S&H ID: 9808-109

Date Sampled: 8/7/98 9:08:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1137	Cl2Dose Chlorine Dose	2.31 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
1138	Cl2Res Chlorine Residual	0.73 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
1139	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	92.8 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1140	HAA-ICR 2-Bromopropionic acid (Surrogate)	102.4 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1141	HAA-ICR Bromochloroacetic acid	2.4 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1142	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1143	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1144	HAA-ICR Dibromoacetic acid	4.9 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1145	HAA-ICR Dichloroacetic acid	6.6 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1146	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1147	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1148	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
1149	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1150	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1151	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1152	pH pH	8.7 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
1153	TEMP Cl2 Temperature	25.5 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
1154	TEMP Temperature	23.0 °C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
1155	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
1156	TOC-ICR TOC	1.80 mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
1157	TOC-ICR TOC (Dupl)	1.80 mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
		1.80 mg/L	0.0 % RPD						
1158	TOX-ICR TOX	50 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190
1159	TOX-ICR TOX (Dupl)	49 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190
		50 µg Cl-/L	2.0 % RPD						
1160	THM-ICR 1,2,3-Trichloropropane (Surrogate)	95.6 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1161	THM-ICR Bromodichloromethane	6.4 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1162	THM-ICR Bromoform	13.1 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1163	THM-ICR Chloroform	2.2 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1164	THM-ICR Dibromochloromethane	13.6 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1165	UV-ICR	UV	0.021	1/cm	SM 5910 B	1	0.009	8/7/98	8/8/98	8-0-254
1166	UV-ICR	UV (Dupl)	0.021	1/cm	SM 5910 B	1	0.009	8/7/98	8/8/98	8-0-254
			0.021	1/cm	0.0 % RPD					

Sample ID: 128.15.Eff-12

S&H ID: 9808-112

Date Sampled: 8/8/98 9:23:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1167	Cl2Dose	Chlorine Dose	2.36	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
1168	Cl2Res	Chlorine Residual	0.71	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
1169	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	90.8	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1170	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.8	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1171	HAA-ICR	Bromochloroacetic acid	3.2	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1172	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1173	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1174	HAA-ICR	Dibromoacetic acid	5.2	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1175	HAA-ICR	Dichloroacetic acid	7.5	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1176	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1177	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1178	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
1179	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1180	pH	Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1181	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1182	pH	pH	8.7	Unit	SM 4500-H+ B	1	n/a	8/8/98		8/8/98	n/a
1183	TEMP	Cl2 Temperature	25.5	°C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
1184	TEMP	Temperature	22.0	°C	SM 2550 B	1	n/a	8/8/98		8/8/98	n/a
1185	TIME	Cl2 Incubation Time	6.1	hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
1186	TOC-ICR	TOC	2.00	mg/L	SM 5310 C	1	0.50	8/8/98		8/8/98	7-0-366
1187	TOC-ICR	TOC (Dupl)	1.99	mg/L	SM 5310 C	1	0.50	8/8/98		8/8/98	7-0-366
			2.00	mg/L	0.5 % RPD						
1188	TOX-ICR	TOX	62	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190
1189	TOX-ICR	TOX (Dupl)	66	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190
			64	µg Cl-/L	6.3 % RPD						
1190	THM-ICR	1,2,3-Trichloropropane (Surrogate)	103.6	%	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1191	THM-ICR	Bromodichloromethane	9.9	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1192	THM-ICR	Bromoform	15.4	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1193	THM-ICR	Chloroform	3.6	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1194	THM-ICR	Dibromochloromethane	18.3	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1195	UV-ICR	UV	0.025	1/cm	SM 5910 B	1	0.009	8/8/98		8/8/98	8-0-254
1196	UV-ICR	UV (Dupl)	0.025	1/cm	SM 5910 B	1	0.009	8/8/98		8/8/98	8-0-254

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

0.025 1/cm

0.0 % RPD

Sample ID: 128.15.Eff-14

S&H ID: 9808-114

Date Sampled: 8/8/98 5:46:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1197	Cl2Dose	Chlorine Dose	2.49	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/11/98		8/11/98	n/a
1198	Cl2Res	Chlorine Residual	0.74	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/11/98		8/11/98	n/a
1199	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	98.0	%	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1200	HAA-ICR	2-Bromopropionic acid (Surrogate)	99.2	%	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1201	HAA-ICR	Bromochloroacetic acid	4.1	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1202	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1203	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/25/98	0-198-0
1204	HAA-ICR	Dibromoacetic acid	5.9	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1205	HAA-ICR	Dichloroacetic acid	8.0	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1206	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1207	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/25/98	0-198-0
1208	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/11/98	8/24/98	8/25/98	0-198-0
1209	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1210	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
1211	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
1212	pH	pH	8.7	Unit	SM 4500-H+ B	1	n/a	8/8/98		8/8/98	n/a
1213	TEMP	Cl2 Temperature	25.4	°C	SM 2550 B	1	n/a	8/11/98		8/11/98	n/a
1214	TEMP	Temperature	23.6	°C	SM 2550 B	1	n/a	8/8/98		8/8/98	n/a
1215	TIME	Cl2 Incubation Time	5.8	hrs	n/a	1	n/a	8/11/98		8/11/98	n/a
1216	TOC-ICR	TOC	2.23	mg/L	SM 5310 C	1	0.50	8/8/98		8/9/98	7-0-366
1217	TOC-ICR	TOC (Dupl)	2.24	mg/L	SM 5310 C	1	0.50	8/8/98		8/9/98	7-0-366
			2.24	mg/L	0.4 % RPD						
1218	TOX-ICR	TOX	74	µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
1219	TOX-ICR	TOX (Dupl)	73	µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
			74	µg Cl-/L	1.4 % RPD						
1220	THM-ICR	1,2,3-Trichloropropane (Surrogate)	91.2	%	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
1221	THM-ICR	Bromodichloromethane	10.3	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
1222	THM-ICR	Bromoform	11.4	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
1223	THM-ICR	Chloroform	4.0	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
1224	THM-ICR	Dibromochloromethane	17.7	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
1225	UV-ICR	UV	0.029	1/cm	SM 5910 B	1	0.009	8/8/98		8/9/98	8-0-255
1226	UV-ICR	UV (Dupl)	0.029	1/cm	SM 5910 B	1	0.009	8/8/98		8/9/98	8-0-255
			0.029	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.15.Eff-17

S&H ID: 9808-117

Date Sampled: 8/9/98 6:32:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1227	Cl2Dose	Chlorine Dose	2.62	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/11/98		8/11/98	n/a
1228	Cl2Res	Chlorine Residual	0.64	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/11/98		8/11/98	n/a
1229	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	97.6	%	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1230	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.0	%	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1231	HAA-ICR	Bromochloroacetic acid	4.2	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1232	HAA-ICR	Bromodichloroacetic acid	1.1	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1233	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/25/98	0-198-0
1234	HAA-ICR	Dibromoacetic acid	4.7	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1235	HAA-ICR	Dichloroacetic acid	7.4	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1236	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1237	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/25/98	0-198-0
1238	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/11/98	8/24/98	8/25/98	0-198-0
1239	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1240	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
1241	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
1242	pH	pH	8.6	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1243	TEMP	Cl2 Temperature	25.4	°C	SM 2550 B	1	n/a	8/11/98		8/11/98	n/a
1244	TEMP	Temperature	23.0	°C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
1245	TIME	Cl2 Incubation Time	5.8	hrs	n/a	1	n/a	8/11/98		8/11/98	n/a
1246	TOC-ICR	TOC	2.58	mg/L	SM 5310 C	1	0.50	8/9/98		8/9/98	7-0-368
1247	TOC-ICR	TOC (Dupl)	2.57	mg/L	SM 5310 C	1	0.50	8/9/98		8/9/98	7-0-368
			2.58	mg/L	0.4 % RPD						
1248	TOX-ICR	TOX	92	µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
1249	TOX-ICR	TOX (Dupl)	94	µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
			93	µg Cl-/L	2.2 % RPD						
1250	THM-ICR	1,2,3-Trichloropropane (Surrogate)	94.0	%	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
1251	THM-ICR	Bromodichloromethane	13.5	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
1252	THM-ICR	Bromoform	10.7	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
1253	THM-ICR	Chloroform	6.1	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
1254	THM-ICR	Dibromochloromethane	19.5	µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/20/98	0-197-0
1255	UV-ICR	UV	0.036	1/cm	SM 5910 B	1	0.009	8/9/98		8/10/98	8-0-257
1256	UV-ICR	UV (Dupl)	0.037	1/cm	SM 5910 B	1	0.009	8/9/98		8/10/98	8-0-257
			0.036	1/cm	2.8 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.15.Eff-19			S&H ID: 9808-119		Date Sampled: 8/10/98 7:18:00 PM						
#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1257	Cl2Dose	Chlorine Dose	2.73	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/13/98		8/13/98	n/a
1258	Cl2Res	Chlorine Residual	0.68	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/13/98		8/13/98	n/a
1259	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	104.4	%	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1260	HAA-ICR	2-Bromopropionic acid (Surrogate)	98.8	%	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1261	HAA-ICR	Bromochloroacetic acid	5.4	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1262	HAA-ICR	Bromodichloroacetic acid	1.3	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1263	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/13/98	8/24/98	8/25/98	0-198-0
1264	HAA-ICR	Dibromoacetic acid	5.2	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1265	HAA-ICR	Dichloroacetic acid	8.4	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1266	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1267	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/13/98	8/24/98	8/25/98	0-198-0
1268	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/13/98	8/24/98	8/25/98	0-198-0
1269	HAA-ICR	Trichloroacetic acid	1.2	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1270	pH	Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
1271	pH	Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
1272	pH	pH	8.4	Unit	SM 4500-H+ B	1	n/a	8/10/98		8/10/98	n/a
1273	TEMP	Cl2 Temperature	25.3	°C	SM 2550 B	1	n/a	8/13/98		8/13/98	n/a
1274	TEMP	Temperature	23.4	°C	SM 2550 B	1	n/a	8/10/98		8/10/98	n/a
1275	TIME	Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	8/13/98		8/13/98	n/a
1276	TOC-ICR	TOC	2.87	mg/L	SM 5310 C	1	0.50	8/10/98		8/12/98	7-0-371
1277	TOC-ICR	TOC (Dupl)	2.90	mg/L	SM 5310 C	1	0.50	8/10/98		8/12/98	7-0-371
			2.88	mg/L	1.0 % RPD						
1278	TOX-ICR	TOX	108	µg Cl-/L	SM 5320 B	1	25	8/13/98		8/20/98	12-0-194
1279	TOX-ICR	TOX (Dupl)	110	µg Cl-/L	SM 5320 B	1	25	8/13/98		8/20/98	12-0-194
			109	µg Cl-/L	1.8 % RPD						
1280	THM-ICR	1,2,3-Trichloropropane (Surrogate)	102.0	%	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1281	THM-ICR	Bromodichloromethane	19.3	µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1282	THM-ICR	Bromoform	10.1	µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1283	THM-ICR	Chloroform	10.9	µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1284	THM-ICR	Dibromochloromethane	24.0	µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1285	UV-ICR	UV	0.045	1/cm	SM 5910 B	1	0.009	8/10/98		8/11/98	8-0-262
1286	UV-ICR	UV (Dupl)	0.045	1/cm	SM 5910 B	1	0.009	8/10/98		8/11/98	8-0-262
			0.045	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.15.Eff-21		S&H ID: 9808-121		Date Sampled: 8/12/98 12:36:00 AM						
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1287	Cl2Dose Chlorine Dose	2.89	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/13/98		8/13/98	n/a
1288	Cl2Res Chlorine Residual	0.75	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/13/98		8/13/98	n/a
1289	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	98.0	%	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1290	HAA-ICR 2-Bromopropionic acid (Surrogate)	95.2	%	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1291	HAA-ICR Bromochloroacetic acid	5.9	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1292	HAA-ICR Bromodichloroacetic acid	1.4	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1293	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/13/98	8/24/98	8/25/98	0-198-0
1294	HAA-ICR Dibromoacetic acid	5.3	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1295	HAA-ICR Dichloroacetic acid	9.0	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1296	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1297	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/13/98	8/24/98	8/25/98	0-198-0
1298	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/13/98	8/24/98	8/25/98	0-198-0
1299	HAA-ICR Trichloroacetic acid	1.4	µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1300	pH Cl2 pH - Final	9.0	Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
1301	pH Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
1302	pH pH	8.8	Unit	SM 4500-H+ B	1	n/a	8/12/98		8/12/98	n/a
1303	TEMP Cl2 Temperature	25.3	°C	SM 2550 B	1	n/a	8/13/98		8/13/98	n/a
1304	TEMP Temperature	22.4	°C	SM 2550 B	1	n/a	8/12/98		8/12/98	n/a
1305	TIME Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	8/13/98		8/13/98	n/a
1306	TOC-ICR TOC	3.31	mg/L	SM 5310 C	1	0.50	8/12/98		8/12/98	7-0-371
1307	TOC-ICR TOC (Dupl)	3.32	mg/L	SM 5310 C	1	0.50	8/12/98		8/12/98	7-0-371
		3.31	mg/L	0.3 % RPD						
1308	TOX-ICR TOX	125	µg Cl-/L	SM 5320 B	1	25	8/13/98		8/20/98	12-0-194
1309	TOX-ICR TOX (Dupl)	124	µg Cl-/L	SM 5320 B	1	25	8/13/98		8/20/98	12-0-194
		125	µg Cl-/L	0.8 % RPD						
1310	THM-ICR 1,2,3-Trichloropropane (Surrogate)	96.4	%	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1311	THM-ICR Bromodichloromethane	21.2	µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1312	THM-ICR Bromoform	8.2	µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1313	THM-ICR Chloroform	13.6	µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1314	THM-ICR Dibromochloromethane	23.9	µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1315	UV-ICR UV	0.051	1/cm	SM 5910 B	1	0.009	8/12/98		8/12/98	8-0-263
1316	UV-ICR UV (Dupl)	0.051	1/cm	SM 5910 B	1	0.009	8/12/98		8/12/98	8-0-263
		0.051	1/cm	0.0 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

