Georgia-Pacific

Georgia-Pacific LLC

133 Peachtree Street NE (30303-1847)
P.O. Box 105605
Atlanta, Georgia 30348-5605
(404) 652-6166 (404) 654-4701 fax

March 22, 2013

Mr. David K. Reuland
Unit Coordinator
Response and Remediation Program
Georgia Environmental Protection Division
2 Martin Luther King, Jr. Drive, SE, Suite 1462
Atlanta, Georgia 30334

Re: Second Semi-Annual Progress Report
Georgia-Pacific LLC – Former Chlorate Plant, Brunswick Site
Brunswick, Glynn County, Georgia
HSI Site No. 10619

Dear Mr. Reuland:

Enclosed are one paper copy and two (2) compact disc (CD) copies, in a searchable PDF format, of the Second Semi-Annual Progress Report for the Georgia-Pacific LLC – Former Chlorate Plant, Brunswick Site in Brunswick, Glynn County, Georgia. This progress report covers the period from September 2012 through February 2013 and is being submitted as described in the approved Voluntary Remediation Plan (VRP), dated October 2011.

Based on the information provided in this report, Georgia-Pacific LLC believes that the Site meets the requirements for compliance with site specific cleanup standards set forth in the Georgia Voluntary Remediation Program and requests concurrence from Georgia EPD to allow termination of groundwater monitoring and submittal of the Compliance Status Report Update.

Please feel free to contact me if you have any questions or need additional information at lcforten@gapac.com or (404)652-6166.

Sincerely,

L. Chase Fortenberry, P.G.
Manager – Environmental Engineering

Attachments: Second Semi-Annual Progress Report

SECOND SEMI-ANNUAL PROGRESS REPORT

FORMER CHLORATE PLANT SITE
1400 WEST NINTH STREET
BRUNSWICK, GLYNN COUNTY, GEORGIA
HSI SITE NUMBER 10619

PREPARED FOR:

BRUNSWICK CELLULOSE, INC.
1400 WEST NINTH STREET
BRUNSWICK, GEORGIA, 31520

and

GEORGIA-PACIFIC LLC
133 PEACHTREE STREET
ATLANTA, GEORGIA, 30303

PREPARED BY:

EARTHCON CONSULTANTS, INC.
1880 WEST OAK PARKWAY
BUILDING 100, SUITE 106
MARIETTA, GEORGIA, 30062
770-973-2100

EarthCon Project No. 02.20060163

March 2013

Contents

PG CERTIFICATION ii
1.0 INTRODUCTION 3
2.0 SUMMARY OF SITE ACTIVITIES 3
2.1 Document Submittals 3
2.2 Quarterly Groundwater Sampling 3
2.3 Groundwater Modeling 5
3.0 CONCEPTUAL SITE MODEL 5
3.1 Groundwater Flow 5
3.2 Groundwater Delineation 6
3.3 Point of Exposure for Groundwater 6
3.4 Modeling Results 7
3.4.1 Point of Exposure – Eastern Property Boundary 7
3.4.2 Point of Exposure – Turtle River 8
4.0 SUMMARY AND RECOMMENDATIONS 9
5.0 MONTHLY INVOICE SUMMARY 10

TABLES

Table 1 Summary of Water Level Measurements
Table 2 Summary of Groundwater Analytical Results – FCP Area
Table 3 Summary of Groundwater Analytical Results – BCI Mill Area
Table 4 Summary of BIOSCREEN Model Results
Table 5 Projected Maximum Constituent Concentrations in Turtle River
Table 6 Revised Milestone Schedule
Table 7 Summary of Monthly Invoices

FIGURES

Figure 1 Potentiometric Surface Map – February 2013
Figure 2 Summary of Constituents in Groundwater Above Delineation Criteria

APPENDICES

Appendix A Summary of Field Procedures
Appendix B Laboratory Analytical Results
Appendix C Groundwater Modeling Results

PG CERTIFICATION

"I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Carol Northern

Carol D. Northern, P.G.
Principal Geologist

Registration No. 793
State of Georgia

Date: 3/22/13

1.0 INTRODUCTION

The Voluntary Investigation and Remediation Plan Application (VIRP) for the Brunswick Cellulose, Inc. (BCI) Pulp Mill, located at 1400 West Ninth Street in Brunswick, Glynn County, Georgia (HSI Site #10619) was submitted to the Georgia EPD on October 4, 2011. BCI is a wholly owned subsidiary of Georgia-Pacific LLC (GP). The VIRP was approved in a letter dated March 26, 2012. This Second Semi-Annual Progress Report provides a summary of activities conducted at the site from September 2012 through February 2013.

2.0 SUMMARY OF SITE ACTIVITIES

As described in the Voluntary Remediation Plan, corrective action for soils will be limited to recording of property notices and an annual site reconnaissance. Corrective action for groundwater will consist of institutional controls, groundwater monitoring and groundwater modeling. Activities conducted from September 2012 through February 2013 are described in the following sections.

2.1 Document Submittals

Institutional controls will be used to eliminate possible groundwater exposure pathways. To accomplish this, BCI/GP submitted an Environmental Covenant in conformance with the Georgia Environmental Covenants Act to the Georgia EPD on June 8, 2012. On August 31, 2012, Georgia EPD provided BCI/GP with comments to the Environmental Covenant. BCI/GP provided a response to comments on September 6, 2012. BCI/GP is currently awaiting a response from Georgia EPD.

As required by the approved Voluntary Remediation Plan, dated October 2011, a site reconnaissance was conducted on January 28, 2013 to confirm that the site remains in compliance with non-residential RRS for soils. The *Site Use and Non-Residential Soil RRS Monitoring Evaluation Form*, which demonstrates compliance with Section 391-3-19-.07(8) of the Rules for Hazardous Site Response, was submitted to Georgia EPD on January 30, 2013.

2.2 Quarterly Groundwater Sampling

Groundwater sampling activities were conducted as described in the approved Voluntary Remediation Plan dated October 2011. Groundwater samples were collected during two quarterly sampling events conducted in November 2012 and February 2013. A complete description of the

field activities is provided in Appendix A. The laboratory analytical results are provided as Appendix B. A summary of the field activities is provided below.

Third Quarterly Sampling Event – November 2012

Groundwater samples were collected from 20 monitoring wells from November 5 to November 8, 2012. Groundwater samples collected from seven wells located in the Former Chlorate Plant (FCP) area (CPW-1, CPW-3, CPW-4, CPW-7, CPW-10, CPW-13, and CPW-14) were analyzed for chromium using EPA Method 6020A. Groundwater samples collected from four wells located in the Trailer Parking Lot (LOC06B-MW-01, LOC06-MW-01D, LOC06-MW-02 and LOC06-MW-04) were analyzed for arsenic, chromium, and nickel using EPA Method 6020A. Groundwater samples collected from eight wells located in the Process Area (LOC11D-MW-01, LOC11B-MW-02, LOC11B-MW-02D, LOC11B-MW-05, LOC11-MW-07, LOC11-MW-08, LOC11-MW-09 and LOC11-MW-10) and background well LOC17B-MW-01 were analyzed for benzene, select SVOCs, and select metals using EPA Methods 8260B, 8270C, and 6020A, respectively.

Groundwater samples could not be collected from four monitoring wells that were included in the Remediation Plan. Process Area well LOC11D-MW-04 was abandoned by filling with concrete during facility construction activities. Similarly, Process Area well LOC11B-MW-06 and FCP area well CPW-5 are under newly poured concrete pads. Process Area well LOC11D-MW-03 was inaccessible during this sampling event.

