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# Anacostia Wet Weather Receiving Water Monitoring Survey: Event 3

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## INTRODUCTION

The Naval Research Laboratory (NRL), working in conjunction with the Metropolitan Washington Council of Government (MWCOG), monitored overflows of the combined sewer system (CSS) and separate storm water system (SSWS) in the Anacostia River in the District of Columbia. The NRL/MWCOG contribution is part of a larger effort by the District of Columbia Water and Sewer Authority (WASA) to develop a Long Term Control Plan (LTCP) for the combined sewer system in the District of Columbia.

NRL monitored four rain events. This report includes the data, QA/QC controls and analysis of the data for Event 3. The Event 3 sampling began on May 14, 23:53 and ended May 16, 20:40. Field personnel maintained a log of the field and laboratory conditions. Copies of these notes are in Appendix 1.

Sampling was conducted at 5 stations located near CSS outfalls on the Anacostia River. The outfalls are located at the following locations (See Graphic A for location of stations):

**Station 1:** Located beneath the New York Ave. Bridge at the DC/Maryland district- / stateline.

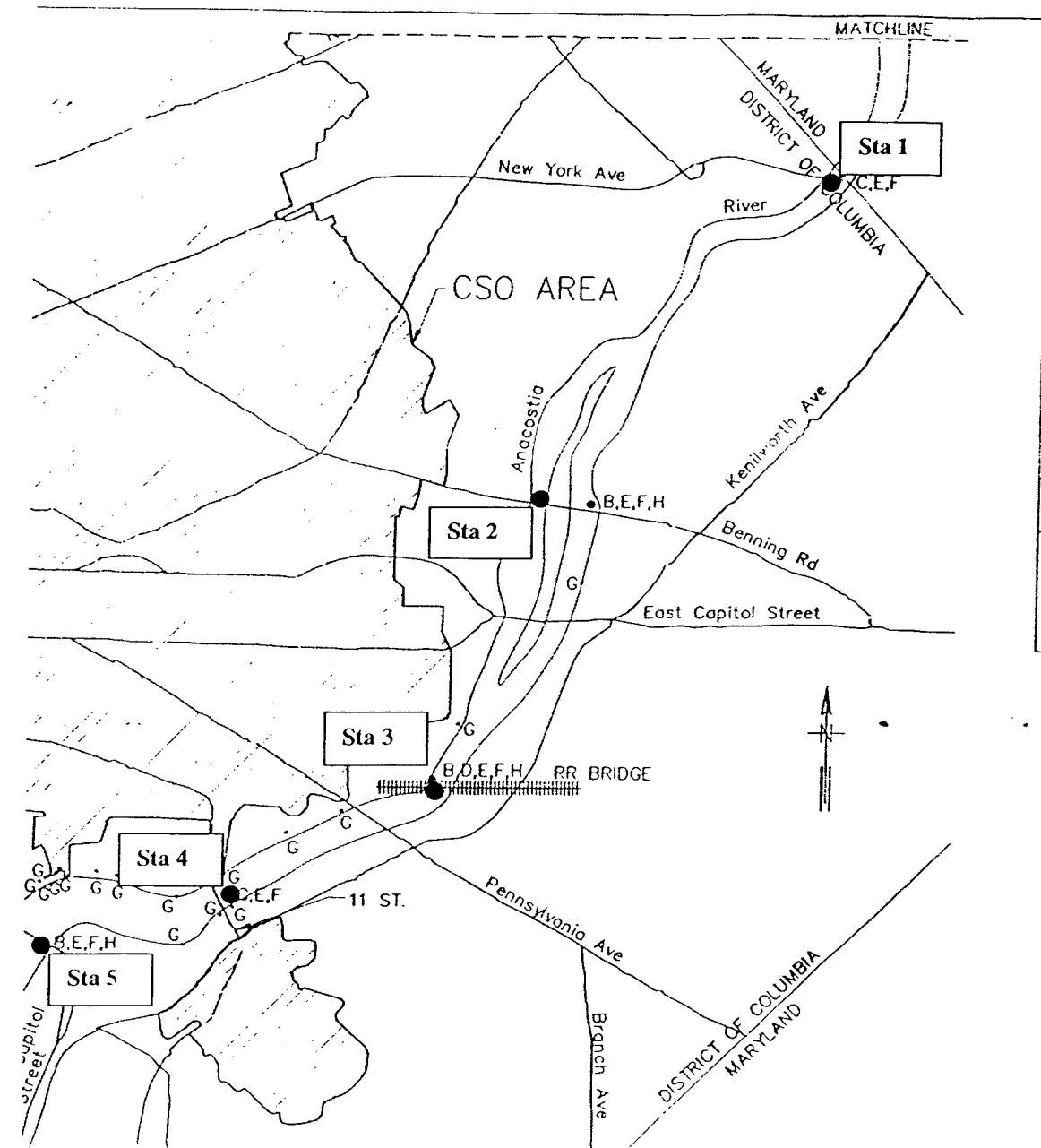
**Station 2:** Located beneath the Benning Rd. Bridge near the PEPCO Power Station.

**Station 3:** Located at the railroad bridge at the northern end of Anacostia Park

**Station 4:** Located beneath the Anacostia Bridge (11<sup>th</sup> Street)

**Station 5:** Located at Douglas Bridge (South Capital Street)

| Event<br>Station_ID | Routine<br>Station_ID | Description    | Latitude   | Longitude   | River_mile |
|---------------------|-----------------------|----------------|------------|-------------|------------|
| 1                   | FA01                  | DC/MD Line     | 38.9165    | -76.9443056 | 6.56       |
| 2                   | FA02                  | Benning Rd     | 38.8968611 | -76.9625833 | 4.57       |
| 3                   | FA03                  | Penn. Ave      | 38.8785833 | -76.9669444 | 2.85       |
| 4                   | FA04                  | 11th St.       | 38.8715    | -76.9901389 | 2.1        |
| 5                   | FA05                  | S. Capitol St. | 38.8680833 | -77.0068333 | 0.97       |



Graphic A: Anacostia River sampling stations

| Monitoring Location   | Outfall              | Overflow Volume<br>(million gallons) | Nearest Station |
|-----------------------|----------------------|--------------------------------------|-----------------|
| Fort Stanton          | 007                  | 0.32                                 | Station 5       |
| B St./ New Jersey Ave | 010, 011, 011a       | Out of Service                       | Station 5       |
| Tiber Creek           | 012                  | Out of Service                       | Station 5       |
| Northeast Boundary    | 019 (swirl effluent) | 4.14                                 | Station 2/3     |
|                       | 019 (bypass)         | 0.18                                 | Station 2/3     |
| <b>Total</b>          |                      | <b>4.64</b>                          |                 |

4.64 million gallons of overflow were measured by Greeley and Hansen Engineers during Event 3, but the B St./ New Jersey Avenue and Tiber Creek outfall gauges were "Out of Service," so the total overflow was greater than the 4.84 million gallons reported.

### Quality Assurance / Quality Control

Performance Evaluation (PE) data from Ammonia, Total Oxidizable Nitrogen (TON:  $\text{NO}_3^-$  and  $\text{NO}_2^-$ ), Nitrite ( $\text{NO}_2^-$ ), o-Phosphate, Total Phosphate and TKN from water pollution (WP) and water source (WS) samples were submitted to Analytical Products Group on September 15, 2000. For the WP and WS samples, our laboratory passed all analyses with the exception of Total Phosphates. Our analysis of this parameter for both the WP and APG+ samples was 0.6 mg/L higher than the accepted range (APG+ is a low concentration component of the WP set). Considering the accuracy of the other PE measurements we reported, the problem was doubtless with the persulfate digestion procedure. Chesapeake Analytical Laboratory, an independent lab contracted by Geo-Centers, Inc. to analyze TKN samples, passed the WP and WS evaluations for TKN. Results from the performance evaluation are included in Appendix II. The results reported for the WS samples were not included in the final reports for Events 1 & 2.

Chain of Custody (COC) forms and temperature blanks accompanied the transfer of all samples from the field lab to NRL and from NRL to Chesapeake Analytical Laboratory. Because a large number of samples transferred, it was impossible to itemize each sample in the COC forms. Instead, sets of samples (e.g. all TKNs from cycles 4-6) were recorded as a single entry. This simplification made it possible to maintain efficient sample transfer during the event. COC forms are found in Appendix III. Chesapeake Analytical Laboratory (CAL), Inc. (301-932-4775) of Waldorf, MD was contracted to process and analyze TKN samples. COC forms from CAL are included in Appendix III. QA/QC requirements from CAL are in Appendix II.

## METHODOLOGY

### Sampling

Qualified NRL employees and contractors collected samples from each of the stations every 4 hours. The field technician log sheet is in Appendix I. We maintained the rigid sampling rate of once every 4 hours. The beginning of each sampling cycle (hereafter referred to as "cycles") almost exactly corresponded with the four hour scheduling. Certified US Army Corps of Engineer personnel piloted the boat. Water samples were collected from 1m depth in a Van Dorn Bottle and transferred to appropriate storage containers (described below) for processing and analysis.

### Biological Oxygen Demand (BOD)

#### *Methods*

Duplicate samples were collected in 60ml BOD bottles with ground glass stoppers. The 5 Day BODs were determined as described by EPA method 405.1. The procedure to determine the 5 day BOD follows the standard technical procedure (SM5210B: Standard Methods for the Examination of Waters and Wastewaters, 20<sup>th</sup> edition, 1998). Dissolved oxygen (DO) was measured by potentiometric titration. The analytical determination follows the method described by Oudot et al. (1987). See the Quality Assurance Project Plan for reference (on file at MWCOG).

#### *QA/QC*

Duplicate samples were run for every sample although QA/QC scheduling required duplicate samples once every 20 samples. The titrant (0.14M sodium thiosulfate) was standardized with a standard KIO<sub>3</sub> solution during the event. Spikes and analytical standards are not applicable to this method. Because the residual DO in all bottles after 5 days was >1 mg/L, dilution water blanks and glucose/glutamic acid checks were not necessary. Laboratory data sheets for the BOD analysis are located in Appendix IV.

#### *Field Problems*

During Event 3 many of the initial DO concentrations were low enough and the BOD high enough that the residual DO at day 5 was less than 1 mg/L. When the DO in the incubation flask is below 1 mg/L aerobic bacteria responsible for the BOD are inhibited, thus the time averaged depletion of DO (which is the BOD) is underestimated. In such cases, the initial sample should be diluted with dilution water, as is specified in SM5210B. Dilution water serves to both provide higher initial DO, which provides more DO for the incubation, and dilutes the amount of organic material that fuels BOD. Dilution factors are used in calculating the BOD to account for the initial dilution. Such a rapid depletion of DO was not observed in Events 1&2, however, so the condition experienced in Event 3 was not expected. As a result, many of the BOD values reported from Event 3 underestimate the true BOD. Suspect data are indicated in the data table.

## **Total Suspended Solids and Volatile Suspended Solids (TSS and VSS)**

### *Methods*

Duplicate samples were collected in 250ml Nalgene bottles. The full volume of the bottle was filtered through a preweighed 48mm GFF filter in the field lab. Loaded filters were stored at  $-20^{\circ}\text{C}$  until analysis. The TSS and VSS concentrations were determined as described by EPA method 160.2 and 160.4, respectively. The procedure follows the standard technical procedure, SM2540D&E, respectively (Standard Methods for the Examination of Waters and Wastewaters, 20<sup>th</sup> edition, 1998).

### *QA/QC*

Duplicate samples were run for every sample although QA/QC scheduling stated that duplicate samples were required once every 20 samples. Spikes and analytical standards are not applicable to this method. Filter blanks for VSS analysis were determined for each set of samples. Equipment Blanks and Field Blanks were collected and analyzed as noted in Appendix II. Laboratory data sheets for TSS and VSS analysis are in Appendix IV.

### *Field Problems*

None.

## **Nutrients ( $\text{NO}_3^-$ & $\text{NO}_2^-$ as N, $\text{NH}_4^+$ as N, o- $\text{PO}_4^{+}$ & Total $\text{PO}_4$ )**

### *Methods*

Duplicate samples were collected in 250ml Nalgene bottles. Samples were filtered through ashed ( $450^{\circ}\text{C}$  for 4 hrs) 48mm GFF filters and collected in clean 60ml Nalgene bottles. Samples for N as nitrate & nitrite (also known as and hereafter referred to as Total Oxidizable Nitrogen (TON)), N as ammonia and o-phosphate were collected in one bottle, and samples for total phosphate were collected in another bottle. Samples were frozen at  $-20^{\circ}\text{C}$  until analysis (TON,  $\text{NH}_4^+$  and o- $\text{PO}_4^{+}$ ) or digestion (Total  $\text{PO}_4^{+}$ ). TON, ammonia and phosphate (for total and o-phosphate) were analyzed on an Amicron Nutrient Analyzer (OI Analytical, College Station, TX) following the methods reported below.

TON concentrations were determined as described by EPA method 353.2. "Determination of nitrite by semi-automated colorimetry." The procedure follows the standard technical procedure, SM4500- $\text{NO}_3^-$  I, Cadmium Reduction Flow Injection (Standard Methods for the Examination of Waters and Wastewaters, 20<sup>th</sup> edition, 1998). This method reduces the ambient nitrate to nitrite, and the combined nitrite (reduced nitrate + ambient nitrite) is analyzed.

Ammonia concentrations were determined as described by EPA method 350.1, "Determination of ammonia by semi-automated colorimetry." The procedure follows the standard technical procedure, SM4500-NH<sub>3</sub>G, Automated Phenate Method (Standard Methods for the Examination of Waters and Wastewaters, 20<sup>th</sup> edition, 1998). Orthophosphate concentrations were determined as described by EPA method 365.1, "Determination of phosphate by semi-automated colorimetry." The procedure follows the standard technical procedure, SM4500-PG, Flow Injection Analysis for Orthophosphate (Standard Methods for the Examination of Waters and Wastewaters, 20<sup>th</sup> edition, 1998).

Total phosphate concentrations were determined by the standard technical procedure, SMP4500-PH, "Manual Digestion Flow Injection Analysis for Total Phosphorus" (Standard Methods for the Examination of Waters and Wastewaters, 20<sup>th</sup> edition, 1998). Organic phosphorus was converted to phosphate by the persulfate digestion procedure.

#### *QA/QC*

Duplicate samples were run every 10 samples. Method blanks and laboratory control samples were run according to schedule. Equipment Blanks and Field Blanks were collected and analyzed as noted in Appendix II. Laboratory data sheets for the nutrient analyses are in Appendix IV.

Because of instrumental instability, ammonia data generated failed QA/QC. The internal and continuing calibration samples run with the ammonia samples were well beyond acceptable tolerances. As a result, ammonia data from Event 3 are not presented in this report. They will be provided to MWCOG at a later time, when the instrumental issues have been solved.

#### *Field Problems*

None.

### **Dissolved, Total and Particulate Organic Carbon (DOC, TOC & POC)**

#### *Methods*

Duplicate samples were collected in 250ml Nalgene bottles. TOC and DOC samples were transferred from the sample bottles into precombusted (450°C for 8 hrs) glass amber ampoules via syringe. Samples for DOC analysis were filtered through precombusted (450°C for 4 hrs) 13mm GFF filters. Twenty microliters of phosphoric acid (85%) was added to the ampoules prior to adding the sample. Ampoules were heat sealed and stored at 4°C until frozen at NRL prior to analysis. TOC and DOC concentrations were determined by the standard technical procedure, SM5310B (Standard Methods for the Examination of Waters and Wastewaters, 20<sup>th</sup> edition, 1998). Analysis was performed on an MQ1001 Total Organic Carbon Analyzer (MQ Scientific, Washington).

### *QA/QC*

Duplicate samples were run for every sample. Analytical standards (or Laboratory control samples (LCS)) were run once per 20 samples, or once per batch, whichever was greater. Because of a slight drift in the instrumentation, the analytical standards were used to continuously update the standard curve. Equipment blanks and field blanks were collected and analyzed as noted in Appendix II. Laboratory data sheets for DOC, TOC and POC analyses are in Appendix IV.

### *Field Problems*

None.

## **Total Kjeldahl Nitrogen (TKN)**

### *Methods*

Duplicate samples were collected in 250ml Nalgene bottles. Samples were preserved at pH<2 with H<sub>2</sub>SO<sub>4</sub> and stored at 4°C during delivery to NRL and at NRL. Samples were analyzed by Chesapeake Analytical Laboratory, Inc. of Waldorf, MD by EPA Method 351.2.

### *QA/QC*

Duplicate samples were run every 10 samples. Method blanks, matrix spikes and laboratory control samples were run according to schedule (See Appendix II). Equipment blanks and field blanks were collected and analyzed as noted in Appendix II. Raw data sheets received from CAL are in Appendix IV.

### *Field Problems*

None.

## **Water Quality Parameters (Temperature, Conductivity, Dissolved Oxygen, pH & Turbidity)**

### *Methods*

Temperature (°C), conductivity (µS/cm), dissolved oxygen (DO) (mg/L) and pH were measured with a Hydrolab Datasonde 4 Water Quality Multiprobe (Hydrolab Corporation, Austin TX).

### *QA/QC*

The instrument was maintained according to manufacturer's specifications and calibrated prior to each field event. Duplicate measurements were scheduled to be recorded once every 10 readings. Duplicate measurements are reported in Table 9.

### *Field Problems*

Prior to this project, the Datasonde 4 probe was sent to the manufacturer for repairs. The nephelometer was mistakenly removed while being repaired and we were unable to get the nephelometer replaced for any of the storm water events.

## **RESULTS**

Data from Event 2 is presented in the following order: Biological Oxygen Demand (BOD), Total Suspended Solids and Volatile Suspended Solids (TSS and VSS), Nutrients ( $\text{NO}_3^-$  &  $\text{NO}_2^-$  as N,  $\text{NH}_4^+$  as N,  $\text{o-PO}_4^{3-}$  & Total  $\text{PO}_4^{3-}$ ), Dissolved and Total Organic Carbon (DOC and TOC), Total Kjeldahl Nitrogen (TKN) and Water Quality Parameters. A brief description and interpretation of the data is provided in this section. In conjunction with the plots provided, this interpretation is intended to provide some spatial (station averages and cycle summaries) and temporal (cycle averages and station summaries) insight. Hopefully, this preliminary perspective will serve as a useful guide for directing model development and detailed statistical analysis.

Data tables for each parameter are in the TABLES section. Field duplicate data are included or calculated into the tables. In some instances, a standard deviation is reported. This standard deviation was calculated using the duplicate values. It is recognized that a standard deviation should be calculated from a set of three samples, so consider the calculated standard deviations with that in mind.

The plots referred to in the data interpretation are in the FIGURES section. The first figure for each parameter contains a plot with the cycle averages and a plot with the station averages. The second figure contains a station summary, which plots the parameter value at each station against the cycle number. Cycle numbers represent each of the sample cycles and are separated in time by approximately 4 hours. For an exact cycle time see the collection time provided in the corresponding data table (TABLES Section). The third figure of each dataset contains a cycle summary that plots the parameter value against each station samples during the cycle.

Detailed coliform data from Event 3 was provided in a separate report submitted by Dr. Joanne Jones-Meehan. It is advisable to obtain those reports to compare the biological and chemical data. The complete coliform dataset is not included in this report. However, to help bridge the two reports, a brief description of the coliform data and representative plots courtesy of Dr. Joanne Jones-Meehan are included. The brief description of the coliform data precedes the results for this report and the representative plots are found in the FIGURES section.

Discussion of the data in this report will be stated in relative terms. For instance, rather than stating Station 2 had a BOD of 3.4mg/L, which was 2.1mg/L higher than that measured at Station 1, this report will state that the BOD at Station 2 was higher than the BOD measured at Station 1. For exact measurements, refer to the figures and data tables.

## **Coliforms**

Event 3 provides a good example of how dramatically a single rain event can effect the water quality of the Anacostia River. Samples collected several days before and after Event 1 had relatively small total coliform counts (Fig 1). With the rain, however, came a huge influx of coliforms. During Cycle 1 900,000 cells/100 ml were measured from Station 5 and 500,00 cells/100 ml were measured from Station 3. The maximum total coliform count was identical in location and magnitude to the maximum from Event 2. In comparison, however, the total coliform inputs from Event 3 were limited to Cycle 1. Total coliform counts decreased during the successive cycles. Fecal coliform counts followed a similar pattern of reaching their maxima during Cycle 1. Cell counts were an order of magnitude less than the total coliform counts, which is not unusual. Cycle 7 provides some indication that there was additional input of fecal coliform impacted material into the river (Fig 2). The counts at all stations, barring Station 3, were higher than the samples collected during Cycle 4. An interesting note regarding the data collected from Event 3 is that the O St./New Jersey Ave. pump station was reported as "Not in Service" during the Event 3 dates. Despite the lack of overflow data, the total and fecal coliform data provide strong evidence that there was a CSO event in the immediate vicinity of the O St. New Jersey Ave Station following the rain that prompted the Event 3 sampling.

## **Biological Oxygen Demand (BOD)**

The data are presented in Table 1 and the plots appear in Figures 3-5. BOD data from Event 3 should be viewed with caution for reasons explained in the Methods:Field Problems section. Station 2 appears to have had the lowest BOD, but since it had the lowest initial DO, it was the most likely to have experienced the greatest BOD inhibition during the 5 day incubations. Low initial DO in the incubations inhibited the potential BOD in these and many other samples. The suspect data from Event 3 are indicated in Table 1.

## **Total Suspended Solids and Volatile Suspended Solids (TSS and VSS)**

The data are presented in Table 2 and the plots appear in Figures 6-8. The most dominate feature of the suspended solids data is the loading observed at stations 1-3 during Cycles 6&7 (Fig 7:A-C). This time and location correspond to the second smaller input of fecal coliforms into the river. This pattern is remarkably similar to that of Event 2 where the second overflow event provided a pulse of suspended solids near Stations 2&3. It is interesting to note that during both events, the overflow event at Station 5 (which led to extremely high coliform counts) had no measurable effect on the particle load. On the other hand, the overflow at the upper portion of the river results in a smaller increase in coliforms, but a marked increase in suspended solids. The particle load from this input can be traced downriver in the later cycles of the event (Fig 8:H-J). There also appears to have been an increase of suspended solids during the final two cycles at Stations 2&3).

**Nutrients: TON (Total Oxidizable Nitrogen --  $\text{NO}_3^-$  &  $\text{NO}_2^-$ ),  $\text{NH}_4^+$  as N, o- $\text{PO}_4^{3-}$  & Total  $\text{PO}_4^{3-}$**

Ammonia and TON: The TON data are presented in Table 3, and the plots appear in Figures 9-11. Cyclical changes were not evident (Fig 9:A), and the highest TON concentrations were measured at Station 5. The TON data provides no indication of the overflow events.

Phosphates (Ortho and Total): Ortho and total phosphate data are presented in Table 3, and the plots appear in Figures 12-14. Total and ortho-phosphate were consistently low throughout the river and showed minimal spatial or temporal variation (Fig 12:A&B). The exception to the lack of variability were two high measurements – one occurred at Station 1, Cycle 1 (Fig13A) and the other at Station 2, Cycle 2). Whether or not these pulses coincide with input for overflows is difficult to say, as they do not seem to coincide with the apparent overflow events where high coliforms and particulates were measured.

**Dissolved, Total and Particulate Organic Carbon (DOC, TOC & POC)**

The data are presented in Tables 4-7 and the plots appear in Figures 15-17. Figure 15:A indicates a slight increase in the TOC and DOC between Cycles 4-7 and a second increase near the end of the event between Cycles 9-11. These increases are not pronounced and would not merit attention were it not for the fact they correspond to the increases observed in the suspended solids data. Suspended solids and organics also correlated in Event 2. The station average pattern between the suspended solid and organic data also correlate, which suggests the source of suspended solid and organic material is the same and limited to the upper river.

**Total Kjeldahl Nitrogen (TKN)**

The data are presented in Table 8, and the plots appear in Figures 18-20. Overall, TKN showed very little variation during Event 3. The highest average concentration was measured at Station 2, due mostly to a relatively high value measured during Cycle 10. Nevertheless, Station 2 had the highest concentration for 8 of the 10 cycles for which data are available. The peak observed at Station 10 parallels increases observed in the suspended solid and organic data.

**Water Quality Parameters**

The data are presented in Table 9, and the plots appear in Figures 21 and 22. Average cycle temperature ranged between 24 and 25°C (Fig 21:A). Temperatures were slightly warmer downriver (Fig 22:A). pH remained constant for the duration of the cycle and was highest at Station 5 (Fig 22:B). Specific conductivity remained constant during Event 3 except for a marked decrease between Cycles 4&5 (Fig 21:D). During this same period, the temperature rose slightly (Fig 21:A) and the DO increased substantially (Fig 21:C). The DO increased during two intervals – between Cycles 4&5 and between Cycles 8&10 (Fig 21:C). These indicators may represent outfall events and match up with periods of rapid change for other parameters (e.g. TKN:C8-10; TSS:C4-7

& C9-10; SS: C4-7 & C10-12). During Event 3, the DO was near hypoxic conditions (<2.0mg/L) for a significant number of the measurements.

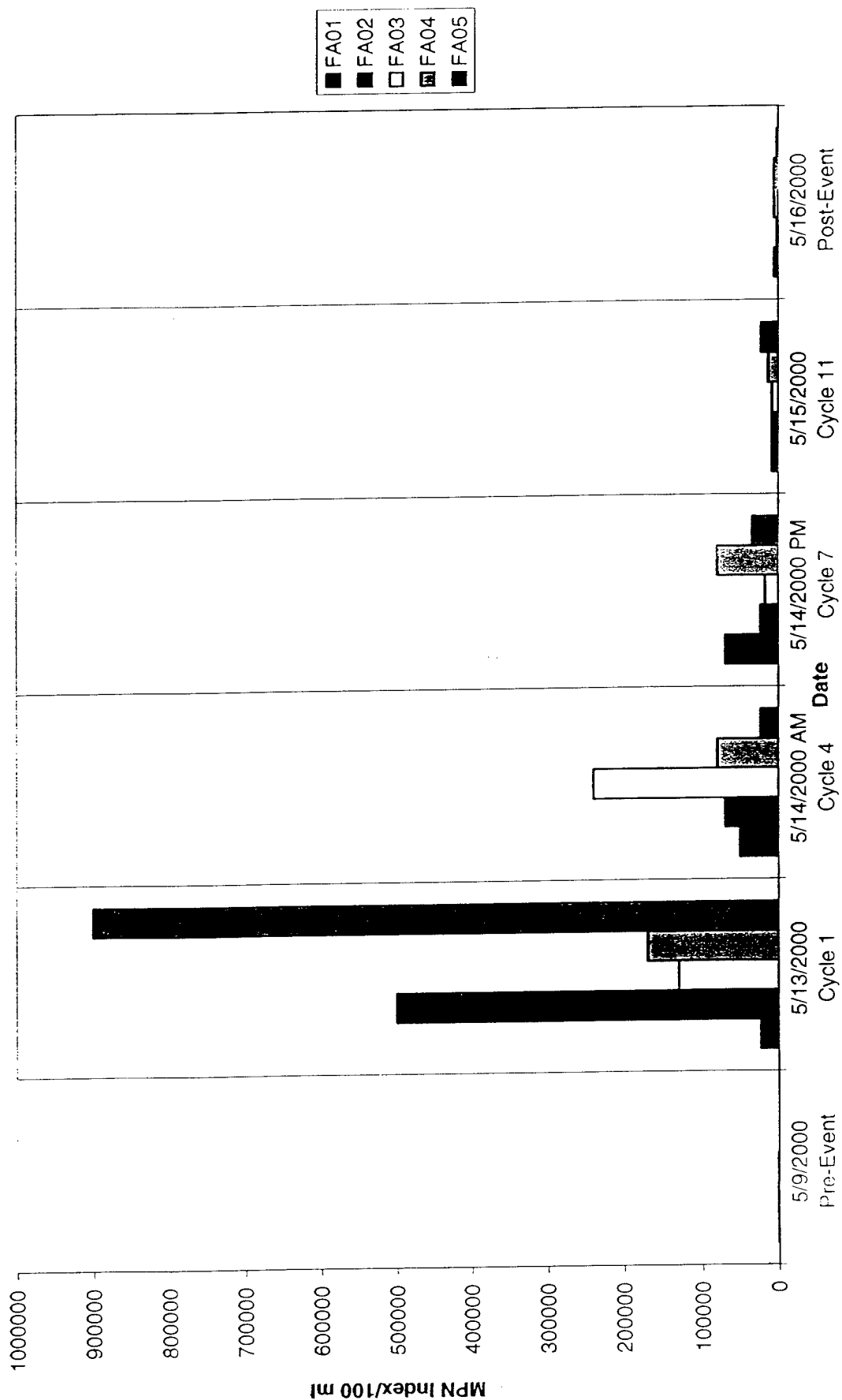
## SUMMARY

The measured overflow of 4.64 million gallons into the Anacostia was far less than the 80.04 million gallons measured during Event 2. However, the outfalls at B St./ New Jersey Ave and Tiber Creek, which dump near Station 5 were out of service, so the relative measurement of 4.64 million gallons is assuredly an underestimate of the actual discharge from the monitored overflows. Despite the disparity in overflow between the two events, the water quality indicators (in terms of concentration, spatial and temporal distribution) were remarkably similar. During both events the coliform counts were similarly high during Cycle 1 at Station 5. During later cycles (4-7) during both events, a smaller input of coliforms was measured near the upper river Stations 2&3. These stations, for both events, were also characterized by an increase in suspended solids and organic carbon.

During the latter stations (9-12) of this event there was a slight increase in the suspended solids, organic carbon and TKN concentrations, but no apparent increase in coliforms. This is the first instance where there has been a change in the general water quality without a change in the coliform counts. Water quality parameters measured with the Hydrolab (temp, pH, DO and spec. cond.) also suggest a marked change in the background water quality.

## FIGURES

Figure 1. Anacostia River (Method #9221B: Total Coliforms)



5/13/2000  
Cycle 1

Figure 2. Anacostia River (Method #9221E: Fecal Collforms)

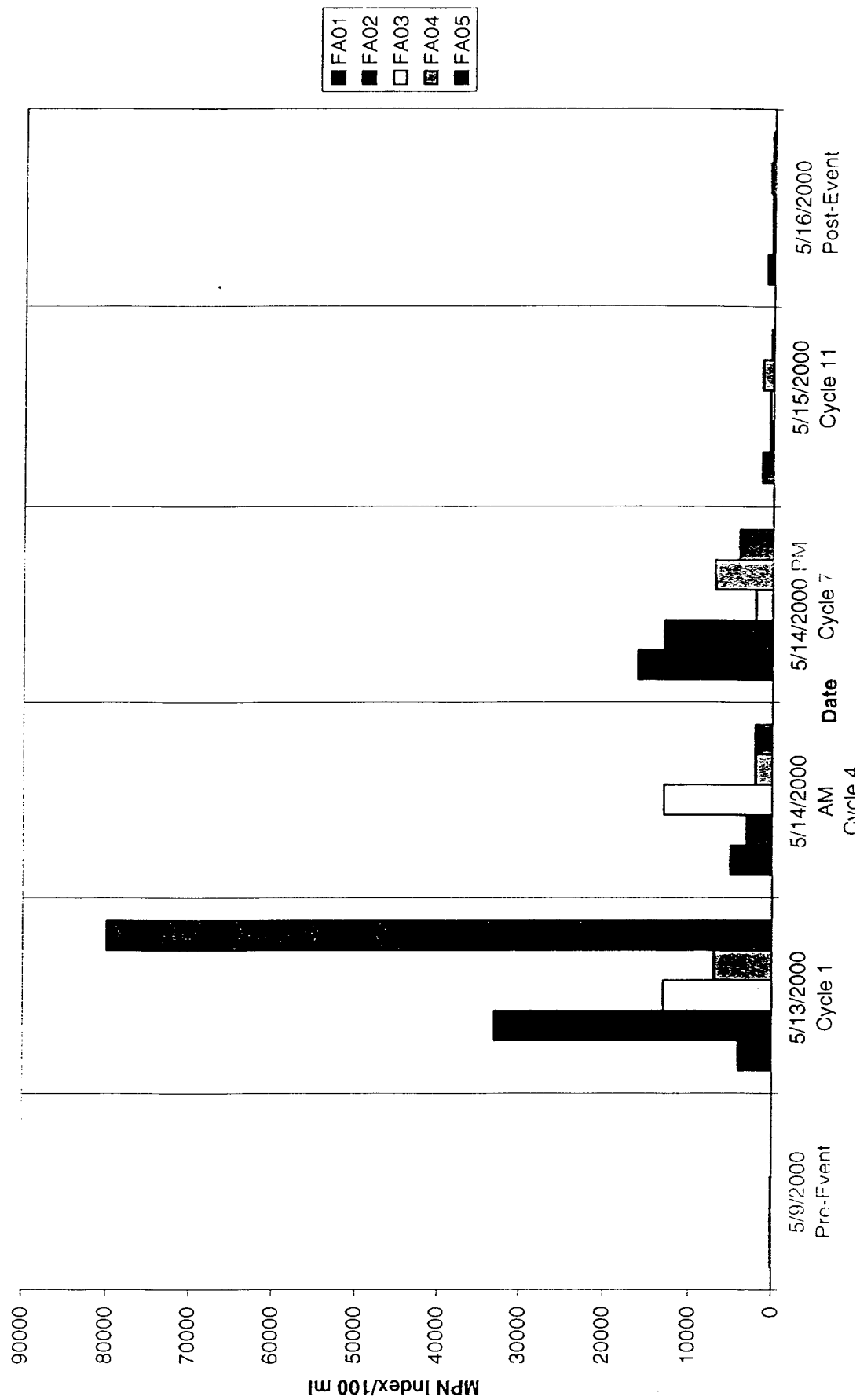


Figure 3: BOD, Event 3

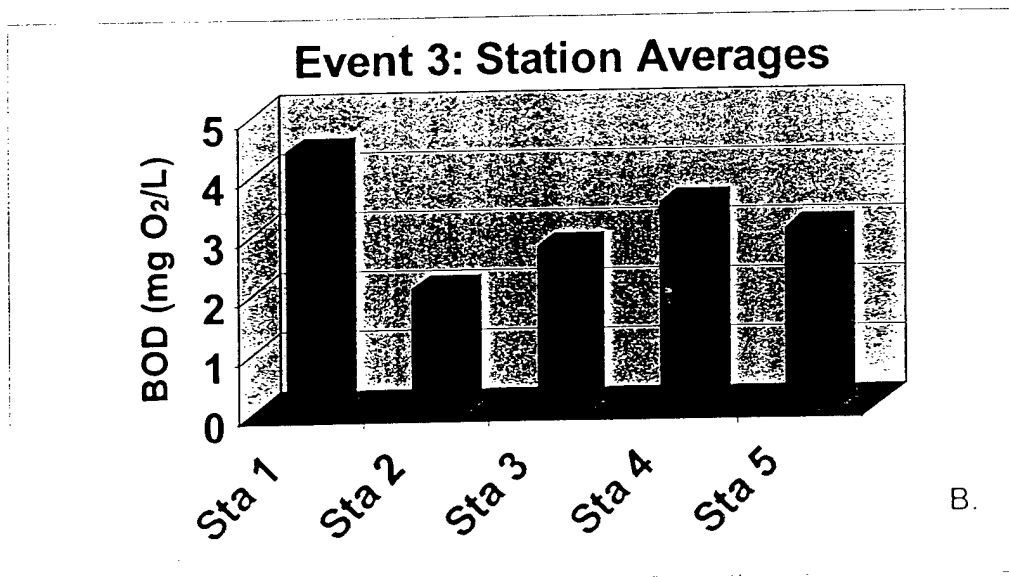
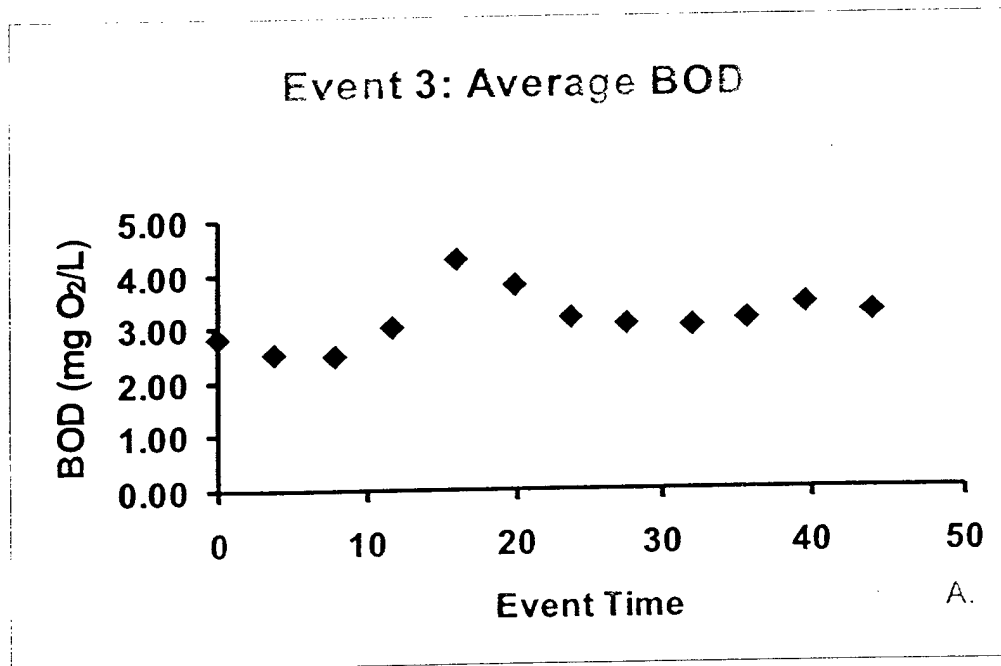
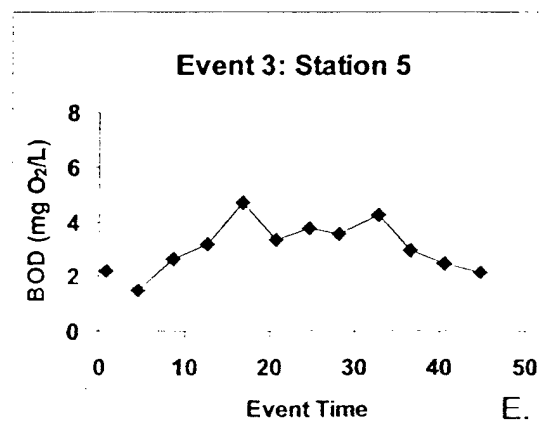
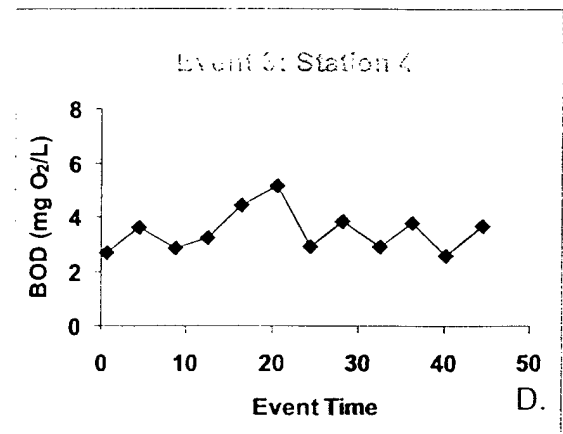
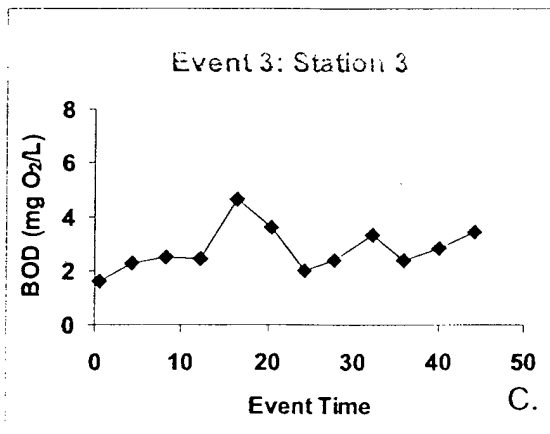
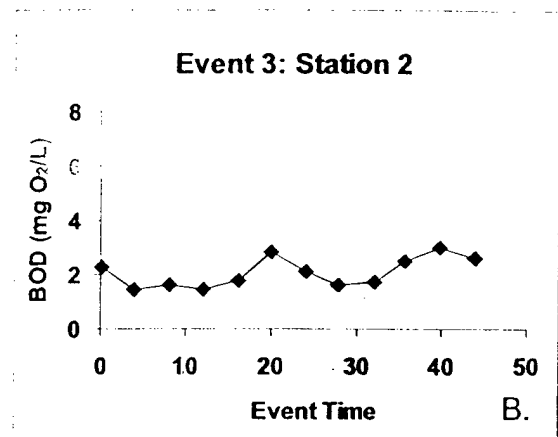
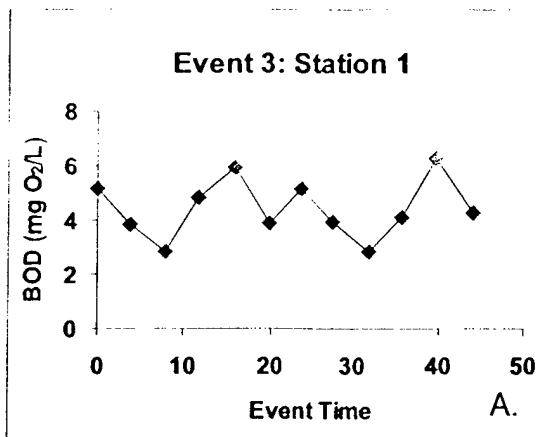