Sample ID: 128.15.Eff-22		S&H ID: 9808-122		Date Sampled: 8/13/98 12:37:00 PM						
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1317	pH pH	8.2	Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
1318	TEMP Temperature	22.4	°C	SM 2550 B	1	n/a	8/13/98		8/13/98	n/a
1319	TOC-ICR TOC	3.49	mg/L	SM 5310 C	1	0.50	8/13/98		8/13/98	7-0-373
1320	TOC-ICR TOC (Dupl)	3.46	mg/L	SM 5310 C	1	0.50	8/13/98		8/13/98	7-0-373
		3.48	mg/L	0.9 % RPD						
1321	UV-ICR UV	0.058	1/cm	SM 5910 B	1	0.009	8/13/98		8/14/98	8-0-265
1322	UV-ICR UV (Dupl)	0.057	1/cm	SM 5910 B	1	0.009	8/13/98		8/14/98	8-0-265
		0.058	1/cm	1.7 % RPD						

Sample ID: 128.15.Eff-6d		S&H ID: 9808-131		Date Sampled: 8/7/98 8:47:00 AM						
#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1323	Cl2Dose Chlorine Dose	2.19	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
1324	Cl2Res Chlorine Residual	0.76	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
1325	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	90.4	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1326	HAA-ICR 2-Bromopropionic acid (Surrogate)	97.2	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1327	HAA-ICR Bromochloroacetic acid	1.3	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1328	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1329	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1330	HAA-ICR Dibromoacetic acid	2.6	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1331	HAA-ICR Dichloroacetic acid	1.4	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1332	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1333	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1334	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
1335	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1336	pH Cl2 pH - Final	9.1	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1337	pH Cl2 pH - Initial	9.1	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1338	pH pH	8.7	Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
1339	TEMP Cl2 Temperature	25.5	°C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
1340	TEMP Temperature	22.1	°C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
1341	TIME Cl2 Incubation Time	6.0	hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
1342	TOC-ICR TOC	1.36	mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
1343	TOC-ICR TOC (Dupl)	1.36	mg/L	SM 5310 C	1	0.50	8/7/98		8/8/98	7-0-366
		1.36	mg/L	0.0 % RPD						
1344	TOX-ICR TOX	31	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
1345	TOX-ICR TOX (Dupl)	32	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
		32	µg Cl-/L	3.1 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1346	THM-ICR 1,2,3-Trichloropropane (Surrogate)	93.6 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1347	THM-ICR Bromodichloromethane	3.5 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1348	THM-ICR Bromoform	10.8 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1349	THM-ICR Chloroform	1.1 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1350	THM-ICR Dibromochloromethane	9.2 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1351	UV-ICR UV	0.014 1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261
1352	UV-ICR UV (Dupl)	0.014 1/cm	SM 5910 B	1	0.009	8/7/98		8/7/98	8-0-261
		0.014 1/cm	0.0 % RPD						

Sample ID: 128.15.Eff-12d

S&H ID: 9808-133

Date Sampled: 8/8/98 9:23:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1353	Cl2Dose Chlorine Dose	2.36 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
1354	Cl2Res Chlorine Residual	0.66 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
1355	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	91.2 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1356	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.4 %	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1357	HAA-ICR Bromochloroacetic acid	2.6 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1358	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1359	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1360	HAA-ICR Dibromoacetic acid	4.0 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1361	HAA-ICR Dichloroacetic acid	6.7 µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1362	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1363	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1364	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
1365	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1366	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1367	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1368	pH pH	8.8 Unit	SM 4500-H+ B	1	n/a	8/8/98		8/8/98	n/a
1369	TEMP Cl2 Temperature	25.5 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
1370	TEMP Temperature	22.0 °C	SM 2550 B	1	n/a	8/8/98		8/8/98	n/a
1371	TIME Cl2 Incubation Time	6.1 hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
1372	TOC-ICR TOC	1.98 mg/L	SM 5310 C	1	0.50	8/8/98		8/9/98	7-0-366
1373	TOC-ICR TOC (Dupl)	2.00 mg/L	SM 5310 C	1	0.50	8/8/98		8/9/98	7-0-366
		1.99 mg/L	1.0 % RPD						
1374	TOX-ICR TOX	63 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190
1375	TOX-ICR TOX (Dupl)	63 µg Cl-/L	SM 5320 B	1	25	8/9/98		8/14/98	12-0-190
		63 µg Cl-/L	0.0 % RPD						
1376	THM-ICR 1,2,3-Trichloropropane (Surrogate)	95.6 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1377	THM-ICR Bromodichloromethane	8.3 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1378	THM-ICR Bromoform	13.5 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1379	THM-ICR Chloroform	3.0 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1380	THM-ICR Dibromochloromethane	16.6 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/19/98	0-195-0
1381	UV-ICR UV	0.025 1/cm	SM 5910 B	1	0.009	8/8/98		8/8/98	8-0-254
1382	UV-ICR UV (Dupl)	0.025 1/cm	SM 5910 B	1	0.009	8/8/98		8/8/98	8-0-254
		0.025 1/cm	0.0 % RPD						

Sample ID: 128.15.Eff-17d

S&H ID: 9808-135

Date Sampled: 8/9/98 6:32:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1383	Cl2Dose Chlorine Dose	2.62 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/11/98		8/11/98	n/a
1384	Cl2Res Chlorine Residual	0.65 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/11/98		8/11/98	n/a
1385	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	96.0 %	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1386	HAA-ICR 2-Bromopropionic acid (Surrogate)	99.2 %	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1387	HAA-ICR Bromochloroacetic acid	4.8 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1388	HAA-ICR Bromodichloroacetic acid	1.3 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1389	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/25/98	0-198-0
1390	HAA-ICR Dibromoacetic acid	5.6 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1391	HAA-ICR Dichloroacetic acid	7.9 µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1392	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1393	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/11/98	8/24/98	8/25/98	0-198-0
1394	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/11/98	8/24/98	8/25/98	0-198-0
1395	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/11/98	8/24/98	8/25/98	0-198-0
1396	pH Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
1397	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/11/98		8/11/98	n/a
1398	pH pH	8.6 Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1399	TEMP Cl2 Temperature	25.4 °C	SM 2550 B	1	n/a	8/11/98		8/11/98	n/a
1400	TEMP Temperature	23.0 °C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
1401	TIME Cl2 Incubation Time	5.8 hrs	n/a	1	n/a	8/11/98		8/11/98	n/a
1402	TOC-ICR TOC	2.61 mg/L	SM 5310 C	1	0.50	8/9/98		8/9/98	7-0-368
1403	TOC-ICR TOC (Dupl)	2.62 mg/L	SM 5310 C	1	0.50	8/9/98		8/9/98	7-0-368
		2.62 mg/L	0.4 % RPD						
1404	TOX-ICR TOX	90 µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
1405	TOX-ICR TOX (Dupl)	93 µg Cl-/L	SM 5320 B	1	25	8/11/98		8/19/98	12-0-193
		92 µg Cl-/L	3.3 % RPD						
1406	THM-ICR 1,2,3-Trichloropropane (Surrogate)	102.4 %	EPA 551.1	1	1.0	8/11/98	8/20/98	8/21/98	0-197-0
1407	THM-ICR Bromodichloromethane	13.5 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/21/98	0-197-0
1408	THM-ICR Bromoform	10.4 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/21/98	0-197-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1409	THM-ICR Chloroform	5.7 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/21/98	0-197-0
1410	THM-ICR Dibromochloromethane	19.1 µg/L	EPA 551.1	1	1.0	8/11/98	8/20/98	8/21/98	0-197-0
1411	UV-ICR UV	0.037 1/cm	SM 5910 B	1	0.009	8/9/98		8/10/98	8-0-257
1412	UV-ICR UV (Dupl)	0.037 1/cm	SM 5910 B	1	0.009	8/9/98		8/10/98	8-0-257
		0.037 1/cm	0.0 % RPD						

Sample ID: 128.Inf.A-1 S&H ID: 9808-141 Date Sampled: 8/5/98 10:55:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1413	ALK	Alkalinity	25	mg/L	SM 2320 B	1	5	8/5/98		8/5/98	1-0-30
1414	ALK	Alkalinity (Dupl)	24	mg/L	SM 2320 B	1	5	8/5/98		8/5/98	1-0-30
			25	mg/L	4.0 % RPD						
1415	NH3	Ammonia Nitrogen	0.20	mg/L	EPA 350.1	1	0.05	8/5/98		8/21/98	MW82778
1416	BR	Bromide	0.100	mg/L	EPA 300.0 A	1	0.020	8/5/98		8/17/98	MW82568
1417	CaHardM	Calcium Hardness	40	mg/L CaCO3	EPA 200.7	1	5	8/5/98		8/24/98	MW n/a
1418	CaMW	Calcium, Total, ICAP	16	mg/L	EPA 200.7	1	1	8/5/98	8/24/98	8/24/98	MW82867
1419	MgMW	Magnesium, Total, ICAP	4	mg/L	EPA 200.7	1	0	8/5/98	8/24/98	8/24/98	MW82947
1420	TotHard	Total Hardness as CaCO3 by ICP	56	mg/L CaCO3	SM 2340B	1	7	8/5/98		8/24/98	MW n/a

Sample ID: 128.Inf.A-2 S&H ID: 9808-142 Date Sampled: 8/10/98 10:40:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1421	ALK	Alkalinity	20	mg/L	SM 2320 B	1	5	8/10/98		8/10/98	1-0-30
1422	ALK	Alkalinity (Dupl)	20	mg/L	SM 2320 B	1	5	8/10/98		8/10/98	1-0-30
			20	mg/L	0.0 % RPD						
1423	NH3	Ammonia Nitrogen	0.11	mg/L	EPA 350.1	1	0.05	8/10/98		8/21/98	MW82778
1424	BR	Bromide	0.130	mg/L	EPA 300.0 A	1	0.020	8/10/98		8/17/98	MW82568
1425	CaHardM	Calcium Hardness	37	mg/L CaCO3	EPA 200.7	1	5	8/10/98		8/17/98	MW n/a
1426	CaMW	Calcium, Total, ICAP	15	mg/L	EPA 200.7	1	1	8/10/98	8/17/98	8/17/98	MW82482
1427	MgMW	Magnesium, Total, ICAP	3	mg/L	EPA 200.7	1	0	8/10/98	8/17/98	8/17/98	MW82490
1428	TotHard	Total Hardness as CaCO3 by ICP	51	mg/L CaCO3	SM 2340B	1	7	8/10/98		8/17/98	MW n/a