Monitoring wells CPW-5, LOC11D-MW-04 and LOC11B-MW-06 have been removed from the sampling program. Well LOC11D-MW-03 was sampled on November 23, 2012.

Fourth Quarterly Sampling Event

Groundwater samples were collected from 21 monitoring wells from February 4 to 6, 2013. Groundwater samples collected from seven wells located in the Former Chlorate Plant (FCP) area (CPW-1, CPW-3, CPW-4, CPW-7, CPW-10, CPW-13, and CPW-14) were analyzed for chromium using EPA Method 6020A. Groundwater samples collected from four wells located in the Trailer Parking Lot (LOC06B-MW-01, LOC06-MW-01D, LOC06-MW-02 and LOC06-MW-04) were analyzed for arsenic, chromium, and nickel using EPA Method 6020A. Groundwater samples collected from nine wells located in the Process Area (LOC11D-MW-01, LOC11B-MW-02, LOC11B-

MW-02D, LOC11D-MW-03, LOC11B-MW-05, LOC11-MW-07, LOC11-MW-08, LOC11-MW-09, LOC11-MW-10) and background well LOC17B-MW-01 were analyzed for benzene, select SVOCs, and select metals using EPA Methods 8260B, 8270C, and 6020A, respectively.

2.3 Groundwater Modeling

Groundwater modeling was conducted using the data collected during the four quarterly monitoring events. The analytical model BIOSCREEN was used to simulate subsurface transport and to determine the length of time it would take each constituent to reach a down-gradient point of exposure (POE). BIOSCREEN, an EPA supported software programmed in the Microsoft Excel spreadsheet environment, is based on the Domenico analytical solute transport model and is used to help simulate remediation through natural attenuation. A discharge calculation was also used to evaluate the effect of constituent migration into the Turtle River. The BIOSCREEN model input and results, figures used to determine plume length, and the Turtle River discharge calculations are provided in Appendix C.

3.0 CONCEPTUAL SITE MODEL

A preliminary Conceptual Site Model (CSM) was provided as Section 4.0 of the approved Voluntary Remediation Plan, dated October 2011. As described in the following sections, the groundwater flow direction and groundwater constituent concentrations are consistent with historical results. Additionally, with submittal of the Environmental Covenant, the possibility of exposure to site groundwater through drinking water wells has been eliminated. Therefore, the Conceptual Site Model has not been updated.

3.1 Groundwater Flow

Water level elevation measurements are provided in Table 1. The water level measurements collected on February 4, 2013 were used to develop a potentiometric surface map for the Site. As shown on Figure 1, an area of higher water level elevations extends through the center of the Mill facility. Groundwater flow east of this "high" point is locally to the east toward the aeration stabilization basin (ASB) and other components of the waste water treatment system. Groundwater flow west of this "high" point is to the west toward the Turtle River. Current groundwater flow is consistent with historic groundwater flow.

3.2 Groundwater Delineation

Horizontal and vertical delineation of constituents detected in groundwater were presented in Section 5.2 of the Revised Compliance Status Report, dated April 2010 (revision dated December 2010) which was approved by Georgia EPD in a letter dated June 30, 2011. As described in the CSR, constituents of concern are present in the surficial aquifer only and the vertical extent of regulated substances in groundwater has been defined.

A summary of the concentrations of constituents detected in the Former Chlorate Plant (FCP) area and the BCI Mill Facility area are provided in Tables 2 and 3, respectively. Figure 2 shows the horizontal extent of locations at the Site with concentrations of regulated substances in surficial groundwater that exceed the delineation criteria.

The concentrations and locations of the constituents detected during the four quarterly monitoring events are consistent with previous detections. Therefore, the horizontal extent of regulated substances in surficial groundwater has been confirmed and, as shown on Figure 2, is confined to an area within the facility property boundary.

3.3 Point of Exposure for Groundwater

The Georgia Voluntary Remediation Program allows demonstration of compliance with site-specific clean-up standards based on fate and transport modeling as long as concentrations of site-specific constituents of concern in groundwater are shown to be protective of any established down-gradient point of exposure (POE). The POE is defined as the nearest of the following:

1) closest existing down gradient drinking water supply well;
2) likely nearest future location of a down gradient drinking water supply well; or
3) hypothetical point of drinking water exposure located at a distance of 1,000 feet down gradient from the delineated site contamination

As described in the approved Voluntary Remediation Plan, there are no drinking water wells installed in the Surficial Aquifer within a ¼ mile radius of the Site. Additionally, BCI/GP has submitted an Environmental Covenant to Georgia EPD which, when executed, will restrict the use of surficial groundwater at the BCI Mill Property to non-potable uses only. Since the delineated groundwater

contamination is located within the center of the BCI Mill property and installation of drinking water wells in the Surficial Aquifer will be prohibited, the POE for groundwater is determined to be the BCI Mill property boundary.

As shown on Figure 1, groundwater flow on the western side of the Site is toward the Turtle River. Therefore, the Turtle River was also evaluated as a potential groundwater POE.

3.4 Modeling Results

The BIOSCREEN model was used to evaluate constituent migration to the down gradient POE. As shown on Figure 1, an area of higher water level elevations extends through the center of the Mill facility. Constituents present on the east side of the Site would potentially flow towards the ASB or to the eastern property boundary while those present on the west side of the site would potentially flow towards the Turtle River.

For purposes of the model, a groundwater plume was developed for each constituent for each area (FCP, Trailer Parking Lot, and Process) based on the maximum concentration detected in that area during the four quarterly sampling events. Since the delineated site contamination is greater than one thousand feet from the property line in all directions, the assumed down gradient POE for constituents present east of the center high is the eastern property boundary. When a plume extended on both sides of the center high, the plume was modeled in both directions; towards the Turtle River and to the eastern property line.

3.4.1 Point of Exposure – Eastern Property Boundary

Groundwater flow in the FCP Area is to the east toward the eastern property boundary. The distance from the edge of the chromium plume to the eastern property is approximately 2,100 feet. As presented in Table 4, it will take more than 9,000 years for chromium in FCP groundwater to travel to the eastern property boundary. This is primarily based on the very high soil/groundwater partition coefficients for chromium.

Groundwater within the Process Area flows both east and west as shown on Figure 1. However, only four constituents (naphthalene, phenanthrene, chromium, and nickel) are present in the Process Area at locations with groundwater flow toward the eastern property boundary. The distance from the plume

boundary to the eastern property line is approximately 2,000 feet. As presented in Table 4, travel times for these constituents range from 2,000 years for naphthalene to greater than 10,000 years for the remaining constituents.

Groundwater flow in the Trailer Parking Lot is to the west toward the Turtle River. Therefore, constituents present in the Trailer Parking Lot do not impact the eastern property boundary POE.

3.4.2 Point of Exposure – Turtle River

All of the constituents detected within the Trailer Parking Lot and Process Area are present at locations with groundwater flow towards the Turtle River. The distance from the plume boundaries to the Turtle River for constituents in the Trailer Parking Lot was approximately 50 feet, while the distance from the Process Area plumes ranged from 150 to 650 feet. As presented in Table 4, travel times for constituents present in the Trailer Parking Lot range from 500 years for chromium to greater than 1,500 years for nickel.

Benzene was detected in the Process Area at only one location and has the shortest travel time of 50 years. Travel times for other constituents present in the Process Area range from 350 years for naphthalene to more than 10,000 years for 4-methylphenol and lead.