Figure 4: BOD, Event 3  
Station Summary



# Figure 5: BOD, Event 3 Cycle Summary

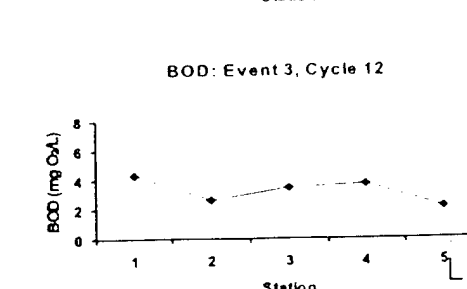
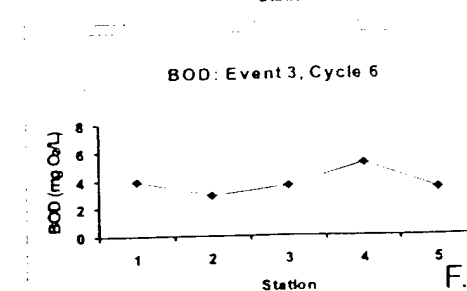
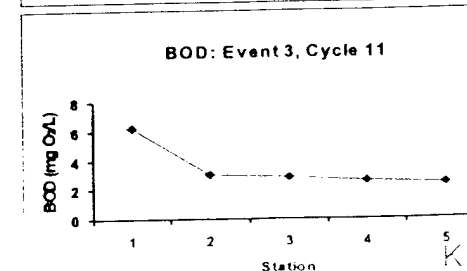
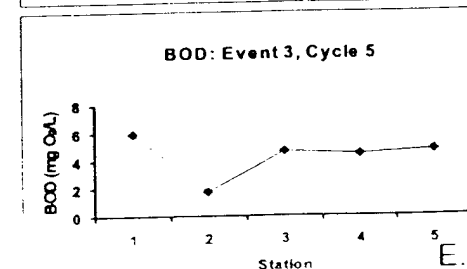
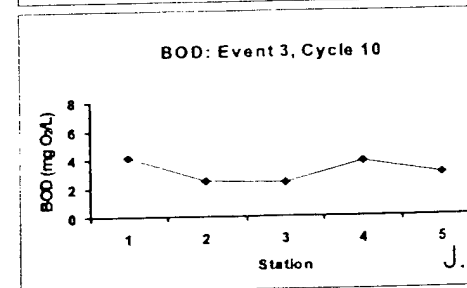
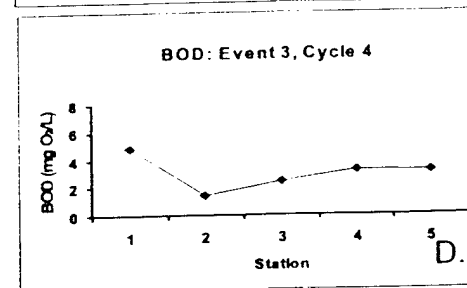
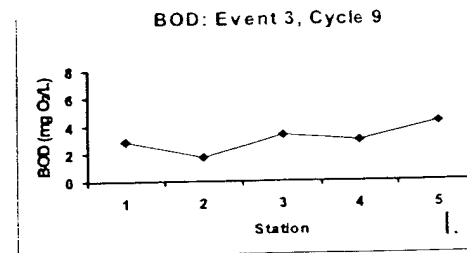
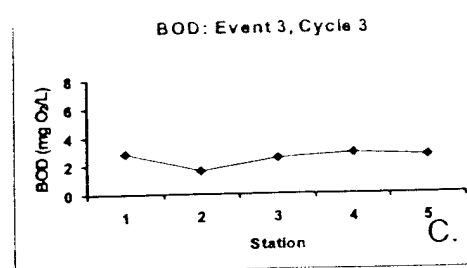
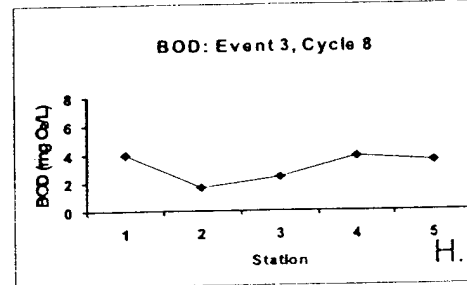
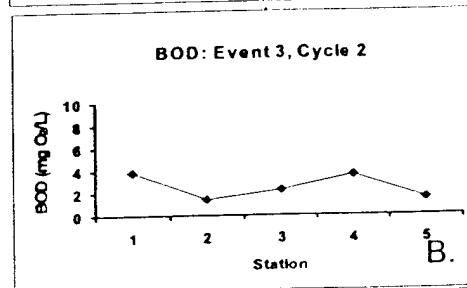
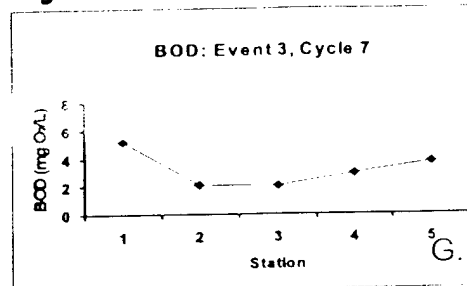
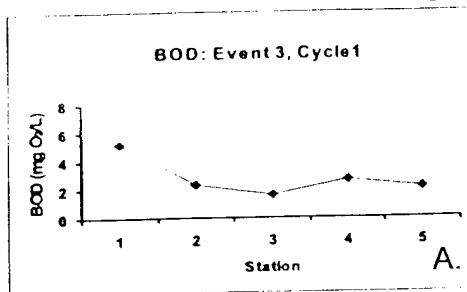
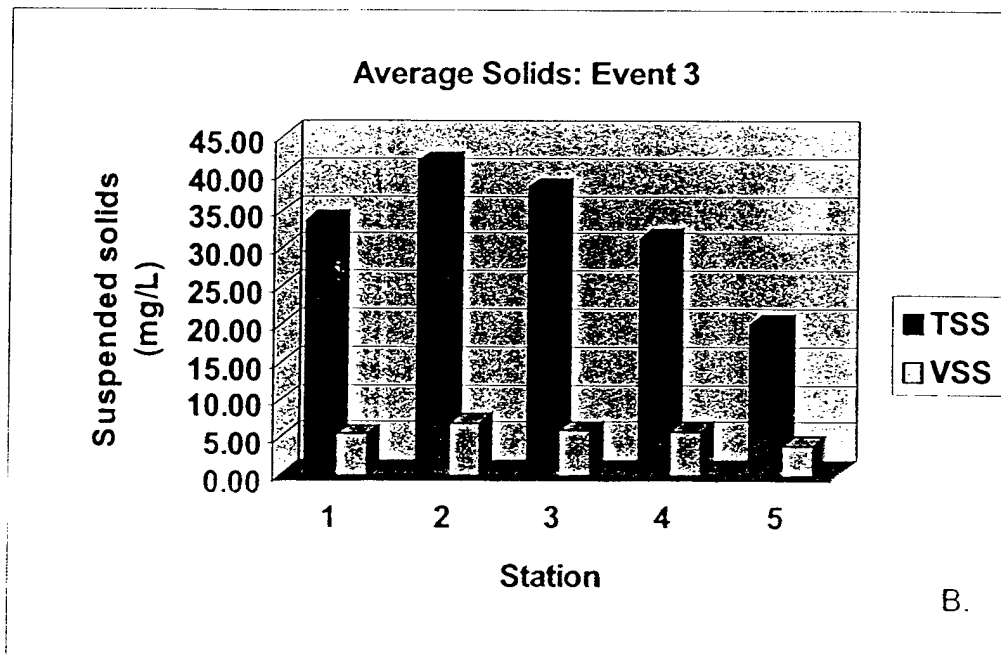
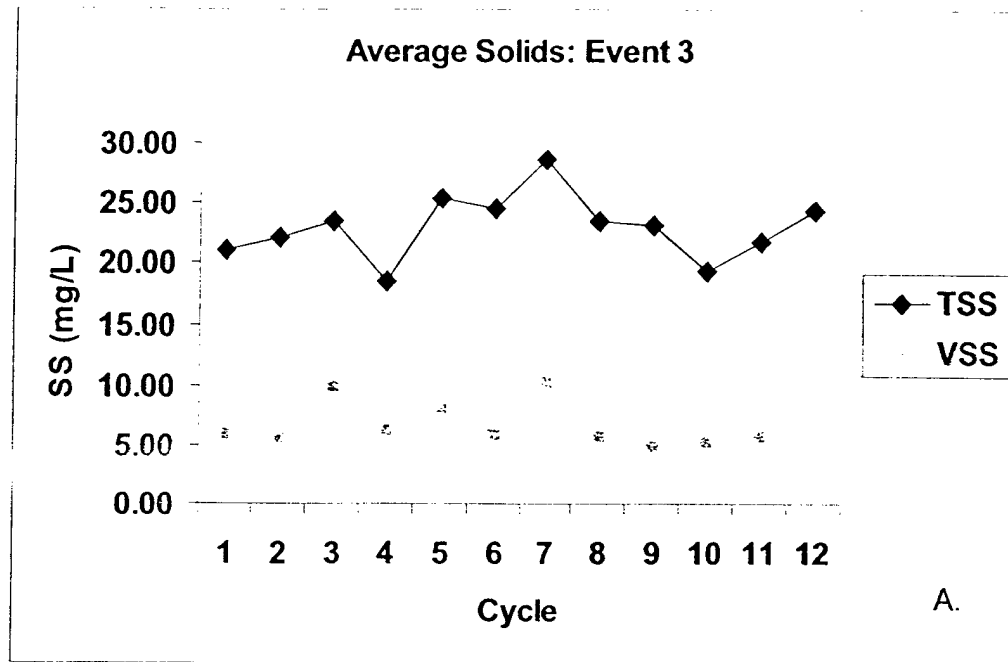
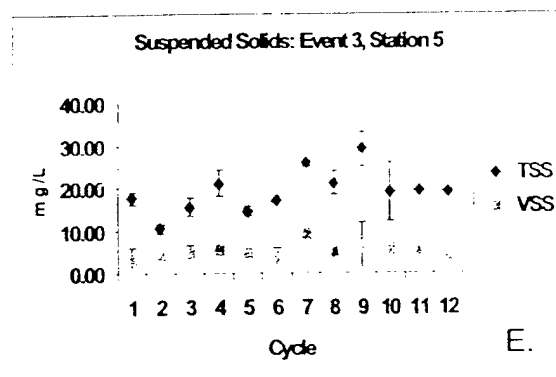
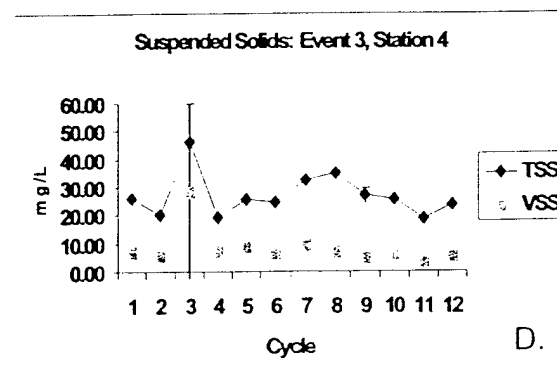
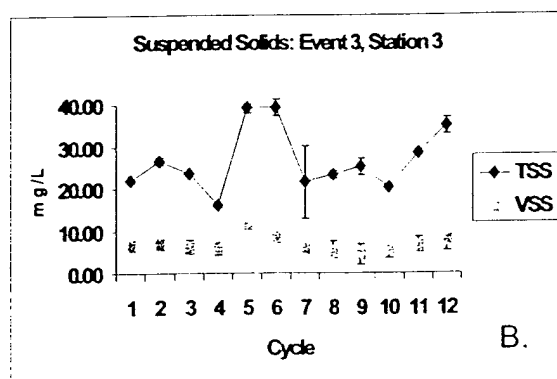
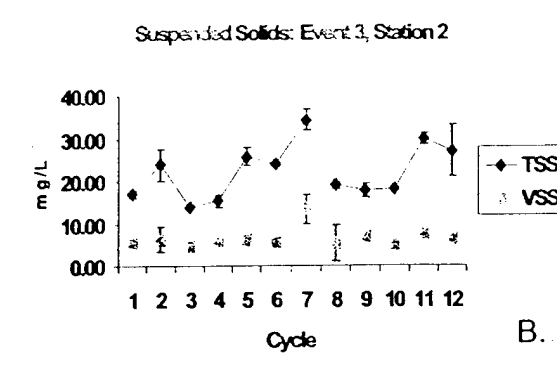
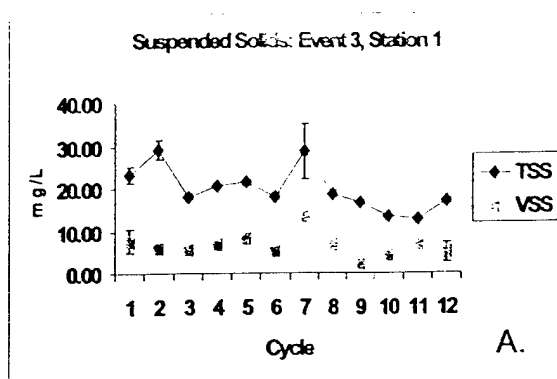


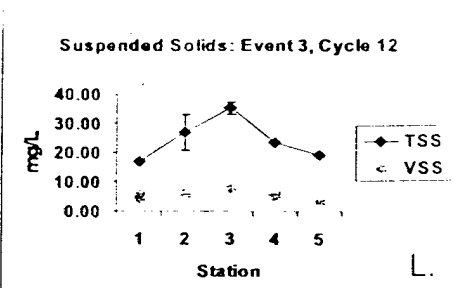
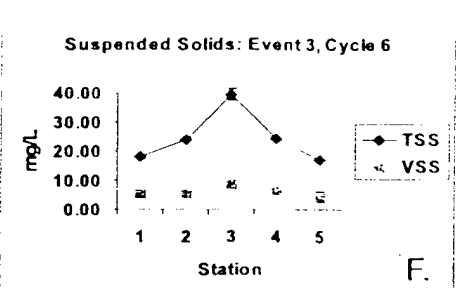
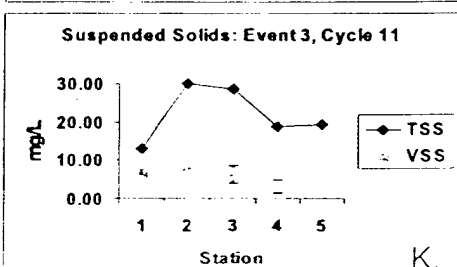
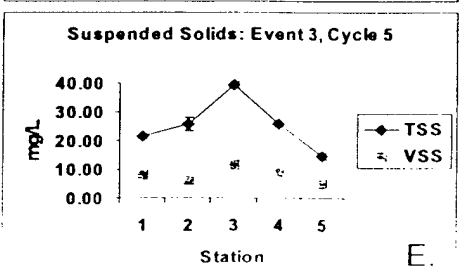
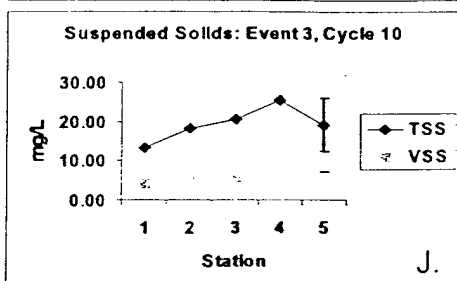
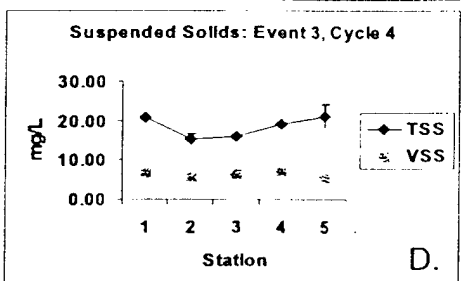
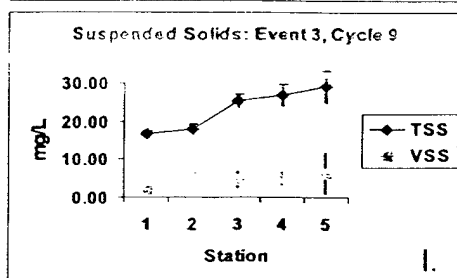
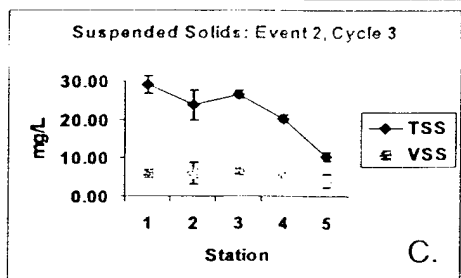
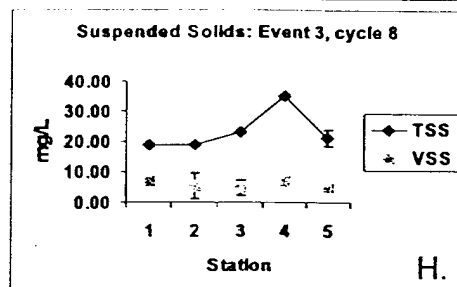
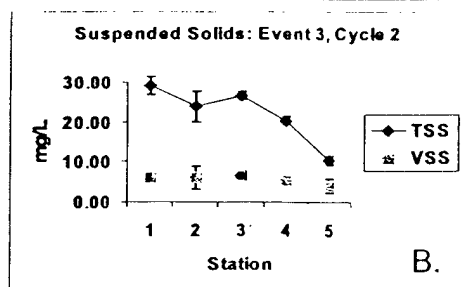
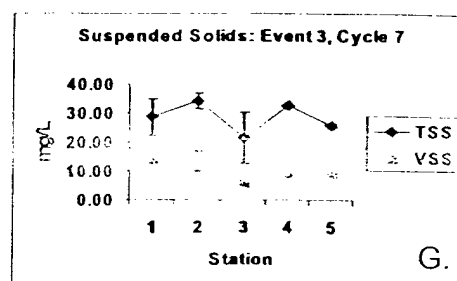
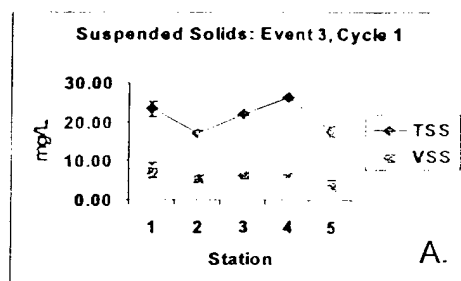
Figure 6: Suspended Solids, Event 3



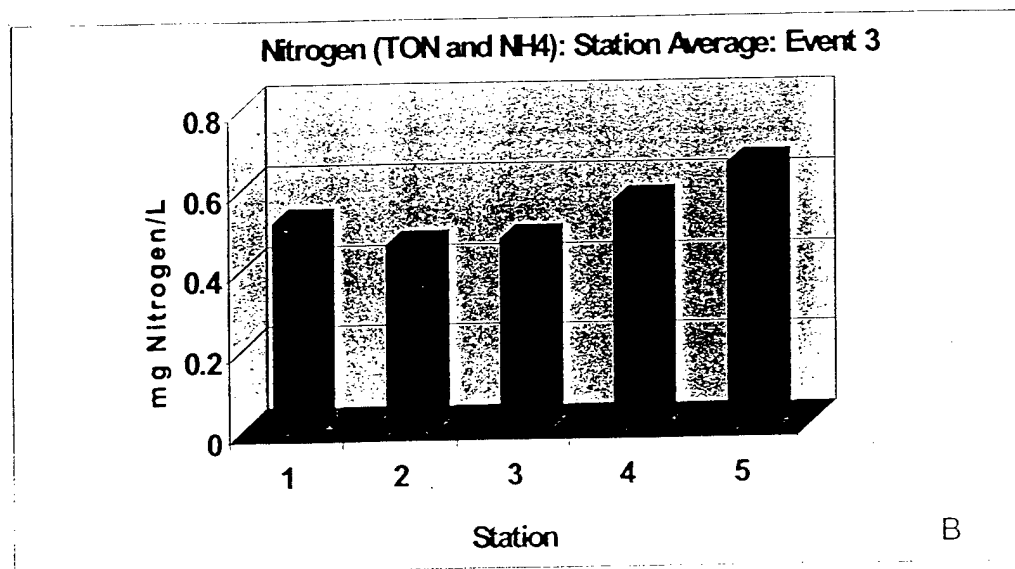
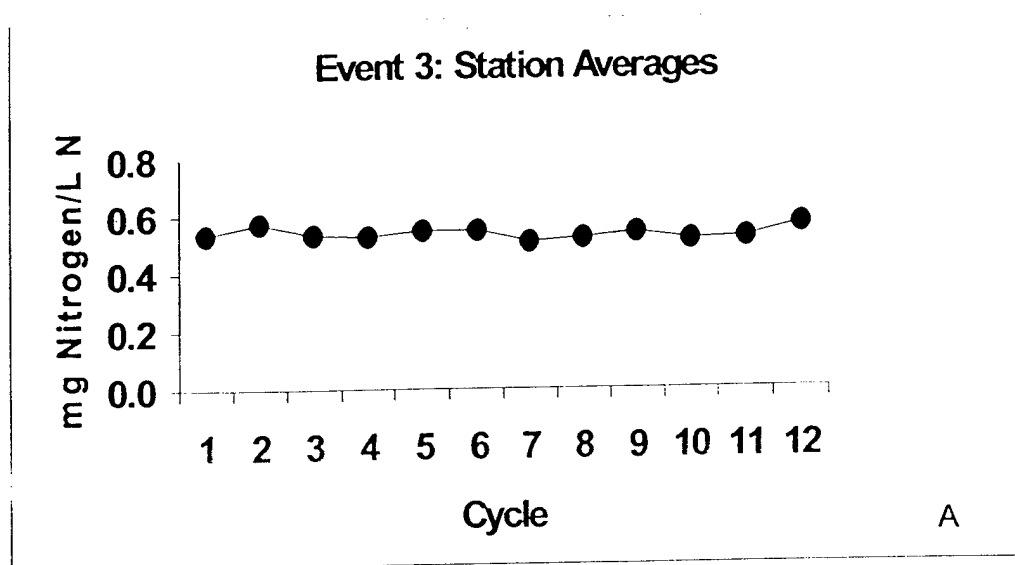
# Figure 7: Suspended Solids, Event 3, Station Summary



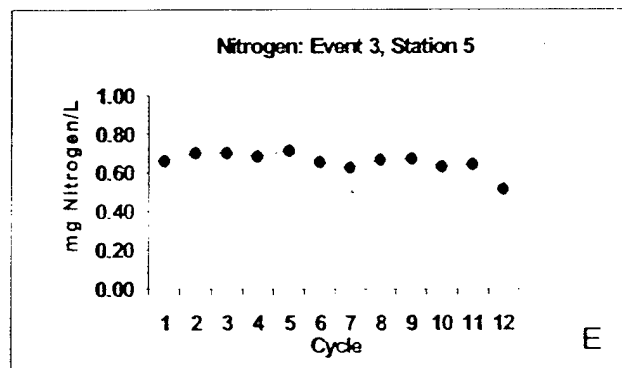
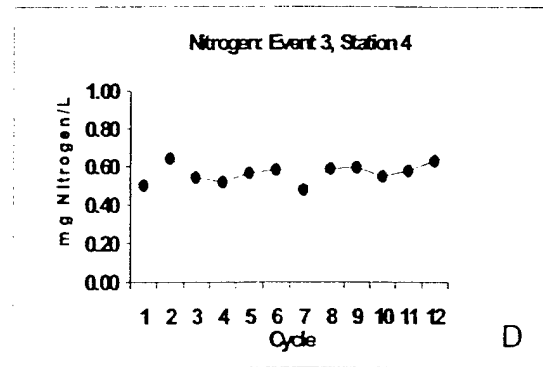
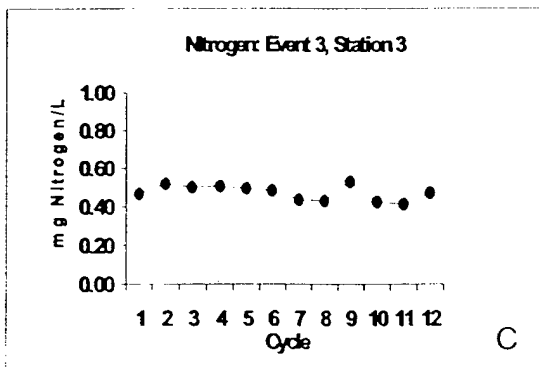
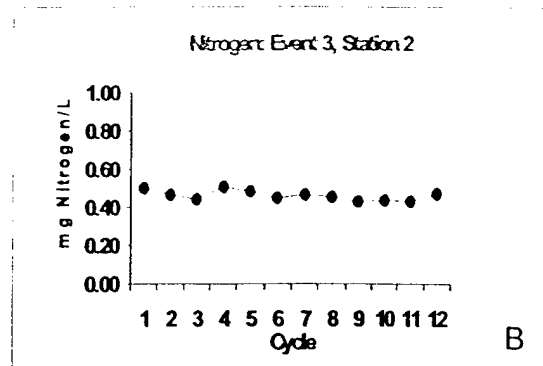
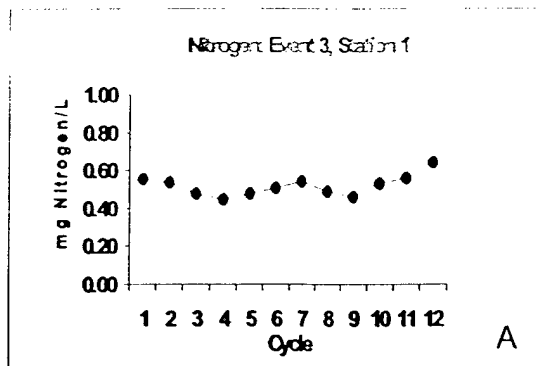
# Figure 8: Suspended Solids, Event 3, Cycle Summary



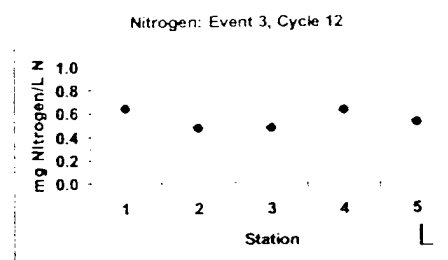
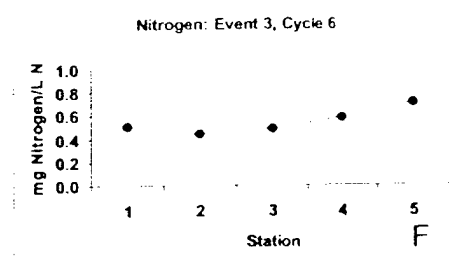
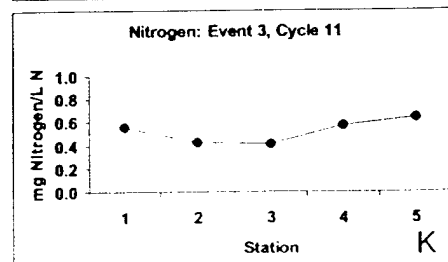
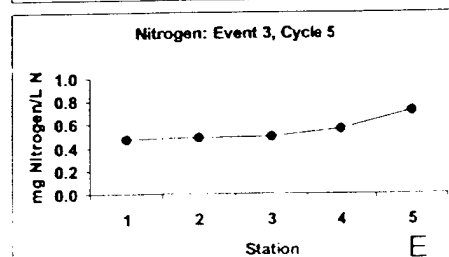
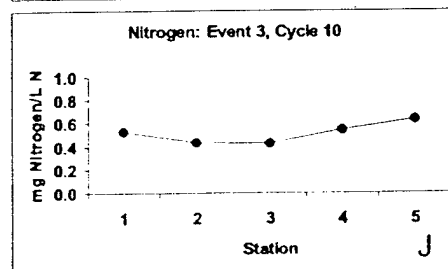
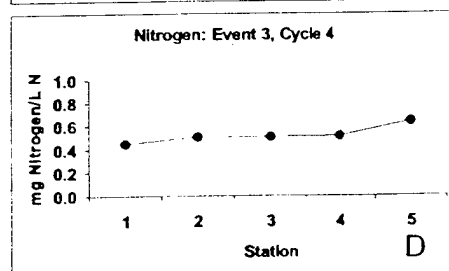
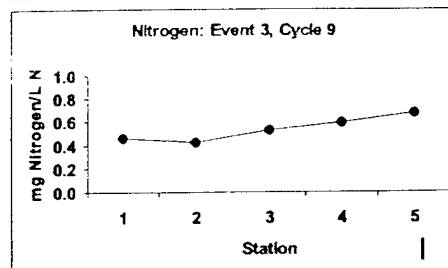
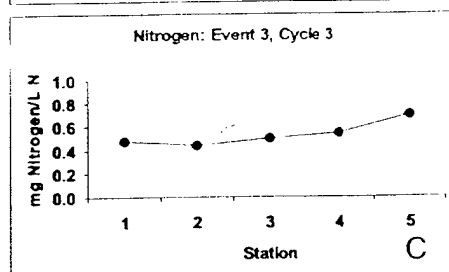
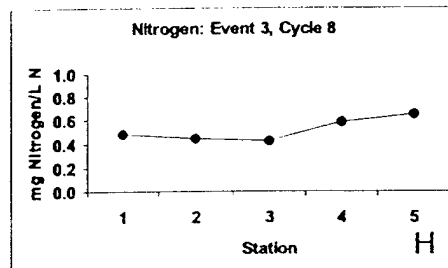
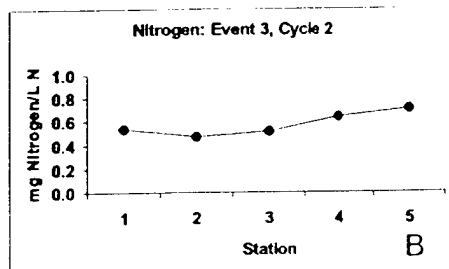
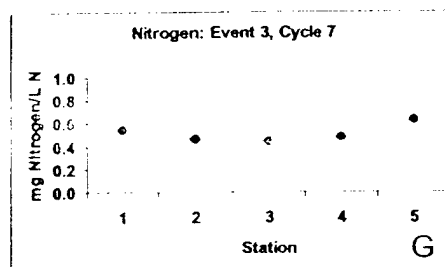
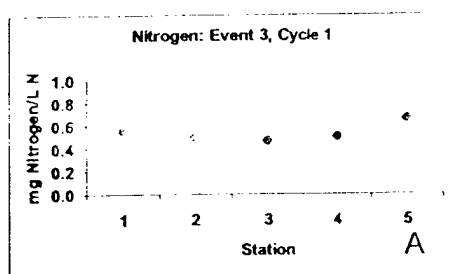
# Figure 9: Nitrogen, Event 3



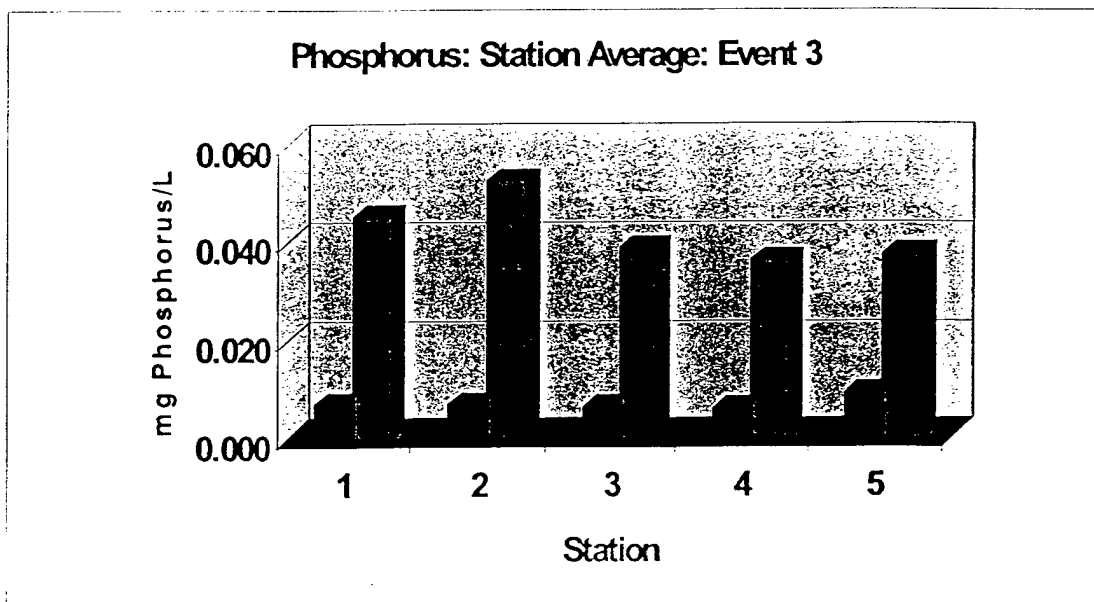
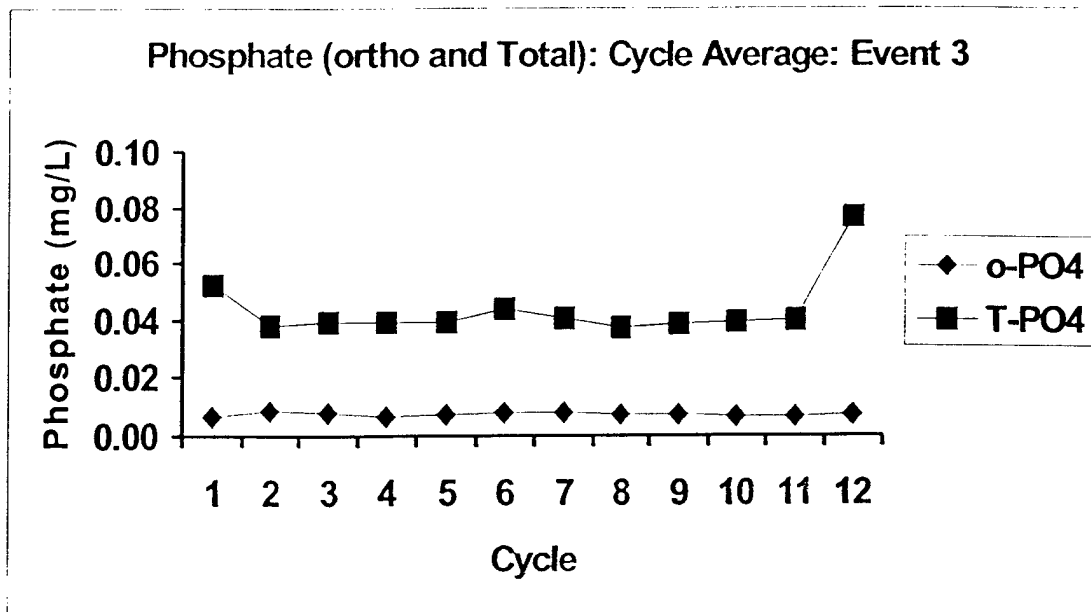
# Figure 10: Phosphate, Event 3 Station Summary



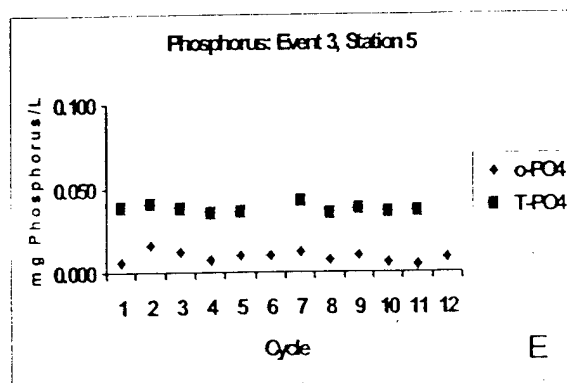
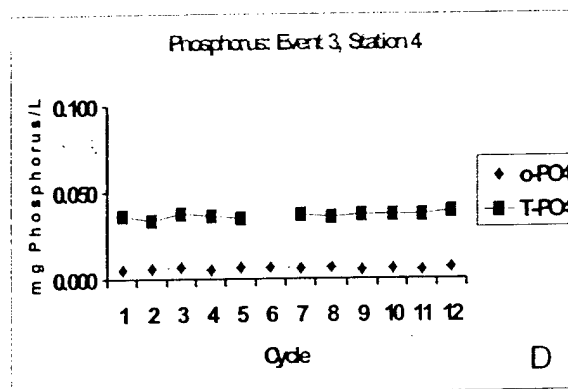
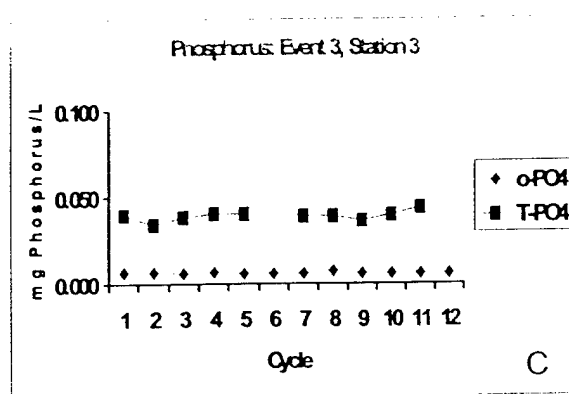
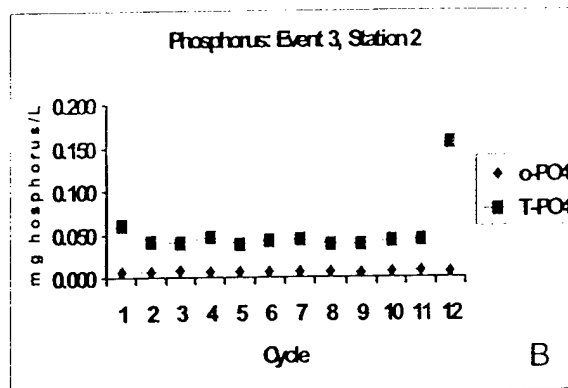
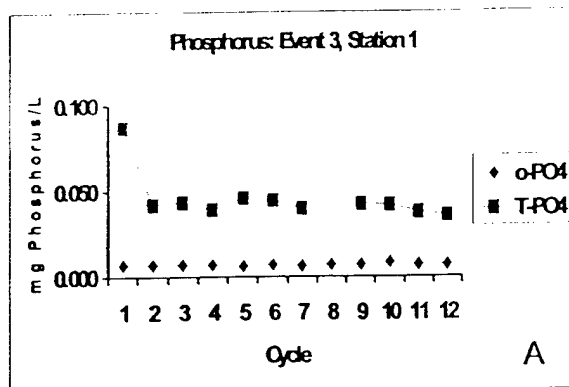
# Figure 11: Phosphate, Event 3 Cycle Summary



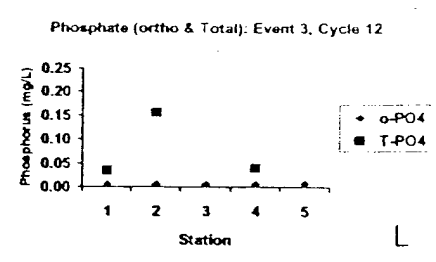
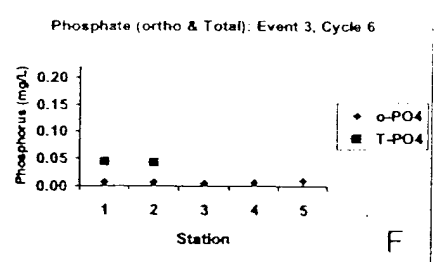
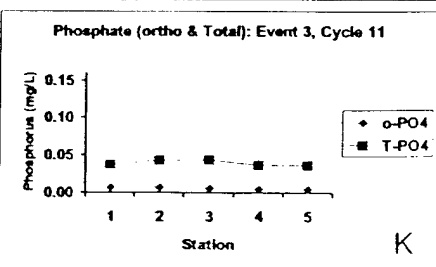
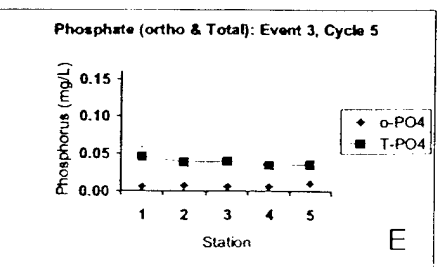
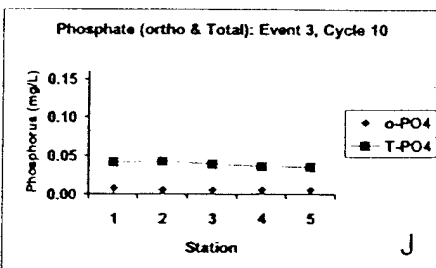
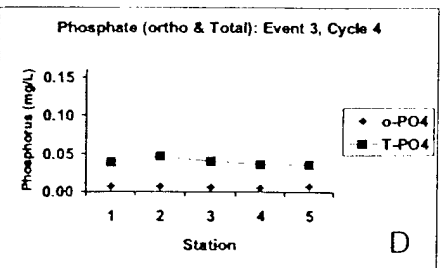
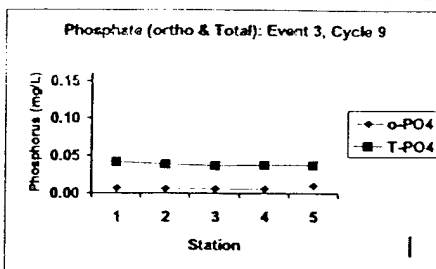
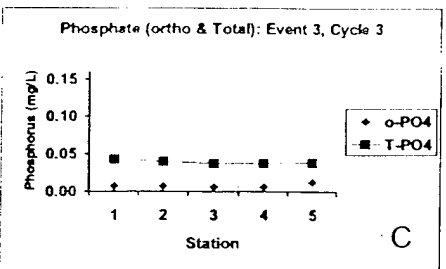
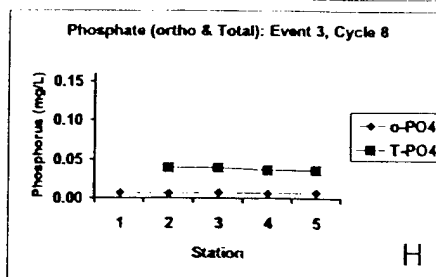
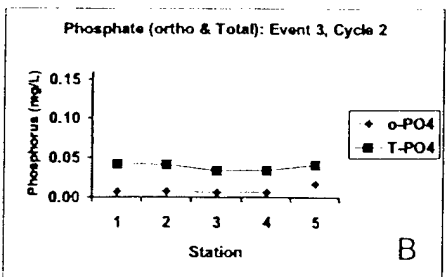
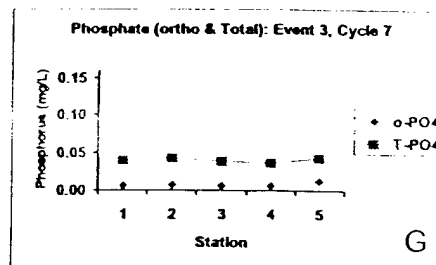
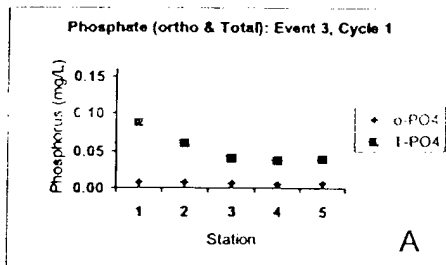
# Figure 12: Phosphate, Event 3



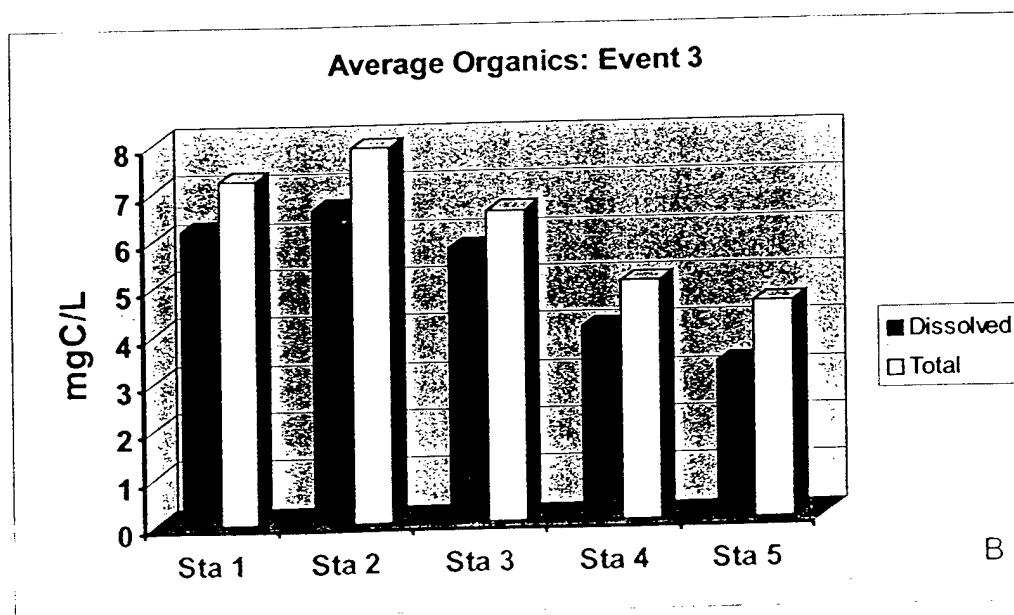
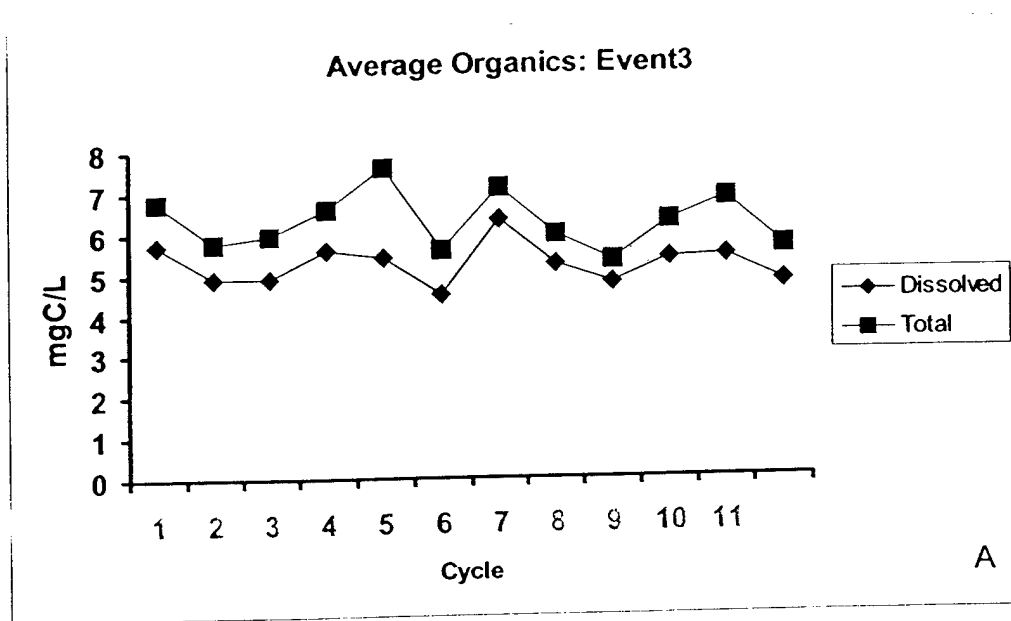
# Figure 13: Phosphate, Event 3 Station Summary