Sample ID: 128.Inf.B-1 S&H ID: 9808-143 Date Sampled: 8/5/98 11:00:00 AM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1429	Cl2Dose	Chlorine Dose	3.60	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/7/98		8/7/98	n/a
1430	Cl2Res	Chlorine Residual	0.81	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/7/98		8/7/98	n/a
1431	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	104.0	%	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1432	HAA-ICR	2-Bromopropionic acid (Surrogate)	86.8 %	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
1433	HAA-ICR	Bromochloroacetic acid	6.8 µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
1434	HAA-ICR	Bromodichloroacetic acid	2.5 µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
1435	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98	0-194-0
1436	HAA-ICR	Dibromoacetic acid	3.6 µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
1437	HAA-ICR	Dichloroacetic acid	12.9 µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
1438	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
1439	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/13/98	8/14/98	0-194-0
1440	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/7/98	8/13/98	8/14/98	0-194-0
1441	HAA-ICR	Trichloroacetic acid	3.4 µg/L	EPA 552.2	1	1.0	8/7/98	8/13/98	8/14/98	0-194-0
1442	pH	Cl2 pH - Final	9.1 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
1443	pH	Cl2 pH - Initial	9.0 Unit	SM 4500-H+ B	1	n/a	8/7/98		8/7/98	n/a
1444	pH	pH	9.4 Unit	SM 4500-H+ B	1	n/a	8/5/98		8/5/98	n/a
1445	TEMP	Cl2 Temperature	25.1 °C	SM 2550 B	1	n/a	8/7/98		8/7/98	n/a
1446	TEMP	Temperature	20.5 °C	SM 2550 B	1	n/a	8/5/98		8/5/98	n/a
1447	TIME	Cl2 Incubation Time	5.9 hrs	n/a	1	n/a	8/7/98		8/7/98	n/a
1448	TOC-ICR	TOC	4.56 mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362
1449	TOC-ICR	TOC (Dupl)	4.56 mg/L	SM 5310 C	1	0.50	8/5/98		8/6/98	7-0-362
			4.56 mg/L	0.0 % RPD						
1450	TOX-ICR	TOX	221 µg Cl-/L	SM 5320 B	1	25	8/7/98		8/11/98	12-0-187
1451	TOX-ICR	TOX (Dupl)	236 µg Cl-/L	SM 5320 B	1	25	8/7/98		8/11/98	12-0-187
			229 µg Cl-/L	6.6 % RPD						
1452	THM-ICR	1,2,3-Trichloropropane (Surrogate)	100.8 %	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
1453	THM-ICR	Bromodichloromethane	23.2 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
1454	THM-ICR	Bromoform	3.2 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
1455	THM-ICR	Chloroform	27.3 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
1456	THM-ICR	Dibromochloromethane	15.6 µg/L	EPA 551.1	1	1.0	8/7/98	8/11/98	8/11/98	0-193-0
1457	TURB	Turbidity	0.10 ntu	SM 2130 B	1	0.05	8/5/98		8/5/98	9-0-15
1458	UV-ICR	UV	0.093 1/cm	SM 5910 B	1	0.009	8/5/98		8/6/98	8-0-258
1459	UV-ICR	UV (Dupl)	0.093 1/cm	SM 5910 B	1	0.009	8/5/98		8/6/98	8-0-258
			0.093 1/cm	0.0 % RPD						

Sample ID: 128.Inf.B-2

S&H ID: 9808-144

Date Sampled: 8/8/98 6:30:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1460	pH	pH	9.2	Unit	SM 4500-H+ B	1	n/a	8/8/98		8/8/98	n/a
1461	TEMP	Temperature	16.1	°C	SM 2550 B	1	n/a	8/8/98		8/8/98	n/a
1462	TOC-ICR	TOC	4.53	mg/L	SM 5310 C	1	0.50	8/8/98		8/10/98	7-0-368
1463	TOC-ICR	TOC (Dupl)	4.53	mg/L	SM 5310 C	1	0.50	8/8/98		8/10/98	7-0-368

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

4.53 mg/L 0.0 % RPD

Sample ID: 128.Inf.B-3 S&H ID: 9808-145 Date Sampled: 8/8/98 6:45:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1464	pH	pH	9.2	Unit	SM 4500-H+ B	1	n/a	8/8/98		8/8/98	n/a
1465	TEMP	Temperature	18.7	°C	SM 2550 B	1	n/a	8/8/98		8/8/98	n/a
1466	TOC-ICR	TOC	4.50	mg/L	SM 5310 C	1	0.50	8/8/98		8/10/98	7-0-368
1467	TOC-ICR	TOC (Dupl)	4.49	mg/L	SM 5310 C	1	0.50	8/8/98		8/10/98	7-0-368
			4.50	mg/L	0.2 % RPD						

Sample ID: 128.Inf.B-4 S&H ID: 9808-146 Date Sampled: 8/8/98 8:30:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1468	Cl2Dose	Chlorine Dose	3.55	mg/L as Cl2	SM 4500-Cl B	1	n/a	8/9/98		8/9/98	n/a
1469	Cl2Res	Chlorine Residual	0.65	mg/L as Cl2	SM 4500-Cl F	1	0.10	8/9/98		8/9/98	n/a
1470	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	92.8	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1471	HAA-ICR	2-Bromopropionic acid (Surrogate)	100.0	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1472	HAA-ICR	Bromochloroacetic acid	7.0	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1473	HAA-ICR	Bromodichloroacetic acid	2.5	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1474	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1475	HAA-ICR	Dibromoacetic acid	3.6	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1476	HAA-ICR	Dichloroacetic acid	13.0	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1477	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1478	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1479	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
1480	HAA-ICR	Trichloroacetic acid	3.5	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1481	pH	Cl2 pH - Final	9.2	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1482	pH	Cl2 pH - Initial	9.2	Unit	SM 4500-H+ B	1	n/a	8/9/98		8/9/98	n/a
1483	pH	pH	9.3	Unit	SM 4500-H+ B	1	n/a	8/8/98		8/8/98	n/a
1484	TEMP	Cl2 Temperature	25.3	°C	SM 2550 B	1	n/a	8/9/98		8/9/98	n/a
1485	TEMP	Temperature	16.8	°C	SM 2550 B	1	n/a	8/8/98		8/8/98	n/a
1486	TIME	Cl2 Incubation Time	6.1	hrs	n/a	1	n/a	8/9/98		8/9/98	n/a
1487	TOC-ICR	TOC	4.51	mg/L	SM 5310 C	1	0.50	8/8/98		8/10/98	7-0-368
1488	TOC-ICR	TOC (Dupl)	4.46	mg/L	SM 5310 C	1	0.50	8/8/98		8/10/98	7-0-368
			4.48	mg/L	1.1 % RPD						
1489	TOX-ICR	TOX	231	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
1490	TOX-ICR	TOX (Dupl)	221	µg Cl-/L	SM 5320 B	1	25	8/9/98		8/13/98	12-0-189
			226	µg Cl-/L	4.4 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1491	THM-ICR 1,2,3-Trichloropropane (Surrogate)	93.2 %	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
1492	THM-ICR Bromodichloromethane	26.4 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
1493	THM-ICR Bromoform	3.6 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
1494	THM-ICR Chloroform	35.3 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
1495	THM-ICR Dibromochloromethane	17.7 µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
1496	TURB Turbidity	0.15 ntu	SM 2130 B	1	0.05	8/8/98		8/8/98	9-0-15
1497	UV-ICR UV	0.094 1/cm	SM 5910 B	1	0.009	8/8/98		8/9/98	8-0-255
1498	UV-ICR UV (Dupl)	0.094 1/cm	SM 5910 B	1	0.009	8/8/98		8/9/98	8-0-255
		0.094 1/cm	0.0 % RPD						

Sample ID: 128.Inf.B-5

S&H ID: 9808-147

Date Sampled: 8/12/98 11:10:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1499	Cl2Dose Chlorine Dose	3.65 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/13/98		8/13/98	n/a
1500	Cl2Res Chlorine Residual	0.77 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/13/98		8/13/98	n/a
1501	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	100.8 %	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1502	HAA-ICR 2-Bromopropionic acid (Surrogate)	110.0 %	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1503	HAA-ICR Bromochloroacetic acid	7.3 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1504	HAA-ICR Bromodichloroacetic acid	2.1 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1505	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/13/98	8/24/98	8/25/98	0-198-0
1506	HAA-ICR Dibromoacetic acid	3.9 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1507	HAA-ICR Dichloroacetic acid	12.4 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1508	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1509	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/13/98	8/24/98	8/25/98	0-198-0
1510	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/13/98	8/24/98	8/25/98	0-198-0
1511	HAA-ICR Trichloroacetic acid	3.0 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1512	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
1513	pH Cl2 pH - Initial	9.1 Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
1514	pH pH	9.0 Unit	SM 4500-H+ B	1	n/a	8/12/98		8/12/98	n/a
1515	TEMP Cl2 Temperature	25.3 °C	SM 2550 B	1	n/a	8/13/98		8/13/98	n/a
1516	TEMP Temperature	19.4 °C	SM 2550 B	1	n/a	8/12/98		8/12/98	n/a
1517	TIME Cl2 Incubation Time	5.9 hrs	n/a	1	n/a	8/13/98		8/13/98	n/a
1518	TOC-ICR TOC	4.61 mg/L	SM 5310 C	1	0.50	8/12/98		8/13/98	7-0-371
1519	TOC-ICR TOC (Dupl)	4.64 mg/L	SM 5310 C	1	0.50	8/12/98		8/13/98	7-0-371
		4.63 mg/L	0.6 % RPD						
1520	TOX-ICR TOX	220 µg Cl-/L	SM 5320 B	1	25	8/13/98		8/20/98	12-0-194
1521	TOX-ICR TOX (Dupl)	218 µg Cl-/L	SM 5320 B	1	25	8/13/98		8/20/98	12-0-194
		219 µg Cl-/L	0.9 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1522	THM-ICR 1,2,3-Trichloropropane (Surrogate)	95.2 %	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1523	THM-ICR Bromodichloromethane	28.9 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1524	THM-ICR Bromoform	3.6 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1525	THM-ICR Chloroform	34.6 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1526	THM-ICR Dibromochloromethane	20.3 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1527	TURB Turbidity	0.15 ntu	SM 2130 B	1	0.05	8/12/98		8/12/98	9-0-15
1528	UV-ICR UV	0.094 1/cm	SM 5910 B	1	0.009	8/12/98		8/12/98	8-0-263
1529	UV-ICR UV (Dupl)	0.094 1/cm	SM 5910 B	1	0.009	8/12/98		8/12/98	8-0-263
		0.094 1/cm	0.0 % RPD						

Sample ID: 128.Inf.B-6

S&H ID: 9808-148

Date Sampled: 8/13/98 10:15:00 AM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1530	Cl2Dose Chlorine Dose	3.65 mg/L as Cl2	SM 4500-Cl B	1	n/a	8/13/98		8/13/98	n/a
1531	Cl2Res Chlorine Residual	0.75 mg/L as Cl2	SM 4500-Cl F	1	0.10	8/13/98		8/13/98	n/a
1532	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	106.0 %	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1533	HAA-ICR 2-Bromopropionic acid (Surrogate)	95.6 %	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1534	HAA-ICR Bromochloroacetic acid	7.0 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1535	HAA-ICR Bromodichloroacetic acid	2.0 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1536	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/13/98	8/24/98	8/25/98	0-198-0
1537	HAA-ICR Dibromoacetic acid	3.7 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1538	HAA-ICR Dichloroacetic acid	12.0 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1539	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1540	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/13/98	8/24/98	8/25/98	0-198-0
1541	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/13/98	8/24/98	8/25/98	0-198-0
1542	HAA-ICR Trichloroacetic acid	2.7 µg/L	EPA 552.2	1	1.0	8/13/98	8/24/98	8/25/98	0-198-0
1543	pH Cl2 pH - Final	9.0 Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
1544	pH Cl2 pH - Initial	9.2 Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
1545	pH pH	9.3 Unit	SM 4500-H+ B	1	n/a	8/13/98		8/13/98	n/a
1546	TEMP Cl2 Temperature	25.3 °C	SM 2550 B	1	n/a	8/13/98		8/13/98	n/a
1547	TEMP Temperature	18.2 °C	SM 2550 B	1	n/a	8/13/98		8/13/98	n/a
1548	TIME Cl2 Incubation Time	6.0 hrs	n/a	1	n/a	8/13/98		8/13/98	n/a
1549	TOC-ICR TOC	4.55 mg/L	SM 5310 C	1	0.50	8/13/98		8/13/98	7-0-373
1550	TOC-ICR TOC (Dupl)	4.54 mg/L	SM 5310 C	1	0.50	8/13/98		8/13/98	7-0-373
		4.54 mg/L	0.2 % RPD						
1551	TOX-ICR TOX	224 µg Cl-/L	SM 5320 B	1	25	8/13/98		8/20/98	12-0-194
1552	TOX-ICR TOX (Dupl)	218 µg Cl-/L	SM 5320 B	1	25	8/13/98		8/20/98	12-0-194
		221 µg Cl-/L	2.7 % RPD						