Discharge calculations were conducted for each constituent present in the Trailer Parking Lot Area and the Process Area to verify that the constituent concentrations in the Turtle River would not exceed In Stream Water Quality Standards (ISWQS) published by Georgia EPD. Because the Turtle River is tidal, USGS flow data is not available. At the recommendation of Ms. Liz Booth of the Georgia EPD, Turtle River flow data was obtained from Mr. Brian Watson of TetraTech (Appendix C). Based on the data provided by Mr. Watson, the maximum flow rate in the Turtle River from January 1, 1998 to December 31, 2007 was 6,750 cubic feet per second (cfs) while the average flow rate was calculated to be 45 cfs.

For each detected constituent, the maximum concentration detected during the four quarterly sampling events was assumed to discharge directly into the Turtle River. Plume lengths were determined from the figures provided in Appendix C. For constituents detected at only one location, a plume length of

100 feet was assumed. The vertical thickness of each contaminated plume was assumed to be 25 feet.

Three of the constituents detected in the Process Area (4-methylphenol, naphthalene and phenanthrene) do not have ISWQS. Four additional constituents (benzene, antimony, arsenic, and lead) were present at concentrations below their respective ISWQS. Therefore, only chromium, mercury and nickel were evaluated. As shown in Table 5, the dilution concentrations for chromium and nickel, at the average flow rate of 45 cfs, are below their respective ISWQS while the dilution concentration for mercury is slightly above its ISWQS. Mercury was detected in the Process Area only once during the four quarterly sampling events. Under the very conservative assumption that the observed concentration of mercury would enter the Turtle River with an assumed plume length of 100 feet the maximum river concentration (0.000026 mg/L) would be slightly above the ISWQS (0.000025 mg/L). Additionally, the BIOSCREEN model shows that, without degradation, the travel time for mercury to reach the Turtle River is more than 9,000 years; therefore mercury in Process Area groundwater does not adversely impact the Turtle River.

As shown in Table 5, the dilution concentrations for arsenic and chromium from the Trailer Parking Lot Area, at the average flow rate of 45 cfs are below their respective ISWQS while the maximum potential river concentration for nickel (0.0173 mg/L) is above its ISWQS (0.0083 mg/L). However, based on the BIOSCREEN model results, with no degradation, the travel time for nickel to reach the Turtle River is greater than 1,500 years. Therefore, nickel in the Trailer Parking Lot Area groundwater does not adversely impact the Turtle River.

4.0 SUMMARY AND RECOMMENDATIONS

As described in Section 3.2, the horizontal extent of constituents in groundwater above delineation criteria has been defined. Additionally, as demonstrated by the analytical results for the four quarterly sampling events (Tables 2 and 3), the constituent concentrations have remained relatively stable.

Results of the groundwater model demonstrate that travel times for the detected constituents are extremely slow. Therefore, the existing groundwater concentrations are protective of the down-gradient POE. Additionally, constituent concentrations do not adversely impact the Turtle River.

Based on the information provided in this report, BCI/GP believes that the Site meets the requirements for compliance with site-specific cleanup standards set forth in the Georgia Voluntary Remediation Program and recommends that groundwater monitoring be terminated and the Compliance Status Report Update be submitted. A revised Schedule which reflects this recommendation is provided in Table 6.

5.0 MONTHLY INVOICE SUMMARY

Georgia EPD requires that the professional engineer/geologist specified in the VIRP oversee the implementation of the VIRP in accordance with the provisions, purposes, standards and policies of the Georgia Voluntary Remediation Program Act. During the 6-month period from September 1, 2012 to February 28, 2013, Ms. Carol Northern, P.G. invoiced 60.5 hours on this project. A monthly summary of hours invoiced and a description of services provided is shown in Table 7.

TABLES

Table 1: Summary of Water Level Measurements

Well ID	Top of Casing (ft above MSL)	Ground Surface (ft above MSL)	November 5, 2012 Depth to Water (ft)	November 5, 2012 Potentiometric Elevations	February 4, 2013 Depth to Water (ft)	February 4, 2013 Potentiometric Elevations
Area 2 Landfill						
GWC-01	9.63	--	6.26	3.37	6.90	2.73
GWC-02	12.22	--	8.58	3.64	8.57	3.65
GWC-03	11.49	--	5.83	5.66	5.84	5.65
Area 5 Landfill						
GWC-04[1]	16.47	--	11.36	5.11	11.55	4.92
GWC-13	20.59	17.55	17.39	3.20	19.44	1.15
GWC-14	12.13	8.98	6.69	5.44	5.30	6.83
Former Chlorate Plant Area						
CPW-1	9.31	9.61	2.01	7.30	1.57	7.74
CPW-2	9.90	10.10	2.21	7.69	1.77	8.13
CPW-3	12.11	9.59	4.78	7.33	4.58	7.53
CPW-4	11.97	9.39	4.68	7.29	4.28	7.69
CPW-5	12.82	10.32	Well under concrete			
CPW-6	9.60	9.82	1.71	7.89	1.1	8.50
CPW-7	11.59	9.29	5.01	6.58	4.73	6.86
CPW-8	9.66	10.13	1.54	8.12	1.1	8.56
CPW-9	9.46	9.94	1.31	8.15	1.1	8.36
CPW-10	13.59	11.15	7.03	6.56	6.73	6.86
CPW-11	11.69	9.36	5.14	6.55	4.96	6.73
CPW-12	11.88	9.40	6.40	5.48	6.76	5.12
CPW-13	9.56	10.13	1.28	8.28	0.98	8.58
CPW-14	12.89	10.40	5.38	7.51	5.18	7.71
BCI Mill Facility Wells						
LOC01B-MW-01	11.44	8.18	Well damaged; can't get WL indicator past 5 feet			
LOC02B-MW-01	11.73	8.41	6.64	5.09	6.58	5.15
LOC04B-MW-01	9.65	6.22	6.08	3.57	6.13	3.52
LOC04C-MW-01	NM	NM	6.51	--	6.61	--
LOC04B-MW-03	11.00	8.39	3.30	7.70	3.16	7.84
LOC05B-MW-01	15.40	10.37	9.54	5.86	9.43	5.97
LOC05C-MW-01	15.45	10.39	9.52	5.93	9.38	6.07
LOC6B-MW-01	24.63	19.74	20.61	4.02	20.65	3.98
LOC6-MW-01D[2]	20.97	20.91	19.51	1.46	22.57	-1.60
LOC6-MW-01DA[2]	21.19	21.15	18.44	2.75	21.03	0.16
LOC6C-MW-01	24.67	19.78	11.59	13.08	20.62	4.05
LOC6-MW-02	16.95	16.88	13.08	3.87	13.23	3.72
LOC6-MW-03	8.13	7.97	4.79	3.34	4.02	4.11
LOC6-MW-04	7.80	7.83	4.08	3.72	4.10	3.70
LOC7B-MW-01[3]	13.02	10.07	8.62	4.40	8.13	4.89
LOC11D-MW-01[2]	5.64	5.87	3.42	2.22	6.53	-0.89
LOC11B-MW-02	5.51	5.62	1.20	4.31	1.37	4.14
LOC11B-MW-02D[2]	5.47	5.60	5.62	-0.15	5.89	-0.42
LOC11B-MW-02DA[2]	5.47	5.56	6.27	-0.80	6.44	-0.97
LOC11D-MW-03[2]	13.30	8.12	4.53	8.77	4.82	8.48
LOC11D-MW-04	NA	6.43	Well abandoned			
LOC11B-MW-05	8.52	8.81	1.41	7.11	2.37	6.15
LOC11B-MW-06	5.47	5.65	Well under concrete			
LOC11-MW-07	8.11	8.05	3.42	4.69	3.28	4.83
LOC11-MW-08	7.58	7.79	3.22	4.36	3.57	4.01
LOC11-MW-09	8.54	8.60	1.54	7.00	1.21	7.33
LOC11-MW-10	9.03	9.20	1.44	7.59	1.03	8.00
Background Wells						
LOC17B-MW-01	0.30	0.49	2.08	-1.78	2.55	-2.25
LOC18B-MW-01	9.53	4.21	6.28	3.25	5.85	3.68