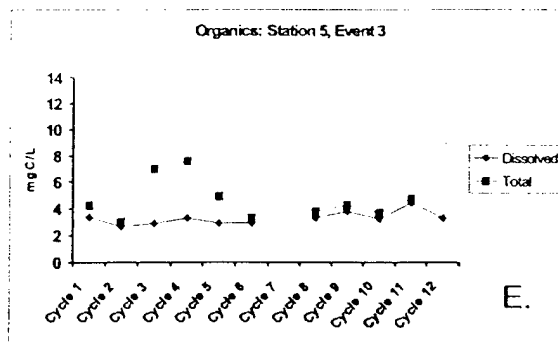
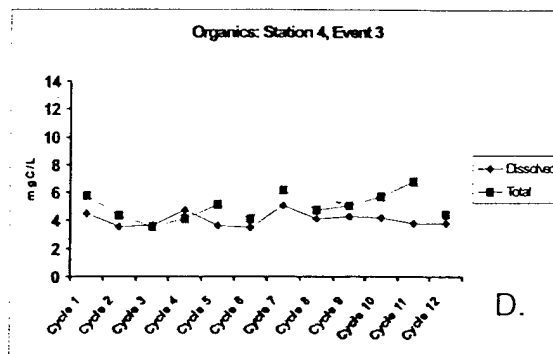
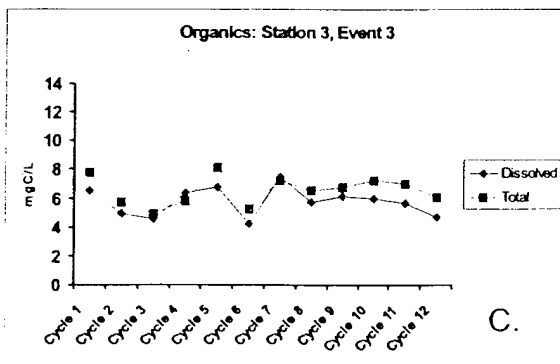
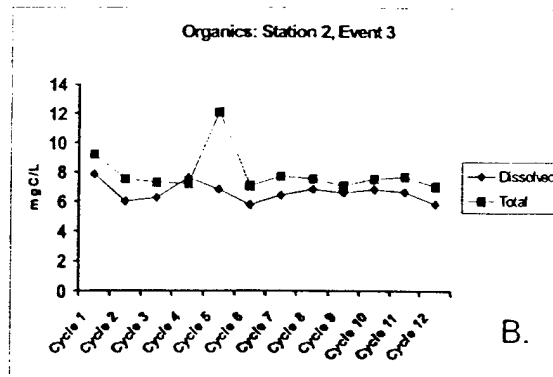
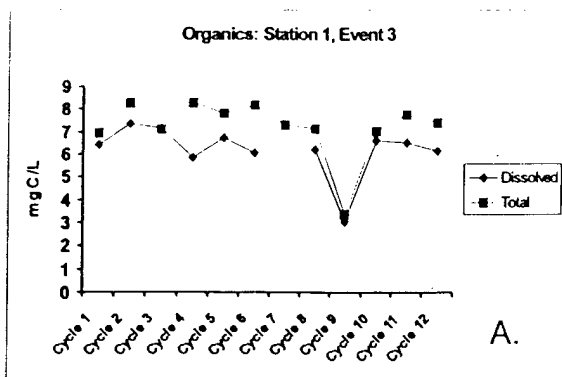
# Figure 14: Phosphate, Event 3 Cycle Summary



# Figure 15: Dissolved and Total Organics Event 3



# Figure 16: Dissolved and Total Organic Carbon, Event 3, Station Summary



# Figure 17: Dissolved and Total Organic Carbon Event 3, Cycle Summary

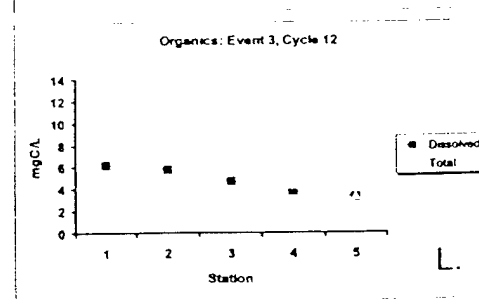
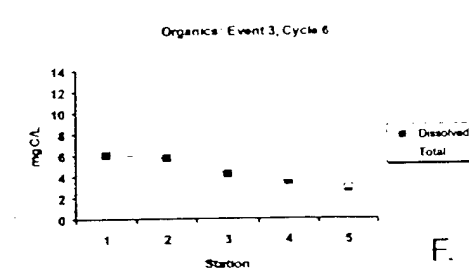
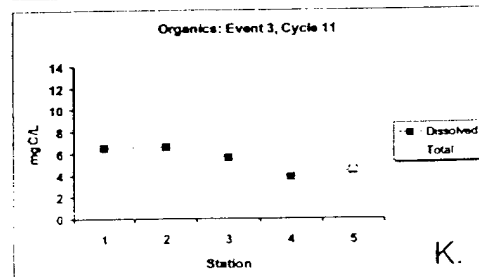
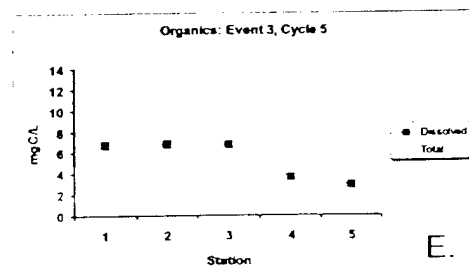
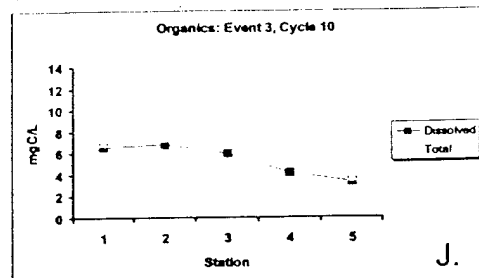
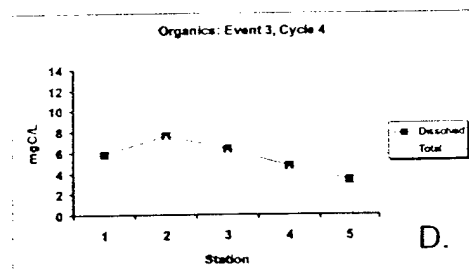
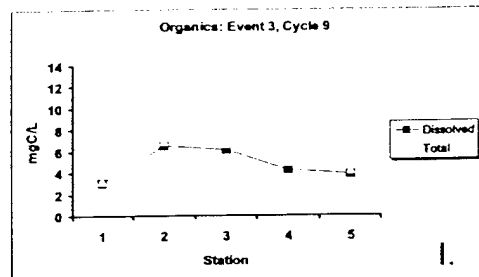
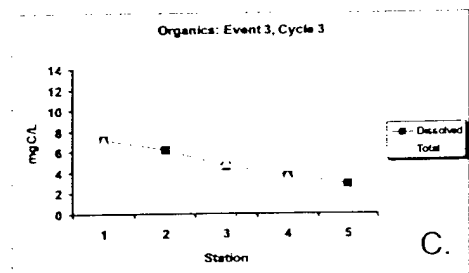
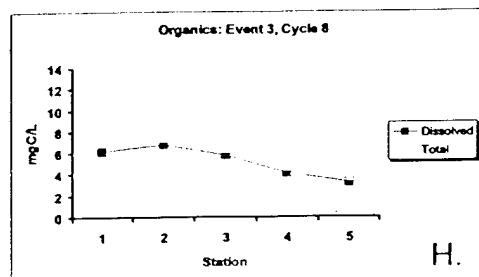
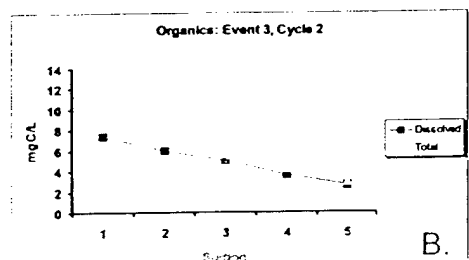
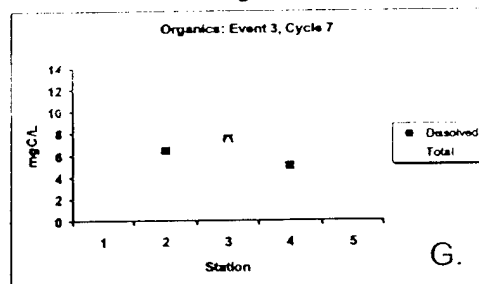
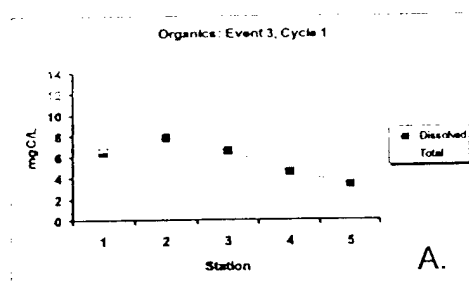
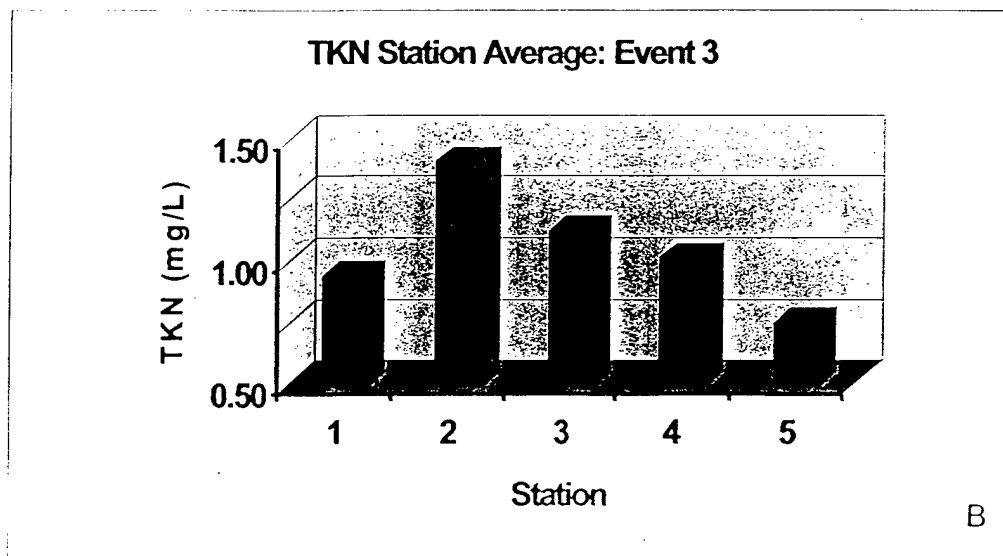
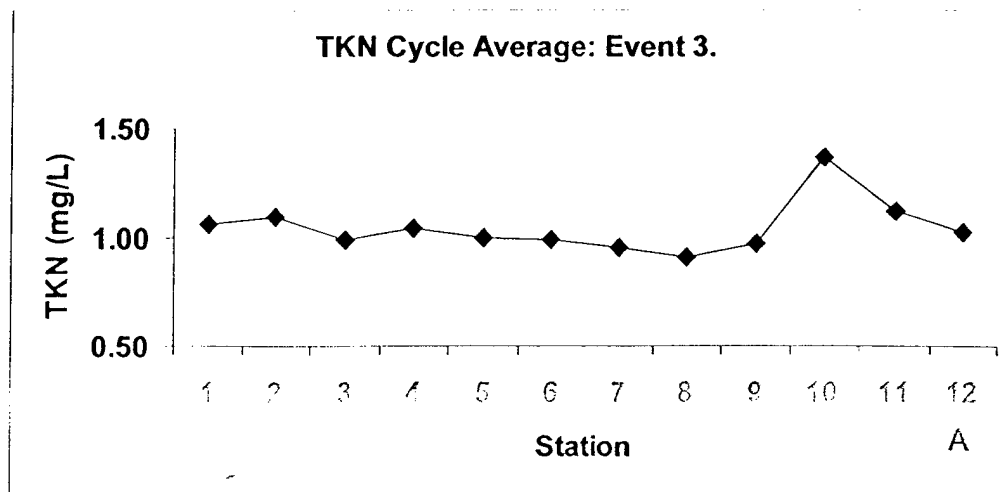
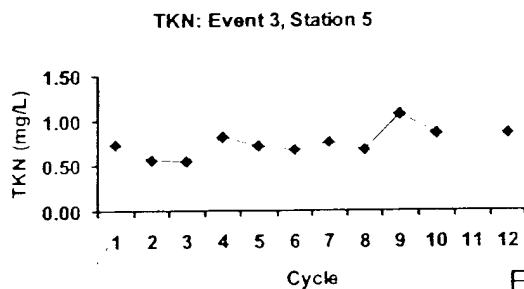
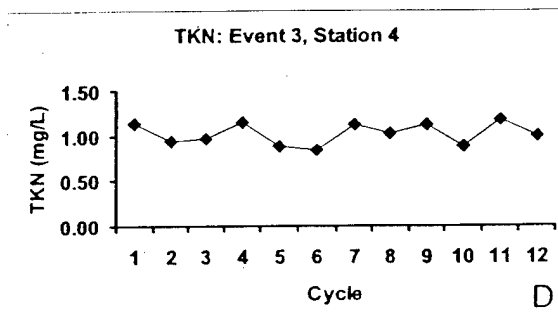
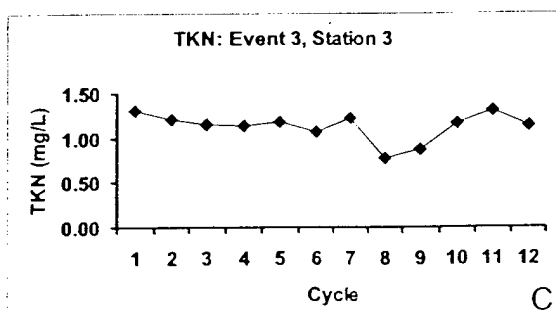
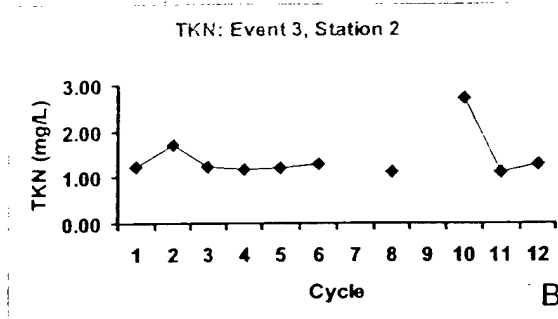
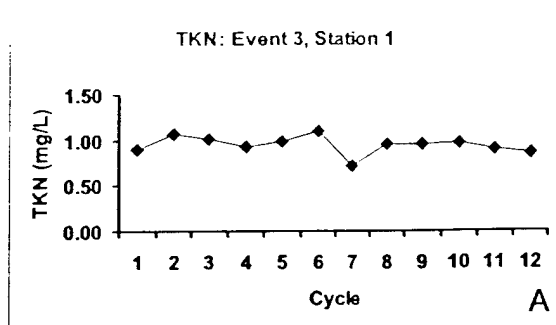


Figure 18: Total Kjeldahl Nitrogen (TKN)  
Event 3



# Figure 19: Total Kjeldahl Nitrogen (TKN) Event 3, Station Summary



# Figure 20: Total Kjeldahl Nitrogen (TKN) Event 3, Cycle Summary

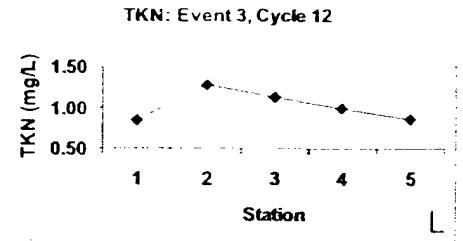
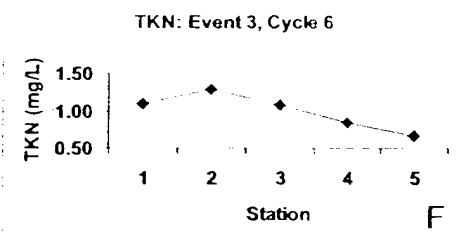
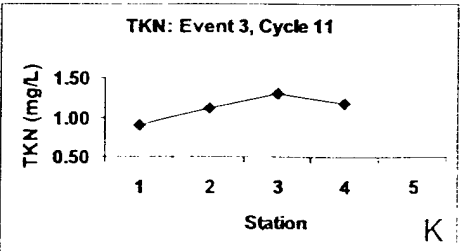
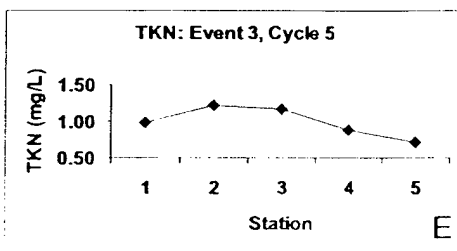
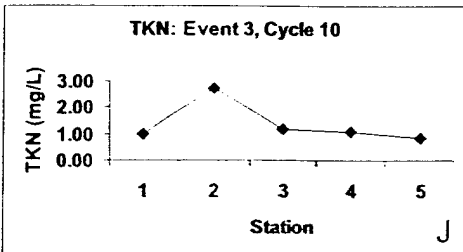
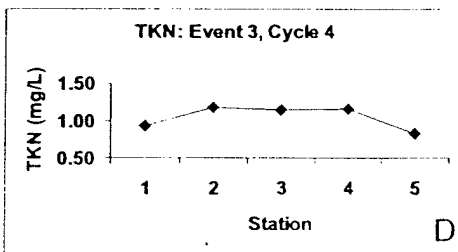
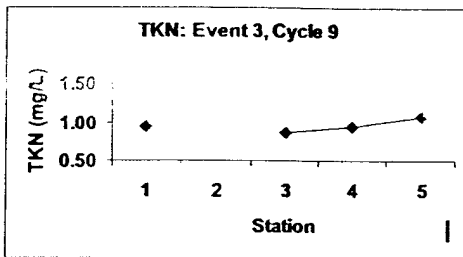
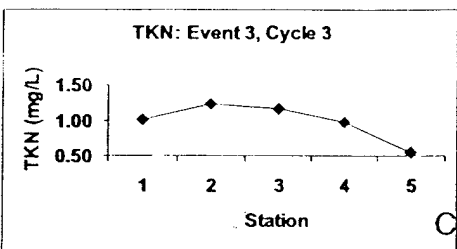
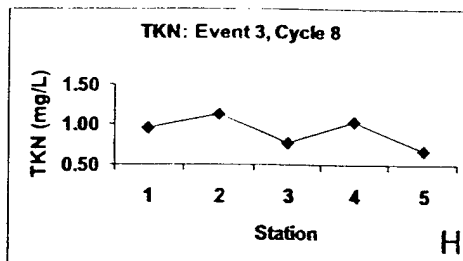
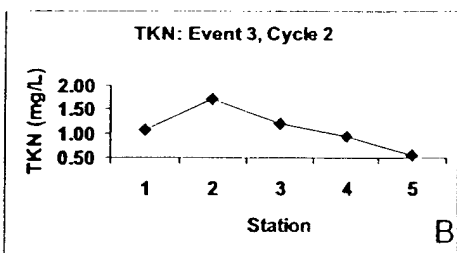
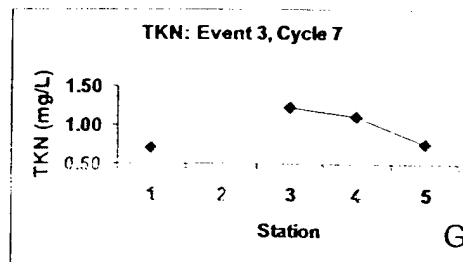
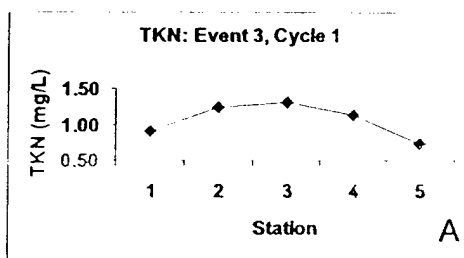


Figure 21: Water Quality, Event 3  
Cycle Summary

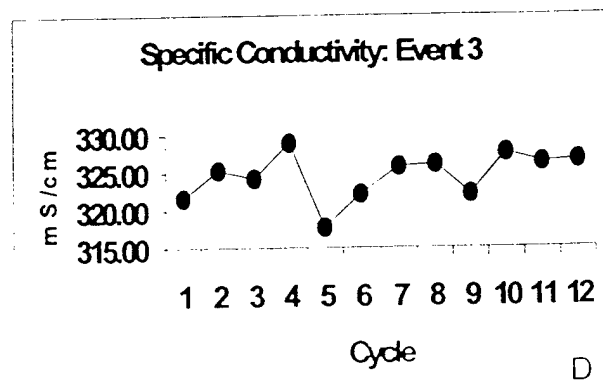
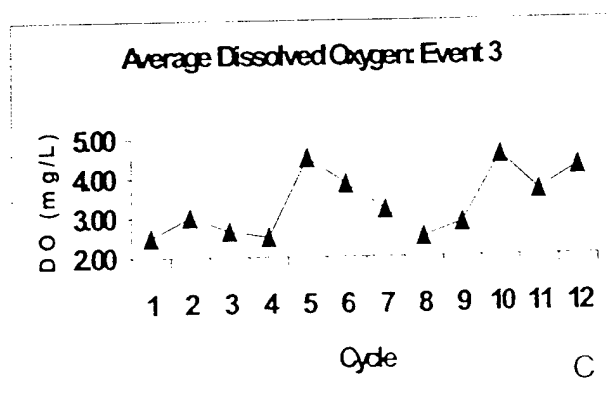
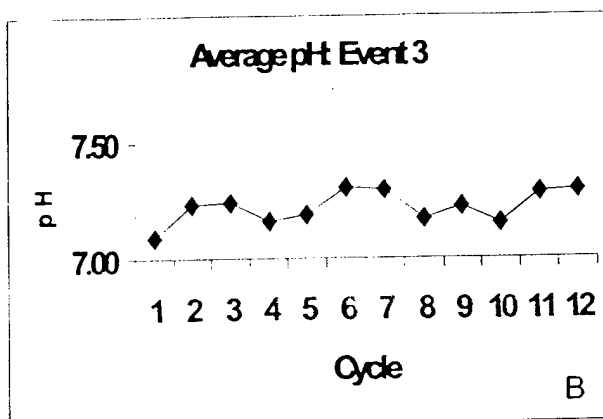
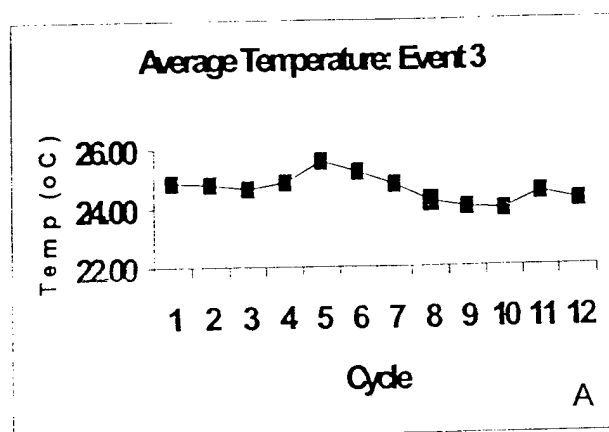
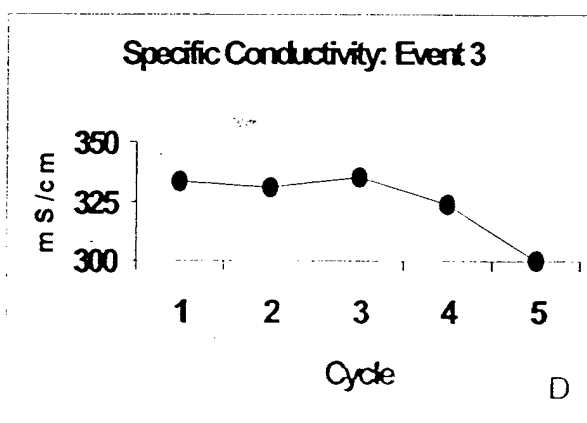
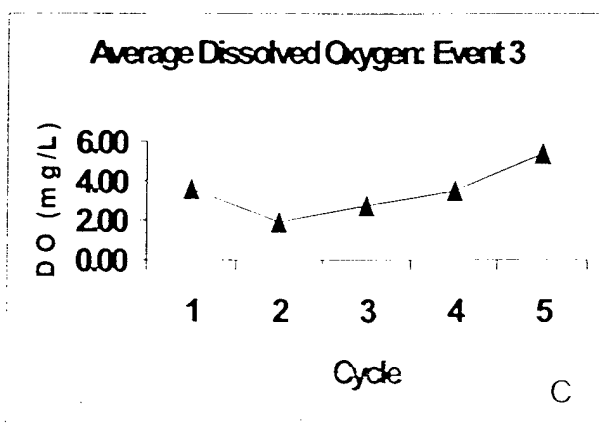
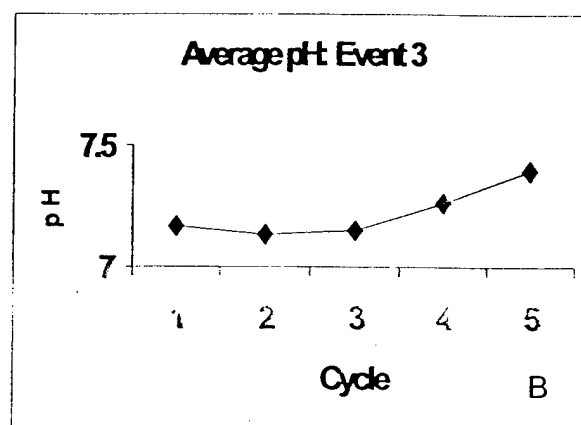
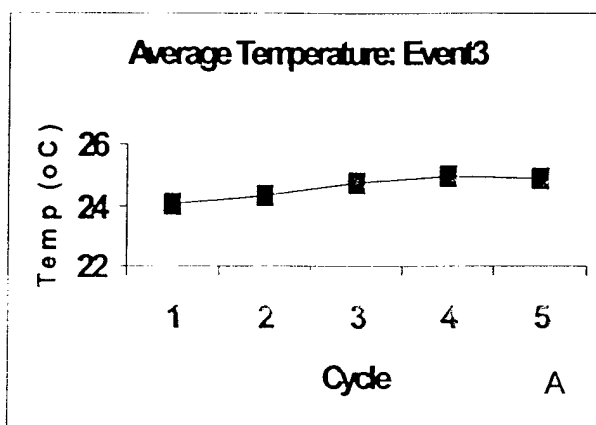


Figure 22: Water quality, Event 3  
Station Summary



## TABLES

TABLE 1

1 of 2

## Summary Data for Biological Oxygen Demand

Event 3: 5/14/2000 23:53 - 5/16/2000 20:40

| Cycle | Station | Time Collected | Duplicate | Biological Oxygen Demand                    |      |                                             |      |                   |                                         | Valid |
|-------|---------|----------------|-----------|---------------------------------------------|------|---------------------------------------------|------|-------------------|-----------------------------------------|-------|
|       |         |                |           | DO (t0)<br>mgO <sub>2</sub> L <sup>-1</sup> | SD   | DO (t1)<br>mgO <sub>2</sub> L <sup>-1</sup> | SD   | Inc. Time<br>days | BOD<br>mgO <sub>2</sub> L <sup>-1</sup> |       |
| 1     | 1       | 5/14/00 23:53  | ✓✓        | 6.01                                        | 0.06 | 0.83                                        | 0.04 | 4.92              | 5.18                                    | n     |
| 1     | 2       | 5/15/00 0:08   | ✓✓        | 2.30                                        | 0.01 | 0.00                                        | 0.00 | 4.92              | 2.30                                    | n     |
| 1     | 3       | 5/15/00 0:19   | ✓☒        | 1.62                                        | 0.01 | 0.00                                        |      | 4.92              | 1.62                                    | n     |
| 1     | 4       | 5/15/00 0:39   | ✓✓        | 2.80                                        | 0.02 | 0.11                                        | 0.16 | 4.92              | 2.69                                    | n     |
| 1     | 5       | 5/15/00 0:49   | ✓✓        | 6.16                                        | 0.02 | 4.00                                        | 0.29 | 4.92              | 2.16                                    | y     |
| 2     | 1       | 5/15/00 3:43   | ✓✓        | 3.81                                        | 0.09 | 0.00                                        | 0.00 | 4.96              | 3.81                                    | n     |
| 2     | 2       | 5/15/00 3:56   | ✓✓        | 1.43                                        | 0.08 | 0.00                                        | 0.00 | 4.96              | 1.43                                    | n     |
| 2     | 3       | 5/15/00 4:08   | ✓✓        | 2.25                                        | 0.16 | 0.00                                        | 0.00 | 4.96              | 2.25                                    | n     |
| 2     | 4       | 5/15/00 4:23   | ✓✓        | 4.69                                        | 0.04 | 1.06                                        | 0.04 | 4.96              | 3.62                                    | y     |
| 2     | 5       | 5/15/00 4:34   | ✓✓        | 6.95                                        | 0.05 | 5.46                                        | 0.23 | 4.96              | 1.50                                    | y     |
| 3     | 1       | 5/15/00 7:50   | ✓☒        | 3.04                                        | 0.07 | 0.23                                        |      | 5.01              | 2.81                                    | n     |
| 3     | 2       | 5/15/00 8:01   | ✓✓        | 1.61                                        | 0.11 | 0.00                                        | 0.00 | 5.01              | 1.61                                    | n     |
| 3     | 3       | 5/15/00 8:11   | ✓✓        | 2.48                                        | 0.00 | 0.00                                        | 0.00 | 5.01              | 2.48                                    | n     |
| 3     | 4       | 5/15/00 8:33   | ✓✓        | 4.28                                        | 0.17 | 1.44                                        | 0.01 | 5.01              | 2.84                                    | y     |
| 3     | 5       | 5/15/00 8:40   | ✓✓        | 6.28                                        | 0.21 | 3.69                                        | 0.05 | 5.01              | 2.59                                    | y     |
| 4     | 1       | 5/15/00 11:36  | ✓✓        | 4.94                                        | 0.39 | 0.11                                        | 0.16 | 5.01              | 4.83                                    | n     |
| 4     | 2       | 5/15/00 11:54  | ✓✓        | 1.44                                        | 0.04 | 0.00                                        | 0.00 | 5.01              | 1.44                                    | n     |
| 4     | 3       | 5/15/00 12:06  | ✓✓        | 2.45                                        | 0.21 | 0.00                                        | 0.00 | 5.01              | 2.45                                    | n     |
| 4     | 4       | 5/15/00 12:25  | ☒✓        | 3.23                                        |      | 0.00                                        | 0.00 | 5.01              | 3.23                                    | n     |
| 4     | 5       | 5/15/00 12:33  | ☒✓        | 5.76                                        |      | 2.63                                        | 0.01 | 5.01              | 3.14                                    | y     |
| 5     | 1       | 5/15/00 15:52  | ✓✓        | 6.04                                        | 0.11 | 0.11                                        | 0.16 | 5.01              | 5.93                                    | n     |
| 5     | 2       | 5/15/00 16:02  | ✓✓        | 1.75                                        | 1.91 | 0.00                                        | 0.00 | 5.01              | 1.75                                    | n     |
| 5     | 3       | 5/15/00 16:13  | ✓✓        | 4.75                                        | 0.11 | 0.11                                        | 0.16 | 5.01              | 4.63                                    | n     |
| 5     | 4       | 5/15/00 16:20  | ✓✓        | 5.75                                        | 0.28 | 1.31                                        | 0.19 | 5.01              | 4.44                                    | y     |
| 5     | 5       | 5/15/00 16:40  | ✓✓        | 8.34                                        | 0.08 | 3.66                                        | 0.02 | 5.01              | 4.67                                    | y     |
| 6     | 1       | 5/15/00 19:44  | ✓✓        | 3.98                                        | 1.64 | 0.11                                        | 0.16 | 5.03              | 3.87                                    | n     |
| 6     | 2       | 5/15/00 19:55  | ✓✓        | 2.86                                        | 0.05 | 0.00                                        | 0.00 | 5.03              | 2.86                                    | n     |
| 6     | 3       | 5/15/00 20:05  | ✓✓        | 3.58                                        | 0.02 | 0.00                                        | 0.00 | 5.03              | 3.58                                    | n     |
| 6     | 4       | 5/15/00 20:22  | ✓✓        | 5.59                                        | 0.44 | 0.41                                        | 0.15 | 5.03              | 5.17                                    | n     |
| 6     | 5       | 5/15/00 20:32  | ✓✓        | 7.15                                        | 0.02 | 3.81                                        | 0.17 | 5.03              | 3.34                                    | y     |

✓✓ : Duplicate measured for t0 and t1

✓☒ : Duplicate measured for t0 only

☒✓ : Duplicate measured for t1 only

NA : Data not available

Note : Standard deviation calculation based on n=2

TABLE 1

2 of 2

## Summary Data for Biological Oxygen Demand

Event 3: 5/14/2000 23:53 - 5/16/2000 20:40

| Cycle | Station | Time Collected | Duplicate | Biological Oxygen Demand                    |      |                                             |      |                   |                                         | Valid |
|-------|---------|----------------|-----------|---------------------------------------------|------|---------------------------------------------|------|-------------------|-----------------------------------------|-------|
|       |         |                |           | DO (t0)<br>mgO <sub>2</sub> L <sup>-1</sup> | SD   | DO (t1)<br>mgO <sub>2</sub> L <sup>-1</sup> | SD   | Inc. Time<br>days | BOD<br>mgO <sub>2</sub> L <sup>-1</sup> |       |
| 7     | 1       | 5/15/00 23:34  | ✓✓        | 5.28                                        | 0.17 | 0.11                                        | 0.16 | 5.00              | 5.17                                    | n     |
| 7     | 2       | 5/15/00 23:54  | ✓✓        | 2.11                                        | 0.14 | 0.00                                        | 0.00 | 5.00              | 2.11                                    | n     |
| 7     | 3       | 5/16/00 0:08   | ✓✓        | 2.00                                        | 0.06 | 0.00                                        | 0.00 | 5.00              | 2.00                                    | n     |
| 7     | 4       | 5/16/00 0:17   | ✓✓        | 2.90                                        | 0.23 | 0.00                                        | 0.00 | 5.00              | 2.90                                    | n     |
| 7     | 5       | 5/16/00 0:26   | ✓✓        | 6.38                                        | 0.30 | 2.65                                        | 0.06 | 5.00              | 3.73                                    | y     |
| 8     | 1       | 5/16/00 3:25   | ✓✓        | 4.05                                        | 0.06 | 0.11                                        | 0.16 | 5.01              | 3.94                                    | n     |
| 8     | 2       | 5/16/00 3:38   | ✓✓        | 1.63                                        | 0.01 | 0.00                                        | 0.00 | 5.01              | 1.63                                    | n     |
| 8     | 3       | 5/16/00 3:48   | ✓✓        | 2.35                                        | 0.02 | 0.00                                        | 0.00 | 5.01              | 2.35                                    | n     |
| 8     | 4       | 5/16/00 3:57   | ✓✓        | 3.95                                        | 0.05 | 0.09                                        | 0.02 | 5.01              | 3.86                                    | n     |
| 8     | 5       | 5/16/00 4:05   | ✓✓        | 5.62                                        | 0.05 | 2.11                                        | 0.01 | 5.01              | 3.51                                    | y     |
| 9     | 1       | 5/16/00 7:45   | ✓✓        | 2.94                                        | 0.09 | 0.11                                        | 0.16 | 4.99              | 2.82                                    | n     |
| 9     | 2       | 5/16/00 8:00   | ✓✓        | 1.72                                        | 0.07 | 0.00                                        | 0.00 | 4.99              | 1.72                                    | n     |
| 9     | 3       | 5/16/00 8:10   | ✓✓        | 3.47                                        | 0.09 | 0.15                                        | 0.21 | 4.99              | 3.32                                    | n     |
| 9     | 4       | 5/16/00 8:29   | ✓✓        | 4.65                                        | 0.01 | 1.77                                        | 0.07 | 4.99              | 2.88                                    | y     |
| 9     | 5       | 5/16/00 8:36   | ✓✓        | 5.58                                        | 0.05 | 1.33                                        | 1.88 | 4.99              | 4.25                                    | y     |
| 10    | 1       | 5/16/00 11:30  | ✓✓        | 4.10                                        | 0.06 | 0.00                                        | 0.00 | 4.98              | 4.10                                    | n     |
| 10    | 2       | 5/16/00 11:38  | ✓✓        | 2.48                                        | 0.17 | 0.00                                        | 0.00 | 4.98              | 2.48                                    | n     |
| 10    | 3       | 5/16/00 11:51  | ✓✓        | 2.38                                        | 0.01 | 0.00                                        | 0.00 | 4.98              | 2.38                                    | n     |
| 10    | 4       | 5/16/00 12:13  | ✓✓        | 4.18                                        | 0.01 | 0.38                                        | 0.22 | 4.98              | 3.80                                    | n     |
| 10    | 5       | 5/16/00 12:25  | ✓✓        | 6.22                                        | 0.04 | 3.29                                        | 0.19 | 4.98              | 2.93                                    | y     |
| 11    | 1       | 5/16/00 15:26  | ✓✓        | 8.05                                        | 0.08 | 1.79                                        | 0.18 | 5.03              | 6.26                                    | y     |
| 11    | 2       | 5/16/00 15:40  | ✓✓        | 3.64                                        | 0.16 | 0.64                                        | 0.91 | 5.03              | 3.00                                    | n     |
| 11    | 3       | 5/16/00 15:50  | ✓✓        | 3.44                                        | 0.10 | 0.60                                        | 0.53 | 5.03              | 2.84                                    | n     |
| 11    | 4       | 5/16/00 16:10  | ✓✓        | 4.11                                        | 1.02 | 1.53                                        | 0.59 | 5.03              | 2.58                                    | n     |
| 11    | 5       | 5/16/00 16:20  | ✓✓        | 8.95                                        | 0.22 | 6.53                                        | 1.27 | 5.03              | 2.42                                    | y     |
| 12    | 1       | 5/16/00 19:45  | ✓✓        | 4.83                                        | 0.19 | 0.54                                        | 0.44 | 5.04              | 4.29                                    | n     |
| 12    | 2       | 5/16/00 19:55  | ✓☒        | 2.86                                        | 0.04 | 0.23                                        |      | 5.04              | 2.64                                    | n     |
| 12    | 3       | 5/16/00 20:05  | ✓✓        | 4.32                                        | 0.07 | 0.87                                        | 0.12 | 5.04              | 3.44                                    | n     |
| 12    | 4       | 5/16/00 20:25  | ✓☒        | 6.06                                        | 0.11 | 2.37                                        |      | 5.04              | 3.70                                    | y     |
| 12    | 5       | 5/16/00 20:40  | ✓✓        | 5.94                                        | 0.08 | 3.82                                        | 1.10 | 5.04              | 2.13                                    | y     |

✓✓ : Duplicate measured for t0 and t1

✓☒ : Duplicate measured for t0 only

☒✓ : Duplicate measured for t1 only

Note : Standard deviation calculation based on n=2

**TABLE 2**

1 of 2

**Summary Data for Suspended Solids****Event 3: 5/14/2000 23:53 - 5/16/2000 20:40**

| Cycle | Station | Time Collected | Suspended Solids |                  |           |                  |                  |           |
|-------|---------|----------------|------------------|------------------|-----------|------------------|------------------|-----------|
|       |         |                | Ave. TSS<br>mg/L | TSS Sta.<br>Dev. | Duplicate | Ave. VSS<br>mg/L | VSS Sta.<br>Dev. | Duplicate |
| 1     | 1       | 5/14/00 23:53  | 23.28            | 1.9420           | ✓         | 7.55             | 2.79             | ✓         |
| 1     | 2       | 5/15/00 0:08   | 16.94            | 0.8186           | ✓         | 5.52             | 0.55             | ✓         |
| 1     | 3       | 5/15/00 0:19   | 22.22/21.48      | 0.5217           | ✓         | 5.80/7.03        | 0.87             | ✓         |
| 1     | 4       | 5/15/00 0:39   | 26.12            | 0.3074           | ✓         | 6.75             | 1.49             | ✓         |
| 1     | 5       | 5/15/00 0:49   | 17.60            | 1.5430           | ✓         | 3.53             | 2.35             | ✓         |
| 2     | 1       | 5/15/00 3:43   | 29.17            | 2.2115           | ✓         | 6.02             | 1.15             | ✓         |
| 2     | 2       | 5/15/00 3:56   | 23.84            | 3.8640           | ✓         | 6.12             | 2.96             | ✓         |
| 2     | 3       | 5/15/00 4:08   | 26.56            | 1.0150           | ✓         | 6.76             | 0.08             | ✓         |
| 2     | 4       | 5/15/00 4:23   | 20.25            | 0.9948           | ✓         | 5.60             | 0.84             | ✓         |
| 2     | 5       | 5/15/00 4:34   | 10.35            | 1.2310           | ✓         | 4.10             | 1.78             | ✓         |
| 3     | 1       | 5/15/00 7:50   | 18.06            | 0.8115           | ✓         | 5.64             | 0.27             | ✓         |
| 3     | 2       | 5/15/00 8:01   | 13.86            | 0.4886           | ✓         | 4.72             | 0.56             | ✓         |
| 3     | 3       | 5/15/00 8:11   | 23.58            | 0.4572           | ✓         | 5.98             | 1.89             | ✓         |
| 3     | 4       | 5/15/00 8:34   | 46.10            | 1.2151           | ✓         | 28.77            | 31.26            | ✓         |
| 3     | 5       | 5/15/00 8:40   | 15.51            | 2.1081           | ✓         | 4.64             | 1.93             | ✓         |
| 4     | 1       | 5/15/00 11:36  | 20.72            | 0.1644           | ✓         | 6.77             | 0.14             | ✓         |
| 4     | 2       | 5/15/00 11:54  | 15.36            | 1.4358           | ✓         | 5.64             | 1.40             | ✓         |
| 4     | 3       | 5/15/00 12:06  | 15.63/16.33      | 0.4961           | ✓         | 7.14/5.31        | 1.30             | ✓         |
| 4     | 4       | 5/15/00 12:25  | 19.11            | 0.6331           | ✓         | 7.14             | 0.05             | ✓         |
| 4     | 5       | 5/15/00 12:33  | 21.12            | 3.0111           | ✓         | 5.59             | 0.46             | ✓         |
| 5     | 1       | 5/15/00 15:52  | 21.59            | 0.8240           | ✓         | 8.13             | 0.51             | ✓         |
| 5     | 2       | 5/15/00 16:02  | 25.74            | 2.2362           | ✓         | 6.31             | 0.64             | ✓         |
| 5     | 3       | 5/15/00 16:12  | 39.25            | 1.0607           | ✓         | 11.64            | 1.61             | ✓         |
| 5     | 4       | 5/15/00 16:28  | 25.69            | 0.4379           | ✓         | 8.82             | 0.45             | ✓         |
| 5     | 5       | 5/15/00 16:40  | 14.48            | 1.1220           | ✓         | 5.08             | 0.48             | ✓         |
| 6     | 1       | 5/15/00 19:43  | 18.18            | 0.7997           | ✓         | 5.27             | 1.39             | ✓         |
| 6     | 2       | 5/15/00 19:55  | 23.97            | 0.6678           | ✓         | 5.47             | 1.45             | ✓         |
| 6     | 3       | 5/15/00 20:05  | 39.37            | 2.0402           | ✓         | 8.52             | 0.50             | ✓         |
| 6     | 4       | 5/15/00 20:22  | 24.41            |                  |           | 6.57             | 0.00             | ✓         |
| 6     | 5       | 5/15/00 20:32  | 16.99            | 0.2299           | ✓         | 3.93             | 2.06             | ✓         |