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1553	THM-ICR 1,2,3-Trichloropropane (Surrogate)	108.0 %	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1554	THM-ICR Bromodichloromethane	33.4 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1555	THM-ICR Bromoform	4.5 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1556	THM-ICR Chloroform	39.7 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1557	THM-ICR Dibromochloromethane	23.4 µg/L	EPA 551.1	1	1.0	8/13/98	8/20/98	8/21/98	0-197-0
1558	TURB Turbidity	0.15 ntu	SM 2130 B	1	0.05	8/13/98		8/13/98	9-0-15
1559	UV-ICR UV	0.094 1/cm	SM 5910 B	1	0.009	8/13/98		8/14/98	8-0-265
1560	UV-ICR UV (Dupl)	0.094 1/cm	SM 5910 B	1	0.009	8/13/98		8/14/98	8-0-265
		0.094 1/cm	0.0 % RPD						

Sample ID: 128.12.5.Inst.Inf-1

S&H ID: 9808-169

Date Sampled: 8/6/98 1:45:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1561	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	100.0 %	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1562	HAA-ICR 2-Bromopropionic acid (Surrogate)	97.2 %	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1563	HAA-ICR Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1564	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1565	HAA-ICR Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/6/98	8/13/98	8/13/98	0-194-0
1566	HAA-ICR Dibromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1567	HAA-ICR Dichloroacetic acid	5.3 µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1568	HAA-ICR Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1569	HAA-ICR Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/6/98	8/13/98	8/13/98	0-194-0
1570	HAA-ICR Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/6/98	8/13/98	8/13/98	0-194-0
1571	HAA-ICR Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1572	THM-ICR 1,2,3-Trichloropropane (Surrogate)	103.2 %	EPA 551.1	1	1.0	8/6/98	8/11/98	8/11/98	0-193-0
1573	THM-ICR Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	8/6/98	8/11/98	8/11/98	0-193-0
1574	THM-ICR Bromoform	ND µg/L	EPA 551.1	1	1.0	8/6/98	8/11/98	8/11/98	0-193-0
1575	THM-ICR Chloroform	2.1 µg/L	EPA 551.1	1	1.0	8/6/98	8/11/98	8/11/98	0-193-0
1576	THM-ICR Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	8/6/98	8/11/98	8/11/98	0-193-0

Sample ID: 128.12.5.Inst.Eff-1

S&H ID: 9808-170

Date Sampled: 8/6/98 1:45:00 PM

#	Analysis Type	Result Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1577	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	101.2 %	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1578	HAA-ICR 2-Bromopropionic acid (Surrogate)	96.4 %	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1579	HAA-ICR Bromochloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1580	HAA-ICR Bromodichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1581	HAA-ICR	Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/6/98	8/13/98	8/13/98	0-194-0
1582	HAA-ICR	Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1583	HAA-ICR	Dichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1584	HAA-ICR	Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1585	HAA-ICR	Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/6/98	8/13/98	8/13/98	0-194-0
1586	HAA-ICR	Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/6/98	8/13/98	8/13/98	0-194-0
1587	HAA-ICR	Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/6/98	8/13/98	8/13/98	0-194-0
1588	THM-ICR	1,2,3-Trichloropropane (Surrogate)	102.8	%	EPA 551.1	1	1.0	8/6/98	8/11/98	8/11/98	0-193-0
1589	THM-ICR	Bromodichloromethane	ND	µg/L	EPA 551.1	1	1.0	8/6/98	8/11/98	8/11/98	0-193-0
1590	THM-ICR	Bromoform	ND	µg/L	EPA 551.1	1	1.0	8/6/98	8/11/98	8/11/98	0-193-0
1591	THM-ICR	Chloroform	ND	µg/L	EPA 551.1	1	1.0	8/6/98	8/11/98	8/11/98	0-193-0
1592	THM-ICR	Dibromochloromethane	ND	µg/L	EPA 551.1	1	1.0	8/6/98	8/11/98	8/11/98	0-193-0

Sample ID: 128.Filtered.Orr

S&H ID: 9808-175

Date Sampled: 7/24/98 1:00:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1593	TOC-ICR	TOC	4.51	mg/L	SM 5310 C	1	0.50	7/24/98		8/7/98	7-0-362
1594	TOC-ICR	TOC (Dupl)	4.50	mg/L	SM 5310 C	1	0.50	7/24/98		8/7/98	7-0-362
			4.50	mg/L	0.2 % RPD						

Sample ID: 128.Settled.Orr

S&H ID: 9808-176

Date Sampled: 7/24/98 12:10:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1595	TOC-ICR	TOC	5.08	mg/L	SM 5310 C	1	0.50	7/24/98		8/7/98	7-0-362
1596	TOC-ICR	TOC (Dupl)	5.05	mg/L	SM 5310 C	1	0.50	7/24/98		8/7/98	7-0-362
			5.06	mg/L	0.6 % RPD						

Sample ID: 128.Raw.Orr

S&H ID: 9808-177

Date Sampled: 7/24/98 12:00:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1597	TOC-ICR	TOC	9.72	mg/L	SM 5310 C	1	0.50	7/24/98		8/7/98	7-0-362
1598	TOC-ICR	TOC (Dupl)	9.60	mg/L	SM 5310 C	1	0.50	7/24/98		8/7/98	7-0-362
			9.66	mg/L	1.2 % RPD						

Sample ID: 128.12.5.Inst.Eff-2

S&H ID: 9808-208

Date Sampled: 8/7/98 4:39:00 PM

#	Analysis	Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1599	HAA-ICR	1,2,3-Trichloropropane (IS) (Internal Standard)	93.6	%	EPA 552.2	1	1.0	8/7/98	8/18/98	8/19/98	0-196-0
1600	HAA-ICR	2-Bromopropionic acid (Surrogate)	95.6	%	EPA 552.2	1	1.0	8/7/98	8/18/98	8/19/98	0-196-0
1601	HAA-ICR	Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/18/98	8/19/98	0-196-0
1602	HAA-ICR	Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/7/98	8/18/98	8/19/98	0-196-0

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Laboratory Test ResultsMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

1603	HAA-ICR	Chlorodibromoacetic acid	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/18/98	8/19/98	0-196-0
1604	HAA-ICR	Dibromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/18/98	8/19/98	0-196-0
1605	HAA-ICR	Dichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/18/98	8/19/98	0-196-0
1606	HAA-ICR	Monobromoacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/18/98	8/19/98	0-196-0
1607	HAA-ICR	Monochloroacetic acid	ND µg/L	EPA 552.2	1	2.0	8/7/98	8/18/98	8/19/98	0-196-0
1608	HAA-ICR	Tribromoacetic acid	ND µg/L	EPA 552.2	1	4.0	8/7/98	8/18/98	8/19/98	0-196-0
1609	HAA-ICR	Trichloroacetic acid	ND µg/L	EPA 552.2	1	1.0	8/7/98	8/18/98	8/19/98	0-196-0
1610	THM-ICR	1,2,3-Trichloropropane (Surrogate)	83.6 %	EPA 551.1	1	1.0	8/7/98	8/17/98	8/17/98	0-195-0
1611	THM-ICR	Bromodichloromethane	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/17/98	8/17/98	0-195-0
1612	THM-ICR	Bromoform	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/17/98	8/17/98	0-195-0
1613	THM-ICR	Chloroform	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/17/98	8/17/98	0-195-0
1614	THM-ICR	Dibromochloromethane	ND µg/L	EPA 551.1	1	1.0	8/7/98	8/17/98	8/17/98	0-195-0

Sample ID: 128.12.5.Inst.Eff-3

S&H ID: 9808-209

Date Sampled: 8/9/98 7:01:00 AM

#	Analysis Type	Result	Units	Method	Dilution	MRL	Samp.	Prep.	Anal.	QC Batch
1615	HAA-ICR 1,2,3-Trichloropropane (IS) (Internal Standard)	93.2	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1616	HAA-ICR 2-Bromopropionic acid (Surrogate)	97.6	%	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1617	HAA-ICR Bromochloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1618	HAA-ICR Bromodichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1619	HAA-ICR Chlorodibromoacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1620	HAA-ICR Dibromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1621	HAA-ICR Dichloroacetic acid	4.4	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1622	HAA-ICR Monobromoacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1623	HAA-ICR Monochloroacetic acid	ND	µg/L	EPA 552.2	1	2.0	8/9/98	8/18/98	8/19/98	0-196-0
1624	HAA-ICR Tribromoacetic acid	ND	µg/L	EPA 552.2	1	4.0	8/9/98	8/18/98	8/19/98	0-196-0
1625	HAA-ICR Trichloroacetic acid	ND	µg/L	EPA 552.2	1	1.0	8/9/98	8/18/98	8/19/98	0-196-0
1626	THM-ICR 1,2,3-Trichloropropane (Surrogate)	83.6	%	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
1627	THM-ICR Bromodichloromethane	ND	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
1628	THM-ICR Bromoform	ND	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
1629	THM-ICR Chloroform	ND	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0
1630	THM-ICR Dibromochloromethane	ND	µg/L	EPA 551.1	1	1.0	8/9/98	8/17/98	8/17/98	0-195-0

End of laboratory test results

ND (non-detect): Result is below minimum reporting level (MRL).

NR (not reportable): Result did not meet QC criteria.

Quality Control Report

Mr. Anthony Clemente
Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, FL 33146

Phone: 305-669-7602 Fax: 305-669-5796

Study#: 128
Study Title: ICR RSSCT #3

Analysis: ALK (Alkalinity)**Method:** SM 2320 B**QC Batch ID:** 1-0-30

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	Date Run	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	100	95	mg/L	95%		08/05/98	9808-141	5		
Matrix Spike (Dupl)	Matrix Spike	100	99	mg/L	99%		08/05/98	9808-141	5		
		100	97	mg/L	97%	4.1 %					
Method Blank	Method Blank		ND*	mg/L			08/05/98	9808-154	5		
Standard	Standard	100	97	mg/L	97%		08/05/98	9808-155	5		
Standard (Dupl)	Standard	100	100	mg/L	100%		08/05/98	9808-155	5		
		100	99	mg/L	99%	3.0 %					
Matrix Spike	Matrix Spike	100	95	mg/L	95%		08/07/98	9807-554	5		
Matrix Spike (Dupl)	Matrix Spike	100	97	mg/L	97%		08/07/98	9807-554	5		
		100	96	mg/L	96%	3.1 %					
Method Blank	Method Blank		ND*	mg/L			08/07/98	9808-198	5		
Standard	Standard	100	95	mg/L	95%		08/07/98	9808-199	5		
Standard (Dupl)	Standard	100	102	mg/L	102%		08/07/98	9808-199	5		
		100	99	mg/L	99%	7.1 %					
Matrix Spike	Matrix Spike	100	97	mg/L	97%		08/10/98	9808-142	5		
Matrix Spike (Dupl)	Matrix Spike	100	97	mg/L	97%		08/10/98	9808-142	5		
		100	97	mg/L	97%	1.0 %					
Method Blank	Method Blank		ND*	mg/L			08/10/98	9808-220	5		
Standard	Standard	100	99	mg/L	99%		08/10/98	9808-221	5		
Standard (Dupl)	Standard	100	98	mg/L	98%		08/10/98	9808-221	5		
		100	99	mg/L	99%	1.0 %					

Analysis: TOC-ICR (Total Organic Carbon)**Method:** SM 5310 C**QC Batch ID:** 7-0-362

										Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD		S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	4.29	mg/L	107%			9808-21	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.28	mg/L	107%			9808-21	0.5		
		4.00	4.28	mg/L	107%	0.5 %					
Method Blank	Method Blank		ND*	mg/L				9808-156	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L				9808-156	0.5		
			ND*	mg/L							
Standard	Standard	0.50	0.46	mg/L	92%			9807-587	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.48	mg/L	96%			9807-587	0.5	50-150%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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		0.50	0.47 mg/L	94%	4.3 %		50-150%	20%
Standard	Standard	4.00	4.04 mg/L	101%		9807-434	0.5 90-110%	
Standard (Dupl)	Standard	4.00	4.06 mg/L	101%		9807-434	0.5 90-110%	
		4.00	4.05 mg/L	101%	0.5 %		90-110%	10%
Standard	Standard	4.00	4.13 mg/L	103%		9807-434	0.5 90-110%	
Standard (Dupl)	Standard	4.00	4.07 mg/L	102%		9807-434	0.5 90-110%	
		4.00	4.10 mg/L	102%	1.5 %		90-110%	10%
Standard	Standard	10.00	10.41 mg/L	104%		9808-163	0.5 90-110%	
Standard (Dupl)	Standard	10.00	10.48 mg/L	105%		9808-163	0.5 90-110%	
		10.00	10.44 mg/L	104%	0.7 %		90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-366

									Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	4.00	4.16	mg/L	104%		9808-91	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.04	mg/L	101%		9808-91	0.5		
		4.00	4.10	mg/L	102%	2.9 %				
Method Blank	Method Blank		ND*	mg/L			9808-201	0.5		
Method Blank (Dupl)	Method Blank		ND*	mg/L			9808-201	0.5		
			ND*	mg/L						
Standard	Standard	0.50	0.55	mg/L	110%		9807-587	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.57	mg/L	114%		9807-587	0.5	50-150%	
		0.50	0.56	mg/L	112%	3.6 %			50-150%	20%
Standard	Standard	4.00	3.98	mg/L	100%		9808-191	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.00	mg/L	100%		9808-191	0.5	90-110%	
		4.00	3.99	mg/L	100%	0.5 %			90-110%	10%
Standard	Standard	4.00	3.99	mg/L	100%		9808-191	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.00	mg/L	100%		9808-191	0.5	90-110%	
		4.00	4.00	mg/L	100%	0.2 %			90-110%	10%
Standard	Standard	10.00	9.75	mg/L	97%		9808-163	0.5	90-110%	
Standard (Dupl)	Standard	10.00	9.78	mg/L	98%		9808-163	0.5	90-110%	
		10.00	9.76	mg/L	98%	0.3 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-368

									Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	4.00	4.08	mg/L	102%		9808-68	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.08	mg/L	102%		9808-68	0.5		
		4.00	4.08	mg/L	102%	0.0 %				
Matrix Spike	Matrix Spike	10.00	9.63	mg/L	96%		9808-144	0.5		
Matrix Spike (Dupl)	Matrix Spike	10.00	9.66	mg/L	97%		9808-144	0.5		
		10.00	9.64	mg/L	96%	0.2 %				

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Method Blank	Method Blank		ND* mg/L			9808-207	0.5		
Method Blank (Dupl)	Method Blank		ND* mg/L			9808-207	0.5		
			ND* mg/L						
Standard	Standard	0.50	0.52 mg/L	104%		9807-587	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.55 mg/L	110%		9807-587	0.5	50-150%	
		0.50	0.54 mg/L	108%	5.6 %			50-150%	20%
Standard	Standard	4.00	4.09 mg/L	102%		9808-191	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.08 mg/L	102%		9808-191	0.5	90-110%	
		4.00	4.08 mg/L	102%	0.2 %			90-110%	10%
Standard	Standard	4.00	4.05 mg/L	101%		9808-191	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.08 mg/L	102%		9808-191	0.5	90-110%	
		4.00	4.06 mg/L	101%	0.7 %			90-110%	10%
Standard	Standard	10.00	9.93 mg/L	99%		9808-163	0.5	90-110%	
Standard (Dupl)	Standard	10.00	9.90 mg/L	99%		9808-163	0.5	90-110%	
		10.00	9.91 mg/L	99%	0.3 %			90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-371

										Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	4.15 mg/L	104%			9808-121	0.5		
Matrix Spike (Dupl)	Matrix Spike	4.00	4.05 mg/L	101%			9808-121	0.5		
		4.00	4.10 mg/L	102%	2.4 %					
Method Blank	Method Blank		ND* mg/L				9808-257	0.5		
Method Blank (Dupl)	Method Blank		ND* mg/L				9808-257	0.5		
			ND* mg/L							
Standard	Standard	0.50	0.56 mg/L	112%			9807-587	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.56 mg/L	112%			9807-587	0.5	50-150%	
		0.50	0.56 mg/L	112%	0.0 %				50-150%	20%
Standard	Standard	4.00	4.14 mg/L	103%			9808-191	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.17 mg/L	104%			9808-191	0.5	90-110%	
		4.00	4.16 mg/L	104%	0.7 %				90-110%	10%
Standard	Standard	4.00	4.13 mg/L	103%			9808-191	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.14 mg/L	103%			9808-191	0.5	90-110%	
		4.00	4.14 mg/L	103%	0.2 %				90-110%	10%
Standard	Standard	10.00	10.06 mg/L	101%			9808-163	0.5	90-110%	
Standard (Dupl)	Standard	10.00	10.09 mg/L	101%			9808-163	0.5	90-110%	
		10.00	10.07 mg/L	101%	0.3 %				90-110%	10%

Analysis: TOC-ICR (Total Organic Carbon)

Method: SM 5310 C

QC Batch ID: 7-0-373

										Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Matrix Spike	Matrix Spike	4.00	3.79 mg/L	95%			9808-89	0.5		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Matrix Spike (Dupl)	Matrix Spike	4.00	3.66 mg/L	92%		9808-89	0.5		
		4.00	3.73 mg/L	93%	3.2 %				
Method Blank	Method Blank		ND* mg/L			9808-281	0.5		
Method Blank (Dupl)	Method Blank		ND* mg/L			9808-281	0.5		
			ND* mg/L						
Standard	Standard	0.50	0.53 mg/L	106%		9807-587	0.5	50-150%	
Standard (Dupl)	Standard	0.50	0.55 mg/L	110%		9807-587	0.5	50-150%	
		0.50	0.54 mg/L	108%	3.7 %			50-150%	20%
Standard	Standard	4.00	4.07 mg/L	102%		9808-191	0.5	90-110%	
Standard (Dupl)	Standard	4.00	4.08 mg/L	102%		9808-191	0.5	90-110%	
		4.00	4.08 mg/L	102%	0.2 %			90-110%	10%
Standard	Standard	10.00	9.81 mg/L	98%		9808-163	0.5	90-110%	
Standard (Dupl)	Standard	10.00	9.95 mg/L	99%		9808-163	0.5	90-110%	
		10.00	9.88 mg/L	99%	1.4 %			90-110%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-252

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank		ND*	1/cm			9808-171	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-171	0.009		
			ND* 1/cm							
Method Blank	Method Blank		ND*	1/cm			9808-171	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-171	0.009		
			ND* 1/cm							
Standard	Standard	0.009	0.007	1/cm	78%		9808-173	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.007	1/cm	78%		9808-173	0.009	75-125%	
		0.009	0.007	1/cm	78%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.083	1/cm	94%		9808-174	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.083	1/cm	94%		9808-174	0.009	85-115%	
		0.088	0.083	1/cm	94%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-253

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank		ND*	1/cm			9808-202	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-202	0.009		
			ND* 1/cm							
Method Blank	Method Blank		ND*	1/cm			9808-202	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-202	0.009		
			ND* 1/cm							
Standard	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Miami-Dade Water and Sewer Department**Study#:** 128
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		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.088	1/cm	100%		9808-174	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.088	1/cm	100%		9808-174	0.009	85-115%	
		0.088	0.088	1/cm	100%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-254

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank		ND*	1/cm			9808-203	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-203	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9808-203	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-203	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.088	1/cm	100%		9808-174	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.088	1/cm	100%		9808-174	0.009	85-115%	
		0.088	0.088	1/cm	100%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-255

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank		ND*	1/cm			9808-205	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-205	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9808-205	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-205	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.088	1/cm	100%		9808-174	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.088	1/cm	100%		9808-174	0.009	85-115%	
		0.088	0.088	1/cm	100%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-257

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Method Blank	Method Blank		ND*	1/cm			9808-219	0.009		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Method Blank (Dupl)	Method Blank	ND*	1/cm			9808-219	0.009		
		ND*	1/cm						
Method Blank	Method Blank	ND*	1/cm			9808-219	0.009		
Method Blank (Dupl)	Method Blank	ND*	1/cm			9808-219	0.009		
		ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%	9808-173	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%	9808-173	0.009	75-125%	
		0.009	0.008	1/cm	89%			75-125%	20%
Standard	Standard	0.088	0.088	1/cm	100%	9808-174	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.088	1/cm	100%	9808-174	0.009	85-115%	
		0.088	0.088	1/cm	100%			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-258

										Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank	ND*	1/cm				9808-171	0.009		
Method Blank (Dupl)	Method Blank	ND*	1/cm				9808-171	0.009		
		ND*	1/cm							
Method Blank	Method Blank	ND*	1/cm				9808-171	0.009		
Method Blank (Dupl)	Method Blank	ND*	1/cm				9808-171	0.009		
		ND*	1/cm							
Standard	Standard	0.009	0.007	1/cm	78%		9808-173	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.007	1/cm	78%		9808-173	0.009	75-125%	
		0.009	0.007	1/cm	78%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.083	1/cm	94%		9808-174	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.083	1/cm	94%		9808-174	0.009	85-115%	
		0.088	0.083	1/cm	94%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-259

										Acceptance Criteria
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank	ND*	1/cm				9808-178	0.009		
Method Blank (Dupl)	Method Blank	ND*	1/cm				9808-178	0.009		
		ND*	1/cm							
Method Blank	Method Blank	ND*	1/cm				9808-178	0.009		
Method Blank (Dupl)	Method Blank	ND*	1/cm				9808-178	0.009		
		ND*	1/cm							
Standard	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.089	1/cm	101%		9808-174	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.089	1/cm	101%		9808-174	0.009	85-115%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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0.088	0.089	1/cm	101%	0.0 %	85-115%	10%
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Analysis: UV-ICR (UV-254)

Method: SM 5910 B

QC Batch ID: 8-0-260

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank			ND*	1/cm			9808-178	0.009		
Method Blank (Dupl)			ND*	1/cm			9808-178	0.009		
			ND*	1/cm						
Method Blank			ND*	1/cm			9808-178	0.009		
Method Blank (Dupl)			ND*	1/cm			9808-178	0.009		
			ND*	1/cm						
Standard		0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
Standard (Dupl)		0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard		0.088	0.089	1/cm	101%		9808-174	0.009	85-115%	
Standard (Dupl)		0.088	0.089	1/cm	101%		9808-174	0.009	85-115%	
		0.088	0.089	1/cm	101%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)

Method: SM 5910 B

QC Batch ID: 8-0-261

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank			ND*	1/cm			9808-178	0.009		
Method Blank (Dupl)			ND*	1/cm			9808-178	0.009		
			ND*	1/cm						
Method Blank			ND*	1/cm			9808-178	0.009		
Method Blank (Dupl)			ND*	1/cm			9808-178	0.009		
			ND*	1/cm						
Standard		0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
Standard (Dupl)		0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard		0.088	0.089	1/cm	101%		9808-174	0.009	85-115%	
Standard (Dupl)		0.088	0.089	1/cm	101%		9808-174	0.009	85-115%	
		0.088	0.089	1/cm	101%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)

Method: SM 5910 B

QC Batch ID: 8-0-262

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank			ND*	1/cm			9808-228	0.009		
Method Blank (Dupl)			ND*	1/cm			9808-228	0.009		
			ND*	1/cm						
Method Blank			ND*	1/cm			9808-228	0.009		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Method Blank (Dupl)	Method Blank	ND*	1/cm			9808-228	0.009		
		ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%	9808-173	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%	9808-173	0.009	75-125%	
		0.009	0.008	1/cm	89%			75-125%	20%
Standard	Standard	0.088	0.088	1/cm	100%	9808-174	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.088	1/cm	100%	9808-174	0.009	85-115%	
		0.088	0.088	1/cm	100%			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-263

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9808-244	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-244	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9808-244	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-244	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.088	1/cm	100%		9808-174	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.088	1/cm	100%		9808-174	0.009	85-115%	
		0.088	0.088	1/cm	100%	0.0 %			85-115%	10%