Notes:
[1]Removed 0.22 feet of casing during May sampling event; change reflected in TOC elevation
[2]Elevation not used to develop potentiometric surface map
[3]Well casing repaired in July 2012; new TOC based on measurement of 2.95 feet of stickup from concrete pad

Table 2: Summary of Groundwater Analytical Results - FCP Area

Well Location	Jul-99	Dec-99	Jun-00	Sep-00	Dec-00	Jan-01	Apr-01	Sep-01	Mar-02	Jul-02	Nov-02	Mar-06	Jul-06	Sep-06	Dec-09	May-12	Aug-12	Nov-12	Feb-13
CPW-1	**1.7**	**1.4**	**0.31**	**0.38**	**0.28**	--	**0.35**	**0.29**	**0.29**	**0.17**	**0.16**	**0.13**	--	--	--	**0.72**	**0.99**	**1.2**	**0.7**
CPW-2	0.044	<0.01	0.029	0.067	0.026	--	0.025	0.028	0.051	0.019	<0.01	na	na	na	na	na	na	na	na
CPW-3	0.033	0.098	0.077	0.037	0.039	--	0.054	0.053	<0.01	**0.16**	**0.17**	**0.48**	--	--	--	**0.45**	**0.36**	**0.87**	**0.57**
CPW-4	--	**2.2**	0.085	0.097	0.043	--	0.019	0.052	0.026	0.027	0.035	**0.72**	--	--	--	**0.11J**	<0.1	0.017J	**0.13**
CPW-5	--	**0.52**	**0.25**	**0.21**	**0.23**	--	**0.14**	**0.22**	**0.15**	0.087	0.071	0.067	--	--	--	na	na	na	na
CPW-6	--	**0.27**	0.086	0.092	0.064	--	0.039	0.049	0.045	0.016	0.051	--	0.1	--	--	--	--	--	--
CPW-7	--	**3.5**	**2.1**	**3**	**3.8**	--	**3.8**	**5.5**	**0.64**	**1.6**	**3**	**5.5**	--	--	--	**26**	**19**	**26**	**15**
CPW-8	--	0.054	0.1	0.025	**0.13**	--	0.1	0.074	0.036	0.011	0.022	--	0.014	--	--	--	--	--	--
CPW-9	--	0.067	0.055	0.37	0.071	--	0.02	0.039	0.036	0.015	0.091	0.05	--	--	0.062	--	--	--	--
CPW-10	--	0.061	0.038	0.061	0.07	--	0.08	0.069	0.072	0.024	0.024	--	**1.4**	--	--	**0.24**	**0.25**	**0.16J**	<0.1
CPW-11	--	0.034	0.022	0.023	0.02	--	0.023	0.025	0.02	0.024	0.037	0.067	--	--	--	--	--	--	--
CPW-12	--	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	--	--	<0.01	--	--	--	--	--
CPW-13	--	--	--	--	--	**0.4**	0.078	0.064	0.039	0.01	0.018	--	0.069	--	**0.47J**	**0.30**	**0.47**	**0.2J**	**0.11**
CPW-14	--	--	--	--	--	0.052	**0.13**	**0.11**	0.085	0.097	**0.14**	0.062	0.066	--	**0.14**	0.057J	<0.1	0.084J	**0.14J**

bold - indicates concentration exceeds delineation criteria of 0.1 mg/L for chromium
na - well not sampled; destroyed
-- well not sampled on this date

Table 3: Summary of Groundwater Analytical Results - BCI Mill Facility

		Regulated Substance (mg/L)									
		Organics				Inorganics					
Sample Location	**Sample Date**	**Benzene**	**3&4-Methylphenol**	**Naphthalene**	**Phenanthrene**	**Antimony**	**Arsenic**	**Chromium**	**Lead**	**Mercury**	**Nickel**
Delineation Criteria (mg/L)		**0.005**	**DL**	**0.02**	**DL**	**0.006**	**0.01**	**0.1**	**0.015**	**0.002**	**0.1**
Log Storage Area											
LOC01-DP-01	3/15/04	<0.001	<0.010	<0.010	<0.010	--	--	--	--	--	--
LOC01B-MW-01	5/15/04	--	--	--	--	<0.006	<0.01	0.017	<0.005	<0.0002	0.012
	12/14/04	--	--	--	--	--	--	--	--	--	<0.02
Wood Yard											
LOC02-DP-01	3/16/04	<0.001	<0.010	<0.010	<0.010	--	--	--	--	--	--
LOC02B-MW-01	5/15/04	--	<0.002	--	--	<0.006	<0.01	0.094	**0.019**	<0.0002	0.018
	12/16/04	--	--	--	--	--	--	0.0374	<0.01	--	<0.02
	3/21/06	--	--	--	--	--	--	0.021	--	--	--
Area 4											
LOC05-DP-01	3/11/04	--	<0.010	<0.010	<0.010	<0.03	<0.05	<0.05	<0.013	<0.001	<0.2
LOC05B-MW-01	5/16/04	--	--	--	--	--	--	--	--	--	<0.01
	7/18/06	--	--	--	--	<0.006	<0.01	--	--	--	--
	11/29/06	<0.001	--	--	--	--	--	--	--	--	--
LOC05C-MW-01	5/16/04	--	--	--	--	--	--	--	--	--	<0.01
Trailer Parking Lot											
LOC06-DP-01	3/11/04	<0.001	<0.010	<0.010	<0.010	<0.03	**0.069**	<0.05	<0.013	<0.001	**0.36**
LOC06B-MW-01	12/16/04	--	--	--	--	--	<0.25	--	--	0.00064	**0.691**
	3/21/06	--	--	--	--	<0.1	**0.12**	--	--	<0.002	**0.68**
	12/1/09	--	--	--	--	--	**0.046J**	--	--	--	**0.4**
	3/5/10	--	--	--	--	--	**0.082**	--	--	--	**0.45**
	5/8/12	--	--	--	--	--	**0.016**	<0.1	--	--	**0.13**
	8/7/12	--	--	--	--	--	**0.025**	**0.12**	--	--	**0.22**
	11/5/12	--	--	--	--	--	**0.039**	**0.17**	--	--	**0.31**
	2/4/13	--	--	--	--	--	**0.019**	<0.1	--	--	**0.12**