Duplicate: ✓

TABLE 2

1 of 2

## Summary Data for Suspended Solids

Event 2: 4/17/2000 7:47 - 4/19/2000 4:06

| Cycle | Station | Time Collected | Suspended Solids |                  |           |                  |                  |           |
|-------|---------|----------------|------------------|------------------|-----------|------------------|------------------|-----------|
|       |         |                | Ave. TSS<br>mg/L | TSS Sta.<br>Dev. | Duplicate | Ave. VSS<br>mg/L | VSS Sta.<br>Dev. | Duplicate |
| 7     | 1       | 5/15/00 23:34  | 28.73            | 6.29             | ✓         | 13.56            | 0.37             | ✓         |
| 7     | 2       | 5/15/00 23:54  | 34.24            | 2.58             | ✓         | 13.42            | 3.44             | ✓         |
| 7     | 3       | 5/16/00 0:08   | 21.48            | 8.83             | ✓         | 5.76             | 0.96             | ✓         |
| 7     | 4       | 5/16/00 0:17   | 32.31/33.01      | 0.49             | ✓         | 9.23/9.35        | 0.09             | ✓         |
| 7     | 5       | 5/16/00 0:27   | 25.79            | 0.75             | ✓         | 9.11             | 0.97             | ✓         |
| 8     | 1       | 5/16/00 3:25   | 18.83            | 0.77             | ✓         | 6.89             | 0.86             | ✓         |
| 8     | 2       | 5/16/00 3:38   | 18.87            | 0.76             | ✓         | 5.23             | 4.25             | ✓         |
| 8     | 3       | 5/16/00 3:48   | 23.26            | 0.89             | ✓         | 4.91             | 2.48             | ✓         |
| 8     | 4       | 5/16/00 3:51   | 34.94            | 0.89             | ✓         | 7.05             | 0.96             | ✓         |
| 8     | 5       | 5/16/00 4:05   | 21.10            | 2.67             | ✓         | 4.85             | 1.27             | ✓         |
| 9     | 1       | 5/16/00 7:45   | 16.87            | 0.60             | ✓         | 2.14             | 0.74             | ✓         |
| 9     | 2       | 5/16/00 8:00   | 17.79            | 1.59             | ✓         | 6.88             | 0.97             | ✓         |
| 9     | 3       | 5/16/00 8:10   | 25.28            | 1.95             | ✓         | 4.56             | 2.31             | ✓         |
| 9     | 4       | 5/16/00 8:29   | 26.85            | 2.81             | ✓         | 4.92             | 1.60             | ✓         |
| 9     | 5       | 5/16/00 8:36   | 29.08            | 4.13             | ✓         | 6.38             | 5.48             | ✓         |
| 10    | 1       | 5/16/00 11:30  | 13.34            | 0.26             | ✓         | 4.20             | 0.72             | ✓         |
| 10    | 2       | 5/16/00 11:38  | 18.07            | 0.03             | ✓         | 4.81             | 1.28             | ✓         |
| 10    | 3       | 5/16/00 11:51  | 20.45            | 0.00             | ✓         | 5.91             | 1.29             | ✓         |
| 10    | 4       | 5/16/00 12:13  | 25.71/25.33      | 0.27             | ✓         | 6.67/5.33        | 0.94             | ✓         |
| 10    | 5       | 5/16/00 12:25  | 19.09            | 6.80             | ✓         | 5.53             | 1.61             | ✓         |
| 11    | 1       | 5/16/00 15:26  | 12.85            | 0.34             | ✓         | 6.75             | 0.29             | ✓         |
| 11    | 2       | 5/16/00 15:40  | 29.87            | 1.22             | ✓         | 7.41             | 0.83             | ✓         |
| 11    | 3       | 5/16/00 15:50  | 28.46            | 0.06             | ✓         | 6.37             | 2.31             | ✓         |
| 11    | 4       | 5/16/00 16:10  | 18.82            | 0.41             | ✓         | 3.20             | 1.76             | ✓         |
| 11    | 5       | 5/16/00 16:20  | 19.26            | 0.37             | ✓         | 5.36             | 0.51             | ✓         |
| 12    | 1       | 5/16/00 19:45  | 17.04            | 0.65             | ✓         | 4.96             | 2.18             | ✓         |
| 12    | 2       | 5/16/00 19:55  | 26.99            | 6.07             | ✓         | 6.31             | 0.51             | ✓         |
| 12    | 3       | 5/16/00 20:05  | 35.20            | 1.96             | ✓         | 7.71             | 0.13             | ✓         |
| 12    | 4       | 5/16/00 20:25  | 23.63            | 0.53             | ✓         | 5.54             | 0.06             | ✓         |
| 12    | 5       | 5/16/00 20:40  | 19.06            | 0.65             | ✓         | 4.00             | 0.27             | ✓         |

Duplicate: ✓

TABLE 3

1 of 2

## Summary Data for Nutrients

Event 3: 5/14/2000 23:53 - 5/16/2000 20:40

| Cycle | Station | Time Collected | Duplicate | Nutrients   |                                         |                                        |
|-------|---------|----------------|-----------|-------------|-----------------------------------------|----------------------------------------|
|       |         |                |           | TON<br>mg/L | O-PO <sub>4</sub> <sup>2-</sup><br>mg/L | ΣPO <sub>4</sub> <sup>2-</sup><br>mg/L |
| 1     | 1       | 4/17/00 7:47   |           | 0.5539      | 0.0070                                  | 0.0871                                 |
| 1     | 2       | 4/17/00 8:09   |           | 0.4996      | 0.0071                                  | 0.0602                                 |
| 1     | 3       | 4/17/00 8:19   |           | 0.4635      | 0.0068                                  | 0.0395                                 |
| 1     | 4       | 4/17/00 8:34   |           | 0.5003      | 0.0055                                  | 0.0364                                 |
| 1     | 5       | 4/17/00 8:43   |           | 0.6589      | 0.0060                                  | 0.0387                                 |
| 2     | 1       | 4/17/00 11:31  |           | 0.5339      | 0.0072                                  | 0.0417                                 |
| 2     | 2       | 4/17/00 11:44  |           | 0.4673      | 0.0071                                  | 0.0410                                 |
| 2     | 3       | 4/17/00 11:54  |           | 0.5164      | 0.0068                                  | 0.0340                                 |
| 2     | 4       | 4/17/00 12:08  |           | 0.6394      | 0.0059                                  | 0.0335                                 |
| 2     | 5       | 4/17/00 12:17  |           | 0.7187      | 0.0166                                  | 0.0417                                 |
| 2     | 5       | 4/17/00 12:17  | ✓         | 0.6966      | 0.0162                                  | 0.0398                                 |
| 3     | 1       | 4/17/00 15:19  |           | 0.4770      | 0.0073                                  | 0.0431                                 |
| 3     | 2       | 4/17/00 15:30  |           | 0.4437      | 0.0075                                  | 0.0396                                 |
| 3     | 3       | 4/17/00 15:42  |           | 0.4991      | 0.0062                                  | 0.0381                                 |
| 3     | 4       | 4/17/00 15:56  |           | 0.5410      | 0.0067                                  | 0.0376                                 |
| 3     | 5       | 4/17/00 16:05  |           | 0.6994      | 0.0124                                  | 0.0384                                 |
| 4     | 1       | 4/17/00 19:40  |           | 0.4465      | 0.0070                                  | 0.0386                                 |
| 4     | 2       | 4/17/00 19:55  |           | 0.5067      | 0.0074                                  | 0.0462                                 |
| 4     | 3       | 4/17/00 20:05  |           | 0.5058      | 0.0068                                  | 0.0404                                 |
| 4     | 4       | 4/17/00 20:20  |           | 0.5154      | 0.0057                                  | 0.0362                                 |
| 4     | 5       | 4/17/00 20:30  |           | 0.6376      | 0.0073                                  | 0.0353                                 |
| 4     | 5       | 4/17/00 20:30  | ✓         | 0.6488      | 0.0074                                  | 0.0356                                 |
| 5     | 1       | 4/17/00 23:20  |           | 0.4742      | 0.0063                                  | 0.0462                                 |
| 5     | 2       | 4/17/00 23:45  |           | 0.4825      | 0.0071                                  | 0.0389                                 |
| 5     | 3       | 4/18/00 0:00   |           | 0.4941      | 0.0061                                  | 0.0402                                 |
| 5     | 4       | 4/18/00 0:10   |           | 0.5624      | 0.0066                                  | 0.0350                                 |
| 5     | 5       | 4/18/00 0:20   |           | 0.7115      | 0.0105                                  | 0.0359                                 |
| 6     | 1       | 4/18/00 3:15   |           | 0.5081      | 0.0070                                  | 0.0443                                 |
| 6     | 2       | 4/18/00 3:30   |           | 0.4444      | 0.0074                                  | 0.0428                                 |
| 6     | 3       | 4/18/00 3:42   |           | 0.4850      | 0.0064                                  |                                        |
| 6     | 4       | 4/18/00 3:50   |           | 0.5822      | 0.0068                                  |                                        |
| 6     | 5       | 4/18/00 4:00   |           | 0.7273      | 0.0108                                  |                                        |
| 6     | 5       | 4/18/00 4:00   | ✓         | 0.6774      | 0.0098                                  |                                        |

Duplicate: ✓

TON: Total oxidizable nitrogen (NO<sub>2</sub><sup>2-</sup> and NO<sub>3</sub><sup>-</sup>)

TABLE 3

2 of 2

## Summary Data for Nutrients

Event 3: 5/14/2000 23:53 - 5/16/2000 20:40

| Cycle | Station | Time Collected | Duplicate | Nutrients   |                                         |                                        |
|-------|---------|----------------|-----------|-------------|-----------------------------------------|----------------------------------------|
|       |         |                |           | TON<br>mg/L | O-PO <sub>4</sub> <sup>2-</sup><br>mg/L | ΣPO <sub>4</sub> <sup>2-</sup><br>mg/L |
| 7     | 1       | 4/18/00 7:15   |           | 0.5434      | 0.0064                                  | 0.0398                                 |
| 7     | 2       | 4/18/00 7:30   |           | 0.4631      | 0.0075                                  | 0.0433                                 |
| 7     | 3       | 4/18/00 7:45   |           | 0.4376      | 0.0065                                  | 0.0391                                 |
| 7     | 4       | 4/18/00 8:00   |           | 0.4787      | 0.0064                                  | 0.0369                                 |
| 7     | 5       | 4/18/00 8:10   |           | 0.6254      | 0.0124                                  | 0.0431                                 |
| 8     | 1       | 4/18/00 11:15  |           | 0.4858      | 0.0069                                  |                                        |
| 8     | 2       | 4/18/00 11:35  |           | 0.4520      | 0.0067                                  | 0.0390                                 |
| 8     | 3       | 4/18/00 11:50  |           | 0.4274      | 0.0074                                  | 0.0390                                 |
| 8     | 4       | 4/18/00 12:10  |           | 0.5910      | 0.0068                                  | 0.0359                                 |
| 8     | 5       | 4/18/00 12:20  |           | 0.6548      | 0.0076                                  | 0.0354                                 |
| 8     | 5       | 4/18/00 12:20  | ✓         | 0.6525      | 0.0076                                  | 0.0353                                 |
| 9     | 1       | 4/18/00 15:20  |           | 0.4601      | 0.0069                                  | 0.0423                                 |
| 9     | 2       | 4/18/00 15:25  |           | 0.4278      | 0.0059                                  | 0.0387                                 |
| 9     | 3       | 4/18/00 15:35  |           | 0.5304      | 0.0064                                  | 0.0364                                 |
| 9     | 4       | 4/18/00 15:55  |           | 0.5938      | 0.0058                                  | 0.0372                                 |
| 9     | 5       | 4/18/00 16:05  |           | 0.6731      | 0.0100                                  | 0.0379                                 |
| 10    | 1       | 4/18/00 19:30  |           | 0.5277      | 0.0080                                  | 0.0420                                 |
| 10    | 2       | 4/18/00 19:50  |           | 0.4366      | 0.0067                                  | 0.0426                                 |
| 10    | 3       | 4/18/00 19:55  |           | 0.4228      | 0.0060                                  | 0.0398                                 |
| 10    | 4       | 4/18/00 20:03  |           | 0.5467      | 0.0058                                  | 0.0371                                 |
| 10    | 5       | 4/18/00 20:03  |           | 0.6495      | 0.0057                                  | 0.0358                                 |
| 10    | 5       | 4/18/00 20:03  |           | 0.6171      | 0.0061                                  | 0.0360                                 |
| 11    | 1       | 4/18/00 23:23  |           | 0.5574      | 0.0072                                  | 0.0378                                 |
| 11    | 2       | 4/18/00 23:40  |           | 0.4285      | 0.0076                                  | 0.0432                                 |
| 11    | 3       | 4/18/00 23:51  |           | 0.4094      | 0.0061                                  | 0.0435                                 |
| 11    | 4       | 4/18/00 23:59  |           | 0.5751      | 0.0053                                  | 0.0369                                 |
| 11    | 5       | 4/19/00 0:08   |           | 0.6401      | 0.0050                                  | 0.0367                                 |
| 12    | 1       | 4/19/00 3:32   |           | 0.6401      | 0.0073                                  | 0.0352                                 |
| 12    | 2       | 4/19/00 3:36   |           | 0.4685      | 0.0062                                  | 0.1557                                 |
| 12    | 3       | 4/19/00 3:47   |           | 0.4721      | 0.0061                                  |                                        |
| 12    | 4       | 4/19/00 3:57   |           | 0.6452      | 0.0084                                  | 0.0391                                 |
| 12    | 4       | 4/19/00 3:57   |           | 0.5981      | 0.0055                                  |                                        |
| 12    | 5       | 4/19/00 4:06   |           | 0.5138      | 0.0089                                  |                                        |

Duplicate: ✓

**TABLE 4**

1 of 2

**Summary Data for Dissolved Organic Carbon**

**Event 3: 5/14/2000 23:53 - 5/16/2000 20:40**

| Cycle | Station | Time Collected | Duplicate | Dissolved Organic Carbon |      |
|-------|---------|----------------|-----------|--------------------------|------|
|       |         |                |           | mgC/L                    | SD   |
| 1     | 1       | 5/14/00 23:53  | ✓         | 6.41/6.29                | 0.18 |
| 1     | 2       | 5/15/00 0:08   |           | 7.80                     |      |
| 1     | 3       | 5/15/00 0:19   |           | 6.49                     |      |
| 1     | 4       | 5/15/00 0:39   |           | 4.52                     |      |
| 1     | 5       | 5/15/00 0:49   |           | 3.35                     |      |
| 2     | 1       | 5/15/00 3:43   |           | 7.36                     |      |
| 2     | 2       | 5/15/00 3:56   |           | 6.01                     |      |
| 2     | 3       | 5/15/00 4:08   |           | 4.96                     |      |
| 2     | 4       | 5/15/00 4:23   |           | 3.58                     |      |
| 2     | 5       | 5/15/00 4:34   |           | 2.65                     |      |
| 3     | 1       | 5/15/00 7:50   | ✓         | 7.14/7.11                | 0.05 |
| 3     | 2       | 5/15/00 8:01   |           | 6.21                     |      |
| 3     | 3       | 5/15/00 8:11   |           | 4.54                     |      |
| 3     | 4       | 5/15/00 8:34   |           | 3.63                     |      |
| 3     | 5       | 5/15/00 8:40   |           | 2.86                     |      |
| 4     | 1       | 5/15/00 11:36  |           | 5.84                     |      |
| 4     | 2       | 5/15/00 11:54  |           | 7.59                     |      |
| 4     | 3       | 5/15/00 12:06  |           | 6.35                     |      |
| 4     | 4       | 5/15/00 12:25  |           | 4.71                     |      |
| 4     | 5       | 5/15/00 12:33  |           | 3.33                     |      |
| 5     | 1       | 5/15/00 15:52  | ✓         | 6.73/6.44                | 0.41 |
| 5     | 2       | 5/15/00 16:02  |           | 6.84                     |      |
| 5     | 3       | 5/15/00 16:12  |           | 6.75                     |      |
| 5     | 4       | 5/15/00 16:28  |           | 3.62                     |      |
| 5     | 5       | 5/15/00 16:30  |           | 2.92                     |      |
| 6     | 1       | 5/15/00 19:43  | ✓         | 6.07/6.16                | 0.12 |
| 6     | 2       | 5/15/00 19:55  |           | 5.76                     |      |
| 6     | 3       | 5/15/00 20:05  |           | 4.23                     |      |
| 6     | 4       | 5/15/00 20:22  |           | 3.48                     |      |
| 6     | 5       | 5/15/00 20:32  |           | 2.88                     |      |

✓ : Duplicate measured

NA: Data not available

**TABLE 4**

2 of 2

**Summary Data for Dissolved Organic Carbon****Event 3: 5/14/2000 23:53 - 5/16/2000 20:40**

| Cycle | Station | Time Collected | Duplicate | Dissolved Organic Carbon<br>mgC/L | SD   |
|-------|---------|----------------|-----------|-----------------------------------|------|
| 7     | 1       | 5/15/00 23:34  |           |                                   |      |
| 7     | 2       | 5/15/00 23:54  |           | 6.43                              |      |
| 7     | 3       | 5/16/00 0:08   |           | 7.49                              |      |
| 7     | 4       | 5/16/00 0:17   |           | 5.03                              |      |
| 7     | 5       |                |           |                                   |      |
| 8     | 1       | 5/16/00 3:25   |           | 6.21                              |      |
| 8     | 2       | 5/16/00 3:38   |           | 6.83                              |      |
| 8     | 3       | 5/16/00 3:48   |           | 5.75                              |      |
| 8     | 4       | 5/16/00 3:50   |           | 4.09                              |      |
| 8     | 5       | 5/16/00 4:05   |           | 3.27                              |      |
| 9     | 1       | 5/16/00 7:45   |           | 3.04                              |      |
| 9     | 2       | 5/16/00 8:00   |           | 6.53                              |      |
| 9     | 3       | 5/16/00 8:10   |           | 6.11                              |      |
| 9     | 4       | 5/16/00 8:29   |           | 4.29                              |      |
| 9     | 5       | 5/16/00 8:36   |           | 3.82                              |      |
| 10    | 1       | 5/16/00 11:30  | ✓         | 6.59/6.31                         | 0.40 |
| 10    | 2       | 5/16/00 11:38  |           | 6.79                              |      |
| 10    | 3       | 5/16/00 11:51  |           | 5.96                              |      |
| 10    | 4       | 5/16/00 12:13  |           | 4.18                              |      |
| 10    | 5       | 5/16/00 12:25  |           | 3.25                              |      |
| 11    | 1       | 5/16/00 15:26  | ✓         | 6.51/6.54                         | 0.04 |
| 11    | 2       | 5/16/00 15:50  |           | 6.64                              |      |
| 11    | 3       | 5/16/00 15:55  |           | 5.63                              |      |
| 11    | 4       | 5/16/00 16:10  |           | 3.81                              |      |
| 11    | 5       | 5/16/00 16:20  |           | 4.42                              |      |
| 12    | 1       | 5/16/00 19:45  |           | 6.17                              |      |
| 12    | 2       | 5/16/00 19:55  |           | 5.83                              |      |
| 12    | 3       | 5/16/00 20:05  |           | 4.71                              |      |
| 12    | 4       | 5/16/00 20:25  |           | 3.82                              |      |
| 12    | 5       | 5/16/00 20:40  |           | 3.28                              |      |

✓ : Duplicate measured

NA: Data not available

TABLE 5

1 of 2

## Summary Data for Total Organic Carbon

Event 3: 5/14/2000 23:53 - 5/16/2000 20:40

| Cycle | Station | Time Collected | Duplicate | Total Organic Carbon<br>mgC/L | SD   |
|-------|---------|----------------|-----------|-------------------------------|------|
| 1     | 1       | 5/14/00 23:53  | ✓         | 6.93                          | 0.29 |
| 1     | 2       | 5/15/00 0:08   |           | 9.22                          |      |
| 1     | 3       | 5/15/00 0:19   |           | 7.76                          |      |
| 1     | 4       | 5/15/00 0:39   |           | 5.79                          |      |
| 1     | 5       | 5/15/00 0:49   |           | 4.23                          |      |
| 2     | 1       | 5/15/00 3:43   |           | 8.29                          |      |
| 2     | 2       | 5/15/00 3:56   |           | 7.56                          |      |
| 2     | 3       | 5/15/00 4:08   |           | 5.70                          |      |
| 2     | 4       | 5/15/00 4:23   |           | 4.35                          |      |
| 2     | 5       | 5/15/00 4:34   |           | 2.97                          |      |
| 3     | 1       | 5/15/00 7:50   | ✓         | 7.07/7.16                     | 0.13 |
| 3     | 2       | 5/15/00 8:01   |           | 7.25                          |      |
| 3     | 3       | 5/15/00 8:11   |           | 4.91                          |      |
| 3     | 4       | 5/15/00 8:34   |           | 3.59                          |      |
| 3     | 5       | 5/15/00 8:40   |           | 6.99                          |      |
| 4     | 1       | 5/15/00 11:36  |           | 8.30                          |      |
| 4     | 2       | 5/15/00 11:54  |           | 7.17                          |      |
| 4     | 3       | 5/15/00 12:06  |           | 5.78                          |      |
| 4     | 4       | 5/15/00 12:25  |           | 4.09                          |      |
| 4     | 5       | 5/15/00 12:33  |           | 7.53                          |      |
| 5     | 1       | 5/15/00 15:52  | ✓         | 7.80/7.64                     | 0.22 |
| 5     | 2       | 5/15/00 16:02  |           | 12.05                         |      |
| 5     | 3       | 5/15/00 16:12  |           | 8.08                          |      |
| 5     | 4       | 5/15/00 16:28  |           | 5.13                          |      |
| 5     | 5       | 5/15/00 16:30  |           | 4.93                          |      |
| 6     | 1       | 5/15/00 19:43  | ✓         | 8.15/7.71                     | 0.62 |
| 6     | 2       | 5/15/00 19:55  |           | 7.03                          |      |
| 6     | 3       | 5/15/00 20:05  |           | 5.27                          |      |
| 6     | 4       | 5/15/00 20:22  |           | 4.11                          |      |
| 6     | 5       | 5/15/00 20:32  | ✓         | 3.27/3.27                     | 0.00 |

✓ : Duplicate measured

NA: Data not available

TABLE 5

2 of 2

## Summary Data for Total Organic Carbon

Event 3: 5/14/2000 23:53 - 5/16/2000 20:40

| Cycle | Station | Time Collected | Duplicate | Dissolved Organic Carbon |      |
|-------|---------|----------------|-----------|--------------------------|------|
|       |         |                |           | mgC/L                    | SD   |
| 7     | 1       | 5/15/00 23:34  |           | 7.28                     |      |
| 7     | 2       | 5/15/00 23:54  |           | 7.67                     |      |
| 7     | 3       | 5/16/00 0:08   |           | 7.24                     |      |
| 7     | 4       | 5/16/00 0:17   |           | 6.13                     |      |
| 7     | 5       |                |           |                          |      |
| 8     | 1       | 5/16/00 3:25   | ✓         | 7.14/7.03                | 0.15 |
| 8     | 2       | 5/16/00 3:38   |           | 7.50                     |      |
| 8     | 3       | 5/16/00 3:48   |           | 6.49                     |      |
| 8     | 4       | 5/16/00 3:50   |           | 4.78                     |      |
| 8     | 5       | 5/16/00 4:05   |           | 3.79                     |      |
| 9     | 1       | 5/16/00 7:45   |           | 3.34                     |      |
| 9     | 2       | 5/16/00 8:00   |           | 7.01                     |      |
| 9     | 3       | 5/16/00 8:10   |           | 6.80                     |      |
| 9     | 4       | 5/16/00 8:29   |           | 5.03                     |      |
| 9     | 5       | 5/16/00 8:36   |           | 4.25                     |      |
| 10    | 1       | 5/16/00 11:30  | ✓         | 7.05/6.90                | 0.21 |
| 10    | 2       | 5/16/00 11:38  |           | 7.49                     |      |
| 10    | 3       | 5/16/00 11:51  |           | 7.21                     |      |
| 10    | 4       | 5/16/00 12:13  |           | 5.73                     |      |
| 10    | 5       | 5/16/00 12:25  |           | 3.74                     |      |
| 11    | 1       | 5/16/00 15:26  | ✓         | 7.77/7.87                | 0.15 |
| 11    | 2       | 5/16/00 15:50  |           | 7.66                     |      |
| 11    | 3       | 5/16/00 15:55  |           | 6.99                     |      |
| 11    | 4       | 5/16/00 16:10  |           | 6.80                     |      |
| 11    | 5       | 5/16/00 16:20  |           | 4.77                     |      |
| 12    | 1       | 5/16/00 19:45  |           | 7.37                     |      |
| 12    | 2       | 5/16/00 19:55  |           | 7.06                     |      |
| 12    | 3       | 5/16/00 20:05  |           | 6.02                     |      |
| 12    | 4       | 5/16/00 20:25  |           | 4.42                     |      |
| 12    | 5       | 5/16/00 20:40  |           | 3.33                     |      |

✓ : Duplicate measured

NA: Data not available

**TABLE 6**

1 of 2

## Summary Data for Total Kjeldahl Nitrogen

Event 3: 5/14/2000 23:53 - 5/16/2000 20:40

| Cycle | Station | Time Collected | Total Kjeldahl Nitrogen |                   |
|-------|---------|----------------|-------------------------|-------------------|
|       |         |                | TKN<br>mg/L             | Duplicate<br>mg/L |
| 1     | 1       | 5/14/00 23:53  | 0.90                    |                   |
| 1     | 2       | 5/15/00 0:08   | 1.23                    |                   |
| 1     | 3       | 5/15/00 0:19   | 1.28                    | 1.33              |
| 1     | 4       | 5/15/00 0:39   | 1.13                    |                   |
| 1     | 5       | 5/15/00 0:49   | 0.73                    |                   |
| 2     | 1       | 5/15/00 3:43   | 1.06                    |                   |
| 2     | 2       | 5/15/00 3:56   | 1.71                    |                   |
| 2     | 3       | 5/15/00 4:08   | 1.20                    |                   |
| 2     | 4       | 5/15/00 4:23   | 0.99                    | 0.88              |
| 2     | 5       | 5/15/00 4:34   | 0.56                    |                   |
| 3     | 1       | 5/15/00 7:50   | 1.01                    |                   |
| 3     | 2       | 5/15/00 8:01   | 1.23                    |                   |
| 3     | 3       | 5/15/00 8:11   | 1.30                    | 1.01              |
| 3     | 4       | 5/15/00 8:34   | 0.97                    |                   |
| 3     | 5       | 5/15/00 8:40   | 0.55                    |                   |
| 4     | 1       | 5/15/00 11:36  | 0.92                    |                   |
| 4     | 2       | 5/15/00 11:54  | 1.18                    |                   |
| 4     | 3       | 5/15/00 12:06  | 1.14                    |                   |
| 4     | 4       | 5/15/00 12:25  | 1.15                    |                   |
| 4     | 5       | 5/15/00 12:33  | 0.82                    |                   |
| 5     | 1       | 5/15/00 15:52  | 0.98                    |                   |
| 5     | 2       | 5/15/00 16:02  | 1.21                    |                   |
| 5     | 3       | 5/15/00 16:12  | 1.14                    | 1.21              |
| 5     | 4       | 5/15/00 16:28  | 0.88                    |                   |
| 5     | 5       | 5/15/00 16:40  | 0.72                    |                   |
| 6     | 1       | 5/15/00 19:43  | 1.09                    |                   |
| 6     | 2       | 5/15/00 19:55  | 1.28                    |                   |
| 6     | 3       | 5/15/00 20:05  | 1.07                    |                   |
| 6     | 4       | 5/15/00 20:22  | 0.84                    |                   |
| 6     | 5       | 5/15/00 20:32  | 0.67                    |                   |

**Table 6**

2 of 2

**Summary Data for Total Kjeldahl Nitrogen****Event 3: 5/14/2000 23:53 - 5/16/2000 20:40**

| Cycle | Station | Time Collected | Total Kjeldahl Nitrogen |                   |
|-------|---------|----------------|-------------------------|-------------------|
|       |         |                | TKN<br>mg/L             | Duplicate<br>mg/L |
| 7     | 1       | 5/15/00 23:34  | 0.71                    |                   |
| 7     | 2       | 5/15/00 23:54  | NA                      |                   |
| 7     | 3       | 5/16/00 0:08   | 1.13                    | 1.31              |
| 7     | 4       | 5/16/00 0:17   | 1.12                    |                   |
| 7     | 5       | 5/16/00 0:27   | 0.76                    |                   |
| 8     | 1       | 5/16/00 3:25   | 0.96                    |                   |
| 8     | 2       | 5/16/00 3:38   | 1.12                    |                   |
| 8     | 3       | 5/16/00 3:48   | 0.77                    |                   |
| 8     | 4       | 5/16/00 3:51   | 1.03                    |                   |
| 8     | 5       | 5/16/00 4:05   | 0.67                    |                   |
| 9     | 1       | 5/16/00 7:45   | 0.93                    | 0.97              |
| 9     | 2       | 5/16/00 8:00   | NA                      |                   |
| 9     | 3       | 5/16/00 8:10   | 0.72                    | 1.01              |
| 9     | 4       | 5/16/00 8:29   | 0.95                    |                   |
| 9     | 5       | 5/16/00 8:36   | 1.23                    | 0.90              |
| 10    | 1       | 5/16/00 11:30  | 0.97                    |                   |
| 10    | 2       | 5/16/00 11:38  | 2.73                    |                   |
| 10    | 3       | 5/16/00 11:51  | 1.17                    |                   |
| 10    | 4       | 5/16/00 8:29   | 1.29                    | 0.88              |
| 10    | 5       | 5/16/00 12:25  | 0.86                    |                   |
| 11    | 1       | 5/16/00 15:26  | 0.90                    |                   |
| 11    | 2       | 5/16/00 15:40  | 1.11                    |                   |
| 11    | 3       | 5/16/00 15:50  | 1.23                    | 1.37              |
| 11    | 4       | 5/16/00 16:10  | 1.18                    |                   |
| 11    | 5       | 5/16/00 16:20  | 0.95                    |                   |
| 12    | 1       | 5/16/00 19:45  | 0.85                    |                   |
| 12    | 2       | 5/16/00 19:55  | 1.28                    |                   |
| 12    | 3       | 5/16/00 20:05  | 1.13                    |                   |
| 12    | 4       | 5/16/00 20:25  | 0.99                    |                   |
| 12    | 5       | 5/16/00 20:40  | 0.86                    |                   |

Table 7

1 of 2

## Summary Data for Water Quality

Event 3: 5/14/2000 23:53 - 5/16/2000 20:40

| Cycle | Station | Time Collected | Duplicate | Hydrolab® Data          |             |                 |            |
|-------|---------|----------------|-----------|-------------------------|-------------|-----------------|------------|
|       |         |                |           | Temp<br>°C              | pH<br>Units | SpCond<br>µS/cm | DO<br>mg/l |
| 1     | 1       | 5/14/00 23:53  |           | 24.11                   | 6.92        | 312.00          | 2.71       |
| 1     | 2       | 5/15/00 0:08   |           | 24.31                   | 7.04        | 316.80          | 1.52       |
| 1     | 3       | 5/15/00 0:19   |           | 25.15                   | 7.07        | 335.20          | 1.41       |
| 1     | 4       | 5/15/00 0:39   |           | 25.35                   | 7.16        | 339.20          | 2.28       |
| 1     | 5       | 5/15/00 0:49   |           | 25.45                   | 7.24        | 304.50          | 4.66       |
| 2     | 1       | 5/15/00 3:43   |           | 24.07                   | 7.16        | 350.30          | 3.04       |
| 2     | 2       | 5/15/00 3:56   |           | 24.74                   | 7.10        | 334.30          | 1.31       |
| 2     | 3       | 5/15/00 4:08   |           | 25.11                   | 7.10        | 338.60          | 1.86       |
| 2     | 4       | 5/15/00 4:23   |           | 25.07                   | 7.23        | 316.50          | 3.92       |
| 2     | 5       | 5/15/00 4:34   |           | 24.99                   | 7.58        | 287.10          | 4.97       |
| 3     | 1       | 5/15/00 7:50   |           | 23.60                   | 7.39        | 325.40          | 3.65       |
| 3     | 2       | 5/15/00 8:01   |           | 24.30                   | 7.28        | 335.60          | 1.28       |
| 3     | 3       | 5/15/00 8:11   |           | 24.78                   | 7.16        | 338.40          | 1.71       |
| 3     | 3       | 5/15/00 8:13   | ✓         | 24.67                   | 7.13        | 338.60          | 1.70       |
| 3     | 4       | 5/15/00 8:34   |           | 24.90                   | 7.29        | 317.50          | 3.10       |
| 3     | 5       | 5/15/00 8:40   |           | 24.70                   | 7.34        | 291.40          | 5.37       |
| 4     | 1       | 5/15/00 11:36  |           | 24.43                   | 7.10        | 330.60          | 3.50       |
| 4     | 2       | 5/15/00 11:54  |           | 23.91                   | 7.08        | 333.80          | 1.20       |
| 4     | 3       | 5/15/00 12:06  |           | 24.94                   | 7.09        | 333.50          | 1.97       |
| 4     | 3       | 5/15/00 12:10  | ✓         | 24.96                   | 7.08        | 334.10          | 1.95       |
| 4     | 4       | 5/15/00 12:25  |           | 25.21                   | 7.18        | 335.90          | 2.75       |
| 4     | 5       | 5/15/00 12:33  |           | 25.24                   | 7.38        | 307.20          | 4.61       |
| 5     | 1       | 5/15/00 15:52  |           | 24.92                   | 7.17        | 329.30          | 4.03       |
| 5     | 2       | 5/15/00 16:02  |           | 25.17                   | 7.26        | 326.60          | 2.81       |
| 5     | 3       | 5/15/00 16:12  |           | 25.99                   | 7.31        | 337.20          | 4.02       |
| 5     | 4       | 5/15/00 16:28  |           | 25.49                   | 7.42        | 315.50          | 4.60       |
| 5     | 4       | 5/15/00 16:30  |           | 25.47                   | 7.42        | 315.70          | 4.50       |
| 5     | 5       | 5/15/00 16:40  |           | 25.74                   | 6.51        | 293.20          | 6.46       |
| 6     | 1       | 5/15/00 19:43  |           | 24.88                   | 7.19        | 332.30          | 3.34       |
| 6     | 2       | 5/15/00 19:55  |           | 25.40                   | 7.16        | 334.90          | 2.19       |
| 6     | 3       | 5/15/00 20:05  |           | 25.40                   | 7.21        | 334.00          | 3.13       |
| 6     | 4       | 5/15/00 20:22  |           | 25.24                   | 7.39        | 316.60          | 4.63       |
| 6     | 5       | 5/15/00 20:32  |           | 25.13                   | 7.59        | 293.00          | 5.90       |
| ✓ :   |         |                |           | Duplicate sample taken. |             |                 |            |

Table 7

2 of 2

## Summary Data for Water Quality

Event 3: 5/14/2000 23:53 - 5/16/2000 20:40

| Cycle | Station | Time Collected | Duplicate | Hydrolab® Data |             |                 |            |
|-------|---------|----------------|-----------|----------------|-------------|-----------------|------------|
|       |         |                |           | Temp<br>°C     | pH<br>Units | SpCond<br>mS/cm | DO<br>mg/l |
| 7     | 1       | 5/15/00 23:34  |           | 25.09          | 7.33        | 330.00          | 5.04       |
| 7     | 2       | 5/15/00 23:54  |           | 24.27          | 7.08        | 324.90          | 2.05       |
| 7     | 3       | 5/16/00 0:08   |           | 24.67          | 7.09        | 328.30          | 1.87       |
| 7     | 4       | 5/16/00 0:17   |           | 25.00          | 7.16        | 337.00          | 2.62       |
| 7     | 5       | 5/16/00 0:27   |           | 24.84          | 7.80        | 309.30          | 4.41       |
| 8     | 1       | 5/16/00 3:25   |           | 23.97          | 7.14        | 344.40          | 3.21       |
| 8     | 2       | 5/16/00 3:38   |           | 23.87          | 7.05        | 326.00          | 1.32       |
| 8     | 3       | 5/16/00 3:48   |           | 24.12          | 7.10        | 338.70          | 1.85       |
| 8     | 3       | 5/16/00 3:50   | ✓         | 24.18          | 7.08        | 338.80          | 2.07       |
| 8     | 4       | 5/16/00 3:51   |           | 24.63          | 7.22        | 325.50          | 2.90       |
| 8     | 5       | 5/16/00 4:05   |           | 24.41          | 7.41        | 301.90          | 4.28       |
| 9     | 1       | 5/16/00 7:45   |           | 23.38          | 7.23        | 335.70          | 2.16       |
| 9     | 2       | 5/16/00 8:00   |           | 23.68          | 7.14        | 335.80          | 1.37       |
| 9     | 3       | 5/16/00 8:10   |           | 24.12          | 7.17        | 326.10          | 2.54       |
| 9     | 4       | 5/16/00 8:29   |           | 24.40          | 7.20        | 316.70          | 3.16       |
| 9     | 5       | 5/16/00 8:36   |           | 24.28          | 7.37        | 295.70          | 5.05       |
| 10    | 1       | 5/16/00 11:30  |           | 23.31          | 7.06        | 334.20          | 3.82       |
| 10    | 2       | 5/16/00 11:38  |           | 23.57          | 7.13        | 329.80          | 2.08       |
| 10    | 3       | 5/16/00 11:51  |           | 23.80          | 7.07        | 335.20          | 7.73       |
| 10    | 4       | 5/16/00 12:13  |           | 24.40          | 7.14        | 327.80          | 3.09       |
| 10    | 5       | 5/16/00 12:25  |           | 24.58          | 7.34        | 310.60          | 6.07       |
| 11    | 1       | 5/16/00 15:26  |           | 23.05          | 7.14        | 335.20          | 3.92       |
| 11    | 2       | 5/16/00 15:40  |           | 23.97          | 7.12        | 329.30          | 2.82       |
| 11    | 3       | 5/16/00 15:50  |           | 24.44          | 7.30        | 336.60          | 2.91       |
| 11    | 3       | 5/16/00 15:55  | ✓         | 24.43          | 7.13        | 336.90          | 2.85       |
| 11    | 4       | 5/16/00 16:10  |           | 24.41          | 7.23        | 322.30          | 2.94       |
| 11    | 5       | 5/16/00 16:20  |           | 25.09          | 7.64        | 305.90          | 6.80       |
| 12    | 1       | 5/16/00 19:45  |           | 23.62          | 7.14        | 344.10          | 3.94       |
| 12    | 2       | 5/16/00 19:55  |           | 24.24          | 7.13        | 336.20          | 3.11       |
| 12    | 3       | 5/16/00 20:05  |           | 24.48          | 7.26        | 331.30          | 4.23       |
| 12    | 4       | 5/16/00 20:25  |           | 24.51          | 7.41        | 319.10          | 4.74       |
| 12    | 5       | 5/16/00 20:40  |           | 24.31          | 7.52        | 302.10          | 5.31       |

✓ : Duplicate sample taken.

## **APPENDIX 1**

**Technician Log**

**Field Conditions Sheet**

**Lab Conditions Sheet**

\*Sign in and out of every shift\*

\*Sign in and out of every shift\*

| Name               | Sign In Time | Sign In Date | Sign Out Time          | Sign Out Date |
|--------------------|--------------|--------------|------------------------|---------------|
| John Pohlman       | 18:00        | 5/13/44      | 7:15                   | 5/14/44       |
| Clerk Mitchell     | 18:30        | 5/13/44      | <del>Shift</del> 23:00 | 5/13/44       |
| Bill Green         | 22:00        | 5/13/44      | 12:25 pm               | 5/14/00       |
| Alyssa Gail        | 0:00         | 5/14/44      | 12:00                  | 5/14/44       |
| CLARK MITCHELL     | 0845         | 5/14/00      | 19:30                  | 5/14/00       |
| MARK PYLE          | 2030         | 5/14/00      | 7:00                   | 5/15/44       |
| John Pohlman       | 11:00        | 5/14/44      | 23:00                  | 5/15/44       |
| Chris Sanetopoulos | 18:00        | 5/14/00      | 3:00                   | 5/15/00       |
| CLARK MITCHELL     | 5:00         | 5/15/00      | 19:00                  | 5/15/00       |
| John Pohlman       | 7:50         | 5/15/00      | 23:50                  | 5/15/00       |
| Chad Miller        | 23:00        | 5/15/44      | 11:00                  | 5/15/00       |
| Chase Lauderdale   | 11:00        | 5/15/44      | 23:00                  | 5/15/44       |
| Bill Green         | 20:30        | 5/15/44      | 11:00                  | 5/15/00       |
| CURRY M. RUSSELL   | 05:30        | 5/16/00      | 08:00                  | 5/16/00       |
|                    |              |              |                        |               |
|                    |              |              | Shifts                 |               |
| John P             | 13.5 + 12 +  | 16 = 41.5    | 3.5                    |               |
| Clerk M            | 3.5 + 14 +   | 14.5 = 32    | 2.5                    |               |
| Bill Green         | 14.5 + 2.5   | = 17         | 1.5                    |               |
| Alyssa Gail        | 12           | = 12         | 1                      |               |
| Mark Pyle          | 10.5         | = 10.5       | 1                      |               |
| Chris J            | 15           | = 15         | 1.5                    |               |
| Chad Miller        | 12           | = 12         | 1                      |               |
| Chase Lauderdale   | 12           | = 12         | 1                      |               |
|                    |              |              | <u>13</u>              |               |

## Field Conditions

\*Record Field Conditions before each sampling session\*

[illegible]

\*Record field lab conditions after each sampling session\*

[illegible]

## **APPENDIX 2**

**PE Evaluations**

**QA/QC Data from CAL**



Analytical Products Group, Inc.