Analysis: UV-ICR (UV-254)**Method:** SM 5910 B**QC Batch ID:** 8-0-265

QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Method Blank	Method Blank		ND*	1/cm			9808-271	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-271	0.009		
			ND*	1/cm						
Method Blank	Method Blank		ND*	1/cm			9808-271	0.009		
Method Blank (Dupl)	Method Blank		ND*	1/cm			9808-271	0.009		
			ND*	1/cm						
Standard	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
Standard (Dupl)	Standard	0.009	0.008	1/cm	89%		9808-173	0.009	75-125%	
		0.009	0.008	1/cm	89%	0.0 %			75-125%	20%
Standard	Standard	0.088	0.089	1/cm	101%		9808-174	0.009	85-115%	
Standard (Dupl)	Standard	0.088	0.089	1/cm	101%		9808-174	0.009	85-115%	
		0.088	0.089	1/cm	101%	0.0 %			85-115%	10%

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Miami-Dade Water and Sewer Department**Study#:** 128
Study Title: ICR RSSCT #3**Analysis:** TURB (Turbidity)**Method:** SM 2130 B**QC Batch ID:** 9-0-15

									Acceptance Criteria		
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>Date Run</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Standard	Standard	5.41	5.46	ntu	101%		08/05/98	9807-108	0.05		
Standard	Standard	5.41	5.53	ntu	102%		08/07/98	9807-108	0.05		
Standard	Standard	5.41	5.47	ntu	101%		08/07/98	9807-108	0.05		
Standard	Standard	5.41	5.49	ntu	101%		08/08/98	9807-108	0.05		
Standard	Standard	5.41	5.53	ntu	102%		08/08/98	9807-108	0.05		
Standard	Standard	5.41	5.47	ntu	101%		08/12/98	9807-108	0.05		
Standard	Standard	5.41	5.48	ntu	101%		08/13/98	9807-108	0.05		

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-186

									Acceptance Criteria		
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>		<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Standard - TCP Aqueous	Standard	25	23	µg Cl-/L	92%			9808-225	25	75-125%	
Standard - TCP Aqueous	Standard	200	195	µg Cl-/L	97%			9808-224	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L				9808-226	25		

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-187

									Acceptance Criteria		
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>		<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Matrix Spike	Matrix Spike	200	196	µg Cl-/L	98%			9808-27	25		
Matrix Spike (Dupl)	Matrix Spike	200	197	µg Cl-/L	98%			9808-27	25		
		200	197	µg Cl-/L	98%	0.5 %					
Standard - TCP Aqueous	Standard	25	22	µg Cl-/L	88%			9808-235	25	75-125%	
Standard - TCP Aqueous	Standard	200	195	µg Cl-/L	97%			9808-234	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L				9808-236	25		

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-188

									Acceptance Criteria		
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>		<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Standard - TCP Aqueous	Standard	25	24	µg Cl-/L	96%			9808-260	25	75-125%	
Standard - TCP Aqueous	Standard	200	201	µg Cl-/L	100%			9808-259	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L				9808-261	25		

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Study Title: ICR RSSCT #3**Analysis:** TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-189

								Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>
Standard - TCP Aqueous	Standard	25	24	µg Cl-/L	96%		9808-264	25	75-125%
Standard - TCP Aqueous	Standard	200	197	µg Cl-/L	98%		9808-263	25	85-115%
System Blank	Blank		ND*	µg Cl-/L			9808-265	25	

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-190

								Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>
Matrix Spike	Matrix Spike	200	203	µg Cl-/L	101%		9808-106	25	
Matrix Spike (Dupl)	Matrix Spike	200	189	µg Cl-/L	94%		9808-106	25	
		200	196	µg Cl-/L	98%	7.1 %			
Standard - TCP Aqueous	Standard	25	22	µg Cl-/L	88%		9808-276	25	75-125%
Standard - TCP Aqueous	Standard	200	194	µg Cl-/L	97%		9808-275	25	85-115%
System Blank	Blank		ND*	µg Cl-/L			9808-277	25	

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-191

								Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>
Standard - TCP Aqueous	Standard	25	23	µg Cl-/L	92%		9808-297	25	75-125%
Standard - TCP Aqueous	Standard	200	195	µg Cl-/L	97%		9808-296	25	85-115%
System Blank	Blank		ND*	µg Cl-/L			9808-298	25	

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-192

								Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>
Standard - TCP Aqueous	Standard	25	22	µg Cl-/L	88%		9808-390	25	75-125%
Standard - TCP Aqueous	Standard	200	193	µg Cl-/L	96%		9808-389	25	85-115%
System Blank	Blank		ND*	µg Cl-/L			9808-391	25	

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-193

								Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>
Matrix Spike	Matrix Spike	200	202	µg Cl-/L	101%		9808-80	25	
Matrix Spike (Dupl)	Matrix Spike	200	191	µg Cl-/L	95%		9808-80	25	
		200	197	µg Cl-/L	98%	5.1 %			

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Standard - TCP Aqueous	Standard	25	22	µg Cl-/L	88%	9808-407	25	75-125%
Standard - TCP Aqueous	Standard	200	196	µg Cl-/L	98%	9808-406	25	85-115%
System Blank	Blank		ND*	µg Cl-/L		9808-408	25	

Analysis: TOX-ICR (Total Organic Halide)**Method:** SM 5320 B**QC Batch ID:** 12-0-194

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Standard - TCP Aqueous	Standard	25	25	µg Cl-/L	100%		9808-413	25	75-125%	
Standard - TCP Aqueous	Standard	200	194	µg Cl-/L	97%		9808-412	25	85-115%	
System Blank	Blank		ND*	µg Cl-/L			9808-414	25		

Analysis: THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-193-0

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Bromodichloromethane	Duplicate	2.9	3.0	µg/L		3.4%	9808-24	1		
Bromodichloromethane	Matrix Spike	40.0	38.2	µg/L	96%		9807-497	1		
Bromodichloromethane	Method Blank		ND*	µg/L			9808-229	1		
Bromodichloromethane	Secondary Source Std	20.0	21.4	µg/L	107%		9808-230	1	70-130%	
Bromodichloromethane	Standard	20.0	20.1	µg/L	101%		9808-231	1	80-120%	
Bromodichloromethane	Standard	20.0	22.4	µg/L	112%		9808-231	1	80-120%	
Bromodichloromethane	Standard	40.0	41.7	µg/L	104%		9808-232	1	80-120%	
Bromoform	Duplicate	9.6	10.0	µg/L		4.1%	9808-24	1		
Bromoform	Matrix Spike	40.0	47.6	µg/L	119%		9807-497	1		
Bromoform	Method Blank		ND*	µg/L			9808-229	1		
Bromoform	Secondary Source Std	20.0	19.4	µg/L	97%		9808-230	1	70-130%	
Bromoform	Standard	20.0	20.0	µg/L	100%		9808-231	1	80-120%	
Bromoform	Standard	20.0	22.8	µg/L	114%		9808-231	1	80-120%	
Bromoform	Standard	40.0	42.9	µg/L	107%		9808-232	1	80-120%	
Chloroform	Duplicate	1.1	1.1	µg/L		0.0%	9808-24	1		
Chloroform	Matrix Spike	40.0	38.6	µg/L	97%		9807-497	1		
Chloroform	Method Blank		ND*	µg/L			9808-229	1		
Chloroform	Secondary Source Std	20.0	22.2	µg/L	111%		9808-230	1	70-130%	
Chloroform	Standard	20.0	19.7	µg/L	98%		9808-231	1	80-120%	
Chloroform	Standard	20.0	21.9	µg/L	110%		9808-231	1	80-120%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Chloroform	Standard	40.0	42.0 µg/L	105%	9808-232	1	80-120%
Dibromochloromethane	Duplicate	7.3	7.4 µg/L	1.4%	9808-24	1	
Dibromochloromethane	Matrix Spike	40.0	39.4 µg/L	98%	9807-497	1	
Dibromochloromethane	Method Blank		ND* µg/L		9808-229	1	
Dibromochloromethane	Secondary Source Std	20.0	20.6 µg/L	103%	9808-230	1	70-130%
Dibromochloromethane	Standard	20.0	20.2 µg/L	101%	9808-231	1	80-120%
Dibromochloromethane	Standard	20.0	22.9 µg/L	115%	9808-231	1	80-120%
Dibromochloromethane	Standard	40.0	41.8 µg/L	104%	9808-232	1	80-120%

Analysis: THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-195-0

										Acceptance Criteria
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>
Bromodichloromethane	Duplicate	1.2	1.1	µg/L		8.7%	9808-67	1		
Bromodichloromethane	Matrix Spike	40.0	42.7	µg/L	107%		9808-131	1		
Bromodichloromethane	Method Blank		ND*	µg/L			9808-291	1		
Bromodichloromethane	Secondary Source Std	20.0	21.5	µg/L	108%		9808-292	1	70-130%	
Bromodichloromethane	Standard	20.0	21.3	µg/L	106%		9808-293	1	80-120%	
Bromodichloromethane	Standard	20.0	21.5	µg/L	108%		9808-293	1	80-120%	
Bromodichloromethane	Standard	40.0	41.2	µg/L	103%		9808-294	1	80-120%	
Bromodichloromethane	Standard	40.0	47.3	µg/L	118%		9808-294	1	80-120%	
Bromoform	Duplicate	5.9	5.5	µg/L		7.0%	9808-67	1		
Bromoform	Matrix Spike	40.0	46.1	µg/L	115%		9808-131	1		
Bromoform	Method Blank		ND*	µg/L			9808-291	1		
Bromoform	Secondary Source Std	20.0	19.5	µg/L	97%		9808-292	1	70-130%	
Bromoform	Standard	20.0	20.0	µg/L	100%		9808-293	1	80-120%	
Bromoform	Standard	20.0	21.6	µg/L	108%		9808-293	1	80-120%	
Bromoform	Standard	40.0	39.6	µg/L	99%		9808-294	1	80-120%	
Bromoform	Standard	40.0	46.3	µg/L	116%		9808-294	1	80-120%	
Chloroform	Duplicate	ND	ND	µg/L		NA	9808-67	1		
Chloroform	Matrix Spike	40.0	43.3	µg/L	108%		9808-131	1		
Chloroform	Method Blank		ND*	µg/L			9808-291	1		
Chloroform	Secondary Source Std	20.0	21.4	µg/L	107%		9808-292	1	70-130%	
Chloroform	Standard	20.0	21.2	µg/L	106%		9808-293	1	80-120%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Chloroform	Standard	20.0	21.0 µg/L	105%	9808-293	1	80-120%
Chloroform	Standard	40.0	41.7 µg/L	104%	9808-294	1	80-120%
Chloroform	Standard	40.0	44.9 µg/L	112%	9808-294	1	80-120%
Dibromochloromethane	Duplicate	3.7	3.5 µg/L	5.6%	9808-67	1	
Dibromochloromethane	Matrix Spike	40.0	43.1 µg/L	108%	9808-131	1	
Dibromochloromethane	Method Blank		ND* µg/L		9808-291	1	
Dibromochloromethane	Secondary Source Std	20.0	20.4 µg/L	102%	9808-292	1	70-130%
Dibromochloromethane	Standard	20.0	21.7 µg/L	109%	9808-293	1	80-120%
Dibromochloromethane	Standard	20.0	22.0 µg/L	110%	9808-293	1	80-120%
Dibromochloromethane	Standard	40.0	42.2 µg/L	106%	9808-294	1	80-120%
Dibromochloromethane	Standard	40.0	45.2 µg/L	113%	9808-294	1	80-120%

Analysis: THM-ICR (Trihalomethanes (ICR))**Method:** EPA 551.1**QC Batch ID:** 0-197-0

								Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range
Bromodichloromethane	Duplicate	24.4	22.7	µg/L		7.2%	9808-38	1	
Bromodichloromethane	Matrix Spike	40.0	37.7	µg/L	94%		9807-537	1	
Bromodichloromethane	Method Blank		ND*	µg/L			9808-416	1	
Bromodichloromethane	Secondary Source Std	20.0	24.4	µg/L	122%		9808-417	1	70-130%
Bromodichloromethane	Standard	20.0	20.6	µg/L	103%		9808-418	1	80-120%
Bromodichloromethane	Standard	20.0	22.4	µg/L	112%		9808-418	1	80-120%
Bromodichloromethane	Standard	40.0	42.0	µg/L	105%		9808-419	1	80-120%
Bromoform	Duplicate	5.3	4.8	µg/L		9.9%	9808-38	1	
Bromoform	Matrix Spike	40.0	39.1	µg/L	98%		9807-537	1	
Bromoform	Method Blank		ND*	µg/L			9808-416	1	
Bromoform	Secondary Source Std	20.0	21.8	µg/L	109%		9808-417	1	70-130%
Bromoform	Standard	20.0	18.6	µg/L	93%		9808-418	1	80-120%
Bromoform	Standard	20.0	23.9	µg/L	119%		9808-418	1	80-120%
Bromoform	Standard	40.0	43.0	µg/L	108%		9808-419	1	80-120%
Chloroform	Duplicate	21.6	20.2	µg/L		6.7%	9808-38	1	
Chloroform	Matrix Spike	40.0	40.5	µg/L	101%		9807-537	1	
Chloroform	Method Blank		ND*	µg/L			9808-416	1	
Chloroform	Secondary Source Std	20.0	24.9	µg/L	124%		9808-417	1	70-130%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Chloroform	Standard	20.0	20.2 µg/L	101%	9808-418	1	80-120%
Chloroform	Standard	20.0	21.7 µg/L	109%	9808-418	1	80-120%
Chloroform	Standard	40.0	42.6 µg/L	106%	9808-419	1	80-120%
Dibromochloromethane	Duplicate	20.7	19.4 µg/L	6.5%	9808-38	1	
Dibromochloromethane	Matrix Spike	40.0	37.3 µg/L	93%	9807-537	1	
Dibromochloromethane	Method Blank		ND* µg/L		9808-416	1	
Dibromochloromethane	Secondary Source Std	20.0	23.4 µg/L	117%	9808-417	1	70-130%
Dibromochloromethane	Standard	20.0	20.7 µg/L	103%	9808-418	1	80-120%
Dibromochloromethane	Standard	20.0	22.3 µg/L	112%	9808-418	1	80-120%
Dibromochloromethane	Standard	40.0	42.4 µg/L	106%	9808-419	1	80-120%

Analysis: HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-194-0

									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Bromochloroacetic acid	Duplicate	ND	ND	µg/L		NA	9808-23	1		
Bromochloroacetic acid	Matrix Spike	40.0	39.8	µg/L	99%		9807-493	1		
Bromochloroacetic acid	Method Blank		ND*	µg/L			9808-267	1		
Bromochloroacetic acid	Secondary Source Std	20.0	18.0	µg/L	90%		9808-268	1	70-130%	
Bromochloroacetic acid	Standard	20.0	18.3	µg/L	92%		9808-269	1	80-120%	
Bromochloroacetic acid	Standard	20.0	18.5	µg/L	93%		9808-269	1	80-120%	
Bromochloroacetic acid	Standard	40.0	40.7	µg/L	102%		9808-270	1	80-120%	
Bromodichloroacetic acid	Duplicate	ND	ND	µg/L		NA	9808-23	1		
Bromodichloroacetic acid	Matrix Spike	40.0	42.2	µg/L	106%		9807-493	1		
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9808-267	1		
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9808-268	1	70-130%	
Bromodichloroacetic acid	Standard	20.0	18.4	µg/L	92%		9808-269	1	80-120%	
Bromodichloroacetic acid	Standard	20.0	17.8	µg/L	89%		9808-269	1	80-120%	
Bromodichloroacetic acid	Standard	40.0	41.6	µg/L	104%		9808-270	1	80-120%	
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9808-23	2		
Chlorodibromoacetic acid	Matrix Spike	40.0	39.6	µg/L	99%		9807-493	2		
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9808-267	2		
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9808-268	2	70-130%	
Chlorodibromoacetic acid	Standard	20.0	18.6	µg/L	93%		9808-269	2	80-120%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Chlorodibromoacetic acid	Standard	20.0	17.8 µg/L	89%	9808-269	2 80-120%
Chlorodibromoacetic acid	Standard	40.0	41.4 µg/L	103%	9808-270	2 80-120%
Dibromoacetic acid	Duplicate	1.1	1.0 µg/L	9.5%	9808-23	1
Dibromoacetic acid	Matrix Spike	40.0	39.2 µg/L	98%	9807-493	1
Dibromoacetic acid	Method Blank		ND* µg/L		9808-267	1
Dibromoacetic acid	Secondary Source Std	20.0	18.5 µg/L	93%	9808-268	1 70-130%
Dibromoacetic acid	Standard	20.0	18.3 µg/L	92%	9808-269	1 80-120%
Dibromoacetic acid	Standard	20.0	18.5 µg/L	93%	9808-269	1 80-120%
Dibromoacetic acid	Standard	40.0	41.5 µg/L	104%	9808-270	1 80-120%
Dichloroacetic acid	Duplicate	ND	ND µg/L	NA	9808-23	1
Dichloroacetic acid	Matrix Spike	40.0	38.0 µg/L	95%	9807-493	1
Dichloroacetic acid	Method Blank		ND* µg/L		9808-267	1
Dichloroacetic acid	Secondary Source Std	20.0	19.0 µg/L	95%	9808-268	1 70-130%
Dichloroacetic acid	Standard	20.0	18.4 µg/L	92%	9808-269	1 80-120%
Dichloroacetic acid	Standard	20.0	18.8 µg/L	94%	9808-269	1 80-120%
Dichloroacetic acid	Standard	40.0	38.9 µg/L	97%	9808-270	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND µg/L	NA	9808-23	1
Monobromoacetic acid	Matrix Spike	40.0	40.4 µg/L	101%	9807-493	1
Monobromoacetic acid	Method Blank		ND* µg/L		9808-267	1
Monobromoacetic acid	Secondary Source Std	20.0	19.1 µg/L	96%	9808-268	1 70-130%
Monobromoacetic acid	Standard	20.0	18.6 µg/L	93%	9808-269	1 80-120%
Monobromoacetic acid	Standard	20.0	18.7 µg/L	93%	9808-269	1 80-120%
Monobromoacetic acid	Standard	40.0	40.0 µg/L	100%	9808-270	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND µg/L	NA	9808-23	2
Monochloroacetic acid	Matrix Spike	40.0	41.6 µg/L	104%	9807-493	2
Monochloroacetic acid	Method Blank		ND* µg/L		9808-267	2
Monochloroacetic acid	Secondary Source Std	20.0	20.3 µg/L	102%	9808-268	2 70-130%
Monochloroacetic acid	Standard	20.0	19.8 µg/L	99%	9808-269	2 80-120%
Monochloroacetic acid	Standard	20.0	18.5 µg/L	93%	9808-269	2 80-120%
Monochloroacetic acid	Standard	40.0	40.1 µg/L	100%	9808-270	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND µg/L	NA	9808-23	4
Tribromoacetic acid	Matrix Spike	40.0	39.4 µg/L	98%	9807-493	4
Tribromoacetic acid	Method Blank		ND* µg/L		9808-267	4

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Tribromoacetic acid	Secondary Source Std		ND	µg/L		9808-268	4	70-130%
Tribromoacetic acid	Standard	20.0	18.9	µg/L	94%	9808-269	4	80-120%
Tribromoacetic acid	Standard	20.0	17.0	µg/L	85%	9808-269	4	80-120%
Tribromoacetic acid	Standard	40.0	40.3	µg/L	101%	9808-270	4	80-120%
Trichloroacetic acid	Duplicate	ND	ND	µg/L	NA	9808-23	1	
Trichloroacetic acid	Matrix Spike	40.0	39.2	µg/L	98%	9807-493	1	
Trichloroacetic acid	Method Blank		ND*	µg/L		9808-267	1	
Trichloroacetic acid	Secondary Source Std	20.0	18.0	µg/L	90%	9808-268	1	70-130%
Trichloroacetic acid	Standard	20.0	18.0	µg/L	90%	9808-269	1	80-120%
Trichloroacetic acid	Standard	20.0	17.7	µg/L	89%	9808-269	1	80-120%
Trichloroacetic acid	Standard	40.0	39.9	µg/L	100%	9808-270	1	80-120%

Analysis: HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-196-0

										Acceptance Criteria	
<u>QC Type</u>		<u>Spike</u>	<u>Recovery</u>	<u>Unit</u>	<u>Yield</u>	<u>RPD</u>	<u>S&H ID</u>	<u>MRL</u>	<u>Range</u>	<u>RPD</u>	
Bromochloroacetic acid	Duplicate	ND	ND	µg/L		NA	9808-104	1			
Bromochloroacetic acid	Matrix Spike	40.0	35.5	µg/L	89%		9808-208	1			
Bromochloroacetic acid	Method Blank		ND*	µg/L			9808-395	1			
Bromochloroacetic acid	Standard	20.0	19.5	µg/L	97%		9808-397	1	80-120%		
Bromochloroacetic acid	Standard	20.0	19.7	µg/L	98%		9808-397	1	80-120%		
Bromochloroacetic acid	Standard	40.0	41.9	µg/L	105%		9808-398	1	80-120%		
Bromochloroacetic acid	Standard	40.0	42.3	µg/L	106%		9808-398	1	80-120%		
Bromodichloroacetic acid	Duplicate	ND	ND	µg/L		NA	9808-104	1			
Bromodichloroacetic acid	Matrix Spike	40.0	34.7	µg/L	87%		9808-208	1			
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9808-395	1			
Bromodichloroacetic acid	Standard	20.0	17.1	µg/L	86%		9808-397	1	80-120%		
Bromodichloroacetic acid	Standard	20.0	19.4	µg/L	97%		9808-397	1	80-120%		
Bromodichloroacetic acid	Standard	40.0	41.3	µg/L	103%		9808-398	1	80-120%		
Bromodichloroacetic acid	Standard	40.0	41.0	µg/L	102%		9808-398	1	80-120%		
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9808-104	2			
Chlorodibromoacetic acid	Matrix Spike	40.0	33.1	µg/L	83%		9808-208	2			
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9808-395	2			
Chlorodibromoacetic acid	Standard	20.0	17.2	µg/L	86%		9808-397	2	80-120%		
Chlorodibromoacetic acid	Standard	20.0	21.1	µg/L	106%		9808-397	2	80-120%		

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Chlorodibromoacetic acid	Standard	40.0	41.2 µg/L	103%	9808-398	2 80-120%
Chlorodibromoacetic acid	Standard	40.0	44.5 µg/L	111%	9808-398	2 80-120%
Dibromoacetic acid	Duplicate	2.2	2.2 µg/L	0.0%	9808-104	1
Dibromoacetic acid	Matrix Spike	40.0	35.6 µg/L	89%	9808-208	1
Dibromoacetic acid	Method Blank		ND* µg/L		9808-395	1
Dibromoacetic acid	Standard	20.0	20.1 µg/L	101%	9808-397	1 80-120%
Dibromoacetic acid	Standard	20.0	20.4 µg/L	102%	9808-397	1 80-120%
Dibromoacetic acid	Standard	40.0	44.0 µg/L	110%	9808-398	1 80-120%
Dibromoacetic acid	Standard	40.0	45.0 µg/L	113%	9808-398	1 80-120%
Dichloroacetic acid	Duplicate	ND	ND µg/L	NA	9808-104	1
Dichloroacetic acid	Matrix Spike	40.0	36.0 µg/L	90%	9808-208	1
Dichloroacetic acid	Method Blank		ND* µg/L		9808-395	1
Dichloroacetic acid	Standard	20.0	20.0 µg/L	100%	9808-397	1 80-120%
Dichloroacetic acid	Standard	20.0	19.5 µg/L	97%	9808-397	1 80-120%
Dichloroacetic acid	Standard	40.0	41.1 µg/L	103%	9808-398	1 80-120%
Dichloroacetic acid	Standard	40.0	40.3 µg/L	101%	9808-398	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND µg/L	NA	9808-104	1
Monobromoacetic acid	Matrix Spike	40.0	38.9 µg/L	97%	9808-208	1
Monobromoacetic acid	Method Blank		ND* µg/L		9808-395	1
Monobromoacetic acid	Standard	20.0	20.0 µg/L	100%	9808-397	1 80-120%
Monobromoacetic acid	Standard	20.0	19.6 µg/L	98%	9808-397	1 80-120%
Monobromoacetic acid	Standard	40.0	37.7 µg/L	94%	9808-398	1 80-120%
Monobromoacetic acid	Standard	40.0	38.5 µg/L	96%	9808-398	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND µg/L	NA	9808-104	2
Monochloroacetic acid	Matrix Spike	40.0	38.1 µg/L	95%	9808-208	2
Monochloroacetic acid	Method Blank		ND* µg/L		9808-395	2
Monochloroacetic acid	Standard	20.0	19.8 µg/L	99%	9808-397	2 80-120%
Monochloroacetic acid	Standard	20.0	18.9 µg/L	94%	9808-397	2 80-120%
Monochloroacetic acid	Standard	40.0	38.3 µg/L	96%	9808-398	2 80-120%
Monochloroacetic acid	Standard	40.0	38.7 µg/L	97%	9808-398	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND µg/L	NA	9808-104	4
Tribromoacetic acid	Matrix Spike	40.0	34.2 µg/L	86%	9808-208	4
Tribromoacetic acid	Method Blank		ND* µg/L		9808-395	4
Tribromoacetic acid	Standard	20.0	19.8 µg/L	99%	9808-397	4 80-120%
Tribromoacetic acid	Standard	20.0	20.8 µg/L	104%	9808-397	4 80-120%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Tribromoacetic acid	Standard	40.0	45.1 µg/L	113%	9808-398	4 80-120%
Tribromoacetic acid	Standard	40.0	46.4 µg/L	116%	9808-398	4 80-120%
Trichloroacetic acid	Duplicate	ND	ND µg/L	NA	9808-104	1
Trichloroacetic acid	Matrix Spike	40.0	33.6 µg/L	84%	9808-208	1
Trichloroacetic acid	Method Blank		ND* µg/L		9808-395	1
Trichloroacetic acid	Standard	20.0	17.7 µg/L	89%	9808-397	1 80-120%
Trichloroacetic acid	Standard	20.0	18.0 µg/L	90%	9808-397	1 80-120%
Trichloroacetic acid	Standard	40.0	41.0 µg/L	102%	9808-398	1 80-120%
Trichloroacetic acid	Standard	40.0	41.6 µg/L	104%	9808-398	1 80-120%