Table 3: Summary of Groundwater Analytical Results - BCI Mill Facility

		Regulated Substance (mg/L)									
		Organics				Inorganics					
Sample Location	**Sample Date**	**Benzene**	**3&4-Methylphenol**	**Naphthalene**	**Phenanthrene**	**Antimony**	**Arsenic**	**Chromium**	**Lead**	**Mercury**	**Nickel**
Delineation Criteria (mg/L)		**0.005**	**DL**	**0.02**	**DL**	**0.006**	**0.01**	**0.1**	**0.015**	**0.002**	**0.1**
LOC6-MW-01D	1/15/10	--	--	--	--	--	**0.081**	--	--	--	**0.41**
	3/5/10	--	--	--	--	--	**0.048**	--	--	--	**0.27**
	5/8/12	--	--	--	--	--	**0.021**	<0.1	--	--	**0.12**
	8/7/12	--	--	--	--	--	**0.037**	**0.17**	--	--	**0.26**
	11/6/12	--	--	--	--	--	**0.039**	**0.19**	--	--	**0.25**
	2/5/13	--	--	--	--	--	<0.01	<0.1	--	--	<0.1
LOC6-MW-01DA	3/5/10	--	--	--	--	--	<0.01	--	--	--	<0.035
LOC6-MW-02	1/14/10	<0.001	<0.0095	<0.0095	<0.0095	<0.006	**0.011J**	**0.15**	<0.01	0.00057	**0.15**
	5/8/12	--	--	--	--	--	**0.017**	**0.12**	--	--	**0.14**
	8/7/12	--	--	--	--	--	**0.013**	**0.21**	--	--	**0.18**
	11/5/12	--	--	--	--	--	**0.013**	**0.12**	--	--	**0.12**
	2/4/13	--	--	--	--	--	<0.01	<0.1	--	--	<0.1
LOC6-MW-03	1/14/10	--	--	--	--	--	<0.01	--	--	--	<0.035
LOC6-MW-04	1/14/10	--	--	--	--	--	<0.01	--	--	--	<0.035
	5/8/12	--	--	--	--	--	<0.01	<0.1	--	--	<0.1
	8/7/12	--	--	--	--	--	<0.01	<0.1	--	--	<0.1
	11/6/12	--	--	--	--	--	<0.01	<0.1	--	--	<0.1
	2/4/13	--	--	--	--	--	<0.01	<0.1	--	--	<0.1
Ash Pad/ESB											
LOC07-DP-01	3/11/04	<0.001	<0.010	<0.010	<0.010	<0.03	<0.05	<0.05	<0.013	<0.001	<0.2
LOC07B-MW-01	5/16/04	--	--	--	--	--	--	--	--	--	<0.01
	7/18/06	--	--	--	--	<0.006	<0.01	--	--	--	--

Table 3: Summary of Groundwater Analytical Results - BCI Mill Facility

		Regulated Substance (mg/L)									
		Organics				Inorganics					
Sample Location	**Sample Date**	**Benzene**	**3&4-Methylphenol**	**Naphthalene**	**Phenanthrene**	**Antimony**	**Arsenic**	**Chromium**	**Lead**	**Mercury**	**Nickel**
Delineation Criteria (mg/L)		**0.005**	**DL**	**0.02**	**DL**	**0.006**	**0.01**	**0.1**	**0.015**	**0.002**	**0.1**
Process Area											
LOC11D-MW-01	12/16/04	<0.005	**0.022**	**0.96**	**0.029**	<0.02	--	0.0378	<0.01	<0.0002	0.0202
	7/19/06	0.0035	**0.026**	**0.073**	**0.022**	<0.006	<0.01	0.032	--	--	--
	5/9/12	<0.005	<0.01	0.016	<0.01	<0.006	<0.01	<0.1	<0.015	<0.002	<0.005
	8/9/12	<0.005	<0.0095	0.01	<0.0095	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	11/7/12	<0.005	<0.0099	**0.13**	<0.0099	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	2/5/13	<0.005	**0.028**	**0.45**	**0.025**	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
LOC11B-MW-02	12/15/04	<0.005	**0.022**	**1.6**	**0.18**	**0.0266**	--	<0.01	<0.01	**0.00298**	0.0295
	7/19/06	<0.01	<0.038	**0.74**	**0.065**	**0.2**	--	--	--	**0.0046**	--
	5/9/12	<0.005	**0.17J**	**3.5**	**0.17J**	**0.036**	**0.018**	<0.1	<0.015	**0.0028**	0.028
	8/9/12	<0.005	<0.47	**1.7**	<0.47	**0.026**	**0.027**	<0.1	<0.015	0.002J	<0.1
	11/8/12	<0.005	<0.063	**1.9**	**0.28J**	**0.033**	**0.013**	<0.1	<0.015	<0.002	<0.1
	2/6/13	<0.005	<0.0096	**1.5**	**0.12**	**0.014**	<0.01	<0.1	<0.015	<0.002	<0.1
LOC11B-MW-02D	9/14/06	**0.025**	<0.094	**0.82**	<0.094	<0.006	**0.028**	**0.35**	<0.005	<0.002	0.099
	11/29/06	--	--	--	--	<0.02	**0.011**	0.076	<0.005	0.00021	<0.03
	5/10/12	**0.020J**	<0.025	**1.4**	**0.15J**	**0.0069**	**0.033**	**0.28**	<0.015	<0.002	0.081
	8/9/12	**0.010J**	<0.47	**3**	<0.47	<0.006	**0.025**	**0.32**	<0.015	<0.004	<0.1
	11/8/12	**0.015J**	<0.12	**4.4**	**0.092J**	<0.006	**0.019**	**0.28**	<0.015	<0.002	<0.1
	2/6/13	**0.019J**	**0.16**	**4.8**	**0.14**	0.0047J	**0.02**	**0.29**	0.0023J	<0.0016	0.08J
LOC11B-MW-02DA	12/11/06	<0.001	<0.0097	<0.0097	<0.0097	<0.006	<0.01	<0.01	<0.005	<0.0002	<0.03
LOC11D-MW-03	12/17/04	<0.25	**0.036**	**0.087**	**0.13**	<0.02	--	**0.232**	<0.01	<0.0002	0.0512
	7/19/06	<0.01	**0.13**	**0.25**	**0.19**	<0.006	<0.01	**0.12**	--	--	0.036
	5/10/12	<0.005	<0.0098	<0.0098	<0.0098	<0.006	<0.01	<0.1	<0.015	<0.002	<0.005
	8/9/12	<0.005	<0.0097	**0.048**	**0.03**	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	11/28/12	<0.005	<0.0099	**0.028**	**0.016**	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	2/6/13	<0.005	<0.01	**0.067**	**0.032**	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
LOC11D-MW-04	12/17/04	**0.012**	<0.01	<0.1	**0.023**	<0.02	--	**0.352**	**0.0247**	0.00027	0.0568