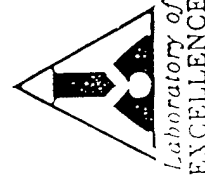
# PERFORMANCE REPORT

WP Performance Summary

May 2000

APG Customer Code: 11045

Geo-Centers Inc  
c/o NRL Building 207 RM 202  
4555 Overlook Ave. SW  
Washington, DC 20375



APG Customer 11045 Geo-Centers Inc  
 EPA Lab Code N/A 4555 Overlook Ave. SW  
 Washington, DC 20375

Print Date June 25, 2000

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WP May 2000

Study Closing Date 06/15/2000

Product: Nutrient

| Analyte                 | Product | Analyte | Reported | Assigned | Acceptance | Range     | Z-Score | Test Method | Evaluation |
|-------------------------|---------|---------|----------|----------|------------|-----------|---------|-------------|------------|
| Level                   | Code    | Value   | Value    | Value    | Value      |           |         |             |            |
| Ammonia Nitrogen as N   | WP      | 31      |          | 2.14     |            | 1.59-2.7  |         |             |            |
| Ammonia Nitrogen as N   | APG+    | 31      |          | 6.95     |            | 5.36-8.49 |         |             |            |
| Nitrate Nitrogen as N   | WP      | 32      |          | 11.1     |            | 8.77-13.2 |         |             |            |
| Nitrate Nitrogen as N   | APG+    | 32      |          | 8.31     |            | 6.56-9.89 |         |             |            |
| Orthophosphate as P     | WP      | 33      |          | 3.42     |            | 2.92-3.96 |         |             |            |
| Orthophosphate as P     | APG+    | 33      |          | 4.68     |            | 3.99-5.4  |         |             |            |
| Total Kjeldahl Nitrogen | WP      | 34      | 10.75    | 9.89     |            | 7.04-12.5 | 1.08    | EPA 351.2   | Acceptable |
| Total Kjeldahl Nitrogen | APG+    | 34      | 7.52     | 6.57     |            | 4.56-8.46 | 1.55    | EPA 351.2   | Acceptable |
| Total Phosphorus as P   | WP      | 35      |          | 3.44     |            | 2.61-4.04 |         |             |            |
| Total Phosphorus as P   | APG+    | 35      |          | 5.84     |            | 4.44-6.83 |         |             |            |

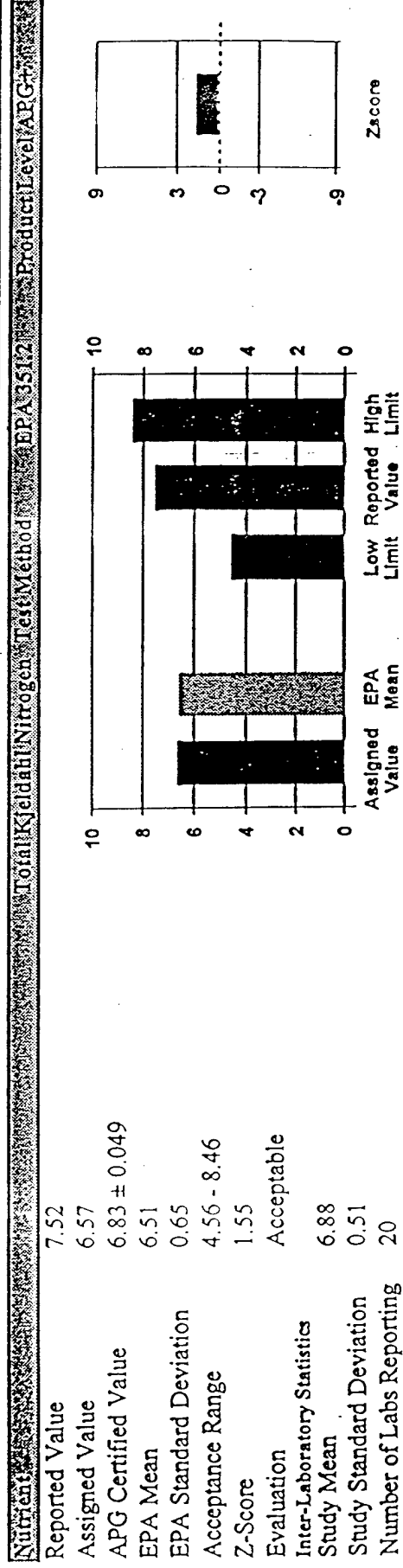
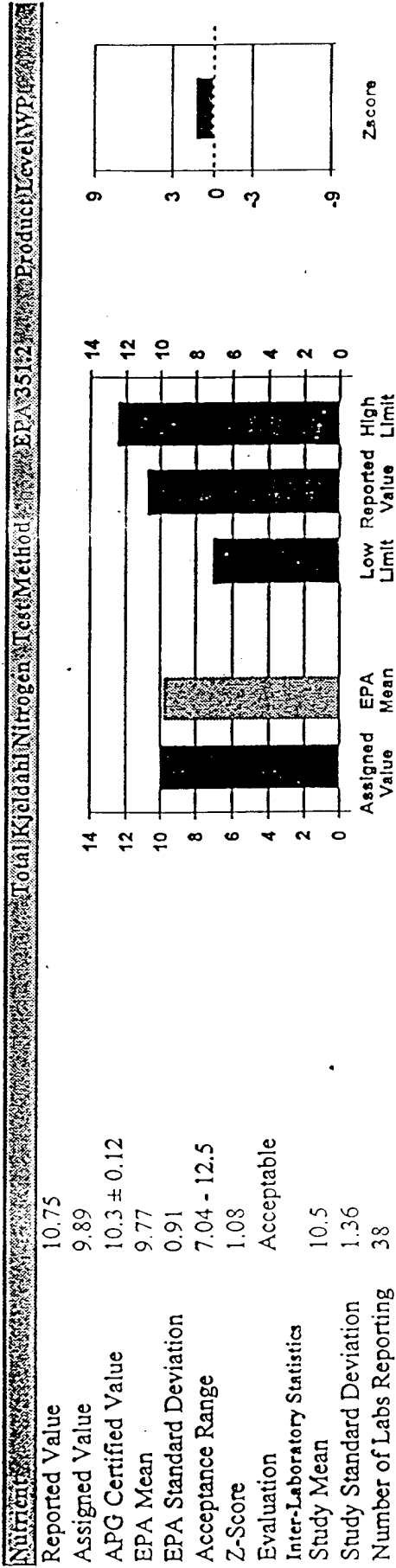


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WP May 2000  
Study Closing Date 06/15/2000

Print Date June 25, 2000

Geo-Centers Inc  
4555 Overlook Ave. SW  
Washington, DC 20375

|              |       |
|--------------|-------|
| APG Customer | 11045 |
| EPA Lab Code | N/A   |



Laboratory Pass Percentage 85.00%



( )



Analytical Products Group, Inc.

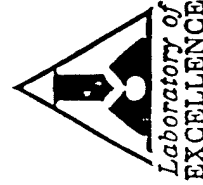
# PERFORMANCE REPORT

WP Performance Summary

August 2000

APG Customer Code: 11045

Geo-Centers Inc  
c/o NRL Building 207 RM 202  
4555 Overlook Ave. SW  
Washington, DC 20375



APG Customer 11045  
EPA Lab Code N/A

Geo-Centers Inc  
4555 Overlook Ave. SW  
Washington, DC 20375

Print Date September 26, 2000

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WP August 2000

Study Closing Date 09/15/2000

## Performance Summary

Product: Nutrient

Lot Number: 28516-28517

| Analyte                 | Product/Analyte Level | Reported Value | Assigned Value | Acceptance Range | Z Score | Test Method | Evaluation     |
|-------------------------|-----------------------|----------------|----------------|------------------|---------|-------------|----------------|
| Ammonia Nitrogen as N   | WP 31                 | 8.21           | 8.12           | 6.27-9.89        | 0.22    | EPA 350.1   | Acceptable     |
| Ammonia Nitrogen as N   | APG+ 31               | 6.00           | 6.02           | 4.62-7.36        | 0.013   | EPA 350.1   | Acceptable     |
| Nitrate Nitrogen as N   | WP 32                 | 7.65           | 6.93           | 5.46-8.25        | 1.68    | EPA 353.2   | Acceptable     |
| Nitrate Nitrogen as N   | APG+ 32               | 2.09           | 1.94           | 1.5-2.34         | 1.2     | EPA 353.2   | Acceptable     |
| Orthophosphate as P     | WP 33                 | 5.36           | 5.1            | 4.36-5.89        | 0.92    | EPA 365.1   | Acceptable     |
| Orthophosphate as P     | APG+ 33               | 4.10           | 3.87           | 3.3-4.47         | 1.09    | EPA 365.1   | Acceptable     |
| Total Kjeldahl Nitrogen | WP 34                 | ..             | 8.88           | 6.29-11.3        |         |             |                |
| Total Kjeldahl Nitrogen | APG+ 34               |                | 4.09           | 2.71-5.47        |         |             |                |
| Total Phosphorus as P   | WP 35                 | 7.16           | 5.6            | 4.26-6.56        | 4.61    | EPA 365.1   | Not Acceptable |
| Total Phosphorus as P   | APG+ 35               | 5.03           | 3.76           | 2.86-4.42        | 5.35    | EPA 365.1   | Not Acceptable |



Analytical Products Group, Inc.

# Performance Summary

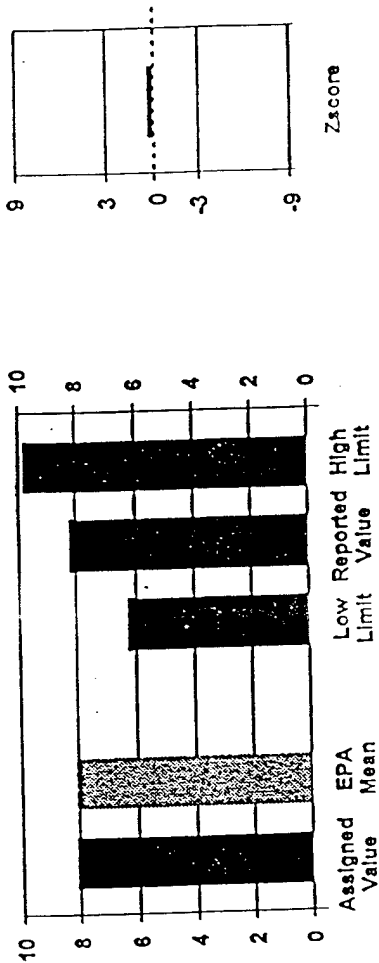
Product: Nutrient      Exception Reporting

| Analyte               | Product | Analyzer | Level | Code | Reported Value | Assigned Value | Acceptance Range | Z-Score | Test Method | Evaluation     |
|-----------------------|---------|----------|-------|------|----------------|----------------|------------------|---------|-------------|----------------|
| Total Phosphorus as P | WP      | 35       |       |      | 7.16           | 5.6            | 4.26-6.56        | 4.61    | EPA 365.1   | Not Acceptable |
| Total Phosphorus as P | APG+    | 35       |       |      | 5.03           | 3.76           | 2.86-4.42        | 5.35    | EPA 365.1   | Not Acceptable |

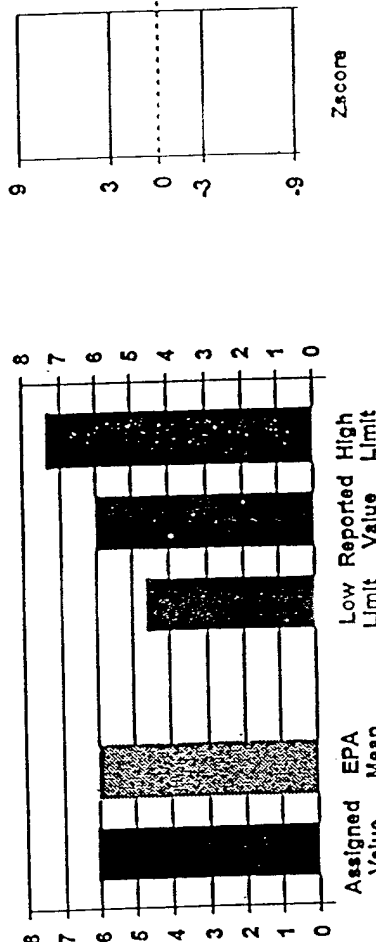


APG Customer 11045 Geo-Centers Inc  
 EPA Lab Code N/A 4555 Overlook Ave. SW  
 Washington, DC 20375

| Nutrient: Ammonia Nitrogen as N Test Method: EPA 3501 Product Level: VP |             |
|-------------------------------------------------------------------------|-------------|
| Reported Value                                                          | 8.21        |
| Assigned Value                                                          | 8.12        |
| APG Certified Value                                                     | 8 ± 0.023   |
| EPA Mean                                                                | 8.08        |
| EPA Standard Deviation                                                  | 0.6         |
| Acceptance Range                                                        | 6.27 - 9.89 |
| Z-Score                                                                 | 0.22        |
| Evaluation                                                              | Acceptable  |
| Inter-Laboratory Statistics                                             |             |
| Study Mean                                                              | 8.18        |
| Study Standard Deviation                                                | 0.54        |
| Number of Labs Reporting                                                | 36          |
| Your Ranking                                                            | 5/28        |
| Laboratory Pass Percentage                                              | 97.22%      |



| Nutrient: Ammonia Nitrogen as N Test Method: EPA 3501 Product Level: VP |             |
|-------------------------------------------------------------------------|-------------|
| Reported Value                                                          | 6.00        |
| Assigned Value                                                          | 6.02        |
| APG Certified Value                                                     | 6.01 ± 0.05 |
| EPA Mean                                                                | 5.99        |
| EPA Standard Deviation                                                  | 0.46        |
| Acceptance Range                                                        | 4.62 - 7.36 |
| Z-Score                                                                 | 0.013       |
| Evaluation                                                              | Acceptable  |
| Inter-Laboratory Statistics                                             |             |
| Study Mean                                                              | 6.22        |
| Study Standard Deviation                                                | 0.41        |
| Number of Labs Reporting                                                | 25          |
| Your Ranking                                                            | 2/25        |
| Laboratory Pass Percentage                                              | 96.00%      |



APG Customer  
EPA Lab Code

11045  
N/A

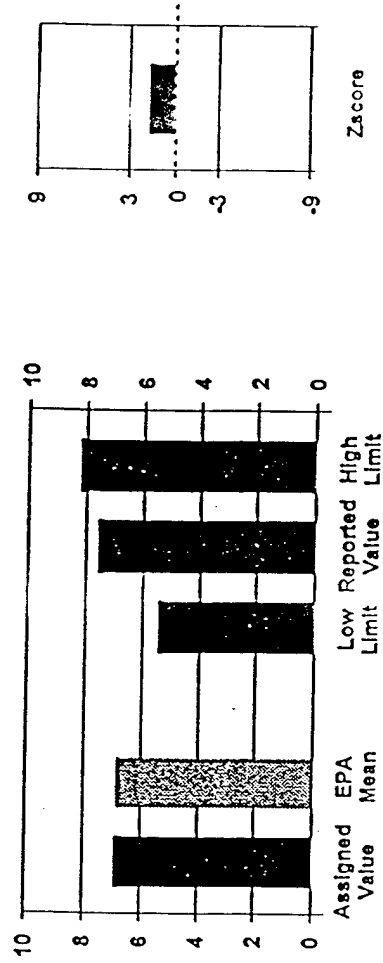
Geo-Centers Inc  
4555 Overlook Ave. SW  
Washington, DC 20375

Print Date September 26, 2000

Page 9  
WP August 2000  
Study Closing Date 09/15/2000

**Nutrient: Nitrate Nitrogen as N Test Method: EPA 353.2 Product Level: VWP**

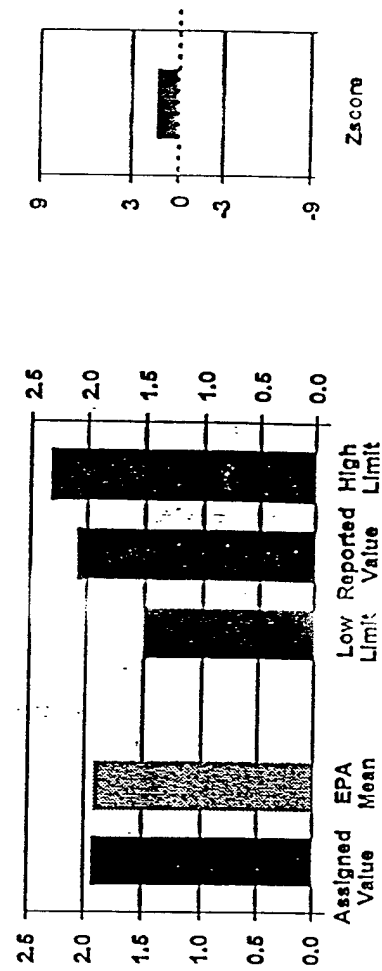
Reported Value 7.65  
Assigned Value 6.93  
APG Certified Value  $7.04 \pm 0.01$   
EPA Mean 6.86  
EPA Standard Deviation 0.47  
Acceptance Range 5.46 - 8.25  
Z-Score 1.68  
Evaluation Acceptable  
Inter-Laboratory Statistics  
Study Mean 7.07  
Study Standard Deviation 0.55  
Number of Labs Reporting 22  
Your Ranking 17/21  
Laboratory Pass Percentage 90.91%



Zscore

**Nutrient: Nitrate Nitrogen as N Test Method: EPA 353.2 Product Level: VWP**

Reported Value 2.09  
Assigned Value 1.94  
APG Certified Value  $1.94 \pm 0.027$   
EPA Mean 1.92  
EPA Standard Deviation 0.14  
Acceptance Range 1.5 - 2.34  
Z-Score 1.2  
Evaluation Acceptable



Zscore

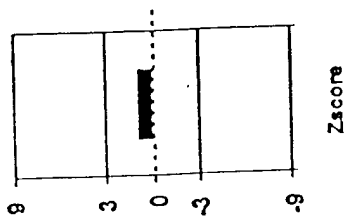
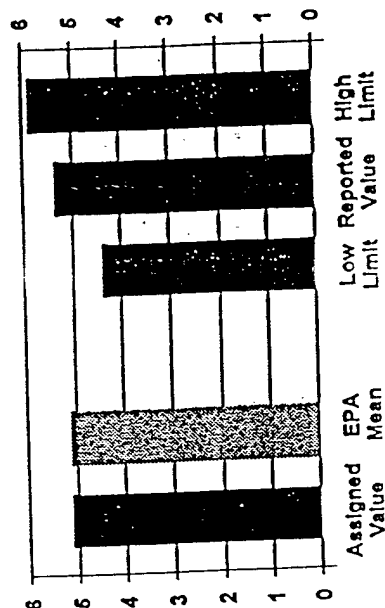


Geo-Centers Inc  
 4555 Overlook Ave. SW  
 Washington, DC 20375

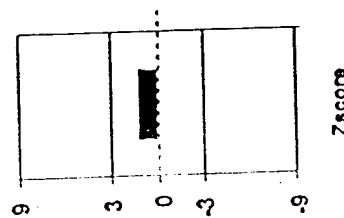
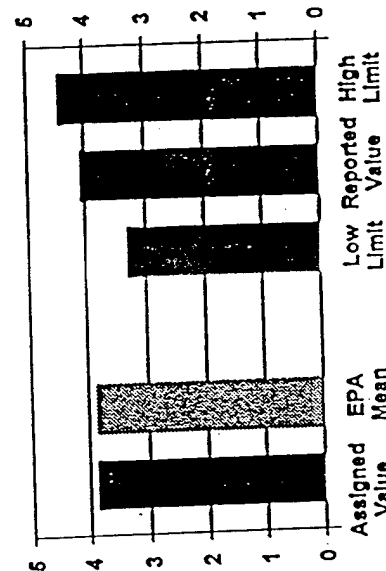
APG Customer 11045  
 EPA Lab Code N/A

Nutrient: Orthophosphate as P, Test Method: EPA 365.1, Product Level: NVR

Reported Value 5.36  
 Assigned Value 5.1  
 APG Certified Value  $5.05 \pm 0.034$   
 EPA Mean 5.12  
 EPA Standard Deviation 0.26  
 Acceptance Range 4.36 - 5.89  
 Z-Score 0.92  
 Evaluation Acceptable  
 Inter-Laboratory Statistics  
 Study Mean 5.21  
 Study Standard Deviation 0.18  
 Number of Labs Reporting 20  
 Your Ranking 11/14  
 Laboratory Pass Percentage 100.00%



Nutrient: Orthophosphate as P, Test Method: EPA 365.1, Product Level: APG  
 Reported Value 4.10  
 Assigned Value 3.87  
 APG Certified Value  $3.87 \pm 0.032$   
 EPA Mean 3.89  
 EPA Standard Deviation 0.2  
 Acceptance Range 3.3 - 4.47  
 Z-Score 1.09  
 Evaluation Acceptable



Analytical Products Group, Inc.

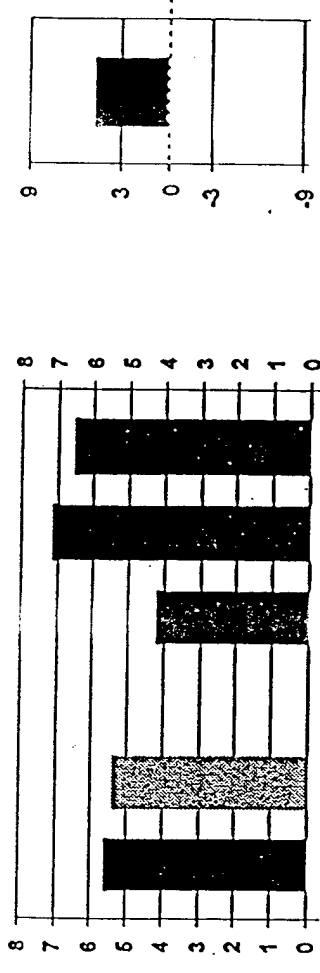
APG Customer 11045  
EPA Lab Code N/A

Geo-Centers Inc  
4555 Overlook Ave. SW  
Washington, DC 20375

Print Date September 26, 2000  
Page 12  
WP August 2000  
Study Closing Date 09/15/2000

| Nutrient                    |                | Total Phosphorus as P, Test Method EPA 365.1 |  | Product Level WVP |  |
|-----------------------------|----------------|----------------------------------------------|--|-------------------|--|
| Reported Value              | 7.16           |                                              |  |                   |  |
| Assigned Value              | 5.6            |                                              |  |                   |  |
| APG Certified Value         | 5.58 ± 0.033   |                                              |  |                   |  |
| EPA Mean                    | 5.41           |                                              |  |                   |  |
| EPA Standard Deviation      | 0.38           |                                              |  |                   |  |
| Acceptance Range            | 4.26 - 6.56    |                                              |  |                   |  |
| Z-Score                     | 4.61           |                                              |  |                   |  |
| Evaluation                  | Not Acceptable |                                              |  |                   |  |
| Inter-Laboratory Statistics |                |                                              |  |                   |  |
| Study Mean                  | 5.7            |                                              |  |                   |  |
| Study Standard Deviation    | 0.32           |                                              |  |                   |  |
| Number of Labs Reporting    | 21             |                                              |  |                   |  |
| Your Ranking                | 19/20          |                                              |  |                   |  |
| Laboratory Pass Percentage  | 90.48%         |                                              |  |                   |  |

| Category           | Value |
|--------------------|-------|
| Assigned Value     | 5.6   |
| EPA Mean           | 5.41  |
| Low Reported Limit | 4.26  |
| High Limit         | 6.56  |

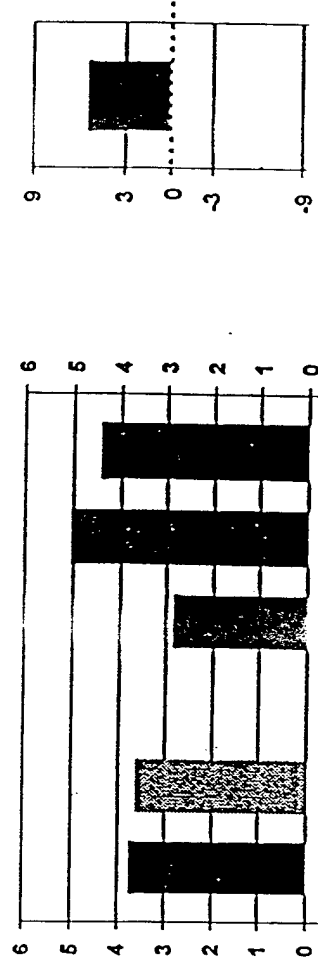


| Nutrient               |                | Total Phosphorus as P, Test Method EPA 365.1 |  | Product Level ARG |  |
|------------------------|----------------|----------------------------------------------|--|-------------------|--|
| Reported Value         | 5.03           |                                              |  |                   |  |
| Assigned Value         | 3.76           |                                              |  |                   |  |
| APG Certified Value    | 3.77 ± 0.036   |                                              |  |                   |  |
| EPA Mean               | 3.64           |                                              |  |                   |  |
| EPA Standard Deviation | 0.26           |                                              |  |                   |  |
| Acceptance Range       | 2.86 - 4.42    |                                              |  |                   |  |
| Z-Score                | 5.35           |                                              |  |                   |  |
| Evaluation             | Not Acceptable |                                              |  |                   |  |

| Category       | Value |
|----------------|-------|
| EPA Mean       | 3.64  |
| Assigned Value | 3.76  |

| Category       | Value |
|----------------|-------|
| Low Limit      | 2.86  |
| Reported Value | 5.03  |
| High Limit     | 4.42  |

| Category | Value |
|----------|-------|
| Z-score  | 5.35  |



APG Customer 11045  
EPA Lab Code N/A

Geo-Centers Inc  
4555 Overlook Ave. SW  
Washington, DC 20375

Print Date October 06, 2000

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WS August 2000

Study Closing Date 09/26/2000

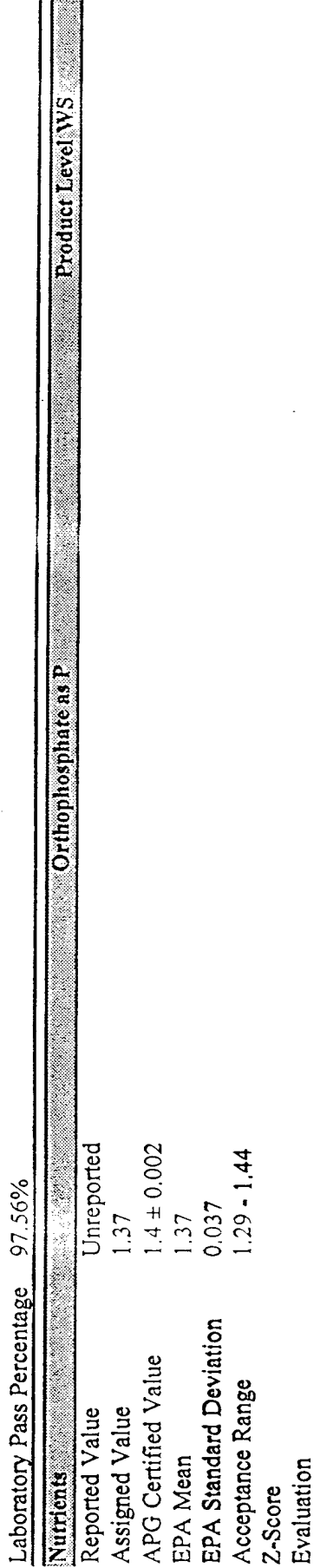
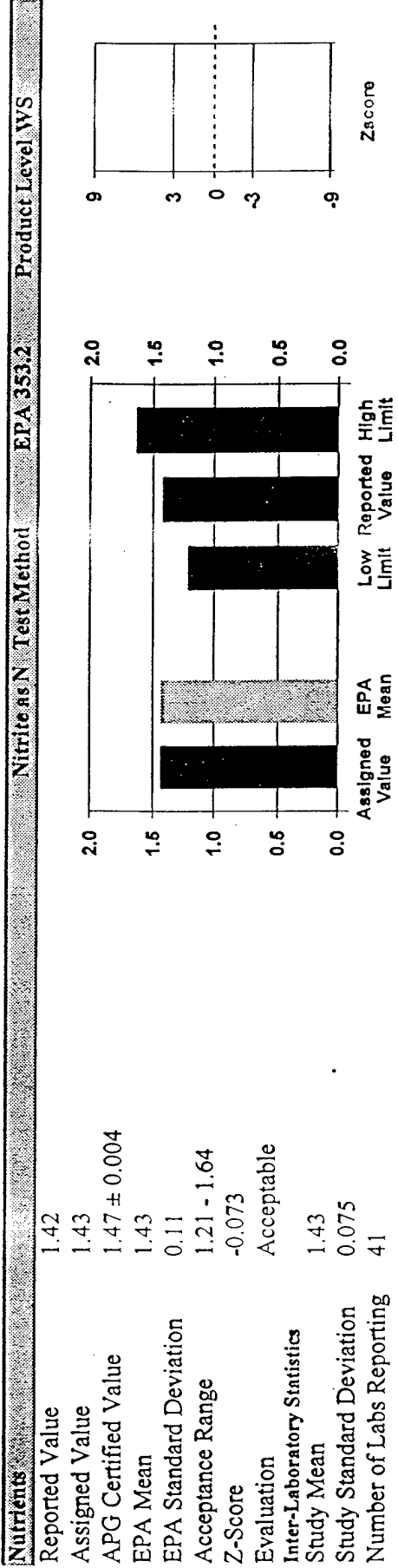
**Product: Nutrients**

**Lot Number: 28594-28595-28596**

| Analyte               | Product Level | Analyte Code | Reported Value | Assigned Value | Acceptance Range | Z-Score | Test Method | Evaluation |
|-----------------------|---------------|--------------|----------------|----------------|------------------|---------|-------------|------------|
| Fluoride              | WS            | 10           |                | 5.88           | 5.29-6.46        |         |             |            |
| Nitrate Nitrogen as N | WS            | 9            |                | 5.22           | 4.7-5.74         |         |             |            |
| Nitrite as N          | WS            | 92           | 1.42           | 1.43           | 1.21-1.64        | 0.073   | EPA 353.2   | Acceptable |
| Orthophosphate as P   | WS            | 261          |                | 1.37           | 1.29-1.44        |         |             |            |



Washington, DC 20375



Spike QA/QC Results from previous sample group (~~Event 3~~)

| Sample ID | result | Spike mg/l | spike result | % recovery |
|-----------|--------|------------|--------------|------------|
|-----------|--------|------------|--------------|------------|

|      |      |     |      |      |
|------|------|-----|------|------|
| 153  | 0.78 | 1.0 | 1.88 | 110  |
| 218  | 1.00 | 1.0 | 2.02 | 100  |
| 362  | 1.23 | 1.0 | 2.19 | 96   |
| 16   | 0.86 | 2.0 | 2.36 | 75   |
| 112  | 2.23 | 1.0 | 2.23 | 97   |
| 3117 | 1.13 | 1.0 | 2.04 | 91   |
| 306  | 0.73 | 1.0 | 1.74 | 100  |
| 307  | 1.23 | 1.0 | 1.87 | 65   |
| 405  | 0.99 | 2.0 | 3.24 | 112  |
| 421  | 2.65 | 1.0 | 2.91 | 26   |
| 439  | 0.72 | 1.0 | 1.61 | 89   |
| 424  | 0.97 | 2.0 | 2.72 | 87.5 |
| 482  | 0.77 | 2.0 | 2.80 | 101  |

## Secondary Source QA sample

| DATE | QA<br>True Value | RESULTS | % Recovery |
|------|------------------|---------|------------|
|------|------------------|---------|------------|

|         |      |      |     |
|---------|------|------|-----|
| 9-20-00 | 8.90 | 8.01 | 89  |
| 9-14-00 | 8.90 | 9.45 | 105 |
| 9-18-00 | 8.90 | 9.27 | 104 |
| 6-16-00 | 9.3  | 9.78 | 105 |
| 6-10-00 | 8.9  | 9.1  | 102 |
| 6-13-00 | 9.3  | 10.4 | 111 |
| 9-25    | 8.9  | 7.99 | 89  |

### Event 3 Blank Table

|              | Field 1 | Field 2  | Field 3  | Field 4 | Equip |
|--------------|---------|----------|----------|---------|-------|
| TSS (mg/L)   | 7.43    | 11.4     | 3.42     | 2.78    | 3.68  |
| VSS (mg/L)   | 2.78    | 5.14     | 12.08    | 4.57    | 3.68  |
| TOC (mg/L)   | 0       | 0.573622 | 0.039146 | 0       |       |
| DOC (mg/L)   | 0       | 0.171346 |          | 0       | 0.28  |
| TKN (mg/L)   | NA      |          |          |         |       |
| NH4 (mg/L)   | 0       | 0        | 0.005    | 0.004   | 0     |
| TON (mg/L)   | 0       | 0        | 0.1      | 0       | 0     |
| o-PO4 (mg/L) | 0.003   | 0.003    | 0.003    | 0.003   | 0.003 |
| T-PO4 (mg/L) | NA      |          |          |         |       |

## **APPENDIX 3**

**Chain of Custody Forms (NRL)**

**Chain of Custody Forms (CAL)**

**Environmental Quality Sciences**  
**U.S. Naval Research Laboratory**  
**Code 6115, 4555, Overlook Ave Sw**  
**Washington D.C. 20375**  
**202-404-6416 Fax: 202-404-8515**

|                                  |
|----------------------------------|
| Project Manager: John Fickelman  |
| Organization: US NRZ, Cycle 6115 |
| Address:                         |
|                                  |
|                                  |
| Ship To:                         |
|                                  |
| Organization:                    |
|                                  |
| Address:                         |
|                                  |

2024041736

Phone Number

2024041736

Sampler (Signature)

2024041736

| Sample ID    | Sample Date | Time | Matrix           | Lab ID |
|--------------|-------------|------|------------------|--------|
| SS-cycle 1-8 | 5/12-15     |      | filter           |        |
| K-cycle 1-8  | "           |      | H <sub>2</sub> O |        |
| N-cycle 1-8  | "           |      | H <sub>2</sub> O |        |
| P-cycle 1-8  | "           |      | H <sub>2</sub> O |        |
| PC-cycle 1-8 | "           |      | filter           |        |
| TC-cycle 1-8 | "           |      | H <sub>2</sub> O |        |
| DC-cycle 1-8 | "           |      | H <sub>2</sub> O |        |
| Field Blank  | "           |      | —                |        |
| Equip Blank  | "           |      | —                |        |

**Recommended Quantity and Preservative (Provide triple volume for QC samples)**

[illegible]

| Project Information               |                                                                                                                                                  | Sample Receipt                                                  |     |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----|
| Project Number:                   |                                                                                                                                                  | Total Number of Containers                                      |     |
| Project Name:                     |                                                                                                                                                  | Chain of Custody/Seals                                          | N/A |
| Job Order Number:                 |                                                                                                                                                  | Seals Intact                                                    | N/A |
| Via:                              |                                                                                                                                                  | Received in Good Condition                                      | N/A |
| TAT:                              | <input type="checkbox"/> 24h <input type="checkbox"/> 48h <input type="checkbox"/> 72h <input type="checkbox"/> 1wk <input type="checkbox"/> 2wk |                                                                 |     |
| Sample Disposal Instructions      |                                                                                                                                                  |                                                                 |     |
| <input type="checkbox"/> Disposal |                                                                                                                                                  | <input type="checkbox"/> Return <input type="checkbox"/> Pickup |     |
| Comments:                         |                                                                                                                                                  |                                                                 |     |

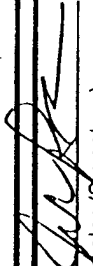
|                                        |                |
|----------------------------------------|----------------|
| Relinquished By: <i>Chris M. Mills</i> | Time: _____    |
| Signature _____                        | Date: _____    |
| Printed Name: <i>Chris M. Mills</i>    | Company: _____ |
| Company: _____                         |                |

|                      |       |
|----------------------|-------|
| Relinquish to: BY: 2 |       |
| Signature            | Time: |
| Printed Name:        |       |
| Date:                |       |
| Company:             |       |
| Relinquish to: BY: 2 |       |
| Signature            | Time: |
| Printed Name:        |       |
| Date:                |       |
| Company:             |       |

|                    |       |
|--------------------|-------|
| Relinquished By: 3 |       |
| Signature          | Time: |
| Date:              |       |
| Company:           |       |
| Relinquished By: 3 |       |
| Signature          | Time: |
| Date:              |       |
| Company:           |       |

**Environmental Quality Sciences**  
**U.S. Naval Research Laboratory**  
**Code 6115, 4555, Overlook Ave Sw**  
**Washington D.C. 20375**  
**202-404-6416 Fax: 202-404-8515**

**Recommended Quantity and Preservative (Provide triple volume for QC samples)**

|                                                                                     |              |
|-------------------------------------------------------------------------------------|--------------|
| Project Manager: John Pohlman                                                       |              |
| Organization: US NRL, Code 6115                                                     |              |
| Address:                                                                            |              |
| Ship To:                                                                            |              |
| Organization:                                                                       |              |
| Address:                                                                            |              |
|  | 2024041736   |
| Sampler (Signature)                                                                 | Phone Number |

| Sample ID         | Sample Date | Time | Matrix            | Lab ID |
|-------------------|-------------|------|-------------------|--------|
| SS - cycle - 9-12 | 5/15/10     |      | filter            |        |
| K - cycle - 9-12  | "           |      | H <sub>2</sub> O  |        |
| N - cycle - 9-12  | "           |      | H <sub>2</sub> O  |        |
| P - cycle - 9-12  | "           |      | H <sub>2</sub> O  |        |
| PC - cycle - 9-12 | "           |      | F <sub>1</sub> kn |        |
| TC - cycle - 9-12 | "           |      | H <sub>2</sub> O  |        |
| DC - cycle - 9-12 | "           |      | H <sub>2</sub> O  |        |
| Field Blanks      | "           |      | —                 |        |
|                   |             |      |                   |        |
|                   |             |      |                   |        |

| Project Information               |                                                                                                                                                  | Sample Receipt                                                  |      |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------|
| Project Number:                   |                                                                                                                                                  | Total in Bore Containers:                                       | 337  |
| Project Name:                     |                                                                                                                                                  | Chain Recorder/Seal:                                            | YNNA |
| Job Order Number:                 |                                                                                                                                                  | Seal Mark:                                                      | YNNA |
| Via:                              |                                                                                                                                                  | Received in Good Condition:                                     | Y    |
| TAT:                              | <input type="checkbox"/> 24h <input type="checkbox"/> 48h <input type="checkbox"/> 72h <input type="checkbox"/> 1wk <input type="checkbox"/> 2wk |                                                                 |      |
| Sample Disposal Instructions      |                                                                                                                                                  |                                                                 |      |
| <input type="checkbox"/> Disposal |                                                                                                                                                  | <input type="checkbox"/> Return <input type="checkbox"/> Pickup |      |
| Comments:                         |                                                                                                                                                  |                                                                 |      |

|                  |               |         |
|------------------|---------------|---------|
| Relinquished By: | Signature     | Time:   |
|                  | Printed Name: | Date:   |
|                  | William Green | 5/15/02 |
|                  | Company:      |         |

|                                                                                                |                       |
|------------------------------------------------------------------------------------------------|-----------------------|
| Rolling Hills Hwy 12                                                                           | Time: 11:30           |
| Signature:  | Date: 04/23/2008      |
| Printed Name: David L. Williams                                                                | Company: C&G-Security |
| Rolling Hills Hwy 12                                                                           | Time:                 |
| Signature:                                                                                     | Date:                 |
| Printed Name:                                                                                  | Company:              |

|                  |       |
|------------------|-------|
| Relinquished Day |       |
| Signature        | Time: |
| Printed Name:    |       |
| Date:            |       |
| Company:         |       |
| Relinquished Day |       |
| Signature        | Time: |
| Printed Name:    |       |
| Date:            |       |
| Company:         |       |

## Distribution

**Environmental Quality Sciences**  
U.S. Naval Research Laboratory  
Code 6115, 4555, Overlook Ave Sw  
Washington D.C. 20375  
202-404-6416 Fax: 202-404-8515

Project Manager: John Pohlman  
Organization: USNRL, Code 6115  
Address:

|               |
|---------------|
| Ship To:      |
| Organization: |
| Address:      |




Sampler (Signature)

2024011736

Phone Number

[illegible]

| Project Information                                                                               |                                                                                                                                                  | Sample Receipt             |        |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------|
| Project Number:                                                                                   |                                                                                                                                                  | Total Number of Containers | 7/2/99 |
| Project Name:                                                                                     |                                                                                                                                                  | Chain of Custody/Seals     | Y/N/NA |
| Job Order Number:                                                                                 |                                                                                                                                                  | Seals intact?              | Y/N/NA |
| Via:                                                                                              |                                                                                                                                                  | Received in good condition | Y      |
| TAT:                                                                                              | <input type="checkbox"/> 24h <input type="checkbox"/> 48h <input type="checkbox"/> 72h <input type="checkbox"/> 1wk <input type="checkbox"/> 2wk |                            |        |
| Sample Storage Instructions                                                                       |                                                                                                                                                  |                            |        |
| <input type="checkbox"/> Disposal <input type="checkbox"/> Return <input type="checkbox"/> Pickup |                                                                                                                                                  |                            |        |
| Comments:                                                                                         |                                                                                                                                                  |                            |        |

|                               |              |                     |                |
|-------------------------------|--------------|---------------------|----------------|
| Belinquished By:              | Time:        | Printed Name:       | Date:          |
| Signature: <i>[Signature]</i> | <i>10:30</i> | <i>John Pollock</i> | <i>5/16/95</i> |
| Company:                      |              | <i>Gen-Conters</i>  |                |
| Belinquished By:              | Time:        | Printed Name:       | Date:          |
| Signature:                    |              |                     |                |
| Company:                      |              |                     |                |

|                                  |             |
|----------------------------------|-------------|
| Relinquished by: 2               | Time:       |
| Signature: <i>[Signature]</i>    | Date: 11/20 |
| Printed Name: <i>[Signature]</i> | Date: 11/20 |
| Company: <i>[Signature]</i>      | Date: 11/20 |
| Relinquished by: 2               | Time:       |
| Signature: <i>[Signature]</i>    | Date: 11/20 |
| Printed Name: <i>[Signature]</i> | Date: 11/20 |
| Company: <i>[Signature]</i>      | Date: 11/20 |

|                    |       |
|--------------------|-------|
| Relinquished By: 3 | Time: |
| Signature          | Date: |
| Printed Name:      |       |
| Company:           |       |
| Relinquished By: 3 | Time: |
| Signature          | Date: |
| Printed Name:      |       |
| Company:           |       |

**Recommended Quantity and Preservative (Provide triple volume for QC samples)**

[illegible]

Date 5/16/00 Page 1 of 1

**Distribution**      **White: Recipient**      **Canary: Project Manager**      **Pink: Project file**

# Chain of Custody

Date 5/28/64 Page 1 of 1


 Sampler (Signature)
 
 Phone Number

| Project Information                                                     |                                                                                                                                                  | Sample Receipt                                                  |       |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------|
| Project Number:                                                         |                                                                                                                                                  | Total Number of Containers                                      | 4775  |
| Project Name:                                                           |                                                                                                                                                  | Chain of Custody Serial                                         | Q/N/A |
| Job Order Number:                                                       |                                                                                                                                                  | Serial Number                                                   | Q/N/A |
| Via:                                                                    |                                                                                                                                                  | Revised Instructions                                            | Q/N/A |
| TAT:                                                                    | <input type="checkbox"/> 24h <input type="checkbox"/> 48h <input type="checkbox"/> 72h <input type="checkbox"/> 1wk <input type="checkbox"/> 2wk |                                                                 |       |
| Sample Disposal Instructions                                            |                                                                                                                                                  |                                                                 |       |
| <input type="checkbox"/> Disposal                                       |                                                                                                                                                  | <input type="checkbox"/> Return <input type="checkbox"/> Pickup |       |
| Comments:                                                               |                                                                                                                                                  |                                                                 |       |
| X <i>Chesapeake Analytical Lab</i><br><i>301-932-4775</i><br><i>301</i> |                                                                                                                                                  |                                                                 |       |

|                    |                                    |       |
|--------------------|------------------------------------|-------|
| Relinquished by: 2 | Signature: <i>RCF</i>              | Time: |
|                    | Printed Name: <i>Sister Of. 36</i> | Date: |
|                    | Company: <i>NR</i>                 |       |
| Relinquished by: 2 | Signature:                         |       |
|                    | Printed Name:                      |       |
|                    | Company:                           |       |

|                         |       |
|-------------------------|-------|
| <b>Faliquil Holiday</b> |       |
| Signature               | Time: |
| Printed Name:           | Date: |
| Company:                |       |
| <b>Faliquil Holiday</b> |       |
| Signature               | Time: |
| Printed Name:           | Date: |
| Company:                |       |

**Recommended Quantity and Preservative (Provide triple volume for QC samples)**

[illegible]

Canary: Project Manager  
Pink: Project file

**White: Recipient**

## Distribution

**CHESAPEAKE ANALYTICAL LAB.**  
**CHAIN OF CUSTODY FORM**  
 106 A ROCKEFELLER CT. WALDORF, MD 20602  
 301-932-4775

|                                                                                                                                                                                 |                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| SAMPLE SOURCE<br><div style="text-align: right; font-size: 1.2em;">202-404-1736</div>                                                                                           | PAGE<br>OF             |
| COMPANY NAME, CONTACT PERSON & PHONE NUMBER:<br><div style="display: flex; justify-content: space-between;"> <span>NRL John Pohlman</span> <span>fax 202-404-8515</span> </div> | COLLECTOR'S SIGNATURE: |

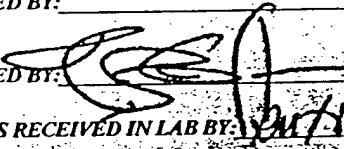
Code 6115 4555 Overlook Ave SW  
 Wash DC 20375

CONTAINER TYPE:  
 P=PLASTIC  
 G=GLASS

SAMPLE TYPE:  
 G= GRAB  
 C= COMPOSIT

| SAMPLE IDENTIFICATION                  | SAMPLE DATE | TIME | PRESERVATIVE                         | ANALYSIS REQUIRED | IN LAB pH |
|----------------------------------------|-------------|------|--------------------------------------|-------------------|-----------|
| 1. Event 3<br>(No #ed. Sheet) supplied |             |      | H <sub>2</sub> SO <sub>4</sub><br>4C | TKN               |           |
| 3. made one!                           |             |      |                                      |                   |           |
| 4.                                     |             |      |                                      |                   |           |
| 5.                                     |             |      |                                      |                   |           |
| 6.                                     |             |      |                                      |                   |           |
| 7.                                     |             |      |                                      |                   |           |
| 8.                                     |             |      |                                      |                   |           |
| 9.                                     |             |      |                                      |                   |           |
| 10.                                    |             |      |                                      |                   |           |
| 11.                                    |             |      |                                      |                   |           |
| 12.                                    |             |      |                                      |                   |           |

RELEASED BY: \_\_\_\_\_ D/T: \_\_\_\_/\_\_\_\_/\_\_\_\_ @ \_\_\_\_\_ REC'D BY: \_\_\_\_\_ D/T: \_\_\_\_/\_\_\_\_/\_\_\_\_ @ \_\_\_\_\_