Analysis: HAA-ICR (Haloacetic Acids)**Method:** EPA 552.2**QC Batch ID:** 0-198-0

									Acceptance Criteria	
QC Type		Spike	Recovery	Unit	Yield	RPD	S&H ID	MRL	Range	RPD
Bromochloroacetic acid	Duplicate	3.8	3.9	µg/L		2.6%	9808-97	1		
Bromochloroacetic acid	Matrix Spike	40.0	37.3	µg/L	93%		9808-211	1		
Bromochloroacetic acid	Method Blank		ND*	µg/L			9808-436	1		
Bromochloroacetic acid	Secondary Source Std	20.0	17.4	µg/L	87%		9808-437	1	70-130%	
Bromochloroacetic acid	Standard	20.0	20.2	µg/L	101%		9808-438	1	80-120%	
Bromochloroacetic acid	Standard	20.0	19.4	µg/L	97%		9808-438	1	80-120%	
Bromochloroacetic acid	Standard	40.0	39.2	µg/L	98%		9808-439	1	80-120%	
Bromodichloroacetic acid	Duplicate	1.0	1.1	µg/L		9.5%	9808-97	1		
Bromodichloroacetic acid	Matrix Spike	40.0	37.6	µg/L	94%		9808-211	1		
Bromodichloroacetic acid	Method Blank		ND*	µg/L			9808-436	1		
Bromodichloroacetic acid	Secondary Source Std		ND	µg/L			9808-437	1	70-130%	
Bromodichloroacetic acid	Standard	20.0	20.5	µg/L	102%		9808-438	1	80-120%	
Bromodichloroacetic acid	Standard	20.0	20.6	µg/L	103%		9808-438	1	80-120%	
Bromodichloroacetic acid	Standard	40.0	42.1	µg/L	105%		9808-439	1	80-120%	
Chlorodibromoacetic acid	Duplicate	ND	ND	µg/L		NA	9808-97	2		
Chlorodibromoacetic acid	Matrix Spike	40.0	34.3	µg/L	86%		9808-211	2		
Chlorodibromoacetic acid	Method Blank		ND*	µg/L			9808-436	2		
Chlorodibromoacetic acid	Secondary Source Std		ND	µg/L			9808-437	2	70-130%	
Chlorodibromoacetic acid	Standard	20.0	20.8	µg/L	104%		9808-438	2	80-120%	
Chlorodibromoacetic acid	Standard	20.0	21.9	µg/L	110%		9808-438	2	80-120%	
Chlorodibromoacetic acid	Standard	40.0	43.7	µg/L	109%		9808-439	2	80-120%	

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

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Dibromoacetic acid	Duplicate	4.5	4.7 µg/L	4.3%	9808-97	1
Dibromoacetic acid	Matrix Spike	40.0	35.8 µg/L	89%	9808-211	1
Dibromoacetic acid	Method Blank		ND* µg/L		9808-436	1
Dibromoacetic acid	Secondary Source Std	20.0	17.6 µg/L	88%	9808-437	1 70-130%
Dibromoacetic acid	Standard	20.0	20.3 µg/L	102%	9808-438	1 80-120%
Dibromoacetic acid	Standard	20.0	20.0 µg/L	100%	9808-438	1 80-120%
Dibromoacetic acid	Standard	40.0	40.1 µg/L	100%	9808-439	1 80-120%
Dichloroacetic acid	Duplicate	6.0	6.4 µg/L	6.5%	9808-97	1
Dichloroacetic acid	Matrix Spike	40.0	37.5 µg/L	94%	9808-211	1
Dichloroacetic acid	Method Blank		ND* µg/L		9808-436	1
Dichloroacetic acid	Secondary Source Std	20.0	18.5 µg/L	93%	9808-437	1 70-130%
Dichloroacetic acid	Standard	20.0	19.7 µg/L	98%	9808-438	1 80-120%
Dichloroacetic acid	Standard	20.0	17.5 µg/L	88%	9808-438	1 80-120%
Dichloroacetic acid	Standard	40.0	36.6 µg/L	92%	9808-439	1 80-120%
Monobromoacetic acid	Duplicate	ND	ND µg/L	NA	9808-97	1
Monobromoacetic acid	Matrix Spike	40.0	39.7 µg/L	99%	9808-211	1
Monobromoacetic acid	Method Blank		ND* µg/L		9808-436	1
Monobromoacetic acid	Secondary Source Std	20.0	19.7 µg/L	98%	9808-437	1 70-130%
Monobromoacetic acid	Standard	20.0	21.5 µg/L	108%	9808-438	1 80-120%
Monobromoacetic acid	Standard	20.0	20.8 µg/L	104%	9808-438	1 80-120%
Monobromoacetic acid	Standard	40.0	38.0 µg/L	95%	9808-439	1 80-120%
Monochloroacetic acid	Duplicate	ND	ND µg/L	NA	9808-97	2
Monochloroacetic acid	Matrix Spike	40.0	41.7 µg/L	104%	9808-211	2
Monochloroacetic acid	Method Blank		ND* µg/L		9808-436	2
Monochloroacetic acid	Secondary Source Std	20.0	19.4 µg/L	97%	9808-437	2 70-130%
Monochloroacetic acid	Standard	20.0	19.6 µg/L	98%	9808-438	2 80-120%
Monochloroacetic acid	Standard	20.0	20.5 µg/L	102%	9808-438	2 80-120%
Monochloroacetic acid	Standard	40.0	38.6 µg/L	97%	9808-439	2 80-120%
Tribromoacetic acid	Duplicate	ND	ND µg/L	NA	9808-97	4
Tribromoacetic acid	Matrix Spike	40.0	32.7 µg/L	82%	9808-211	4
Tribromoacetic acid	Method Blank		ND* µg/L		9808-436	4
Tribromoacetic acid	Secondary Source Std		ND µg/L		9808-437	4 70-130%

ND: non-detect. *Recovery is below 1/2 minimum reporting level (MRL). NA (not applicable): RPD calculation is not applicable.

Quality Control ReportMr. Anthony Clemente
Miami-Dade Water and Sewer Department**Study#:** 128
Study Title: ICR RSSCT #3

Tribromoacetic acid	Standard	20.0	20.5 µg/L	102%	9808-438	4 80-120%
Tribromoacetic acid	Standard	20.0	21.6 µg/L	108%	9808-438	4 80-120%
Tribromoacetic acid	Standard	40.0	42.3 µg/L	106%	9808-439	4 80-120%
Trichloroacetic acid	Duplicate	ND	ND µg/L	NA	9808-97	1
Trichloroacetic acid	Matrix Spike	40.0	35.3 µg/L	88%	9808-211	1
Trichloroacetic acid	Method Blank		ND* µg/L		9808-436	1
Trichloroacetic acid	Secondary Source Std	20.0	16.8 µg/L	84%	9808-437	1 70-130%
Trichloroacetic acid	Standard	20.0	19.9 µg/L	99%	9808-438	1 80-120%
Trichloroacetic acid	Standard	20.0	17.9 µg/L	89%	9808-438	1 80-120%
Trichloroacetic acid	Standard	40.0	38.6 µg/L	97%	9808-439	1 80-120%

End of quality control report

QC Results from Montgomery Watson Laboratories

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Coral Gables, FL 33146

Study#: 128
Study Title: ICR RSSCT #3

Phone: 305-669-7602 Fax: 305-669-5796

QC Batch ID: 82482 **Report #:** 45986
45987

Analysis: CA **Method:** EPA/ML 200.7

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Calcium, Total, ICAP	50	49.5	99.0%		(90 - 110)
LCS2	Calcium, Total, ICAP	50	51.5	103.0%		(90 - 110)
MBLK	Calcium, Total, ICAP	ND	ND			
MS	Calcium, Total, ICAP	50	49.4	99.0%		(80 - 120)

QC Batch ID: 82490 **Report #:** 45986
45987

Analysis: MG **Method:** ML/EPA 200.7

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Magnesium, Total, ICAP	20	19.7	98.0%		(85 - 115)
LCS2	Magnesium, Total, ICAP	20	20.4	102.0%		(85 - 115)
MBLK	Magnesium, Total, ICAP	ND	ND			
MS	Magnesium, Total, ICAP	20	19.8	99.0%		(70 - 130)

QC Batch ID: 82568 **Report #:** 45986
45987
45993

Analysis: BR **Method:** ML/EPA 300

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Bromide	0.02	0.019	95.0%		(50 - 150)
LCS2	Bromide	0.1	0.098	98.0%		(90 - 110)
MBLK	Bromide	ND	ND			(70 - 130)
MS	Bromide	0.1	0.106	106.0%		(80 - 120)
MSD	Bromide	0.1	0.105	105.0%		(80 - 120)

QC Batch ID: 82778 **Report #:** 45986
45987
45993

Analysis: NH3 **Method:** ML/EPA 350.1

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Ammonia Nitrogen	1	1.09	109.0%		(80 - 120)

ND (non-detect): Result is below 1/2 minimum reporting level (MRL).

QC Results from Montgomery Watson LaboratoriesMr. Anthony Clemente
Miami-Dade Water and Sewer DepartmentStudy#: 128
Study Title: ICR RSSCT #3

LCS2	Ammonia Nitrogen	1	1.08	108.0%	(80 - 120)
MBLK	Ammonia Nitrogen	ND	ND		
MS	Ammonia Nitrogen	1	0.81	81.0%	(80 - 120)
MSD	Ammonia Nitrogen	1	0.8	80.0%	(80 - 120)

QC Batch ID: 82867

Report #: 45993

Analysis: CA

Method: EPA/ML 200.7

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Calcium, Total, ICAP	50	52.4	105.0%		(90 - 110)
LCS2	Calcium, Total, ICAP	50	52.3	105.0%		(90 - 110)
MS	Calcium, Total, ICAP	50	52.6	105.0%		(80 - 120)

QC Batch ID: 82947

Report #: 45993

Analysis: MG

Method: ML/EPA 200.7

<u>QC</u>	<u>Analyte</u>	<u>Spike</u>	<u>Recovery</u>	<u>Yield</u>	<u>RPD</u>	<u>Acceptance Criteria Range</u>
LCS1	Magnesium, Total, ICAP	20	20.9	104.0%		(85 - 115)
LCS2	Magnesium, Total, ICAP	20	20.9	104.0%		(85 - 115)
MS	Magnesium, Total, ICAP	20	21.7	108.0%		(70 - 130)

End of MW QC report

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Study#: 128
Study Title: ICR RSSCT #3

Analysis comments**Analysis:** Turbidity**Method:** SM 2130 B

Reported turbidity data has been rounded following the requirements of SM 2130 B, reproduced in the table below (Standard Methods, 1995). Note that the reported digits are not necessarily significant.

Turbidity Range	Report to Nearest
0-1.0	0.05
1-10	0.1
10-40	1
40-100	5
100-400	10
400-1000	50
> 1000	100

End of comments