Table 3: Summary of Groundwater Analytical Results - BCI Mill Facility

		Regulated Substance (mg/L)									
		Organics				Inorganics					
Sample Location	**Sample Date**	**Benzene**	**3&4-Methylphenol**	**Naphthalene**	**Phenanthrene**	**Antimony**	**Arsenic**	**Chromium**	**Lead**	**Mercury**	**Nickel**
Delineation Criteria (mg/L)		**0.005**	**DL**	**0.02**	**DL**	**0.006**	**0.01**	**0.1**	**0.015**	**0.002**	**0.1**
LOC11B-MW-05	5/16/04	0.003	**0.016**	**0.095**	**0.0053**	--	--	<0.01	--	0.00065	0.014
	12/15/04	<0.005	**0.015**	**0.075**	<0.01	<0.02	--	0.0193	<0.01	0.00042	0.0222
	7/19/06	0.0022	<0.0094	**0.06**	<0.0094	--	--	--	--	--	--
	5/10/12	<0.005	**0.013**	**0.085**	<0.0099	<0.006	<0.01	**0.11**	<0.015	<0.002	0.039
	8/9/12	<0.005	**0.016**	**0.083**	<0.0097	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	11/7/12	<0.005	**0.015**	**0.099**	<0.0098	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	2/6/13	<0.005	**0.024**	**0.11**	<0.0098	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
LOC11B-MW-06	5/16/04	<0.001	**0.0056**	**0.12**	**0.013**	--	--	0.036	**0.018**	0.0012	0.039
	12/15/04	<0.005	<0.01	**0.056**	<0.01	<0.02	--	**0.124**	0.0115	0.0018	0.0874
	7/19/06	<0.001	<0.01	**0.11**	<0.01	<0.006	<0.01	<0.01	--	<0.0002	<0.035
LOC11-MW-07	1/15/10	<0.001	<0.0094	**0.16**	**0.039**	--	--	0.018	--	--	--
	5/9/12	<0.005	<0.049	**0.31**	**0.054**	<0.006	<0.01	**0.12**	<0.015	<0.002	0.054
	8/8/12	<0.005	<0.049	**0.26**	<0.049	<0.006	<0.01	**0.15**	<0.015	<0.002	<0.1
	11/7/12	<0.005	<0.0098	**0.24**	**0.041**	<0.006	<0.01	**0.14**	<0.015	<0.002	<0.1
	2/5/13	<0.005	<0.0098	**0.31**	**0.049**	<0.006	<0.01	**0.13**	<0.015	<0.002	<0.1
LOC11-MW-08	1/15/10	<0.001	<0.0094	<0.0094	<0.0094	<0.006	<0.01	0.049	--	<0.0002	--
	5/9/12	<0.005	<0.0096	<0.0096	<0.0096	<0.006	<0.01	<0.1	<0.015	<0.002	0.028
	8/9/12	<0.005	<0.0097	<0.0097	<0.0097	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	11/7/12	<0.005	<0.0096	<0.0096	<0.0096	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	2/6/13	<0.005	<0.0096	<0.0096	<0.0096	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
LOC11-MW-09	1/15/10	<0.001	<0.0094	<0.0094	<0.0094	<0.006	<0.01	<0.01	--	<0.0002	--
	6/18/12	<0.005	<0.0099	<0.0099	<0.0099	<0.006	<0.01	<0.1	<0.015	<0.002	<0.005
	8/9/12	<0.005	<0.0096	<0.0096	<0.0096	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	11/8/12	<0.005	<0.0096	<0.0096	<0.0096	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	2/5/13	<0.005	<0.0099	<0.0099	<0.0099	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1

Table 3: Summary of Groundwater Analytical Results - BCI Mill Facility

		Regulated Substance (mg/L)									
		Organics				Inorganics					
Sample Location	**Sample Date**	**Benzene**	**3&4-Methylphenol**	**Naphthalene**	**Phenanthrene**	**Antimony**	**Arsenic**	**Chromium**	**Lead**	**Mercury**	**Nickel**
Delineation Criteria (mg/L)		**0.005**	**DL**	**0.02**	**DL**	**0.006**	**0.01**	**0.1**	**0.015**	**0.002**	**0.1**
LOC11-MW-10	1/14/10	<0.001	<0.0094	<0.0094	<0.0094	--	--	<0.01	--	--	--
	6/18/12	<0.005	<0.0097	<0.0097	<0.0097	<0.006	<0.01	<0.1	<0.015	<0.002	<0.005
	8/8/12	<0.005	<0.0096	<0.0096	<0.0096	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	11/6/12	<0.005	<0.0099	<0.0099	<0.0099	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	2/5/13	<0.005	<0.013	<0.0069	<0.0076	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
Background											
LOC17B-MW-01	5/14/04	--	--	--	--	<0.006	<0.01	<0.01	<0.005	<0.0002	<0.01
	12/14/04	<0.005	<0.010	<0.010	<0.010	<0.02	<0.05	<0.01	<0.01	<0.0002	<0.02
	5/10/12	<0.005	<0.0098	<0.0098	<0.0098	<0.006	<0.01	<0.1	<0.015	<0.002	<0.005
	8/9/12	<0.005	<0.0095	<0.0095	<0.0095	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	11/7/12	<0.005	<0.0096	<0.0096	<0.0096	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
	2/6/13	<0.005	<0.0098	<0.0098	<0.0098	<0.006	<0.01	<0.1	<0.015	<0.002	<0.1
LOC18B-MW-01	5/14/04	--	--	--	--	<0.006	<0.01	<0.01	<0.005	<0.0002	<0.01
	12/14/04	<0.005	<0.010	<0.010	<0.010	<0.02	<0.05	<0.01	<0.01	<0.0002	<0.02

Notes: -- not analyzed J - estimated concentration
DL - Detection Limit
Bold - detected at concentration above Delineation Criteria
Individual isomers of 3&4-methylphenol were not reported by the laboratory

Table 4: Summary of BIOSCREEN Model Results

Location	Regulated Substance	Point of Exposure (POE)	Maximum Detected Concentration[1] (mg/L)	Distance from Maximum Concentration to POE (ft)	Time Until Constituent Reaches POE[2] (yrs)
FCP Area	Chromium	Eastern Property Boundary	26	2,300	**>9,000**
Trailer Parking Lot Area	Arsenic	Turtle River	0.039	200	**>800**
	Chromium	Turtle River	0.21	260	**>500**
	Nickel	Turtle River	0.31	200	**>1,500**
Process Area	Benzene	Turtle River	0.02J	700	**>50**
	4-methylphenol	Turtle River	0.17J	700	**>10,000**
	Naphthalene	Eastern Property Boundary	4.8	2,700	**>2,000**
		Turtle River	4.8	700	**>350**
	Phenanthrene	Eastern Property Boundary	0.28J	2,700	**>10,000**
		Turtle River	0.28J	700	**>900**
	Antimony	Turtle River	0.036	700	**>7,500**
	Arsenic	Turtle River	0.033	700	**>4,500**
	Chromium	Eastern Property Boundary	0.32	2,700	**>10,000**
		Turtle River	0.32	700	**>2,000**
	Lead	Turtle River	0.0023J	700	**>10,000**
	Mercury	Turtle River	0.0028	700	**>9,000**
	Nickel	Eastern Property Boundary	0.081	2,700	**>10,000**
		Turtle River	0.081	700	**>8,500**

Notes:
[1]Maximum concentration detected during the quarterly sampling events
[2]Based on "No Degradation" curve within BIOSCREEN.
FCP - Former Chlorate Plant

Prepared by: SLS 3/7/13
Checked by: JAR 3/18/13

Table 5: Projected Maximum Constituent Concentrations in Turtle River

Location	Regulated Substance	Maximum Plume Width (ft)	Maximum Detected Concentration[1] (mg/L)	Maximum River Concentration based on Average Flow Rate (mg/L)	Maximum River Concentration based on Max Flow Rate (mg/L)	In Stream Water Quality Standard[2] (mg/L)
Trailer Parking Lot Area	Arsenic	650	0.039	0.0024	0.000016	0.036
	Chromium	650	0.21	0.013	0.000085	0.05
	Nickel	600	0.31	0.017	0.00012	0.0083
Process Area	Chromium	900	0.32	0.027	0.00018	0.05
	Mercury	100	0.0028	0.000026	0.00000017	0.000025
	Nickel	900	0.081	0.0068	0.000045	0.0083

Notes:
[1]Maximum concentration detected during the quarterly sampling events
[2]Source: http://www.gaepd.org/Files_PDF/plans/chatt/chatt-b.pdf
Average flow rate = 45 cubic feet per second (cfs); maximum flow rate = 6,750 cfs
Average flow rate - calculated from flow rate data from January 1, 1998 to December 31, 2007 provided by Tetra Tech (Correspondence records, Appendix C)