RELEASED BY:  D/T: 1346/5/26 @ \_\_\_\_\_ REC'D BY: \_\_\_\_\_ D/T: \_\_\_\_/\_\_\_\_/\_\_\_\_ @ \_\_\_\_\_

SAMPLES RECEIVED IN LAB BY:  DATE/TIME: 5/26 @ 1346 ICED YES NO TEMP \_\_\_\_\_

PH CHECKED IN LAB BY: \_\_\_\_\_ DATE: \_\_\_\_\_

## **APPENDIX 4**

**Laboratory Data Sheets (NRL)**

**Raw Data Sheets (CAL)**

# Dissolved Oxygen Titrations

WMMMS Event 3

Biological Oxygen Demand

| Cycle | Anal ID | Bott ID | Sta | TP | Time Stored  | Time Fixed    | Inc. (D) | Tit. Vol | Rep | mg O <sub>2</sub> /L | Avg. | Std Dev | BOD (mg/L) | Comments |
|-------|---------|---------|-----|----|--------------|---------------|----------|----------|-----|----------------------|------|---------|------------|----------|
| 1     | 462     | 82      | 1   | t0 |              | 5/14/00 1:57  |          | 2.290    | 1   | 6.05                 |      |         |            |          |
|       | 463     | 97      |     | t0 |              |               |          | 2.260    | 2   | 5.97                 | 6.01 | 0.06    |            |          |
|       | 464     | 18      |     | t1 | 5/14/00 1:50 | 5/18/00 23:55 | 4.92     | 0.489    | 1   | 0.86                 |      |         |            |          |
|       | 465     | 154     |     | t1 |              |               |          | 0.471    | 2   | 0.81                 | 0.83 | 0.04    | 5.18       |          |
|       | 466     | 33      | 2   | t0 |              | 5/14/00 1:57  |          | 0.99     | 1   | 2.30                 |      |         |            |          |
|       | 467     | 48      |     | t0 |              |               |          | 0.987    | 2   | 2.30                 | 2.30 | 0.01    |            |          |
|       | 468     | 147     |     | t1 | 5/14/00 1:50 | 5/18/00 23:55 | 4.92     | 0.117    | 1   | 0.00                 |      |         |            |          |
|       | 469     | 131     |     | t1 |              |               |          | 0.015    | 2   | 0.00                 | 0.00 | 0.00    | 2.30       |          |
|       | 470     | 21      | 3   | t0 |              | 5/14/00 1:57  |          | 0.753    | 1   | 1.62                 |      |         |            |          |
|       | 471     | 11      |     | t0 |              |               |          | 0.749    | 2   | 1.61                 | 1.62 | 0.01    |            |          |
|       | 472     | 129     |     | t1 | 5/14/00 1:50 | 5/18/00 23:55 | 4.92     | 0.033    | 1   | 0.00                 |      |         |            |          |
|       | 473     | 47      |     | t1 |              |               |          | NA       | 2   |                      | 0.00 | #DIV/0! | 1.62       |          |
|       | 474     | 5       | 4   | t0 |              | 5/14/00 1:57  |          | 1.168    | 1   | 2.82                 |      |         |            |          |
|       | 475     | 112     |     | t0 |              |               |          | 1.157    | 2   | 2.79                 | 2.80 | 0.02    |            |          |
|       | 476     | 98      |     | t1 | 5/14/00 1:50 | 5/18/00 23:55 | 4.92     | 0.01     | 1   | 0.00                 |      |         |            |          |
|       | 477     | 124     |     | t1 |              |               |          | 0.269    | 2   | 0.23                 | 0.11 | 0.16    | 2.69       |          |
|       | 478     | 144     | 5   | t0 |              | 5/14/00 1:57  |          | 2.324    | 1   | 6.15                 |      |         |            |          |
|       | 479     | 19      |     | t0 |              |               |          | 2.333    | 2   | 6.18                 | 6.16 | 0.02    |            |          |
|       | 480     | 17      |     | t1 | 5/14/00 1:50 | 5/18/00 23:55 | 4.92     | 1.507    | 1   | 3.80                 |      |         |            |          |
|       | 481     | 150     |     | t1 |              |               |          | 1.649    | 2   | 4.20                 | 4.00 | 0.29    | 2.16       |          |
| 2     | 482     | 8       | 1   | t0 |              | 5/14/00 5:20  |          | 1.535    | 1   | 3.88                 |      |         |            |          |
|       | 483     | 97      |     | t0 |              |               |          | 1.490    | 2   | 3.75                 | 3.81 | 0.09    |            |          |
|       | 484     | 48      |     | t1 | 5/14/00 5:11 | 5/19/00 4:10  | 4.96     | 0.037    | 1   | 0.00                 |      |         |            |          |
|       | 485     | 33      |     | t1 |              |               |          | 0.012    | 2   | 0.00                 | 0.00 | 0.00    | 3.81       |          |
|       | 486     | 11      | 2   | t0 |              |               |          | 0.707    | 1   | 1.49                 |      |         |            |          |
|       | 487     | 21      |     | t0 |              |               |          | 0.667    | 2   | 1.37                 | 1.43 | 0.08    |            |          |
|       | 488     | 112     |     | t1 |              |               | 4.96     | 0.04     | 1   | 0.00                 |      |         |            |          |
|       | 489     | 5       |     | t1 |              |               |          | 0.014    | 2   | 0.00                 | 0.00 | 0.00    | 1.43       |          |
|       | 490     | 19      | 3   | t0 |              |               |          | 1.009    | 1   | 2.36                 |      |         |            |          |
|       | 491     | 144     |     | t0 |              |               |          | 0.932    | 2   | 2.14                 | 2.25 | 0.16    |            |          |
|       | 492     | 45      |     | t1 |              |               | 4.96     | 0.011    | 1   | 0.00                 |      |         |            |          |

|     |     |    |   |               |               |       |   |      |      |         |      |
|-----|-----|----|---|---------------|---------------|-------|---|------|------|---------|------|
| 493 | 23  | t1 |   |               |               | 0.003 | 2 | 0.00 | 0.00 | 0.00    | 2.25 |
| 494 | 116 | t0 | 4 |               |               | 1.825 | 1 | 4.71 |      |         |      |
| 495 | 149 | t0 |   |               |               | 1.807 | 2 | 4.66 | 4.69 | 0.04    |      |
| 496 | 6   | t1 |   |               | 4.96          | 0.571 | 1 | 1.10 |      |         |      |
| 497 | 95  | t1 |   |               |               | 0.549 | 2 | 1.03 | 1.06 | 0.04    | 3.62 |
| 498 | 15  | t0 | 5 |               |               | 2.614 | 1 | 6.99 |      |         |      |
| 499 | 99  | t0 |   |               |               | 2.591 | 2 | 6.92 | 6.95 | 0.05    |      |
| 500 | 115 | t1 |   |               | 4.96          | 2.14  | 1 | 5.62 |      |         |      |
| 501 | 141 | t1 |   |               |               | 2.027 | 2 | 5.23 | 5.46 | 0.23    | 1.50 |
| 502 | 8   | t0 | 1 |               | 5/14/00 9:15  | 1.227 | 1 | 2.69 |      |         |      |
| 503 | 11  | t0 |   |               |               | 1.260 | 2 | 3.08 | 3.04 | 0.07    |      |
| 504 | 19  | t1 |   | 5/14/00 8:57  | 5/19/00 9:15  | 0.269 | 1 | 0.23 |      |         |      |
| 505 | 116 | t1 |   |               |               | NA    | 2 |      | 0.23 | #DIV/0! | 2.81 |
| 506 | 149 | t0 | 2 |               |               | 0.722 | 1 | 1.53 |      |         |      |
| 507 | 144 | t0 |   |               |               | 0.774 | 2 | 1.68 | 1.61 | 0.11    |      |
| 508 | 21  | t1 |   |               |               | 0.013 | 1 | 0.00 |      |         |      |
| 509 | 97  | t1 |   |               | 5.01          | 0.117 | 2 | 0.00 | 0.00 | 0.00    | 1.61 |
| 510 | 80  | t0 | 3 |               |               | 1.052 | 1 | 2.48 |      |         |      |
| 511 | 36  | t0 |   |               |               | 1.050 | 2 | 2.48 | 2.48 | 0.00    |      |
| 512 | 99  | t1 |   |               | 5.01          | 0.065 | 1 | 0.00 |      |         |      |
| 513 | 15  | t1 |   |               |               | 0.015 | 2 | 0.00 | 0.00 | 0.00    | 2.48 |
| 514 | 28  | t0 | 4 |               |               | 1.634 | 1 | 4.16 |      |         |      |
| 515 | 140 | t0 |   |               |               | 1.719 | 2 | 4.41 | 4.28 | 0.17    |      |
| 516 | 32  | t1 |   |               | 5.01          | 0.688 | 1 | 1.43 |      |         |      |
| 517 | 38  | t1 |   |               |               | 0.695 | 2 | 1.45 | 1.44 | 0.01    | 2.84 |
| 518 | 120 | t0 | 5 |               |               | 2.318 | 1 | 6.13 |      |         |      |
| 519 | 130 | t0 |   |               |               | 2.419 | 2 | 6.42 | 6.28 | 0.21    |      |
| 520 | 7   | t1 |   |               | 5.01          | 1.456 | 1 | 3.65 |      |         |      |
| 521 | 27  | t1 |   |               |               | 1.482 | 2 | 3.72 | 3.69 | 0.05    | 2.59 |
| 522 | 105 | t0 | 1 |               | 5/14/00 13:00 | 1.999 | 1 | 5.21 |      |         |      |
| 523 | 54  | t0 |   |               |               | 1.809 | 2 | 4.67 | 4.94 | 0.39    |      |
| 524 | 75  | t1 |   | 5/14/00 12:47 | 5/19/00 13:05 | 0.269 | 1 | 0.23 |      |         |      |
| 525 | 148 | t1 |   |               |               | 0.014 | 2 | 0.00 | 0.11 | 0.16    | 4.83 |
| 526 | 59  | t0 | 2 |               |               | 0.679 | 1 | 1.41 |      |         |      |
| 527 | 63  | t0 |   |               |               | 0.698 | 2 | 1.45 | 1.44 | 0.04    |      |

|     |     |    |               |       |   |      |      |      |      |  |  |  |
|-----|-----|----|---------------|-------|---|------|------|------|------|--|--|--|
| 528 | 110 | t1 | 5.01          | 0.016 | 1 | 0.00 |      |      |      |  |  |  |
| 529 | 119 | t1 |               | 0.015 | 2 | 0.00 | 0.00 | 0.00 | 1.44 |  |  |  |
| 530 | 58  | t0 |               | 0.991 | 1 | 2.31 |      |      |      |  |  |  |
| 531 | 65  | t0 |               | 1.092 | 2 | 2.60 | 2.45 | 0.21 |      |  |  |  |
| 532 | 142 | t1 | 5.01          | 0.117 | 1 | 0.00 |      |      |      |  |  |  |
| 533 | 138 | t1 |               | 0.035 | 2 | 0.00 | 0.00 | 0.00 | 2.45 |  |  |  |
| 534 | 89  | t0 |               | 1.411 | 1 | 3.52 |      |      |      |  |  |  |
| 535 | 143 | t0 |               | 1.31  | 2 | 3.23 | 3.23 |      |      |  |  |  |
| 536 | 122 | t1 | 5.01          | 0.015 | 1 | 0.00 |      |      |      |  |  |  |
| 537 | 26  | t1 |               | 0.058 | 2 | 0.00 | 0.00 | 0.00 | 3.23 |  |  |  |
| 538 | 43  | t0 |               | 2.006 | 1 | 5.23 |      |      |      |  |  |  |
| 539 | 14  | t0 |               | 2.189 | 2 | 5.76 | 5.76 |      |      |  |  |  |
| 540 | 70  | t1 | 5.01          | 1.098 | 1 | 2.62 |      |      |      |  |  |  |
| 541 | 106 | t1 |               | 1.105 | 2 | 2.64 | 2.63 | 0.01 | 3.14 |  |  |  |
| 542 | 57  | t0 | 5/14/00 17:00 | 2.261 | 1 | 5.97 |      |      |      |  |  |  |
| 543 | 152 | t0 |               | 2.313 | 2 | 6.12 | 6.04 | 0.11 |      |  |  |  |
| 544 | 151 | t1 | 5/14/00 16:50 | 0.269 | 1 | 0.23 |      |      |      |  |  |  |
| 545 | 88  | t1 |               | 0.022 | 2 | 0.00 | 0.11 | 0.16 | 5.93 |  |  |  |
| 546 | 60  | t0 |               | 0.33  | 1 | 0.40 |      |      |      |  |  |  |
| 547 | 87  | t0 |               | 1.268 | 2 | 3.11 | 1.75 | 1.91 |      |  |  |  |
| 548 | 107 | t1 | 5.01          | 0.022 | 1 | 0.00 |      |      |      |  |  |  |
| 549 | 16  | t1 |               | 0.012 | 2 | 0.00 | 0.00 | 0.00 | 1.75 |  |  |  |
| 550 | 113 | t0 |               | 1.811 | 1 | 4.67 | 4.75 | 0.11 |      |  |  |  |
| 551 | 126 | t0 |               | 1.863 | 2 | 4.82 |      |      |      |  |  |  |
| 552 | 51  | t1 | 5.01          | 0.269 | 1 | 0.23 |      |      |      |  |  |  |
| 553 | 94  | t1 |               | 0.015 | 2 | 0.00 | 0.11 | 0.16 | 4.63 |  |  |  |
| 554 | 93  | t0 |               | 2.116 | 1 | 5.55 |      |      |      |  |  |  |
| 555 | 67  | t0 |               | 2.253 | 2 | 5.95 | 5.75 | 0.28 |      |  |  |  |
| 556 | 61  | t1 | 5.01          | 0.692 | 1 | 1.45 |      |      |      |  |  |  |
| 557 | 85  | t1 |               | 0.597 | 2 | 1.17 | 1.31 | 0.19 | 4.44 |  |  |  |
| 558 | 1   | t0 |               | 3.101 | 1 | 8.39 |      |      |      |  |  |  |
| 559 | 40  | t0 |               | 3.063 | 2 | 8.28 | 8.34 | 0.08 |      |  |  |  |
| 560 | 52  | t1 | 5.01          | 1.455 | 1 | 3.65 |      |      |      |  |  |  |
| 561 | 24  | t1 |               | 1.467 | 2 | 3.68 | 3.66 | 0.02 | 4.67 |  |  |  |
| 562 | 118 | t0 | 5/14/00 21:00 | 1.972 | 1 | 5.14 |      |      |      |  |  |  |



|     |     |   |    |  |              |       |   |      |      |      |      |  |
|-----|-----|---|----|--|--------------|-------|---|------|------|------|------|--|
| 598 | 11  | 5 | t0 |  |              | 2.332 | 1 | 6.17 |      |      |      |  |
| 599 | 8   |   | t0 |  |              | 2.477 | 2 | 6.59 | 6.38 | 0.30 |      |  |
| 600 | 144 |   | t1 |  |              | 1.126 | 1 | 2.70 |      |      |      |  |
| 601 | 149 |   | t1 |  |              | 1.097 | 2 | 2.61 | 2.65 | 0.06 | 3.73 |  |
| 602 | 109 | 1 | t0 |  | 5/15/00 4:30 | 1.611 | 1 | 4.09 |      |      |      |  |
| 603 | 137 |   | t0 |  |              | 1.580 | 2 | 4.01 | 4.05 | 0.06 |      |  |
| 604 | 34  |   | t1 |  |              | 0.119 | 1 | 0.00 |      |      |      |  |
| 605 | 25  |   | t1 |  | 5/15/00 4:20 | 0.269 | 2 | 0.23 | 0.11 | 0.16 | 3.94 |  |
| 606 | 125 | 2 | t0 |  |              | 0.759 | 1 | 1.64 |      |      |      |  |
| 607 | 49  |   | t0 |  |              | 0.753 | 2 | 1.62 | 1.63 | 0.01 |      |  |
| 608 | 73  |   | t1 |  |              | 0.025 | 1 | 0.00 |      |      |      |  |
| 609 | 69  |   | t1 |  |              | 0.009 | 2 | 0.00 | 0.00 | 0.00 | 1.63 |  |
| 610 | 140 | 3 | t0 |  |              | 1.002 | 1 | 2.34 |      |      |      |  |
| 611 | 130 |   | t0 |  |              | 1.013 | 2 | 2.37 | 2.35 | 0.02 |      |  |
| 612 | 11  |   | t1 |  |              | 0.079 | 1 | 0.00 |      |      |      |  |
| 613 | 8   |   | t1 |  |              | 0.043 | 2 | 0.00 | 0.00 | 0.00 | 2.35 |  |
| 614 | 28  | 4 | t0 |  |              | 1.574 | 1 | 3.99 |      |      |      |  |
| 615 | 120 |   | t0 |  |              | 1.549 | 2 | 3.92 | 3.95 | 0.05 |      |  |
| 616 | 143 |   | t1 |  |              | 0.219 | 1 | 0.08 |      |      |      |  |
| 617 | 105 |   | t1 |  |              | 0.228 | 2 | 0.11 | 0.09 | 0.02 | 3.86 |  |
| 618 | 89  | 5 | t0 |  |              | 2.13  | 1 | 5.59 |      |      |      |  |
| 619 | 65  |   | t0 |  |              | 2.153 | 2 | 5.66 | 5.62 | 0.05 |      |  |
| 620 | 58  |   | t1 |  |              | 0.927 | 1 | 2.12 |      |      |      |  |
| 621 | 54  |   | t1 |  |              | 0.921 | 2 | 2.11 | 2.11 | 0.01 | 3.51 |  |
| 622 | 137 | 1 | t0 |  | 5/15/00 9:00 | 1.188 | 1 | 2.88 |      |      |      |  |
| 623 | 109 |   | t0 |  |              | 1.231 | 2 | 3.00 | 2.94 | 0.09 |      |  |
| 624 | 125 |   | t1 |  |              | 0.269 | 1 | 0.23 |      |      |      |  |
| 625 | 49  |   | t1 |  |              | 0.016 | 2 | 0.00 | 0.11 | 0.16 | 2.82 |  |
| 626 | 57  | ? | t0 |  |              | 0.804 | 1 | 1.77 |      |      |      |  |
| 627 | 126 |   | t0 |  |              | 0.769 | 2 | 1.67 | 1.72 | 0.07 |      |  |
| 628 | 93  |   | t1 |  |              | 0.01  | 1 | 0.00 |      |      |      |  |
| 629 | 152 |   | t1 |  |              | 0.066 | 2 | 0.00 | 0.00 | 0.00 | 1.72 |  |
| 630 | 140 | 3 | t0 |  |              | 1.416 | 1 | 3.53 |      |      |      |  |
| 631 | 130 |   | t0 |  |              | 1.370 | 2 | 3.40 | 3.47 | 0.09 |      |  |
| 632 | 63  |   | t1 |  |              | 0.293 | 1 | 0.29 |      |      |      |  |

|     |     |    |   |               |               |       |   |      |      |      |      |
|-----|-----|----|---|---------------|---------------|-------|---|------|------|------|------|
| 633 | 14  | t1 |   |               |               | 0.188 | 2 | 0.00 | 0.15 | 0.21 | 3.32 |
| 634 | 65  | t0 | 4 |               |               | 1.801 | 1 | 4.04 |      |      |      |
| 635 | 89  | t0 |   |               |               | 1.807 | 2 | 4.66 | 4.65 | 0.01 |      |
| 636 | 59  | t1 |   |               |               | 0.82  | 1 | 1.81 |      |      |      |
| 637 | 113 | t1 |   |               |               | 0.787 | 2 | 1.72 | 1.77 | 0.07 | 2.88 |
| 638 | 43  | t0 | 5 |               |               | 2.137 | 1 | 5.61 |      |      |      |
| 639 | 31  | t0 |   |               |               | 2.112 | 2 | 5.54 | 5.58 | 0.05 |      |
| 640 | 28  | t1 |   |               |               | 1.111 | 1 | 2.65 |      |      |      |
| 641 | 120 | t1 |   |               |               | 0.021 | 2 | 0.00 | 1.33 | 1.88 | 4.25 |
| 642 | 71  | t0 | 1 |               | 5/15/00 12:50 | 1.599 | 1 | 4.03 |      |      |      |
| 643 | 139 | t0 |   |               |               | 1.630 | 2 | 4.15 | 4.10 | 0.06 |      |
| 644 | 66  | t1 |   | 5/15/00 12:37 | 5/20/00 12:15 | 0.025 | 1 | 0.00 |      |      |      |
| 645 | 96  | t1 |   |               |               | 0.018 | 2 | 0.00 | 0.00 | 0.00 | 4.10 |
| 646 | 29  | t0 | 2 |               |               | 1.011 | 1 | 2.36 |      |      |      |
| 647 | 157 | t0 |   |               |               | 1.092 | 2 | 2.60 | 2.48 | 0.17 |      |
| 648 | 91  | t1 |   |               |               | 0.012 | 1 | 0.00 |      |      |      |
| 649 | 42  | t1 |   |               |               | 0.012 | 2 | 0.00 | 0.00 | 0.00 | 2.48 |
| 650 | 50  | t0 | 3 |               |               | 1.019 | 1 | 2.39 |      |      |      |
| 651 | 74  | t0 |   |               |               | 1.013 | 2 | 2.37 | 2.38 | 0.01 |      |
| 652 | 2   | t1 |   |               |               | 0.061 | 1 | 0.00 |      |      |      |
| 653 | 78  | t1 |   |               |               | 0.018 | 2 | 0.00 | 0.00 | 0.00 | 2.38 |
| 654 | 127 | t0 | 4 |               |               | 1.638 | 1 | 4.17 |      |      |      |
| 655 | 9   | t0 |   |               |               | 1.642 | 2 | 4.18 | 4.18 | 0.01 |      |
| 656 | 76  | t1 |   |               |               | 0.269 | 1 | 0.23 |      |      |      |
| 657 | 87  | t1 |   |               |               | 0.376 | 2 | 0.53 | 0.38 | 0.22 | 3.80 |
| 658 | 135 | t0 | 5 |               |               | 2.338 | 1 | 6.19 |      |      |      |
| 659 | 22  | t0 |   |               |               | 2.359 | 2 | 6.35 | 6.22 | 0.04 |      |
| 660 | 92  | t1 |   |               |               | 1.378 | 1 | 3.42 |      |      |      |
| 661 | 155 | t1 |   |               |               | 1.287 | 2 | 3.16 | 3.29 | 0.19 | 2.93 |
| 662 | 146 | t0 | 1 |               | 5/15/00 16:55 | 2.963 | 1 | 7.00 |      |      |      |
| 663 | 29  | t0 |   |               |               | 3.000 | 2 | 8.10 | 8.05 | 0.08 |      |
| 664 | 139 | t1 |   | 5/15/00 16:50 | 5/20/00 17:30 | 0.855 | 1 | 1.92 |      |      |      |
| 665 | 71  | t1 |   |               |               | 0.767 | 2 | 1.66 | 1.79 | 0.18 | 6.26 |
| 666 | 158 | t0 | 2 |               |               | 1.493 | 1 | 3.75 |      |      |      |
| 667 | 132 | t0 |   |               |               | 1.416 | 2 | 3.53 | 3.64 | 0.16 |      |

|     |     |    |   |               |       |   |      |      |         |      |  |
|-----|-----|----|---|---------------|-------|---|------|------|---------|------|--|
| 668 | 90  | t1 |   | 5.03          | 0.19  | 1 | 0.00 |      |         |      |  |
| 669 | 104 | t1 |   |               | 0.637 | 2 | 1.29 | 0.64 | 0.91    | 3.00 |  |
| 670 | 134 | t0 | 3 |               | 1.361 | 1 | 3.37 |      |         |      |  |
| 671 | 102 | t0 |   |               | 1.409 | 2 | 3.51 | 3.44 | 0.10    |      |  |
| 672 | 30  | t1 |   | 5.03          | 0.269 | 1 | 0.23 |      |         |      |  |
| 673 | 117 | t1 |   |               | 0.531 | 2 | 0.98 | 0.60 | 0.53    | 2.84 |  |
| 674 | 47  | t0 | 4 |               | 1.365 | 1 | 3.39 |      |         |      |  |
| 675 | 72  | t0 |   |               | 1.866 | 2 | 4.83 | 4.11 | 1.02    |      |  |
| 676 | 101 | t1 |   | 5.03          | 0.578 | 1 | 1.12 |      |         |      |  |
| 677 | 20  | t1 |   |               | 0.866 | 2 | 1.95 | 1.53 | 0.59    | 2.58 |  |
| 678 | 3   | t0 | 5 |               | 3.35  | 1 | 9.11 |      |         |      |  |
| 679 | 41  | t0 |   |               | 3.242 | 2 | 8.80 | 8.95 | 0.22    |      |  |
| 680 | 123 | t1 |   | 5.03          | 2.145 | 1 | 5.63 |      |         |      |  |
| 681 | 136 | t1 |   |               | 2.767 | 2 | 7.43 | 6.53 | 1.27    | 2.42 |  |
| 682 | 89  | t0 | 1 | 5/15/00 21:38 | 1.820 | 1 | 4.70 |      |         |      |  |
| 683 | 43  | t0 |   |               | 1.912 | 2 | 4.96 | 4.83 | 0.19    |      |  |
| 684 | 65  | t1 |   | 5/15/00 21:30 | 0.269 | 1 | 0.23 |      |         |      |  |
| 685 | 126 | t1 |   | 5/20/00 22:30 | 0.486 | 2 | 0.85 | 0.54 | 0.44    | 4.29 |  |
| 686 | 9   | t0 | 2 |               | 1.174 | 1 | 2.83 |      |         |      |  |
| 687 | 135 | t0 |   |               | 1.194 | 2 | 2.89 | 2.86 | 0.04    |      |  |
| 688 | 127 | t1 |   |               | 0.269 | 1 | 0.23 |      |         |      |  |
| 689 | 140 | t1 |   |               | NA    | 2 |      | 0.23 | #DIV/0! | 2.64 |  |
| 690 | 57  | t0 | 3 |               | 1.670 | 1 | 4.26 |      |         |      |  |
| 691 | 60  | t0 |   |               | 1.705 | 2 | 4.37 | 4.32 | 0.07    |      |  |
| 692 | 82  | t1 |   | 5.04          | 0.523 | 1 | 0.96 |      |         |      |  |
| 693 | 40  | t1 |   |               | 0.463 | 2 | 0.78 | 0.87 | 0.12    | 3.44 |  |
| 694 | 109 | t0 | 4 |               | 2.321 | 1 | 6.14 |      |         |      |  |
| 695 | 67  | t0 |   |               | 2.267 | 2 | 5.99 | 6.06 | 0.11    |      |  |
| 696 | 1   | t1 |   | 5.04          | NA    | 1 |      |      |         |      |  |
| 697 | 137 | t1 |   |               | 1.012 | 2 | 2.37 | 2.37 | #DIV/0! | 3.70 |  |
| 698 | 50  | t0 | 5 |               | 2.272 | 1 | 6.00 |      |         |      |  |
| 699 | 157 | t0 |   |               | 2.232 | 2 | 5.89 | 5.94 | 0.08    |      |  |
| 700 | 74  | t1 |   | 5.04          | 1.785 | 1 | 4.60 |      |         |      |  |
| 701 | 130 | t1 |   |               | 1.244 | 2 | 3.04 | 3.82 | 1.10    | 2.13 |  |

# Standards and Blanks

## Dissolved Oxygen Standards and Blanks

WWMS Event 3

Biological Oxygen Demand

Date of Standardization

5/16/00

| Standard |                       | Blank   |                           |                           |              |
|----------|-----------------------|---------|---------------------------|---------------------------|--------------|
|          | <u>Tit. Vol. (ml)</u> |         | <u>1st Tit. Vol. (ml)</u> | <u>2nd Tit. Vol. (ml)</u> | <u>Blank</u> |
| Rep 1    | 8.281                 | Rep 1   | 2.133                     | 1.963                     | 0.17         |
| Rep 2    | 8.338                 | Rep 2   | 2.294                     | 2.095                     | 0.199        |
| Rep 3    | 8.182                 | Rep 3   | 2.284                     | 2.099                     | 0.185        |
| Average  | 8.267                 | Average |                           |                           | 0.185        |
| Std Dev  | 0.079                 | Std Dev |                           |                           | 0.015        |
| % Error  | 0.95%                 | % Error |                           |                           | 7.86%        |

### Standard Factorization

Stand Vol. (ml)

2

Approx Titrant Conc.

0.014

Stand Factor

2

Titrant Vol (STD)

4.134

\*Equation Volume is the actual volume factored to what it would be if 10mls of the standard (0.01M KIO<sub>3</sub>) were titrated with an approximate 0.14M titrant\*

Date of Standardization

5/14/00

# Total Seston Sample Data Sheet

Sample Date: 5/15/00-

Cruise: Anacstia Wet Weather

Analysis Date: 5/20/00

| SAMPLE_ID | REP | STATION     | TIME          | VOL. | PREFILTER<br>WT (g) | POST FILTER_W<br>103-105°C (g) | SESTON<br>(g) | CONC.<br>(mg/L) | Ave.<br>SS Conc. | sd<br>SS Conc. | POST FILTER WT<br>550°C | Uncorrected<br>VSS BLANK | Corrected<br>VSS BLANK | VSS<br>CONC. | Ave.<br>VSS | sd<br>VSS |
|-----------|-----|-------------|---------------|------|---------------------|--------------------------------|---------------|-----------------|------------------|----------------|-------------------------|--------------------------|------------------------|--------------|-------------|-----------|
| EB 31     | 1   | field blank | 5/15/00 4:34  | 190  | 0.1292              | 0.1299                         | 0.0007        | 3.6842          |                  |                | 0.1277                  | 0.0022                   | 0.0007                 | 3.68         | 3.231       | 0.6409    |
| FB 31     | 1   | field blank | 5/15/00 4:34  | 180  | 0.1286              | 0.1291                         | 0.0005        | 2.7778          |                  |                | 0.1271                  | 0.0020                   | 0.0005                 | 2.78         | 3.9603      | 1.6724    |
| FB 32     | 1   | field blank | 5/15/00 16:40 | 175  | 0.1233              | 0.1246                         | 0.0013        | 7.4286          |                  |                | 0.1222                  | 0.0024                   | 0.0009                 | 5.14         | 8.6117      | 4.9057    |
| FB 33     | 1   | field blank | 5/16/00 4:05  | 149  | 0.1251              | 0.1268                         | 0.0017        | 11.4094         |                  |                | 0.1235                  | 0.0033                   | 0.0018                 | 12.08        | 8.326       | 5.3097    |
| FB 34     | 1   | Eqp blank   | 5/16/00 15:20 | 175  | 0.1229              | 0.1235                         | 0.0006        | 3.4286          |                  |                | 0.1212                  | 0.0023                   | 0.0008                 | 4.57         | 7.0476      | 3.5019    |
| SS 300    | 1   | 1           | 5/14/00 23:53 | 210  | 0.1260              | 0.1306                         | 0.0046        | 21.9048         | 23.2780          | 1.9420         | 0.1271                  | 0.0035                   | 0.0020                 | 9.52         | 7.55        | 2.7877    |
| SS 301    | 2   | 1           | 5/14/00 23:53 | 215  | 0.1250              | 0.1303                         | 0.0053        | 24.6512         |                  |                | 0.1276                  | 0.0027                   | 0.0012                 | 5.58         |             |           |
| SS 302    | 1   | 2           | 5/15/00 0:08  | 220  | 0.1285              | 0.1321                         | 0.0036        | 16.3636         | 16.9425          | 0.8186         | 0.1293                  | 0.0028                   | 0.0013                 | 5.91         | 5.52        | 0.5522    |
| SS 303    | 2   | 2           | 5/15/00 0:08  | 234  | 0.1250              | 0.1291                         | 0.0041        | 17.5214         |                  |                | 0.1264                  | 0.0027                   | 0.0012                 | 5.13         |             |           |
| SS 304    | 1   | 3           | 5/15/00 0:19  | 207  | 0.1249              | 0.1295                         | 0.0046        | 22.2222         | 21.8533          | 0.5217         | 0.1268                  | 0.0027                   | 0.0012                 | 5.80         | 6.41        | 0.8727    |
| SS 305    | 2   | 3           | 5/15/00 0:19  | 256  | 0.1257              | 0.1312                         | 0.0055        | 21.4844         |                  |                | 0.1279                  | 0.0033                   | 0.0018                 | 7.03         |             |           |
| SS 306    | 1   | 4           | 5/15/00 0:39  | 205  | 0.1248              | 0.1302                         | 0.0054        | 26.3415         | 26.1241          | 0.3074         | 0.1271                  | 0.0031                   | 0.0016                 | 7.80         | 6.75        | 1.4887    |
| SS 307    | 2   | 4           | 5/15/00 0:39  | 193  | 0.1247              | 0.1297                         | 0.0050        | 25.9067         |                  |                | 0.1271                  | 0.0026                   | 0.0011                 | 5.70         |             |           |
| SS 308    | 1   | 5           | 5/15/00 0:49  | 214  | 0.1248              | 0.1288                         | 0.0040        | 18.6916         | 17.6005          | 1.5430         | 0.1269                  | 0.0019                   | 0.0004                 | 1.87         | 3.53        | 2.3473    |
| SS 309    | 2   | 5           | 5/18/00 0:49  | 212  | 0.1249              | 0.1284                         | 0.0035        | 16.5094         |                  |                | 0.1258                  | 0.0026                   | 0.0011                 | 5.19         |             |           |
| SS 310    | 1   | 1           | 5/18/00 3:43  | 205  | 0.1243              | 0.1306                         | 0.0063        | 30.7317         | 29.1679          | 2.2115         | 0.1277                  | 0.0029                   | 0.0014                 | 6.83         | 6.02        | 1.1462    |
| SS 311    | 2   | 1           | 5/18/00 3:43  | 192  | 0.1248              | 0.1301                         | 0.0053        | 27.6042         |                  |                | 0.1276                  | 0.0025                   | 0.0010                 | 5.21         |             |           |
| SS 312    | 1   | 2           | 5/18/00 3:56  | 207  | 0.1249              | 0.1304                         | 0.0055        | 26.5700         | 23.8378          | 3.8640         | 0.1272                  | 0.0032                   | 0.0017                 | 8.21         | 6.12        | 2.9645    |
| SS 313    | 2   | 2           | 5/18/00 3:56  | 199  | 0.1256              | 0.1298                         | 0.0042        | 21.1055         |                  |                | 0.1275                  | 0.0023                   | 0.0008                 | 4.02         |             |           |
| SS 314    | 1   | 3           | 5/18/00 4:08  | 220  | 0.1271              | 0.1331                         | 0.0060        | 27.2727         | 26.5550          | 1.0150         | 0.1301                  | 0.0030                   | 0.0015                 | 6.82         | 6.76        | 0.0846    |
| SS 315    | 2   | 3           | 5/18/00 4:08  | 209  | 0.1236              | 0.1290                         | 0.0054        | 25.8373         |                  |                | 0.1261                  | 0.0029                   | 0.0014                 | 6.70         |             |           |
| SS 316    | 1   | 4           | 5/18/00 4:23  | 220  | 0.1278              | 0.1321                         | 0.0043        | 19.5455         | 20.2489          | 0.9948         | 0.1295                  | 0.0026                   | 0.0011                 | 5.00         | 5.60        | 0.8418    |
| SS 317    | 2   | 4           | 5/18/00 4:23  | 210  | 0.1250              | 0.1294                         | 0.0044        | 20.9524         |                  |                | 0.1266                  | 0.0028                   | 0.0013                 | 6.19         |             |           |
| SS 318    | 1   | 5           | 5/18/00 4:34  | 211  | 0.1250              | 0.1270                         | 0.0020        | 9.4787          | 10.3491          | 1.2310         | 0.1249                  | 0.0021                   | 0.0006                 | 2.84         | 4.10        | 1.7835    |
| SS 319    | 2   | 5           | 5/18/00 4:34  | 205  | 0.1248              | 0.1271                         | 0.0023        | 11.2195         |                  |                | 0.1245                  | 0.0026                   | 0.0011                 | 5.37         |             |           |
| SS 320    | 1   | 1           | 5/15/00 7:50  | 220  | 0.1288              | 0.1329                         | 0.0041        | 18.6364         | 18.0626          | 0.8115         | 0.1302                  | 0.0027                   | 0.0012                 | 5.45         | 5.64        | 0.2652    |
| SS 321    | 2   | 1           | 5/15/00 7:50  | 223  | 0.1274              | 0.1313                         | 0.0039        | 17.4888         |                  |                | 0.1285                  | 0.0028                   | 0.0013                 | 5.83         |             |           |
| SS 322    | 1   | 2           | 5/15/00 8:01  | 185  | 0.1265              | 0.1290                         | 0.0025        | 13.5135         | 13.8590          | 0.4886         | 0.1267                  | 0.0023                   | 0.0008                 | 4.32         | 4.72        | 0.5581    |
| SS 323    | 2   | 2           | 5/15/00 8:01  | 176  | 0.1278              | 0.1303                         | 0.0025        | 14.2045         |                  |                | 0.1279                  | 0.0024                   | 0.0009                 | 5.11         |             |           |
| SS 324    | 1   | 3           | 5/15/00 8:11  | 205  | 0.1285              | 0.1334                         | 0.0049        | 23.9024         | 23.5791          | 0.4572         | 0.1304                  | 0.0030                   | 0.0015                 | 7.32         | 5.98        | 1.8851    |
| SS 325    | 2   | 3           | 5/15/00 8:11  | 215  | 0.1283              | 0.1333                         | 0.0050        | 23.2558         |                  |                | 0.1308                  | 0.0025                   | 0.0010                 | 4.65         |             |           |
| SS 326    | 1   | 4           | 5/15/00 8:34  | 230  | 0.1293              | 0.1340                         | 0.0047        | 46.9565         | 46.0973          | 1.2151         | 0.1208                  | 0.0132                   | 0.0117                 | 50.87        | 28.77       | 31.2562   |

|        |   |   |               |     |        |        |        |         |         |         |  |        |        |         |         |               |
|--------|---|---|---------------|-----|--------|--------|--------|---------|---------|---------|--|--------|--------|---------|---------|---------------|
| SS 327 | 2 | 4 | 5/15/00 8:34  | 210 | 0.1282 | 0.1343 | 0.0061 | 45.2381 |         |         |  | 0.1314 | 0.0029 | 0.0014  | 6.67    |               |
| SS 328 | 1 | 5 | 5/15/00 8:40  | 200 | 0.1248 | 0.1282 | 0.0034 | 17.0000 | 15.5093 | 2.1081  |  | 0.1255 | 0.0027 | 0.0012  | 6.00    | 4.6355 1.9297 |
| SS 329 | 2 | 5 | 5/15/00 8:40  | 214 | 0.1245 | 0.1275 | 0.0030 | 14.0187 |         |         |  | 0.1253 | 0.0022 | 0.0007  | 3.27    |               |
| SS 330 | 1 | 1 | 5/15/00 11:36 | 233 | 0.1235 | 0.1283 | 0.0048 | 20.6009 | 20.7171 | 0.1644  |  | 0.1252 | 0.0031 | 0.0016  | 6.87    | 0.1416        |
| SS 331 | 2 | 1 | 5/15/00 11:36 | 240 | 0.1238 | 0.1288 | 0.0050 | 20.8333 |         |         |  | 0.1257 | 0.0031 | 0.0016  | 6.67    |               |
| SS 332 | 1 | 2 | 5/15/00 11:54 | 258 | 0.1241 | 0.1278 | 0.0037 | 14.3411 | 15.3564 | 1.4358  |  | 0.1251 | 0.0027 | 0.0012  | 4.65    | 5.64 1.4043   |
| SS 333 | 2 | 2 | 5/15/00 11:54 | 226 | 0.1249 | 0.1286 | 0.0037 | 16.3717 |         |         |  | 0.1256 | 0.0030 | 0.0015  | 6.64    |               |
| SS 334 | 1 | 3 | 5/15/00 13:06 | 224 | 0.1240 | 0.1275 | 0.0035 | 15.6250 | 15.9758 | 0.4961  |  | 0.1244 | 0.0031 | 0.0016  | 7.14    | 6.22 1.2988   |
| SS 335 | 2 | 3 | 5/15/00 13:06 | 245 | 0.1254 | 0.1294 | 0.0040 | 16.3265 |         |         |  | 0.1266 | 0.0028 | 0.0013  | 5.31    |               |
| SS 336 | 1 | 4 | 5/15/00 13:25 | 209 | 0.1257 | 0.1296 | 0.0039 | 18.6603 | 19.1079 | 0.6331  |  | 0.1266 | 0.0030 | 0.0015  | 7.18    | 7.14 0.0466   |
| SS 337 | 2 | 4 | 5/15/00 13:25 | 225 | 0.1248 | 0.1292 | 0.0044 | 19.5556 |         |         |  | 0.1261 | 0.0031 | 0.0016  | 7.11    |               |
| SS 338 | 1 | 5 | 5/15/00 13:33 | 237 | 0.1261 | 0.1306 | 0.0045 | 18.9873 | 21.1165 | 3.0111  |  | 0.1277 | 0.0029 | 0.0014  | 5.91    | 5.59 0.4554   |
| SS 339 | 2 | 5 | 5/15/00 13:33 | 228 | 0.1251 | 0.1304 | 0.0053 | 23.2456 |         |         |  | 0.1277 | 0.0027 | 0.0012  | 5.26    |               |
| SS 340 | 1 | 1 | 5/15/00 15:52 | 212 | 0.1239 | 0.1286 | 0.0047 | 22.1698 | 21.5872 | 0.8240  |  | 0.1253 | 0.0033 | 0.0018  | 8.49    | 8.13 0.5148   |
| SS 341 | 2 | 1 | 5/15/00 15:52 | 219 | 0.1224 | 0.1270 | 0.0046 | 21.0046 |         |         |  | 0.1238 | 0.0032 | 0.0017  | 7.76    |               |
| SS 342 | 1 | 2 | 5/15/00 16:02 | 207 | 0.1233 | 0.1283 | 0.0050 | 24.1546 | 25.7358 | 2.2362  |  | 0.1254 | 0.0029 | 0.0014  | 6.76    | 6.31 0.6432   |
| SS 343 | 2 | 2 | 5/15/00 16:02 | 205 | 0.1240 | 0.1296 | 0.0056 | 27.3171 |         |         |  | 0.1289 | 0.0027 | 0.0012  | 5.85    |               |
| SS 344 | 1 | 3 | 5/15/00 16:12 | 180 | 0.1243 | 0.1315 | 0.0072 | 40.0000 | 39.2500 | 1.0607  |  | 0.1277 | 0.0038 | 0.0023  | 12.78   | 11.64 1.6106  |
| SS 345 | 2 | 3 | 5/15/00 16:12 | 200 | 0.1230 | 0.1307 | 0.0077 | 38.5000 |         |         |  | 0.1271 | 0.0036 | 0.0021  | 10.50   |               |
| SS 346 | 1 | 4 | 5/15/00 16:28 | 197 | 0.1262 | 0.1312 | 0.0050 | 25.3807 | 25.6904 | 0.4379  |  | 0.1279 | 0.0033 | 0.0018  | 9.14    | 8.82 0.4505   |
| SS 347 | 2 | 4 | 5/15/00 16:28 | 200 | 0.1249 | 0.1301 | 0.0052 | 26.0000 |         |         |  | 0.1269 | 0.0032 | 0.0017  | 8.50    |               |
| SS 348 | 1 | 5 | 5/15/00 16:40 | 190 | 0.1229 | 0.1255 | 0.0026 | 13.6842 | 14.4776 | 1.1220  |  | 0.1231 | 0.0024 | 0.0009  | 4.74    | 5.08 0.4822   |
| SS 349 | 2 | 5 | 5/15/00 16:40 | 203 | 0.1243 | 0.1274 | 0.0031 | 15.2709 |         |         |  | 0.1248 | 0.0026 | 0.0011  | 5.42    |               |
| SS 350 | 1 | 1 | 5/15/00 19:43 | 208 | 0.1247 | 0.1286 | 0.0039 | 18.7600 | 18.1845 | 0.7997  |  | 0.1258 | 0.0028 | 0.0013  | 6.25    | 5.27 1.3890   |
| SS 351 | 2 | 1 | 5/15/00 19:43 | 210 | 0.1243 | 0.1280 | 0.0037 | 17.6190 |         |         |  | 0.1256 | 0.0024 | 0.0009  | 4.29    |               |
| SS 352 | 1 | 2 | 5/15/00 19:55 | 200 | 0.1249 | 0.1296 | 0.0047 | 23.5000 | 23.9722 | 0.6678  |  | 0.1268 | 0.0028 | 0.0013  | 6.50    | 5.47 1.4535   |
| SS 353 | 2 | 2 | 5/15/00 19:55 | 180 | 0.1240 | 0.1284 | 0.0044 | 24.4444 |         |         |  | 0.1261 | 0.0023 | 0.0008  | 4.44    |               |
| SS 354 | 1 | 3 | 5/15/00 20:05 | 203 | 0.1240 | 0.1317 | 0.0077 | 37.9310 | 39.3737 | 2.0402  |  | 0.1284 | 0.0033 | 0.0018  | 8.87    | 8.52 0.4976   |
| SS 355 | 2 | 3 | 5/15/00 20:05 | 196 | 0.1247 | 0.1327 | 0.0080 | 40.8163 |         |         |  | 0.1296 | 0.0031 | 0.0016  | 8.16    |               |
| SS 356 | 1 | 4 | 5/15/00 20:22 | 426 | 0.1251 | 0.1355 | 0.0104 | 24.4131 | 24.4131 | #DIV/0! |  | 0.1312 | 0.0043 | 0.0028  | 6.57    | 6.57 0.0000   |
| SS 357 | 2 | 4 | 5/15/00 20:22 |     |        |        | 0.0000 | #DIV/0! |         |         |  |        | 0.0000 | -0.0015 | #DIV/0! |               |
| SS 358 | 1 | 5 | 5/15/00 20:32 | 204 | 0.1243 | 0.1278 | 0.0035 | 17.1569 | 16.9943 | 0.2239  |  | 0.1252 | 0.0026 | 0.0011  | 5.39    | 3.93 2.0626   |
| SS 359 | 2 | 5 | 5/15/00 20:32 | 202 | 0.1228 | 0.1262 | 0.0034 | 16.8317 |         |         |  | 0.1242 | 0.0020 | 0.0005  | 2.48    |               |
| SS 360 | 1 | 1 | 5/15/00 23:34 | 217 | 0.1239 | 0.1311 | 0.0072 | 33.1797 | 28.7286 | 6.2949  |  | 0.1266 | 0.0045 | 0.0030  | 13.82   | 13.56 0.3748  |
| SS 361 | 2 | 1 | 5/15/00 23:34 | 173 | 0.1252 | 0.1294 | 0.0042 | 24.2775 |         |         |  | 0.1256 | 0.0038 | 0.0023  | 13.29   |               |
| SS 362 | 1 | 2 | 5/15/00 23:54 | 183 | 0.1245 | 0.1311 | 0.0066 | 36.0656 | 34.2416 | 2.5795  |  | 0.1267 | 0.0044 | 0.0029  | 15.85   | 13.42 3.4351  |
| SS 363 | 2 | 2 | 5/15/00 23:54 | 182 | 0.1261 | 0.1320 | 0.0059 | 32.4176 |         |         |  | 0.1285 | 0.0035 | 0.0020  | 10.99   |               |
| SS 364 | 1 | 3 | 5/16/00 0:08  | 202 | 0.1252 | 0.1308 | 0.0056 | 27.7228 | 21.4756 | 8.8348  |  | 0.1280 | 0.0028 | 0.0013  | 6.44    | 5.76 0.9613   |
| SS 365 | 2 | 3 | 5/16/00 0:08  | 197 | 0.1262 | 0.1292 | 0.0030 | 15.2284 |         |         |  | 0.1267 | 0.0025 | 0.0010  | 5.08    |               |

|         |   |   |               |     |        |        |        |         |         |        |        |        |        |       |      |        |
|---------|---|---|---------------|-----|--------|--------|--------|---------|---------|--------|--------|--------|--------|-------|------|--------|
| SS 366  | 1 | 4 | 5/16/00 0:17  | 195 | 0.1272 | 0.1335 | 0.0063 | 32.3077 | 32.6563 | 0.4930 | 0.1302 | 0.0033 | 0.0018 | 9.23  | 9.30 | 0.0911 |
| SS 367  | 2 | 4 | 5/16/00 0:17  | 203 | 0.1260 | 0.1327 | 0.0067 | 33.0049 |         |        | 0.1293 | 0.0034 | 0.0019 | 9.35  |      |        |
| SS 368  | 1 | 5 | 5/16/00 0:27  | 194 | 0.1250 | 0.1299 | 0.0049 | 25.2577 | 25.7868 | 0.7482 | 0.1265 | 0.0034 | 0.0019 | 9.79  | 9.11 | 0.9707 |
| SS 369  | 2 | 5 | 5/16/00 0:27  | 190 | 0.1264 | 0.1314 | 0.0050 | 26.3158 |         |        | 0.1283 | 0.0031 | 0.0016 | 8.42  |      |        |
| SS 370  | 1 | 1 | 5/16/00 3:25  | 160 | 0.1267 | 0.1298 | 0.0031 | 19.3750 | 18.8304 | 0.7702 | 0.1271 | 0.0027 | 0.0012 | 7.50  | 6.89 | 0.8586 |
| SS 371  | 2 | 1 | 5/16/00 3:25  | 175 | 0.1259 | 0.1291 | 0.0032 | 18.2857 |         |        | 0.1265 | 0.0026 | 0.0011 | 6.29  |      |        |
| SS 372  | 1 | 2 | 5/16/00 3:38  | 170 | 0.1258 | 0.1291 | 0.0033 | 19.4118 | 18.8725 | 0.7626 | 0.1262 | 0.0029 | 0.0014 | 8.24  | 5.23 | 4.2519 |
| SS 373  | 2 | 2 | 5/16/00 3:38  | 180 | 0.1250 | 0.1283 | 0.0033 | 18.3333 |         |        | 0.1261 | 0.0022 | 0.0004 | 2.22  |      |        |
| SS 374  | 1 | 3 | 5/16/00 3:48  | 190 | 0.1256 | 0.1299 | 0.0043 | 22.6316 | 23.2602 | 0.8891 | 0.1275 | 0.0024 | 0.0006 | 3.16  | 4.91 | 2.4811 |
| SS 375  | 2 | 3 | 5/16/00 3:48  | 180 | 0.1258 | 0.1301 | 0.0043 | 23.8889 |         |        | 0.1271 | 0.0030 | 0.0012 | 6.67  |      |        |
| SS 376  | 1 | 4 | 5/16/00 3:51  | 204 | 0.1259 | 0.1329 | 0.0070 | 34.3137 | 34.9404 | 0.8862 | 0.1298 | 0.0031 | 0.0013 | 6.37  | 7.05 | 0.9612 |
| SS 377  | 2 | 4 | 5/16/00 3:51  | 194 | 0.1254 | 0.1323 | 0.0069 | 35.5670 |         |        | 0.1290 | 0.0033 | 0.0015 | 7.73  |      |        |
| SS 378  | 1 | 5 | 5/16/00 4:05  | 174 | 0.1263 | 0.1303 | 0.0040 | 22.9885 | 21.0988 | 2.6725 | 0.1275 | 0.0028 | 0.0010 | 5.75  | 4.85 | 1.2674 |
| SS 379  | 2 | 5 | 5/16/00 4:05  | 177 | 0.1256 | 0.1290 | 0.0034 | 19.2090 |         |        | 0.1265 | 0.0025 | 0.0007 | 3.95  |      |        |
| SS 380  | 1 | 1 | 5/16/00 7:45  | 185 | 0.1253 | 0.1285 | 0.0032 | 17.2973 | 16.8709 | 0.6031 | 0.1264 | 0.0021 | 0.0003 | 1.62  | 2.14 | 0.7390 |
| SS 381  | 2 | 1 | 5/16/00 7:45  | 225 | 0.1249 | 0.1286 | 0.0037 | 16.4444 |         |        | 0.1262 | 0.0024 | 0.0006 | 2.67  |      |        |
| SS 382  | 1 | 2 | 5/16/00 8:00  | 185 | 0.1260 | 0.1295 | 0.0035 | 18.9189 | 17.7928 | 1.5926 | 0.1263 | 0.0032 | 0.0014 | 7.57  | 6.88 | 0.9738 |
| SS 383  | 2 | 2 | 5/16/00 8:00  | 210 | 0.1253 | 0.1288 | 0.0035 | 16.6667 |         |        | 0.1257 | 0.0031 | 0.0013 | 6.19  |      |        |
| SS 384  | 1 | 3 | 5/16/00 8:10  | 205 | 0.1258 | 0.1307 | 0.0049 | 23.9024 | 25.2846 | 1.9546 | 0.1283 | 0.0024 | 0.0006 | 2.93  | 4.56 | 2.3077 |
| SS 385  | 2 | 3 | 5/16/00 8:10  | 210 | 0.1255 | 0.1311 | 0.0056 | 26.6667 |         |        | 0.1280 | 0.0031 | 0.0013 | 6.19  |      |        |
| SS 386  | 1 | 4 | 5/16/00 8:29  | 215 | 0.1252 | 0.1314 | 0.0062 | 28.8372 | 26.8510 | 2.8089 | 0.1283 | 0.0031 | 0.0013 | 6.05  | 4.92 | 1.6000 |
| SS 387  | 2 | 4 | 5/16/00 8:29  | 185 | 0.1255 | 0.1301 | 0.0046 | 24.8649 |         |        | 0.1276 | 0.0025 | 0.0007 | 3.78  |      |        |
| SS 388  | 1 | 5 | 5/16/00 8:36  | 195 | 0.1255 | 0.1306 | 0.0051 | 26.1538 | 29.0769 | 4.1339 | 0.1268 | 0.0038 | 0.0020 | 10.26 | 6.38 | 5.4846 |
| SS 389  | 2 | 5 | 5/16/00 8:36  | 200 | 0.1241 | 0.1305 | 0.0064 | 32.0000 |         |        | 0.1282 | 0.0023 | 0.0005 | 2.50  |      |        |
| SS 390  | 1 | 1 | 5/16/00 11:30 | 170 | 0.1251 | 0.1274 | 0.0023 | 13.5294 | 13.3437 | 0.2627 | 0.1248 | 0.0026 | 0.0008 | 4.71  | 4.20 | 0.7224 |
| SS 391  | 2 | 1 | 5/16/00 11:30 | 190 | 0.1242 | 0.1267 | 0.0025 | 13.1579 |         |        | 0.1242 | 0.0025 | 0.0007 | 3.68  |      |        |
| SS 392  | 1 | 2 | 5/16/00 11:38 | 210 | 0.1245 | 0.1283 | 0.0038 | 18.0952 | 18.0720 | 0.0329 | 0.1253 | 0.0030 | 0.0012 | 5.71  | 4.81 | 1.2812 |
| SS 393  | 2 | 2 | 5/16/00 11:38 | 205 | 0.1248 | 0.1285 | 0.0037 | 18.0488 |         |        | 0.1259 | 0.0026 | 0.0008 | 3.90  |      |        |
| SS 394  | 1 | 3 | 5/16/00 11:51 | 220 | 0.1244 | 0.1289 | 0.0045 | 20.4545 | 20.4545 | 0.0000 | 0.1260 | 0.0029 | 0.0011 | 5.00  | 5.91 | 1.2856 |
| SS 395  | 2 | 3 | 5/16/00 11:51 | 220 | 0.1249 | 0.1294 | 0.0045 | 20.4545 |         |        | 0.1261 | 0.0033 | 0.0015 | 6.82  |      |        |
| SS 396  | 1 | 4 | 5/16/00 12:13 | 210 | 0.1249 | 0.1303 | 0.0054 | 25.7143 | 25.5238 | 0.2694 | 0.1271 | 0.0032 | 0.0014 | 6.67  | 6.00 | 0.9428 |
| SS 397  | 2 | 4 | 5/16/00 12:13 | 225 | 0.1248 | 0.1305 | 0.0057 | 25.3333 |         |        | 0.1275 | 0.0030 | 0.0012 | 5.33  |      |        |
| SS 398  | 1 | 5 | 5/16/00 12:25 | 205 | 0.1239 | 0.1288 | 0.0049 | 23.9024 | 19.0941 | 6.8001 | 0.1261 | 0.0027 | 0.0009 | 4.39  | 5.53 | 1.6097 |
| SS 399  | 2 | 5 | 5/16/00 12:25 | 210 | 0.1251 | 0.1281 | 0.0030 | 14.2857 |         |        | 0.1249 | 0.0032 | 0.0014 | 6.67  |      |        |
| SS 3100 | 1 | 1 | 5/16/00 15:26 | 230 | 0.1226 | 0.1255 | 0.0029 | 12.6087 | 12.8498 | 0.3410 | 0.1221 | 0.0034 | 0.0016 | 6.96  | 6.75 | 0.2907 |
| SS 3101 | 2 | 1 | 5/16/00 15:26 | 275 | 0.1239 | 0.1275 | 0.0036 | 13.0909 |         |        | 0.1239 | 0.0036 | 0.0018 | 6.55  |      |        |
| SS 3102 | 1 | 2 | 5/16/00 15:40 | 200 | 0.1244 | 0.1302 | 0.0058 | 29.0000 | 29.8659 | 1.2245 | 0.1268 | 0.0034 | 0.0016 | 8.00  | 7.41 | 0.8278 |
| SS 3103 | 2 | 2 | 5/16/00 15:40 | 205 | 0.1239 | 0.1302 | 0.0063 | 30.7317 |         |        | 0.1270 | 0.0032 | 0.0014 | 6.83  |      |        |
| SS 3104 | 1 | 3 | 5/16/00 15:50 | 190 | 0.1233 | 0.1287 | 0.0054 | 28.4211 | 28.4605 | 0.0558 | 0.1260 | 0.0027 | 0.0009 | 4.74  | 6.37 | 2.3074 |

|         |   |   |                |     |        |        |        |         |         |        |        |        |        |          |        |        |
|---------|---|---|----------------|-----|--------|--------|--------|---------|---------|--------|--------|--------|--------|----------|--------|--------|
| SS 3105 | 2 | 3 | 5/15/00 15:50  | 200 | 0.1237 | 0.1294 | 0.0057 | 28.5000 |         |        | 0.1260 | 0.0034 | 0.0016 | 8.00     |        |        |
| SS 3106 | 1 | 4 | 5/15/2000 16:1 | 205 | 0.1237 | 0.1275 | 0.0038 | 18.5366 | 18.8238 | 0.4063 | 0.1253 | 0.0022 | 0.0004 | 1.95     | 3.20   | 1.7630 |
| SS 3107 | 2 | 4 | 5/15/2000 16:1 | 225 | 0.1221 | 0.1264 | 0.0043 | 19.1111 |         |        | 0.1236 | 0.0028 | 0.0010 | 4.44     |        |        |
| SS 3108 | 1 | 5 | 5/15/00 16:20  | 200 | 0.1245 | 0.1283 | 0.0038 | 19.0000 | 19.2619 | 0.3704 | 0.1255 | 0.0028 | 0.0010 | 5.00     | 5.36   | 0.5051 |
| SS 3109 | 2 | 5 | 5/15/00 16:20  | 210 | 0.1248 | 0.1289 | 0.0041 | 19.5238 |         |        | 0.1259 | 0.0030 | 0.0012 | 5.71     |        |        |
| SS 3110 | 1 | 1 | 5/15/00 19:45  | 205 | 0.1232 | 0.1266 | 0.0034 | 16.5854 | 17.0427 | 0.6467 | 0.1241 | 0.0025 | 0.0007 | 3.41     | 4.96   | 2.1817 |
| SS 3111 | 2 | 1 | 5/15/00 19:45  | 200 | 0.1243 | 0.1278 | 0.0035 | 17.5000 |         |        | 0.1247 | 0.0031 | 0.0013 | 6.5      |        |        |
| SS 3112 | 1 | 2 | 5/15/00 19:55  | 185 | 0.1234 | 0.1276 | 0.0042 | 22.7027 | 26.9924 | 6.0865 | 0.1247 | 0.0029 | 0.0011 | 5.945946 | 6.3063 | 0.5096 |
| SS 3113 | 2 | 2 | 5/15/00 19:55  | 195 | 0.1212 | 0.1273 | 0.0061 | 31.2821 |         |        | 0.1242 | 0.0031 | 0.0013 | 6.666667 |        |        |
| SS 3114 | 1 | 3 | 5/15/00 20:05  | 205 | 0.1239 | 0.1314 | 0.0075 | 36.5854 | 35.1974 | 1.9628 | 0.128  | 0.0034 | 0.0016 | 7.804878 | 7.712  | 0.1314 |
| SS 3115 | 2 | 3 | 5/15/00 20:05  | 210 | 0.1228 | 0.1299 | 0.0071 | 33.8095 |         |        | 0.1285 | 0.0034 | 0.0016 | 7.619048 |        |        |
| SS 3116 | 1 | 4 | 5/15/00 20:25  | 215 | 0.1233 | 0.1283 | 0.005  | 23.2558 | 23.6279 | 0.5262 | 0.1253 | 0.003  | 0.0012 | 5.581395 | 5.5407 | 0.0576 |
| SS 3117 | 2 | 4 | 5/15/00 20:25  | 200 | 0.1242 | 0.1290 | 0.0048 | 24.0000 |         |        | 0.1261 | 0.0029 | 0.0011 | 5.5      |        |        |
| SS 3118 | 1 | 5 | 5/15/00 20:40  | 215 | 0.1285 | 0.1325 | 0.004  | 18.6047 | 19.0642 | 0.6499 | 0.1298 | 0.0027 | 0.0009 | 4.186047 | 3.9978 | 0.2662 |
| SS 3119 | 2 | 5 | 5/15/00 20:40  | 210 | 0.1279 | 0.1320 | 0.0041 | 19.5238 |         |        | 0.1294 | 0.0026 | 0.0008 | 3.809524 |        |        |

## Total Seston Blank Data Sheet

Sample Date: 5/15/00- 5/16/00

Cruise: Anacstia Wet Weather

Analysis Date: 5/20/00

| SAMPLE | Pre-Ignition-Blank | Post-Ignition Blank |            |
|--------|--------------------|---------------------|------------|
|        | WT (g)             | WT (g)              | Difference |
| B1     | 0.1257             | 0.1238              | 0.0019     |
| B2     | 0.1255             | 0.1237              | 0.0018     |
| B3     | 0.1260             | 0.1242              | 0.0018     |

|           |        |
|-----------|--------|
| 0.0018    | Avg.   |
| 5.774E-05 | StdDev |

**TON Event 3**

Peak Table: Nitrate+Nitrite

File name: A:\E3&amp;3TON.TXT

Date: September 21, 2000

Operator: MITCH

| Cup | Name        | Type | Height  | Calc. (mg/L) |
|-----|-------------|------|---------|--------------|
|     | 3 Sync      | SYNC | 1116937 | 1.860517     |
|     | 0 Carryover | CO   | 354     | -0.000328    |
|     | 0 Carryover | CO   | 108     | -0.000738    |
|     | 0 Baseline  | RB   | 0       | -0.000918    |
|     | 0 Cal 0     | C    | -63     | -0.001023    |
|     | 1 Cal 1     | C    | 96603   | 0.160077     |
|     | 2 Cal 2     | C    | 738822  | 1.230369     |
|     | 3 Cal 3     | C    | 1203979 | 2.005578     |
|     | 0 BLANK     | BLNK | -224    | -0.001292    |
|     | 0 BLANK     | BLNK | -163    | -0.001189    |
|     | 4 ICV       | ICV  | 873552  | 1.454902     |
|     | 0 READ B/L  | RB   | 0       | -0.000918    |
|     | 8 NO2 1.5   | U    | 873714  | 1.455173     |
|     | 9 NO3 1.5   | U    | 843556  | 1.404913     |
|     | 10 N301     | U    | 332939  | 0.553943     |
|     | 11 N303     | U    | 300319  | 0.49958      |
|     | 12 N305     | U    | 278663  | 0.463489     |
|     | 13 N307     | U    | 300742  | 0.500285     |
|     | 14 N309     | U    | 395945  | 0.658946     |
|     | 15 N311     | U    | 320932  | 0.533933     |
|     | 16 N313     | U    | 280933  | 0.467272     |
|     | 17 N315     | U    | 310387  | 0.516358     |
|     | 18 N317     | U    | 384196  | 0.639365     |
|     | 19 N319     | U    | 431824  | 0.718739     |
|     | 0 BLANK     | BLNK | -153    | -0.001173    |
|     | 0 BLANK     | BLNK | -77     | -0.001046    |
|     | 5 CCV       | CCV  | 769074  | 1.280786     |
|     | 0 READ B/L  | RB   | 0       | -0.000918    |
|     | 20 N318 DUP | U    | 418547  | 0.696612     |
|     | 21 N321     | U    | 286745  | 0.476957     |
|     | 22 N323     | U    | 266816  | 0.443745     |
|     | 23 N325     | U    | 300028  | 0.499095     |
|     | 24 N327     | U    | 325169  | 0.540994     |
|     | 25 N329     | U    | 420195  | 0.699359     |
|     | 26 N331     | U    | 268489  | 0.446534     |
|     | 27 N333     | U    | 304587  | 0.506692     |
|     | 28 N335     | U    | 304021  | 0.50575      |
|     | 29 N337     | U    | 309795  | 0.515371     |
|     | 0 BLANK     | BLNK | -218    | -0.001281    |
|     | 0 BLANK     | BLNK | -137    | -0.001146    |
|     | 5 CCV       | CCV  | 730903  | 1.217171     |
|     | 0 READ B/L  | RB   | 0       | -0.000918    |

|             |      |        |           |
|-------------|------|--------|-----------|
| 30 N338     | U    | 383144 | 0.637612  |
| 31 N336 DUP | U    | 389869 | 0.648819  |
| 32 N341     | U    | 285070 | 0.474165  |
| 33 N343     | U    | 290095 | 0.482541  |
| 34 N345     | U    | 297013 | 0.49407   |
| 35 N347     | U    | 337991 | 0.562362  |
| 36 N349     | U    | 427462 | 0.71147   |
| 37 N351     | U    | 305438 | 0.50811   |
| 38 N353     | U    | 267218 | 0.444415  |
| 39 N355     | U    | 291565 | 0.48499   |
| 0 BLANK     | BLNK | -199   | -0.00125  |
| 0 BLANK     | BLNK | -264   | -0.001359 |
| 6 CCV       | CCV  | 738871 | 1.23045   |
| 0 READ B/L  | RB   | 0      | -0.000918 |
| 40 N357     | U    | 349901 | 0.58221   |
| 41 N359     | U    | 436954 | 0.72729   |
| 42 N358 DUP | U    | 406993 | 0.677358  |
| 43 N361     | U    | 326618 | 0.543407  |
| 44 N363     | U    | 278441 | 0.463119  |
| 45 N365     | U    | 263137 | 0.437614  |
| 46 N367     | U    | 287805 | 0.478724  |
| 47 N369     | U    | 375821 | 0.625407  |
| 48 N371     | U    | 292039 | 0.485781  |
| 49 N373     | U    | 271772 | 0.452005  |
| 0 BLANK     | BLNK | -1     | -0.00092  |
| 0 BLANK     | BLNK | -19    | -0.00095  |
| 6 CCV       | CCV  | 742796 | 1.236991  |
| 0 READ B/L  | RB   | 0      | -0.000918 |
| 50 N375     | U    | 256989 | 0.427368  |
| 51 N377     | U    | 355165 | 0.590984  |
| 52 N379     | U    | 393433 | 0.654758  |
| 53 N378 DUP | U    | 392092 | 0.652525  |
| 54 N381     | U    | 276655 | 0.460142  |
| 55 N383     | U    | 257220 | 0.427752  |
| 56 N385     | U    | 318807 | 0.53039   |
| 57 N387     | U    | 356864 | 0.593815  |
| 58 N389     | U    | 404412 | 0.673056  |
| 59 N391     | U    | 317163 | 0.527652  |
| 0 BLANK     | BLNK | -171   | -0.001203 |
| 0 BLANK     | BLNK | -135   | -0.001143 |
| 7 CCV       | CCV  | 750322 | 1.249533  |
| 0 READ B/L  | RB   | 0      | -0.000918 |
| 60 N393     | U    | 262553 | 0.43664   |
| 61 N395     | U    | 254265 | 0.422828  |
| 62 N397     | U    | 328588 | 0.546692  |
| 63 N399     | U    | 390255 | 0.649463  |
| 64 N398 DUP | U    | 370836 | 0.6171    |
| 65 N3101    | U    | 335031 | 0.557429  |
| 66 N3103    | U    | 257648 | 0.428467  |

|             |      |        |           |
|-------------|------|--------|-----------|
| 67 N3105    | U    | 246225 | 0.40943   |
| 68 N3107    | U    | 345612 | 0.575063  |
| 69 N3109    | U    | 384621 | 0.640074  |
| 0 BLANK     | BLNK | -189   | -0.001233 |
| 0 BLANK     | BLNK | -182   | -0.001222 |
| 7 CCV       | CCV  | 742434 | 1.236389  |
| 0 READ B/L  | RB   | 0      | -0.000918 |
| 70 N3111    | U    | 384615 | 0.640064  |
| 71 N3113    | U    | 281691 | 0.468535  |
| 72 N3114    | U    | 283804 | 0.472057  |
| 73 N3117    | U    | 387723 | 0.645242  |
| 74 N3116 DU | U    | 359409 | 0.598056  |
| 75 N3118    | U    | 308871 | 0.513833  |

**Orthophosphate Event 3**

Peak Table: Ortho-Phosphate

File name: A:\E3&amp;4OP.TXT

Date: September 21, 2000

Operator: MITCH

| Cup | Name        | Type | Height | Calc. (mg/L) |
|-----|-------------|------|--------|--------------|
|     | 3 Sync      | SYNC | 298576 | 2.015616     |
|     | 0 Carryover | CO   | 87     | 0.00546      |
|     | 0 Carryover | CO   | 27     | 0.005056     |
|     | 0 Baseline  | RB   | 0      | 0.004874     |
|     | 0 Cal 0     | C    | -41    | 0.004598     |
|     | 1 Cal 1     | C    | 21497  | 0.149648     |
|     | 2 Cal 2     | C    | 181633 | 1.228068     |
|     | 3 Cal 3     | C    | 297417 | 2.007813     |
|     | 0 BLANK     | BLNK | -42    | 0.004594     |
|     | 0 BLANK     | BLNK | -43    | 0.004582     |
|     | 4 ICV       | ICV  | 200717 | 1.356593     |
|     | 0 READ B/L  | RB   | 0      | 0.004874     |
|     | 8 NO2 1.5   | U    | -167   | 0.003752     |
|     | 9 NO3 1.5   | U    | -85    | 0.004299     |
|     | 10 N301     | U    | 314    | 0.006992     |
|     | 11 N303     | U    | 337    | 0.007145     |
|     | 12 N305     | U    | 283    | 0.006781     |
|     | 13 N307     | U    | 94     | 0.005505     |
|     | 14 N309     | U    | 171    | 0.006025     |
|     | 15 N311     | U    | 349    | 0.007225     |
|     | 16 N313     | U    | 336    | 0.007136     |
|     | 17 N315     | U    | 281    | 0.006767     |
|     | 18 N317     | U    | 159    | 0.005945     |
|     | 19 N319     | U    | 1734   | 0.016553     |
|     | 0 BLANK     | BLNK | -69    | 0.004406     |
|     | 0 BLANK     | BLNK | -73    | 0.004379     |
|     | 5 CCV       | CCV  | 185740 | 1.255729     |
|     | 0 READ B/L  | RB   | 0      | 0.004874     |
|     | 20 N318 DUP | U    | 1675   | 0.016155     |
|     | 21 N321     | U    | 354    | 0.007261     |
|     | 22 N323     | U    | 397    | 0.007547     |
|     | 23 N325     | U    | 197    | 0.006201     |
|     | 24 N327     | U    | 275    | 0.006728     |
|     | 25 N329     | U    | 1124   | 0.012443     |
|     | 26 N331     | U    | 316    | 0.007002     |
|     | 27 N333     | U    | 380    | 0.007436     |
|     | 28 N335     | U    | 291    | 0.006832     |
|     | 29 N337     | U    | 120    | 0.00568      |
|     | 0 BLANK     | BLNK | -84    | 0.00431      |
|     | 0 BLANK     | BLNK | -89    | 0.004273     |
|     | 5 CCV       | CCV  | 182850 | 1.236267     |
|     | 0 READ B/L  | RB   | 0      | 0.004874     |

|             |   |     |          |
|-------------|---|-----|----------|
| 30 N338     | U | 366 | 0.007341 |
| 31 N336 DUP | U | 370 | 0.007367 |
| 32 N341     | U | 205 | 0.006256 |
| 33 N343     | U | 324 | 0.007056 |
| 34 N345     | U | 182 | 0.006097 |
| 35 N347     | U | 261 | 0.00663  |
| 36 N349     | U | 841 | 0.010538 |
| 37 N351     | U | 318 | 0.007017 |
| 38 N353     | U | 378 | 0.007419 |
| 39 N355     | U | 219 | 0.006351 |

| Cup | Name        | Type | Height | Calc. (mg/L) |
|-----|-------------|------|--------|--------------|
|     | 0 BLANK     | BLNK | -61    | 0.004463     |
|     | 0 BLANK     | BLNK | -51    | 0.00453      |
|     | 6 CCV       | CCV  | 182689 | 1.235182     |
|     | 0 READ B/L  | RB   | 0      | 0.004874     |
|     | 40 N357     | U    | 286    | 0.006801     |
|     | 41 N359     | U    | 881    | 0.010804     |
|     | 42 N358 DUP | U    | 728    | 0.009778     |
|     | 43 N361     | U    | 228    | 0.006407     |
|     | 44 N363     | U    | 391    | 0.007509     |
|     | 45 N365     | U    | 241    | 0.006498     |
|     | 46 N367     | U    | 229    | 0.006418     |
|     | 47 N369     | U    | 1117   | 0.012396     |
|     | 48 N371     | U    | 303    | 0.006913     |
|     | 49 N373     | U    | 277    | 0.006741     |
|     | 0 BLANK     | BLNK | -69    | 0.004407     |
|     | 0 BLANK     | BLNK | -60    | 0.00447      |
|     | 6 CCV       | CCV  | 180789 | 1.222389     |
|     | 0 READ B/L  | RB   | 0      | 0.004874     |
|     | 50 N375     | U    | 369    | 0.007358     |
|     | 51 N377     | U    | 292    | 0.006839     |
|     | 52 N379     | U    | 397    | 0.007551     |
|     | 53 N378 DUP | U    | 401    | 0.007574     |
|     | 54 N381     | U    | 300    | 0.006898     |
|     | 55 N383     | U    | 148    | 0.005873     |
|     | 56 N385     | U    | 230    | 0.006425     |
|     | 57 N387     | U    | 138    | 0.005806     |
|     | 58 N389     | U    | 767    | 0.010039     |
|     | 59 N391     | U    | 463    | 0.007995     |
|     | 0 BLANK     | BLNK | -57    | 0.004493     |
|     | 0 BLANK     | BLNK | -65    | 0.004439     |
|     | 7 CCV       | CCV  | 184873 | 1.249891     |
|     | 0 READ B/L  | RB   | 0      | 0.004874     |
|     | 60 N393     | U    | 274    | 0.00672      |
|     | 61 N395     | U    | 170    | 0.006021     |
|     | 62 N397     | U    | 144    | 0.005843     |
|     | 63 N399     | U    | 129    | 0.005743     |
|     | 64 N398 DUP | U    | 178    | 0.006071     |

|             |      |        |          |
|-------------|------|--------|----------|
| 65 N3101    | U    | 353    | 0.007249 |
| 66 N3103    | U    | 403    | 0.007586 |
| 67 N3105    | U    | 179    | 0.00608  |
| 68 N3107    | U    | 68     | 0.005334 |
| 69 N3109    | U    | 21     | 0.005015 |
| 0 BLANK     | BLNK | -122   | 0.004052 |
| 0 BLANK     | BLNK | -119   | 0.004071 |
| 7 CCV       | CCV  | 185926 | 1.256978 |
| 0 READ B/L  | RB   | 0      | 0.004874 |
| 70 N3111    | U    | 356    | 0.007274 |
| 71 N3113    | U    | 196    | 0.006194 |
| 72 N3114    | U    | 188    | 0.006137 |
| 73 N3117    | U    | 529    | 0.008435 |
| 74 N3116 DU | U    | 100    | 0.005549 |
| 75 N3118    | U    | 596    | 0.008889 |
| 76 N401     | U    | 1417   | 0.014414 |
| 77 N403     | U    | 1144   | 0.012578 |
| 78 N405     | U    | 518    | 0.008362 |
| 79 N407     | U    | 820    | 0.010397 |
| 0 BLANK     | BLNK | -60    | 0.00447  |

| Cup | Name        | Type | Height | Calc. (mg/L) |
|-----|-------------|------|--------|--------------|
|     | 0 BLANK     | BLNK | -65    | 0.004434     |
|     | 5 CCV       | CCV  | 182427 | 1.233416     |
|     | 0 READ B/L  | RB   | 0      | 0.004874     |
|     | 80 N409     | U    | 3596   | 0.029092     |
|     | 81 N411     | U    | 708    | 0.00964      |
|     | 82 N413     | U    | 695    | 0.009557     |
|     | 83 N415     | U    | 976    | 0.011447     |
|     | 84 N417     | U    | 806    | 0.010302     |
|     | 85 N419     | U    | 585    | 0.008814     |
|     | 86 N420 DUP | U    | 618    | 0.009035     |
|     | 87 N421     | U    | 1015   | 0.011709     |
|     | 88 N423     | U    | 463    | 0.007995     |
|     | 89 N425     | U    | 764    | 0.010019     |
|     | 0 BLANK     | BLNK | -73    | 0.00438      |
|     | 0 BLANK     | BLNK | -87    | 0.004291     |
|     | 5 CCV       | CCV  | 184681 | 1.248595     |
|     | 0 READ B/L  | RB   | 0      | 0.004874     |
|     | 90 N427     | U    | 790    | 0.010195     |
|     | 91 N429     | U    | 531    | 0.008451     |
|     | 92 N431     | U    | 562    | 0.008657     |
|     | 93 N433     | U    | 758    | 0.009982     |
|     | 94 N435     | U    | 573    | 0.008732     |
|     | 95 N437     | U    | 529    | 0.008434     |
|     | 96 N439     | U    | 1675   | 0.016154     |
|     | 97 N440 DUP | U    | 1773   | 0.016812     |
|     | 98 N441     | U    | 708    | 0.009642     |
|     | 99 N443     | U    | 629    | 0.009109     |

|              |      |        |          |
|--------------|------|--------|----------|
| 0 BLANK      | BLNK | -82    | 0.004323 |
| 0 BLANK      | BLNK | -91    | 0.004264 |
| 6 CCV        | CCV  | 182453 | 1.233594 |
| 0 READ B/L   | RB   | 0      | 0.004874 |
| 100 N445     | U    | 613    | 0.008999 |
| 101 N447     | U    | 572    | 0.008729 |
| 102 N449     | U    | 706    | 0.009627 |
| 103 N451     | U    | 448    | 0.00789  |
| 104 N453     | U    | 568    | 0.008696 |
| 105 N455     | U    | 593    | 0.008871 |
| 106 N457     | U    | 509    | 0.008299 |
| 107 N459     | U    | 423    | 0.007722 |
| 108 N460 DUP | U    | 483    | 0.008125 |
| 109 N461     | U    | 792    | 0.010206 |
| 0 BLANK      | BLNK | -77    | 0.004354 |
| 0 BLANK      | BLNK | -73    | 0.004382 |
| 6 CCV        | CCV  | 182405 | 1.233268 |
| 0 READ B/L   | RB   | 0      | 0.004874 |
| 110 N463     | U    | 688    | 0.009506 |
| 111 N465     | U    | 598    | 0.008901 |
| 112 N467     | U    | 691    | 0.009525 |
| 113 N469     | U    | 1720   | 0.016458 |
| 114 N471     | U    | 577    | 0.008757 |
| 115 N473     | U    | 831    | 0.010471 |
| 116 N475     | U    | 993    | 0.011562 |
| 117 N477     | U    | 765    | 0.010024 |
| 118 N479     | U    | 2797   | 0.023708 |
| 119 N480 DUP | U    | 2897   | 0.024383 |
| 0 BLANK      | BLNK | -37    | 0.004626 |
| 0 BLANK      | BLNK | -48    | 0.00455  |

| Cup | Name       | Type | Height | Calc. (mg/L) |
|-----|------------|------|--------|--------------|
|     | 7 CCV      | CCV  | 182695 | 1.23522      |
|     | 0 READ B/L | RB   | 0      | 0.004874     |
| 120 | N481       | U    | 963    | 0.011362     |
| 8   | N483       | U    | 827    | 0.010443     |
| 9   | N485       | U    | 789    | 0.010191     |
| 10  | N487       | U    | 910    | 0.011        |
| 11  | N489       | U    | 785    | 0.01016      |
| 12  | N491       | U    | 948    | 0.01126      |
| 13  | N493       | U    | 794    | 0.01022      |
| 14  | N495       | U    | 907    | 0.010984     |
| 15  | N497       | U    | 918    | 0.011058     |
| 16  | N499       | U    | 2664   | 0.022818     |
|     | 0 BLANK    | BLNK | -58    | 0.004482     |
|     | 0 BLANK    | BLNK | -62    | 0.004455     |
|     | 7 CCV      | CCV  | 182570 | 1.234383     |
|     | 0 READ B/L | RB   | 0      | 0.004874     |
| 17  | N4100 DU   | U    | 2510   | 0.021777     |

|    |          |      |         |          |
|----|----------|------|---------|----------|
| 18 | N4101    | U    | 687     | 0.009502 |
| 19 | N4103    | U    | 1237    | 0.013204 |
| 20 | N4105    | U    | 1003    | 0.011626 |
| 21 | N4107    | U    | 1006    | 0.011651 |
| 22 | N4109    | U    | 1681    | 0.016192 |
| 23 | N4111    | U    | 645     | 0.009221 |
| 24 | N4113    | U    | 964     | 0.011368 |
| 25 | N4115    | U    | 837     | 0.010513 |
| 26 | N4117    | U    | 914     | 0.011027 |
| 0  | BLANK    | BLNK | -36     | 0.00463  |
| 0  | BLANK    | BLNK | -47     | 0.004558 |
| 5  | CCV      | CCV  | 182194  | 1.231851 |
| 0  | READ B/L | RB   | 0       | 0.004874 |
| 27 | N4119    | U    | 1131    | 0.012491 |
| 28 | N4120 DU | U    | 1140    | 0.012553 |
| 29 | 2FB07    | U    | 156     | 0.005923 |
| 30 | NFB4     | U    | 61      | 0.005286 |
| 31 | FIELD BL | U    | -62     | 0.004458 |
| 33 | FB2N     | U    | -28     | 0.004684 |
| 33 | FB2N     | U    | 1233883 | 8.31438  |
| 34 | N4FB2    | U    | -355    | 0.002485 |
| 35 | N4FB4    | U    | -9      | 0.004815 |
| 36 | 4EB N    | U    | -63     | 0.004448 |
| 0  | BLANK    | BLNK | -107    | 0.004151 |
| 0  | BLANK    | BLNK | -114    | 0.004106 |
| 5  | CCV      | CCV  | 183070  | 1.237751 |

# TOTAL PHOSPHATE EVENT #3

## Run Results Report

Results: C:\FLOW\_4\SAMPLE~1\EVNT3&4T.RST

Results completed: 17:37 September 27, 2000.