Prepared by: SLS 3/13/13
Checked by: JAR 3/18/13

Table 6: Revised Milestone Schedule

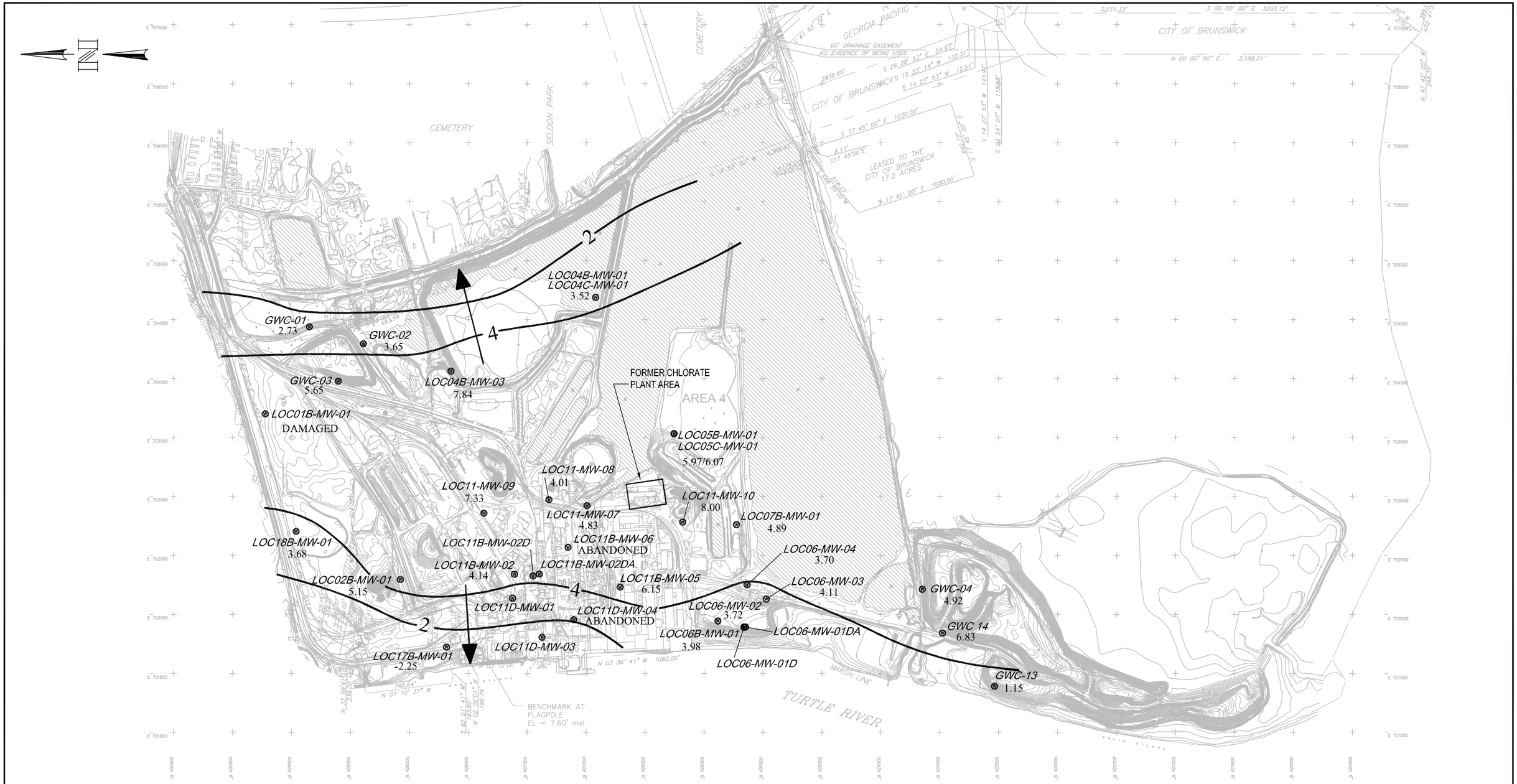
Date	Activity
March 26, 2012	*VRP Application Approved*
April 24, 2012	*Cost Estimate and Financial Instrument Submitted*
May 7, 2012	*Filing of Affidavit with clerk of Superior Court of Glynn County pursuant to O.C.G.A. §44-2-20*
May 16, 2012	*Submittal of copy of receipt of recorded Affidavit to EPD*
May 7-10 and June 18-19, 2012	*First Quarterly Sampling Event and Well Repair Activities*
August 6-9, 2012	*Second Quarterly Sampling Event*
September 18, 2012	*Submittal of First Semi-Annual Progress Report*
November 5-8 and 28, 2012	*Third Quarterly Sampling Event*
January 30, 2013	*Submittal of Annual Site Inspection Form*
February 4-6, 2013	*Fourth Quarterly Sampling Event*
March 26, 2013	*Second Semi-Annual Progress Report*
August 2013	Compliance Status Report Update

Note: Annual Site Inspection Forms will be submitted in January of each year

Table 7: Summary of Monthly Invoices

Month	Hours Billed by Carol Northern, P.G.	Description of Activities
September 2012	30	– Preparation and submittal of the First Semi-Annual Progress Report
October 2012	1.25	– Initial scheduling for the Third Quarterly Sampling Event
November 2012	8.5	– Review Third Quarter sampling activities with sampling team – Participate in calls from field sampling team – Coordinate with analytical laboratory
December 2012	4.5	– Review laboratory analytical results
January 2013	7.25	– Prepare/Submit Annual Site Inspection Form – Initial scheduling for the Fourth Quarterly Sampling Event – Review groundwater model parameters with team
February 2013	9	– Review Fourth Quarter sampling activities with sampling team – Participate in calls from field sampling team – Coordinate with analytical laboratory – Review laboratory analytical results

FIGURES



LEGEND:

- MW-01 — WELL LOCATION
- 4 — ESTIMATED GROUNDWATER POTENTIOMETRIC SURFACE, FT. MSL, AUGUST 2012
- GROUNDWATER FLOW DIRECTION