Operator: MITCH

| TOTAL PHOSPHATE |     |           |           |          |       |
|-----------------|-----|-----------|-----------|----------|-------|
| Time            | Cup | Name      | Height    | Calc.    | Flags |
| 10:49           | 0   | Carryover | 117.5134  | 0.036161 |       |
| 10:51           | 0   | Carryover | 30.09072  | 0.034256 |       |
| 10:53           | 0   | Baseline  | 9.54E-07  | 0.033601 | BL    |
| 10:55           | 0   | Cal 0     | -28.85477 | 0.032972 |       |
| 10:57           | 1   | Cal 1     | 4529.948  | 0.132286 |       |
| 10:59           | 2   | Cal 2     | 49866.76  | 1.119951 |       |
| 11:01           | 3   | Cal 3     | 93761.02  | 2.076191 |       |
| 11:03           | 0   | BLANK     | -37.9249  | 0.032774 |       |
| 11:05           | 0   | BLANK     | -33.16455 | 0.032987 |       |
| 11:07           | 4   | ICV       | 65765.34  | 1.466303 | 2.25% |
| 11:09           | 0   | READ B/L  | 0         | 0.033601 | BL    |
| 11:11           | 8   | P301      | 2456.046  | 0.087106 |       |
| 11:13           | 9   | P303      | 1221.165  | 0.060204 |       |
| 11:15           | 10  | P305      | 271.2086  | 0.039509 |       |
| 11:17           | 11  | P307      | 128.8272  | 0.036407 |       |
| 11:19           | 12  | P309      | 234.2635  | 0.038704 |       |
| 11:21           | 13  | P311      | 371.8098  | 0.0417   |       |
| 11:23           | 14  | P313      | 340.3114  | 0.041014 |       |
| 11:25           | 15  | P315      | 17.09321  | 0.033973 |       |
| 11:27           | 16  | P317      | -5.740674 | 0.033475 |       |
| 11:29           | 17  | P319      | 370.2341  | 0.041666 |       |
| 11:31           | 18  | P318 DUP  | 284.8999  | 0.039807 |       |
| 11:33           | 19  | P321      | 438.2025  | 0.043147 |       |
| 11:35           | 0   | BLANK     | -95.87823 | 0.031512 |       |
| 11:37           | 0   | BLANK     | -73.51717 | 0.031999 |       |
| 11:39           | 5   | CCV       | 50625.3   | 1.136476 | 8.35% |
| 11:41           | 0   | READ B/L  | 0         | 0.033601 | BL    |
| 11:43           | 20  | P323      | 276.8031  | 0.039631 |       |
| 11:45           | 21  | P325      | 208.5073  | 0.038143 |       |
| 11:47           | 22  | P327      | 181.9379  | 0.037564 |       |
| 11:49           | 23  | P329      | 220.4557  | 0.038403 |       |
| 11:51           | 24  | P331      | 231.7708  | 0.03865  |       |
| 11:53           | 25  | P333      | 579.5473  | 0.046226 |       |
| 11:55           | 26  | P335      | 313.2401  | 0.040424 |       |
| 11:57           | 27  | P337      | 119.3989  | 0.036202 |       |
| 11:59           | 28  | P338      | 79.80352  | 0.035339 |       |
| 12:01           | 29  | P336 DUP  | 90.44772  | 0.035571 |       |
| 12:03           | 0   | BLANK     | -104.0009 | 0.031335 |       |
| 12:05           | 0   | BLANK     | -79.07561 | 0.031878 |       |

|       |             |           |             |        |
|-------|-------------|-----------|-------------|--------|
| 12:07 | 5 CCV       | 50451.3   | 1.132686    | 8.65%  |
| 12:09 | 0 READ B/L  | 0         | 0.033601 BL |        |
| 12:11 | 30 P341     | 576.2166  | 0.046153    |        |
| 12:13 | 31 P343     | 241.8178  | 0.038869    |        |
| 12:15 | 32 P345     | 305.0798  | 0.040247    |        |
| 12:17 | 33 P347     | 63.25875  | 0.034979    |        |
| 12:19 | 34 P349     | 107.0491  | 0.035933    |        |
| 12:21 | 35 P351     | 492.3372  | 0.044326    |        |
| 12:23 | 36 P353     | 423.6014  | 0.042829    |        |
| 12:25 | 37 P361     | 283.8329  | 0.039784    |        |
| 12:27 | 38 P363     | 447.2306  | 0.043343    |        |
| 12:29 | 39 P365     | 253.1919  | 0.039116    |        |
| 12:31 | 0 BLANK     | -110.2839 | 0.031198    |        |
| 12:33 | 0 BLANK     | -129.4524 | 0.03078     |        |
| 12:35 | 6 CCV       | 50057.5   | 1.124107    | 9.35%  |
| 12:37 | 0 READ B/L  | 0         | 0.033601 BL |        |
| 12:39 | 40 P367     | 152.7287  | 0.036928    |        |
| 12:41 | 41 P369     | 435.0493  | 0.043078    |        |
| 12:45 | 43 P373     | 248.6199  | 0.039017    |        |
| 12:47 | 44 P375     | 248.9694  | 0.039024    |        |
| 12:49 | 45 P377     | 106.0871  | 0.035912    |        |
| 12:51 | 46 P379     | 81.56     | 0.035377    |        |
| 12:53 | 47 P378 DUP | 76.99404  | 0.035278    |        |
| 12:55 | 48 P381     | 401.6059  | 0.04235     |        |
| 12:57 | 49 P383     | 235.5673  | 0.038732    |        |
| 12:59 | 50 P385     | 126.74    | 0.036362    |        |
| 13:01 | 0 BLANK     | -109.4656 | 0.031216    |        |
| 13:03 | 0 BLANK     | -100.5549 | 0.03141     |        |
| 13:05 | 6 CCV       | 49859.56  | 1.119794    | 9.69%  |
| 13:07 | 0 READ B/L  | 0         | 0.033601 BL |        |
| 13:09 | 51 P387     | 163.8474  | 0.03717     |        |
| 13:11 | 52 P389     | 197.1716  | 0.037896    |        |
| 13:13 | 53 P391     | 385.9357  | 0.042008    |        |
| 13:15 | 54 P393     | 413.0293  | 0.042598    |        |
| 13:17 | 55 P395     | 283.7571  | 0.039782    |        |
| 13:19 | 56 P397     | 158.5874  | 0.037055    |        |
| 13:21 | 57 P399     | 100.6967  | 0.035794    |        |
| 13:23 | 58 P398 DUP | 108.5834  | 0.035966    |        |
| 13:25 | 59 P3101    | 191.7381  | 0.037778    |        |
| 13:27 | 60 P3103    | 438.8887  | 0.043162    |        |
| 13:29 | 0 BLANK     | -79.46546 | 0.031869    |        |
| 13:31 | 0 BLANK     | -82.87263 | 0.031795    |        |
| 13:33 | 7 CCV       | 48388.59  | 1.087749    | 12.28% |
| 13:35 | 0 READ B/L  | 0         | 0.033601 BL |        |
| 13:37 | 61 P3105    | 456.5811  | 0.043547    |        |
| 13:39 | 62 P3107    | 150.6335  | 0.036882    |        |
| 13:41 | 63 P3109    | 140.1974  | 0.036655    |        |
| 13:43 | 64 P3111    | 71.88176  | 0.035166    |        |
| 13:45 | 65 P3113    | 5605.109  | 0.155708    |        |

|       |             |           |             |        |
|-------|-------------|-----------|-------------|--------|
| 13:47 | 66 P3117    | 250.5586  | 0.039059    |        |
| 13:49 | 67 P335A    | 221.6983  | 0.03843     |        |
| 13:51 | 68 P337A    | 135.2149  | 0.036546    |        |
| 13:53 | 69 P338A    | 134.5495  | 0.036532    |        |
| 13:55 | 70 P339?    | 286.0331  | 0.039832    |        |
| 13:57 | 0 BLANK     | -74.45621 | 0.031978    |        |
| 13:59 | 0 BLANK     | -79.4896  | 0.031869    |        |
| 14:01 | 7 CCV       | 48701.24  | 1.09456     | 11.73% |
| 14:03 | 0 READ B/L  | 0         | 0.033601 BL |        |
| 14:05 | 71 P401     | 504.2769  | 0.044586    |        |
| 14:07 | 72 P403     | 561.2398  | 0.045827    |        |
| 14:09 | 73 P405     | 281.5039  | 0.039733    |        |
| 14:11 | 74 P407     | 296.4945  | 0.04006     |        |
| 14:13 | 75 P409     | 563.4821  | 0.045876    |        |
| 14:15 | 76 P411     | 490.7671  | 0.044292    |        |
| 14:17 | 77 P413     | 581.8311  | 0.046276    |        |
| 14:19 | 78 P415     | 887.4066  | 0.052933    |        |
| 14:21 | 79 P417     | 911.8569  | 0.053465    |        |
| 14:23 | 80 P419     | 421.5289  | 0.042784    |        |
| 14:25 | 0 BLANK     | -71.67226 | 0.032039    |        |
| 14:27 | 0 BLANK     | -75.29776 | 0.03196     |        |
| 14:29 | 5 CCV       | 49149.19  | 1.104319    | 10.94% |
| 14:31 | 0 READ B/L  | 0         | 0.033601 BL |        |
| 14:33 | 81 P420 DUP | 257.4241  | 0.039209    |        |
| 14:35 | 82 P421     | 430.4792  | 0.042979    |        |
| 14:37 | 83 P423     | 381.3797  | 0.041909    |        |
| 14:39 | 84 P425     | 850.622   | 0.052131    |        |
| 14:41 | 85 P427     | 392.1973  | 0.042145    |        |
| 14:43 | 86 P429     | 359.2103  | 0.041426    |        |
| 14:45 | 87 P431     | 397.5572  | 0.042261    |        |
| 14:47 | 88 P433     | 394.8846  | 0.042203    |        |
| 14:49 | 89 P435     | 285.0978  | 0.039811    |        |
| 14:51 | 90 P437     | 350.0438  | 0.041226    |        |
| 14:53 | 0 BLANK     | -94.85484 | 0.031534    |        |
| 14:55 | 0 BLANK     | -89.9453  | 0.031641    |        |
| 14:57 | 5 CCV       | 48809.59  | 1.096921    | 11.54% |
| 14:59 | 0 READ B/L  | 0         | 0.033601 BL |        |
| 15:01 | 91 P439     | 1047.4    | 0.056418    |        |
| 15:03 | 92 P440 DUP | 344.355   | 0.041102    |        |
| 15:05 | 93 P441     | 293.0251  | 0.039984    |        |
| 15:07 | 94 P444     | 524.4125  | 0.045025    |        |
| 15:09 | 95 P447     | 276.6354  | 0.039627    |        |
| 15:11 | 96 P449     | 225.6791  | 0.038517    |        |
| 15:13 | 97 P451     | 302.0753  | 0.040181    |        |
| 15:15 | 98 P453     | 381.2453  | 0.041906    |        |
| 15:17 | 99 P455     | 337.5685  | 0.040954    |        |
| 15:19 | 100 P457    | 245.3196  | 0.038945    |        |
| 15:21 | 0 BLANK     | -61.54259 | 0.03226     |        |
| 15:23 | 0 BLANK     | -59.31462 | 0.032308    |        |

|       |              |           |             |        |
|-------|--------------|-----------|-------------|--------|
| 15:25 | 6 CCV        | 48362.2   | 1.087174    | 12.32% |
| 15:27 | 0 READ B/L   | 0         | 0.033601 BL |        |
| 15:29 | 101 P459     | 178.8879  | 0.037498    |        |
| 15:31 | 102 P460 DUP | 171.392   | 0.037334    |        |
| 15:33 | 103 P459A    | 370.1199  | 0.041664    |        |
| 15:35 | 104 P461     | 550.4463  | 0.045592    |        |
| 15:37 | 105 P463     | 403.412   | 0.042389    |        |
| 15:39 | 106 P465     | 458.8177  | 0.043596    |        |
| 15:41 | 107 P467     | 360.7261  | 0.041459    |        |
| 15:43 | 108 P469     | 1013.578  | 0.055681    |        |
| 15:45 | 109 P471     | 357.7655  | 0.041394    |        |
| 15:47 | 110 P473     | 493.2848  | 0.044347    |        |
| 15:49 | 0 BLANK      | -52.35488 | 0.03246     |        |
| 15:51 | 0 BLANK      | -63.92909 | 0.032208    |        |
| 15:53 | 6 CCV        | 50636.97  | 1.13673     | 8.33%  |
| 15:55 | 0 READ B/L   | 0         | 0.033601 BL |        |
| 15:57 | 111 P475     | 530.9986  | 0.045168    |        |
| 15:59 | 112 P477     | 340.5146  | 0.041019    |        |
| 16:01 | 113 P479     | 570.2651  | 0.046024    |        |
| 16:03 | 114 P480 DUP | 457.5507  | 0.043568    |        |
| 16:05 | 115 P481     | 511.0907  | 0.044735    |        |
| 16:07 | 116 P483     | 714.6365  | 0.049169    |        |
| 16:09 | 117 P485     | 530.3252  | 0.045154    |        |
| 16:11 | 118 P487     | 329.4027  | 0.040777    |        |
| 16:13 | 119 P489     | 744.8913  | 0.049828    |        |
| 16:15 | 120 P491     | 435.7654  | 0.043094    |        |
| 16:17 | 0 BLANK      | -67.22887 | 0.032136    |        |
| 16:19 | 0 BLANK      | -81.39078 | 0.031827    |        |
| 16:21 | 7 CCV        | 47400.1   | 1.066215    | 14.01% |
| 16:23 | 0 READ B/L   | 0         | 0.033601 BL |        |
| 16:25 | 8 P493       | 1031.243  | 0.056066    |        |
| 16:27 | 9 P495       | 409.0619  | 0.042512    |        |
| 16:29 | 10 P497      | 381.8976  | 0.04192     |        |
| 16:31 | 11 P499      | 520.6949  | 0.044944    |        |
| 16:33 | 12 P4100 DUP | 540.2392  | 0.04537     |        |
| 16:35 | 13 P4101     | 473.2649  | 0.043911    |        |
| 16:37 | 14 P4103     | 898.8107  | 0.053181    |        |
| 16:39 | 15 P4105     | 633.2686  | 0.047396    |        |
| 16:41 | 16 P4107     | 1127.565  | 0.058165    |        |
| 16:43 | 17 P4109     | 467.7127  | 0.04379     |        |
| 16:45 | 0 BLANK      | -96.81519 | 0.031491    |        |
| 16:47 | 0 BLANK      | -94.69054 | 0.031538    |        |
| 16:49 | 7 CCV        | 47000.07  | 1.0575      | 14.72% |
| 16:51 | 0 READ B/L   | 0         | 0.033601 BL |        |
| 16:53 | 18 P4111     | 4024.415  | 0.121273    |        |
| 16:55 | 19 P4113     | 5129.975  | 0.145357    |        |
| 16:57 | 20 P4115     | 7174.279  | 0.189893    |        |
| 16:59 | 21 P4117     | 6999.58   | 0.186087    |        |
| 17:01 | 22 P4119     | 604.6129  | 0.046772    |        |

|       |              |           |             |        |
|-------|--------------|-----------|-------------|--------|
| 17:03 | 23 P4120 DUP | 430.4253  | 0.042977    |        |
| 17:05 | 24 P4FB4     | 222.6709  | 0.038451    |        |
| 17:07 | 25 P4EB      | 969.5777  | 0.054723    |        |
| 17:09 | 26 P4FB2     | 598.0234  | 0.046629    |        |
| 17:11 | 27 P4FB34    | 15.57699  | 0.03394     |        |
| 17:13 | 0 BLANK      | -75.26006 | 0.031961    |        |
| 17:15 | 0 BLANK      | -79.90494 | 0.03186     |        |
| 17:17 | 5 CCV        | 45013.1   | 1.014214    | 18.21% |
| 17:19 | 0 READ B/L   | 0         | 0.033601 BL |        |
| 17:21 | 28 PFB31     | 61.46933  | 0.03494     |        |
| 17:23 | 29 PFB32     | 36.12216  | 0.034387    |        |
| 17:25 | 30 PEB31     | 174.5417  | 0.037403    |        |
| 17:27 | 31 PFB33     | 40.65959  | 0.034486    |        |
| 17:29 | 0 BLANK      | -81.01946 | 0.031836    |        |
| 17:31 | 0 BLANK      | -76.39598 | 0.031936    |        |
| 17:33 | 5 CCV        | 44581.98  | 1.004822    | 18.97% |

# Organics

### Event 3

[illegible]

|     |  |   |   |   |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
|-----|--|---|---|---|---------------|------|------|------|-------|-------|------|--|--|--|--|--|--|--|--|
| 325 |  | 3 | 3 | 3 | 5/15/00 8:11  | 4.54 | 4.54 |      | 4.91  | 4.91  |      |  |  |  |  |  |  |  |  |
|     |  | 3 | 3 | 3 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 327 |  | 3 | 4 | 4 | 5/15/00 8:34  | 3.63 | 3.63 |      | 3.59  | 3.59  |      |  |  |  |  |  |  |  |  |
|     |  | 3 | 4 | 4 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 329 |  | 3 | 5 | 5 | 5/15/00 8:40  | 2.86 | 2.86 |      | 6.99  | 6.99  |      |  |  |  |  |  |  |  |  |
|     |  | 3 | 5 | 5 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 332 |  | 4 | 1 | 1 | 5/15/00 11:36 | 5.84 | 5.84 |      | 8.30  | 8.30  |      |  |  |  |  |  |  |  |  |
|     |  | 4 | 1 | 1 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 333 |  | 4 | 2 | 2 | 5/15/00 11:54 | 7.59 | 7.59 |      | 7.17  | 7.17  |      |  |  |  |  |  |  |  |  |
|     |  | 4 | 2 | 2 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 335 |  | 4 | 3 | 3 | 5/15/00 12:06 | 6.35 | 6.35 |      | 5.78  | 5.78  |      |  |  |  |  |  |  |  |  |
|     |  | 4 | 3 | 3 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 337 |  | 4 | 4 | 4 | 5/15/00 12:25 | 4.71 | 4.71 |      | 4.09  | 4.09  |      |  |  |  |  |  |  |  |  |
|     |  | 4 | 4 | 4 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 340 |  | 4 | 5 | 5 | 5/15/00 12:33 | 3.33 | 3.33 |      | 7.53  | 7.53  |      |  |  |  |  |  |  |  |  |
|     |  | 4 | 5 | 5 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 341 |  | 5 | 1 | 1 | 5/15/00 15:52 | 7.02 | 6.73 | 0.41 | 7.95  | 7.80  | 0.22 |  |  |  |  |  |  |  |  |
| 342 |  | 5 | 1 | 1 | 5/15/00 15:52 | 6.44 |      | 0.28 | 7.64  |       |      |  |  |  |  |  |  |  |  |
| 343 |  | 5 | 2 | 2 | 5/15/00 16:02 | 6.84 | 6.84 |      | 12.05 | 12.05 |      |  |  |  |  |  |  |  |  |
|     |  | 5 | 2 | 2 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 346 |  | 5 | 3 | 3 | 5/15/00 16:12 | 6.75 | 6.75 |      | 8.08  | 8.08  |      |  |  |  |  |  |  |  |  |
|     |  | 5 | 3 | 3 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 347 |  | 5 | 4 | 4 | 5/15/00 16:28 | 3.62 | 3.62 |      | 5.13  | 5.13  |      |  |  |  |  |  |  |  |  |
|     |  | 5 | 4 | 4 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 349 |  | 5 | 5 | 5 | 5/15/00 16:30 | 2.92 | 2.92 |      | 4.93  | 4.93  |      |  |  |  |  |  |  |  |  |
|     |  | 5 | 5 | 5 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 351 |  | 6 | 1 | 1 | 5/15/00 19:43 | 5.99 | 6.07 | 0.12 | 8.59  | 8.15  | 0.62 |  |  |  |  |  |  |  |  |
| 352 |  | 6 | 1 | 1 | 5/15/00 19:43 | 6.16 |      |      | 7.71  |       |      |  |  |  |  |  |  |  |  |
| 353 |  | 6 | 2 | 2 | 5/15/00 19:55 | 5.76 | 5.76 |      | 7.03  | 7.03  |      |  |  |  |  |  |  |  |  |
|     |  | 6 | 2 | 2 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 355 |  | 6 | 3 | 3 | 5/15/00 20:05 | 4.23 | 4.23 |      | 5.27  | 5.27  |      |  |  |  |  |  |  |  |  |
|     |  | 6 | 3 | 3 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 357 |  | 6 | 4 | 4 | 5/15/00 20:22 | 3.48 | 3.48 |      | 4.11  | 4.11  |      |  |  |  |  |  |  |  |  |
|     |  | 6 | 4 | 4 |               |      |      |      |       |       |      |  |  |  |  |  |  |  |  |
| 359 |  | 6 | 5 | 5 | 5/15/00 20:32 | 3.06 | 2.88 | 0.25 | 3.27  | 3.27  | 0.00 |  |  |  |  |  |  |  |  |

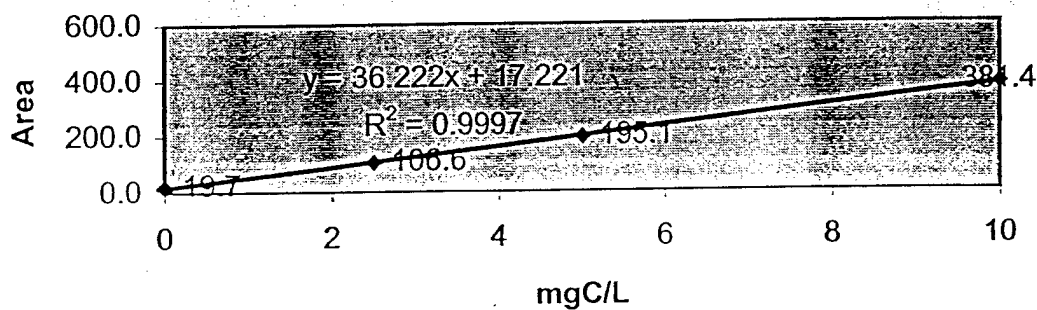
[illegible]

[illegible]

# TOC Sample Data

| Analysis ID | Sample ID | File             | Peak 1  | Peak 2  | Peak 1 TOC<br>(mgC/L) | Peak 2 TOC<br>(mgC/L) | Average TOC<br>mgC/L | Std Dev<br>mgC/L |
|-------------|-----------|------------------|---------|---------|-----------------------|-----------------------|----------------------|------------------|
| 439         | TC301     | 090800samp11.CHR | 279.866 | 271.782 | 7.25                  | 7.03                  | 7.14                 | 0.16             |
| 440         | TC303     | 090800samp12.CHR | 357.08  | 345.204 | 9.38                  | 9.05                  | 9.22                 | 0.23             |
| 441         | TC305     | 090800samp13.CHR | 299.291 | 297.193 | 7.79                  | 7.73                  | 7.76                 | 0.04             |
| 442         | TC307     | 090800samp14.CHR | 233.201 | 220.978 | 5.96                  | 5.63                  | 5.79                 | 0.24             |
| 443         | TC309     | 090800samp15.CHR | 175.775 | 165.189 | 4.38                  | 4.09                  | 4.23                 | 0.21             |
| 444         | TC311     | 090800samp16.CHR | 321.12  | 313.556 | 8.39                  | 8.18                  | 8.29                 | 0.15             |
| 445         | TC313     | 090800samp17.CHR | 292.038 | 289.847 | 7.59                  | 7.53                  | 7.56                 | 0.04             |
| 446         | TC315     | 090800samp18.CHR | 225.853 | 221.31  | 5.76                  | 5.63                  | 5.70                 | 0.09             |
| 447         | TC317     | 090800samp19.CHR | 180.239 | 169.601 | 4.50                  | 4.21                  | 4.35                 | 0.21             |
| 448         | TC319     | 090800samp20.CHR | 130.924 | 118.972 | 3.14                  | 2.81                  | 2.97                 | 0.23             |
| 449         | TC321     | 090800samp21.CHR | 270.412 | 269.159 | 6.99                  | 6.96                  | 6.97                 | 0.02             |
| 450         | TC323     | 090800samp22.CHR | 282.962 | 276.512 | 7.34                  | 7.16                  | 7.25                 | 0.13             |
| 451         | TC325     | 090800samp23.CHR | 199.638 | 190.288 | 5.04                  | 4.78                  | 4.91                 | 0.18             |
| 452         | TC327     | 090800samp24.CHR | 148.869 | 145.523 | 3.63                  | 3.54                  | 3.59                 | 0.07             |
| 453         | TC329     | 090800samp25.CHR | 269.495 | 271.517 | 6.96                  | 7.02                  | 6.99                 | 0.04             |
| 454         | TC331     | 090800samp26.CHR | 318.434 | 316.996 | 8.32                  | 8.28                  | 8.30                 | 0.03             |
| 455         | TC333     | 090800samp27.CHR | 278.236 | 275.936 | 7.21                  | 7.14                  | 7.17                 | 0.04             |
| 456         | TC302     | 090800samp28.CHR | 266.461 | 255.183 | 6.88                  | 6.57                  | 6.73                 | 0.22             |
| 457         | TC322     | 090800samp29.CHR | 281.46  | 271.512 | 7.29                  | 7.02                  | 7.16                 | 0.19             |
| 458         | TC335     | 090800samp30.CHR | 229.366 | 223.823 | 5.86                  | 5.70                  | 5.78                 | 0.11             |
| 459         | TC337     | 090800samp31.CHR | 167.811 | 162.716 | 4.16                  | 4.02                  | 4.09                 | 0.10             |
| 460         | TC339     | 090800samp32.CHR | 291.587 | 288.064 | 7.57                  | 7.48                  | 7.53                 | 0.07             |
| 461         | TC341     | 090800samp33.CHR | 305.639 | 304.788 | 7.96                  | 7.94                  | 7.95                 | 0.02             |
| 462         | TC342     | 090800samp34.CHR | 294.545 | 293.446 | 7.66                  | 7.63                  | 7.64                 | 0.02             |
| 463         | TC343     | 090800samp36.CHR | 438.311 | 468.786 | 11.63                 | 12.47                 | 12.05                | 0.59             |

Standard Curve for Samples 439-463 (0-10mgC/L)v

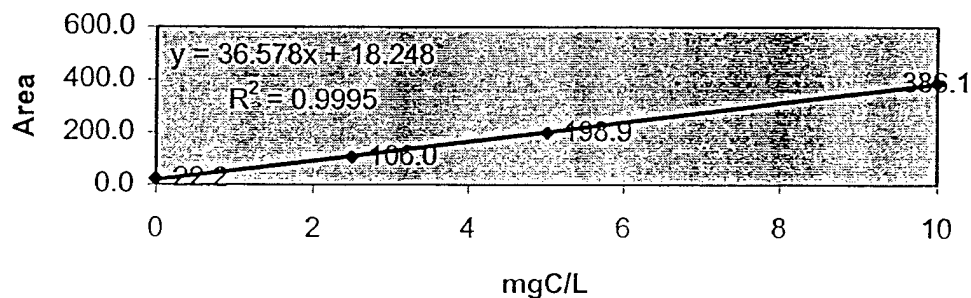


Yintercept= 17.221      Slope= 36.222

# TOC Sample Data

| Analysis ID | Sample ID | File            | Peak 1   | Peak 2   | Peak 1 TOC<br>(mgC/L) | Peak 2 TOC<br>(mgC/L) | Average TOC<br>mgC/L | Std Dev<br>mgC/L | Comments   |
|-------------|-----------|-----------------|----------|----------|-----------------------|-----------------------|----------------------|------------------|------------|
| 464         | DC303     | 090900samp03.CH | 299.968  | 307.189  | 7.70                  | 7.90                  | 7.80                 | 0.14             |            |
| 465         | DC305     | 090900samp04.CH | 255.18   | 256.141  | 6.48                  | 6.50                  | 6.49                 | 0.02             |            |
| 466         | DC307     | 090900samp05.CH | 184.905  | 182.372  | 4.56                  | 4.49                  | 4.52                 | 0.05             |            |
| 467         | DC309     | 090900samp06.CH | 145.019  | 136.236  | 3.47                  | 3.23                  | 3.35                 | 0.17             |            |
| 468         | DC311     | 090900samp07.CH | 285.703  | 289.032  | 7.31                  | 7.40                  | 7.36                 | 0.06             |            |
| 469         | DC313     | 090900samp08.CH | 1263.2   | 1263.9   | 34.04                 | 34.05                 | 34.05                | 0.01             | Seems High |
| 470         | DC315     | 090900samp09.CH | 204.344  | 194.64   | 5.09                  | 4.82                  | 4.96                 | 0.19             |            |
| 471         | DC317     | 090900samp10.CH | 151.801  | 146.764  | 3.65                  | 3.51                  | 3.58                 | 0.10             |            |
| 472         | DC319     | 090900samp11.CH | 117.11   | 113.522  | 2.70                  | 2.60                  | 2.65                 | 0.07             |            |
| 473         | DC321     | 090900samp12.CH | 271.134  | 290.032  | 6.91                  | 7.43                  | 7.17                 | 0.37             |            |
| 474         | DC322     | 090900samp13.CH | 279.305  | 277.176  | 7.14                  | 7.08                  | 7.11                 | 0.04             |            |
| 475         | DC323     | 090900samp14.CH | 247.265  | 243.672  | 6.26                  | 6.16                  | 6.21                 | 0.07             |            |
| 476         | DC325     | 090900samp15.CH | 186.934  | 181.584  | 4.61                  | 4.47                  | 4.54                 | 0.10             |            |
| 477         | DC327     | 090900samp16.CH | 151.399  | 151.004  | 3.64                  | 3.63                  | 3.63                 | 0.01             |            |
| 478         | DC329     | 090900samp17.CH | 126.88   | 118.6    | 2.97                  | 2.74                  | 2.86                 | 0.16             |            |
| 479         | DC331     | 090900samp18.CH | 523.048  | 531.297  | 13.80                 | 14.03                 | 13.91                | 0.16             | Seems High |
| 480         | DC333     | 090900samp19.CH | 293.882  | 297.617  | 7.54                  | 7.64                  | 7.59                 | 0.07             |            |
| 481         | DC301     | 090900samp20.CH | 259.498  | 255.459  | 6.60                  | 6.49                  | 6.54                 | 0.08             |            |
| 482         | DC302     | 090900samp21.CH | 254.7    | 241.8    | 6.46                  | 6.11                  | 6.29                 | 0.25             |            |
| 483         | DC335     | 090900samp22.CH | 247.773  | 253.126  | 6.27                  | 6.42                  | 6.35                 | 0.10             |            |
| 484         | DC337     | 090900samp23.CH | 190.56   | 190.794  | 4.71                  | 4.72                  | 4.71                 | 0.00             |            |
| 485         | DC339     | 090900samp24.CH | 1063.544 | 1055.791 | 28.58                 | 28.37                 | 28.47                | 0.15             | Seems High |
| 486         | DC341     | 090900samp25.CH | 271.504  | 278.554  | 6.92                  | 7.12                  | 7.02                 | 0.14             |            |
| 487         | DC342     | 090900samp26.CH | 259.678  | 248.202  | 6.60                  | 6.29                  | 6.44                 | 0.22             |            |
| 488         | DC343     | 090900samp27.CH | 266.253  | 270.59   | 6.78                  | 6.90                  | 6.84                 | 0.08             |            |

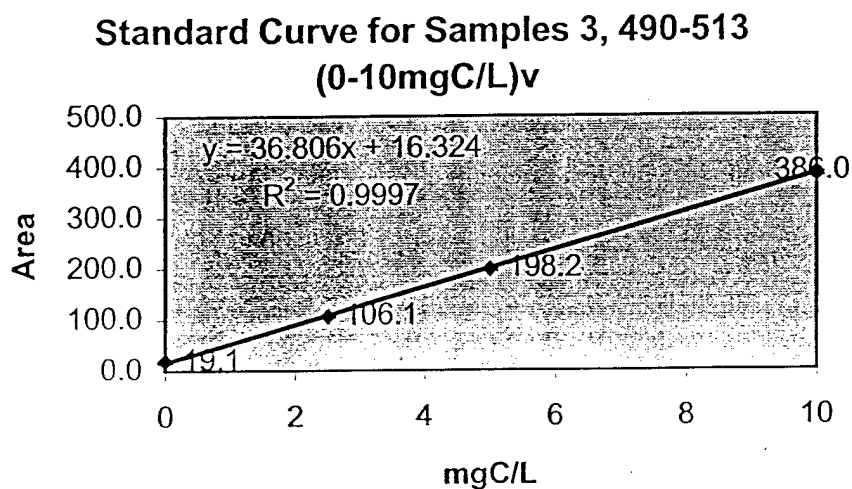
Standard Curve for Samples 464-488 (0-10mgC/L)v



Yintercept= 18.248 Slope= 36.578

## TOC Sample Data

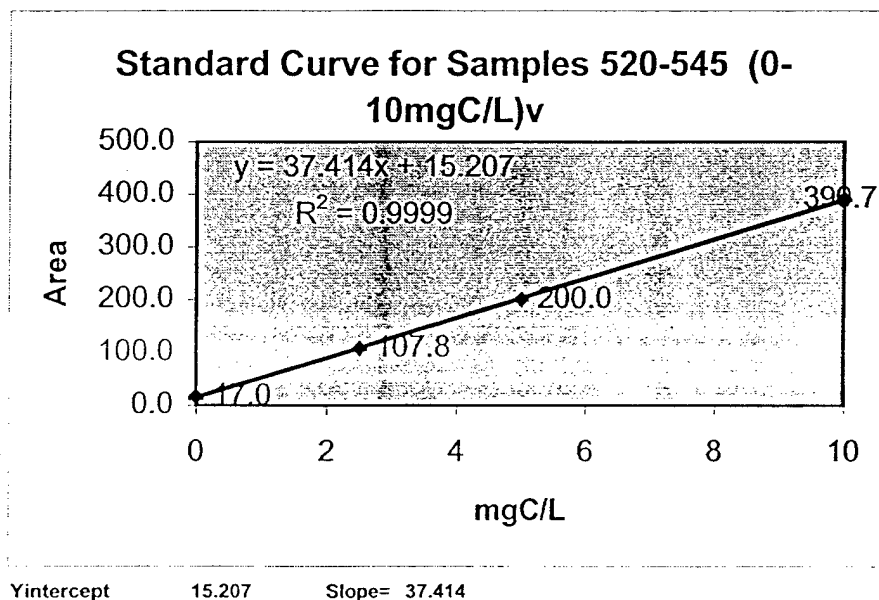
| Analysis ID | Sample ID | File             | Peak 1 | Peak 2 | Peak 1 TOC<br>(mgC/L) | Peak 2 TOC<br>(mgC/L) | Average TOC<br>mgC/L | Std Dev<br>mgC/L | Comments |
|-------------|-----------|------------------|--------|--------|-----------------------|-----------------------|----------------------|------------------|----------|
| 3           | TC346     | 091000samp09.CHR | 311.4  | 316.3  | 8.02                  | 8.15                  | 8.08                 | 0.09             |          |
| 490         | TC347     | 091000samp10.CHR | 211.7  | 198.8  | 5.31                  | 4.96                  | 5.13                 | 0.25             |          |
| 491         | TC349     | 091000samp11.CHR | 228.9  | 166.4  | 5.78                  | 4.08                  | 4.93                 | 1.20             |          |
| 492         | TC351     | 091000samp12.CHR | 350.1  | 314.6  | 9.07                  | 8.10                  | 8.59                 | 0.68             | DUPS     |
| 493         | TC352     | 091000samp12.CHR | 297.9  | 302.4  | 7.65                  | 7.77                  | 7.71                 | 0.09             | DUPS     |
| 494         | TC353     | 091000samp16.CHR | 250.4  | 299.7  | 6.36                  | 7.70                  | 7.03                 | 0.95             |          |
| 495         | TC355     | 091000samp17.CHR | 214.9  | 205.8  | 5.40                  | 5.15                  | 5.27                 | 0.17             |          |
| 496         | TC357     | 091000samp18.CHR | 165.3  | 170    | 4.05                  | 4.18                  | 4.11                 | 0.09             |          |
| 497         | TC361     | 091000samp19.CHR | 284.9  | 283.9  | 7.30                  | 7.27                  | 7.28                 | 0.02             |          |
| 498         | TC363     | 091000samp20.CHR | 302.5  | 294.9  | 7.78                  | 7.57                  | 7.67                 | 0.15             |          |
| 499         | TC365     | 091000samp21.CHR | 288.1  | 277.8  | 7.38                  | 7.10                  | 7.24                 | 0.20             | DUPS     |
| 500         | TC367     | 091000samp22.CHR | 243.6  | 240.3  | 6.18                  | 6.09                  | 6.13                 | 0.06             | DUPS     |
| 501         | TC371     | 091000samp23.CHR | 281.2  | 284.6  | 7.20                  | 7.29                  | 7.24                 | 0.07             |          |
| 502         | TC372     | 091000samp24.CHR | 274.9  | 275.2  | 7.03                  | 7.03                  | 7.03                 | 0.01             |          |
| 503         | TC373     | 091000samp25.CHR | 289.9  | 294.5  | 7.43                  | 7.56                  | 7.50                 | 0.09             |          |
| 504         | TC375     | 091000samp26.CHR | 255.5  | 255.1  | 6.50                  | 6.49                  | 6.49                 | 0.01             |          |
| 505         | TC377     | 091000samp27.CHR | 205.9  | 178.9  | 5.15                  | 4.42                  | 4.78                 | 0.52             |          |
| 506         | TC379     | 091200samp01     | 159.07 | 152.21 | 3.88                  | 3.69                  | 3.79                 | 0.13             | DUPS     |
| 507         | TC381     | 091200samp02     | 144.84 | 133.5  | 3.49                  | 3.18                  | 3.34                 | 0.22             | DUPS     |
| 508         | TC383     | 091200samp03     | 272.71 | 275.78 | 6.97                  | 7.05                  | 7.01                 | 0.06             |          |
| 509         | TC385     | 091200samp04     | 266.76 | 266.45 | 6.80                  | 6.80                  | 6.80                 | 0.01             |          |
| 510         | TC387     | 091200samp05     | 202.13 | 200.82 | 5.05                  | 5.01                  | 5.03                 | 0.03             |          |
| 511         | TC389     | 091200samp06     | 175.6  | 170.17 | 4.33                  | 4.18                  | 4.25                 | 0.10             |          |
| 512         | TC391     | 091200samp07     | 276.32 | 286.21 | 7.06                  | 7.33                  | 7.20                 | 0.19             |          |
| 513         | TC392     | 091200samp08     | 268.87 | 271.94 | 6.86                  | 6.95                  | 6.90                 | 0.06             |          |



Yintercept 16.32 Slope= 36.806

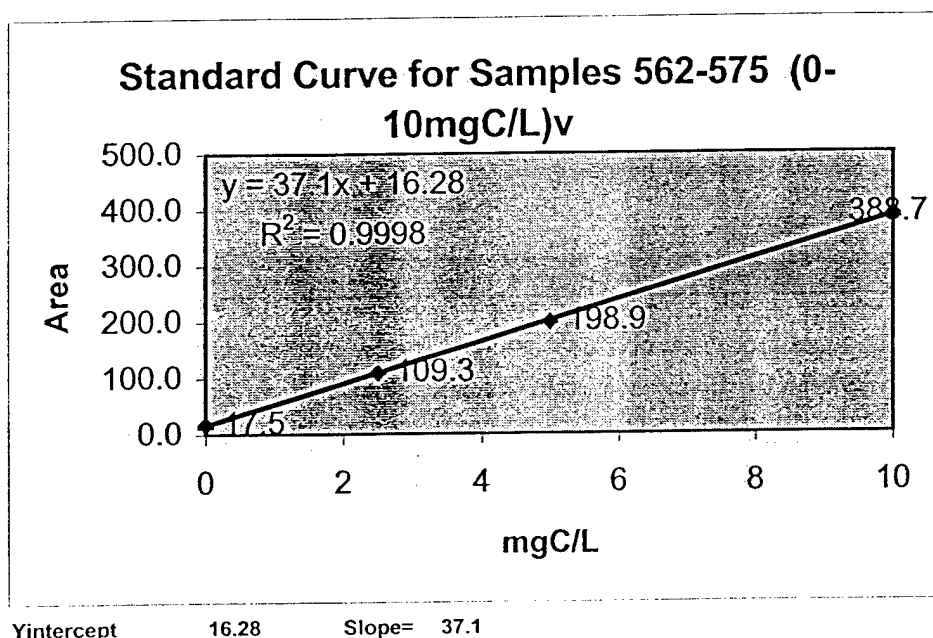
# TOC Sample Data

| Analysis ID | Sample ID | File             | Peak 1 | Peak 2 | Peak 1 TOC<br>(mgC/L) | Peak 2 TOC<br>(mgC/L) | Average TOC<br>mgC/L | Std Dev<br>mgC/L | Comments |
|-------------|-----------|------------------|--------|--------|-----------------------|-----------------------|----------------------|------------------|----------|
| 520         | DC346     | 091200samp23.CHR | 266.8  | 268.39 | 6.72                  | 6.77                  | 6.75                 | 0.03             |          |
| 521         | DC347     | 091200samp24.CHR | 154.73 | 146.76 | 3.73                  | 3.52                  | 3.62                 | 0.15             |          |
| 522         | DC349     | 091200samp25.CHR | 128.22 | 120.88 | 3.02                  | 2.82                  | 2.92                 | 0.14             |          |
| 523         | DC351     | 091200samp26.CHR | 234.25 | 244.2  | 5.85                  | 6.12                  | 5.99                 | 0.19             |          |
| 524         | DC352     | 091200samp27.CHR | 246.21 | 245.15 | 6.17                  | 6.15                  | 6.16                 | 0.02             | DUPS     |
| 525         | DC353     | 091200samp28.CHR | 229.2  | 232    | 5.72                  | 5.79                  | 5.76                 | 0.05             | DUPS     |
| 526         | DC355     | 091200samp29.CHR | 174.75 | 171.84 | 4.26                  | 4.19                  | 4.23                 | 0.05             |          |
| 527         | DC357     | 091200samp30.CHR | 147.34 | 143.78 | 3.53                  | 3.44                  | 3.48                 | 0.07             |          |
| 528         | DC361     | 091200samp31.CHR | 527.58 |        | 13.69                 |                       | 13.69                | #DIV/0!          |          |
| 529         | DC363     | 091200samp32.CHR | 835.96 | 825.56 | 21.94                 | 21.66                 | 21.80                | 0.20             |          |
| 530         | DC365     | 091200samp33.CHR | 794.16 | 784.67 | 20.82                 | 20.57                 | 20.69                | 0.18             |          |
| 531         | DC367     | 091200samp34.CHR | 800.05 | 799.65 | 20.98                 | 20.97                 | 20.97                | 0.01             | DUPS     |
| 532         | DC369     | 091200samp35.CHR | 813.95 | 796.41 | 21.35                 | 20.88                 | 21.11                | 0.33             | DUPS     |
| 533         | DC371     | 091200samp36.CHR | 250.98 | 243.91 | 6.30                  | 6.11                  | 6.21                 | 0.13             |          |
| 534         | DC372     | 091200samp37.CHR | 360.12 | 360.72 | 9.22                  | 9.23                  | 9.23                 | 0.01             |          |
| 535         | DC373     | 091200samp38.CHR | 268.69 | 272.44 | 6.78                  | 6.88                  | 6.83                 | 0.07             |          |
| 536         | DC375     | 091200samp39.CHR | 232.06 | 228.9  | 5.80                  | 5.71                  | 5.75                 | 0.06             |          |
| 537         | DC377     | 091200samp40.CHR | 169.2  | 167.49 | 4.12                  | 4.07                  | 4.09                 | 0.03             |          |
| 538         | DC379     | 091200samp41.CHR | 138.91 | 135.89 | 3.31                  | 3.23                  | 3.27                 | 0.06             |          |
| 539         | DC381     | 091200samp42.CHR | 128.89 | 129.01 | 3.04                  | 3.04                  | 3.04                 | 0.00             |          |
| 540         | DC383     | 091200samp43.CHR | 258.09 | 261.02 | 6.49                  | 6.57                  | 6.53                 | 0.06             |          |
| 541         | DC385     | 091200samp44.CHR | 243.25 | 244.12 | 6.10                  | 6.12                  | 6.11                 | 0.02             |          |
| 542         | DC387     | 091200samp45.CHR | 177.64 | 173.47 | 4.34                  | 4.23                  | 4.29                 | 0.08             |          |
| 543         | DC389     | 091200samp46.CHR | 160.64 | 155.63 | 3.89                  | 3.75                  | 3.82                 | 0.09             |          |
| 544         | DC391     | 091200samp47.CHR | 272.12 | 272.97 | 6.87                  | 6.89                  | 6.88                 | 0.02             |          |
| 545         | DC392     | 091200samp48.CHR | 250.98 | 251.93 | 6.30                  | 6.33                  | 6.31                 | 0.02             |          |



# TOC Sample Data

| Analysis ID | Sample ID | File            | Peak 1 | Peak 2 | Peak 1 TOC<br>(mgC/L) | Peak 2 TOC<br>(mgC/L) | Average TOC<br>mgC/L | Std Dev<br>mgC/L | Comments |
|-------------|-----------|-----------------|--------|--------|-----------------------|-----------------------|----------------------|------------------|----------|
| 562         | TC395     | 91200bsamp02.CH | 288.51 | 278.72 | 7.34                  | 7.07                  | 7.21                 | 0.19             |          |
| 563         | TC397     | 91200bsamp03.CH | 232.05 | 225.39 | 5.82                  | 5.64                  | 5.73                 | 0.13             | DUPS     |
| 564         | TC399     | 91200bsamp04.CH | 162.16 | 147.66 | 3.93                  | 3.54                  | 3.74                 | 0.28             | DUPS     |
| 565         | TC3101    | 91200bsamp05.CH | 302.06 | 298.93 | 7.70                  | 7.62                  | 7.66                 | 0.06             |          |
| 566         | TC3102    | 91200bsamp06.CH | 314.64 | 301.93 | 8.04                  | 7.70                  | 7.87                 | 0.24             |          |
| 567         | TC3103    | 91200bsamp07.CH | 299.14 | 301.57 | 7.62                  | 7.69                  | 7.66                 | 0.05             |          |
| 568         | TC3105    | 91200bsamp08.CH | 278.74 | 272.8  | 7.07                  | 6.91                  | 6.99                 | 0.11             |          |
| 569         | TC3107    | 91200bsamp09.CH | 263.38 | 273.7  | 6.66                  | 6.94                  | 6.80                 | 0.20             |          |
| 570         | TC3109    | 91200bsamp10.CH | 194.5  | 192.19 | 4.80                  | 4.74                  | 4.77                 | 0.04             |          |
| 571         | TC3111    | 91200bsamp12.CH | 285.97 | 293.72 | 7.27                  | 7.48                  | 7.37                 | 0.15             |          |
| 572         | TC3113    | 91200bsamp13.CH | 280.51 | 275.57 | 7.12                  | 6.99                  | 7.06                 | 0.09             |          |
| 573         | TC3115    | 91200bsamp14.CH | 241.61 | 237.74 | 6.07                  | 5.97                  | 6.02                 | 0.07             |          |
| 574         | TC3117    | 91200bsamp15.CH | 182.11 | 178.55 | 4.47                  | 4.37                  | 4.42                 | 0.07             |          |
| 575         | TC3119    | 91200bsamp16.CH | 143.53 | 135.99 | 3.43                  | 3.23                  | 3.33                 | 0.14             |          |



| SAMPLE ID | TKN mg/l | SAMPLE ID | TKN mg/l |
|-----------|----------|-----------|----------|
| K396      | 0.88     | K390      | 2.73     |
| K383      | 0.95     | K3113     | 0.85     |
| 388A      | 0.96     | K3106     | 1.23     |
| 3108      | 0.90     | K3107     | 1.37     |
| 395       | 0.86     | K3119     | 0.99     |
| 3105      | 0.74     | K3117     | 1.13     |
| K360      | 0.71     | K342      | 0.88     |
| 3104      | 1.11     | K368      | 0.76     |
| K384      | 1.01     | K339      | 1.18     |
| K389A     | 0.90     | K373      | 0.96     |
| K382      | 0.72     | K3100     | 1.18     |
| 3101      | 1.05     | K372      | 0.77     |
| K385      | 0.93     | K3114     | 0.86     |
| K340      | 0.72     | K391      | 0.97     |
| K389B     | 0.56     | K352      | 1.09     |
| K388B     | 1.17     | K354      | 1.07     |
| K386      | 1.29     | K375      | 0.67     |
| K387      | 1.23     | K376      | 1.12     |

Event 3

| SAMPLE ID | TKN mg/l | SAMPLE ID | TKN mg/l             |
|-----------|----------|-----------|----------------------|
| K348      | 1.21     | K306      | 0.73                 |
| K329      | 0.97     | K326      | 0.55                 |
| K379      | 1.03     | K310      | 1.20                 |
| K321      | 1.23     | K314      | 1.71                 |
| K347      | 1.21     | K336      | 0.82                 |
| K353      | 0.67     | K331      | 1.15                 |
| K355      | 0.84     | K301      | 0.90                 |
| K3116     | 1.28     | K367      | 1.12                 |
| K327      | 1.01     | K365      | 1.31                 |
| K316      | 0.88     | K337      | 0.92                 |
| K330      | 1.14     | K322      | 1.01                 |
| K308      | 1.13     | K319      | 1.06                 |
| K364      | 1.13     | K302      | 1.33                 |
| K346      | 0.98     | K317      | <del>1.23</del> 0.97 |
| K328      | 1.30     | K307      | 1.23                 |
| K359      | 1.28     |           |                      |
| K349      | 1.14     |           |                      |
| K312      | 0.56     |           |                      |
| K300      | 1.28     |           |                      |