WATER LEVEL DATA COLLECTED BY: PREMIER ENVIRONMENTAL
BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

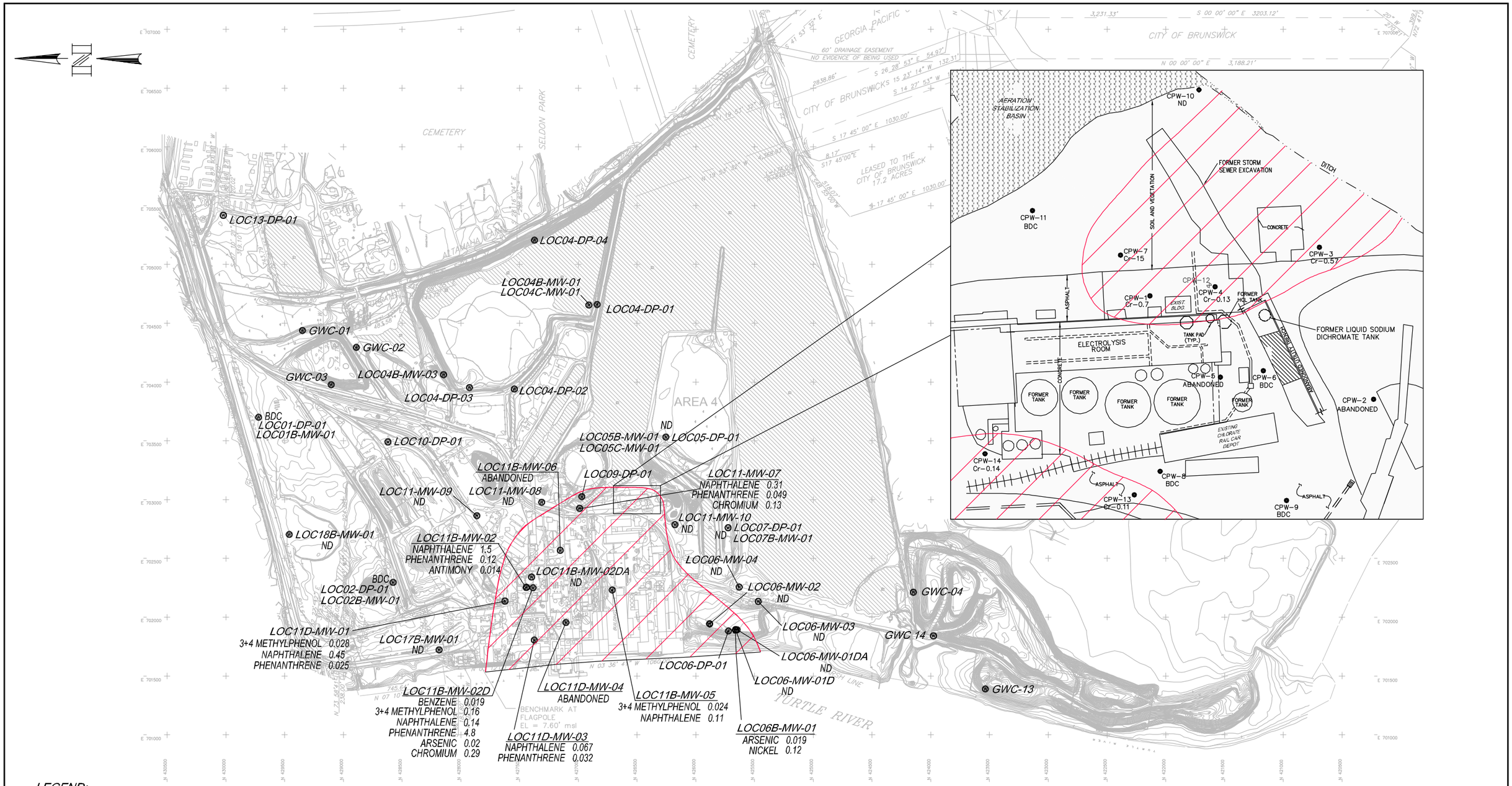
PROJECT NO. 02.20060613

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

POTENTIOMETRIC SURFACE MAP
FEBRUARY 2013

DRAWN:	CHECKED:	DATE:	FIGURE:
ED	PK	MARCH 2013	1

FILENAME: 02.20060163 - POT MAP - FEB 2013



LEGEND:

MW-01	WELL LOCATION
	AREA ABOVE DELINEATION CRITERIA
BENZENE 0.019	CONSTITUENT CONCENTRATION IN MG/L
BDC	BELOW DELINEATION CRITERIA
ND	NOT DETECTED

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.

BRUNSWICK, GEORGIA

PROJECT NO. 02.20060163

EARTHCON®

EarthCon Consultants, Inc.

1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

SUMMARY OF CONSTITUENTS IN GROUNDWATER ABOVE DELINEATION CRITERIA

DRAWN:	CHECKED:	DATE:	FIGURE:
TM/SBH/ED	PK	MARCH 2013	2

FILENAME: 02.20060163 - GW ABOVE DC FIG2 - FEB 2013

APPENDIX A

SUMMARY OF FIELD PROCEDURES

APPENDIX A

SUMMARY OF FIELD PROCEDURES

From September 2012 to February 2013, the Third and Fourth Quarterly Sampling Events were conducted at the Brunswick Cellulose, Inc. (BCI) facility in accordance with the Voluntary Remediation Plan dated October 5, 2011. The field activities are described in the following sections.

MONITORING WELL SAMPLING

Groundwater samples were collected from the monitoring wells listed in Table A-1. The sampling was conducted in general accordance with the United States Environmental Protection Agency (USEPA) Region 4 Science and Ecosystem Support Division (SESD) Operating Procedure (OP) for Groundwater Sampling (SESDPROC-301-RI), dated October 28, 2011.

Prior to sampling, water level measurements were collected from each well to calculate purge volume and water quality parameters were measured. The water quality parameters measured at the time of groundwater sampling are presented on Table A-2 and the well sampling forms are provided at the end of this Appendix.

Sample Containers

The laboratory provided sample containers that met the sampling requirements of the study. The laboratory verified the cleanliness of each batch of containers prior to use. The laboratory supplied the necessary preservation solutions and shipped these with the sample containers.

The field sampler took responsibility for identifying properly the exact location of each sample taken; and for recording the date upon which it was obtained, the type of sample, the preservative used, and the applicable project number. This information was documented in the field book/well sampling sheet. This same information was then placed on the sample identification label and the chain-of-custody record. Sample labels were filled out with indelible ink. If the field sampler determined that additional information was pertinent to a sample being taken, such data was recorded in the field log.

Ground-Water Level Measurement

Prior to well sampling, depth to groundwater and total well depth were measured using an electronic tape or water level indicator. A fixed point was marked with an indelible marker on each well to serve as a reference point for measurement. Depths were measured to the nearest 0.01 foot and recorded on the field sheet. The tape was cleaned with phosphate-free laboratory detergent and water, and rinsed with distilled water prior to each use.

Well Purging

Monitoring wells were purged prior to sampling to provide fresh formational water for sampling. Low-flow purging was accomplished by lowering teflon tubing to the screened portion of the well and below the water column. The tubing was coupled to a peristaltic pump operated at a flow rate that limited drawdown of the water table to less than 0.5 feet. Water quality parameters, including pH, specific conductance, temperature and turbidity, were measured during purging. Also, groundwater levels were regularly monitored during purging to ensure the water level was

not being drawn down in the well. Purging was considered complete after removal of three well volumes and when the depth to water and water quality parameters stabilized. Purge water from the wells was temporarily placed in 5-gallon buckets and emptied into the Mill waste water treatment facility.

Groundwater Sampling and Analysis

Ground-water samples were generally collected immediately after purging was complete. In instances when wells were slow to recharge, the samples were collected as soon as sufficient volume was available but not more than 8 hours after well purging. The monitoring wells were sampled using low-flow techniques to reduce disturbance of the water column during sampling. Clean teflon tubing coupled with a peristaltic pump was used to collect the samples.

The Third Quarterly Sampling Event was conducted from November 5 to November 8, 2012. During this event, groundwater samples were collected from seven monitoring wells located in the Former Chlorate Plant (FCP) area, four monitoring wells located in the Trailer parking Lot, and seven monitoring wells located in the Process Area. Monitoring well LOC11D-MW-03 was not accessible and could not be sampled at this time. The groundwater samples were placed in laboratory-supplied containers, packed on ice, and transported to TestAmerica in Savannah, Georgia under chain-of-custody protocols. The samples were analyzed for benzene, selected metals, and/or selected SVOCs using USEPA SW-846 Methods as shown on Table A-1.

On November 28, 2012, a groundwater sample was collected from monitoring well LOC11D-MW-03 which was inaccessible during the November 5 to 8 sampling event. The groundwater sample was placed in laboratory-supplied containers, packed on ice, and transported to TestAmerica Savannah under chain-of-custody protocols. The sample was analyzed for benzene, selected SVOCs, and selected metals using USEPA SW-846 Methods as shown on Table A-1.

The Fourth Quarterly Sampling Event was conducted from February 4 to February 6, 2013. During this event, groundwater samples were collected from the 21 monitoring wells listed on Table A-1. The groundwater samples were placed in laboratory-supplied containers, packed on ice, and transported to TestAmerica in Savannah under chain-of-custody protocols. The samples were analyzed for benzene, selected metals, and/or selected SVOCs using USEPA SW-846 Methods as shown on Table A-1.

Decontamination Procedures

Decontamination procedures consisted of the use of clean, disposable Teflon tubing at each sampling location. Latex gloves were also worn and changed between each sampling location. Non-disposable equipment such as the water level indicator and field measurement instrumentation was initially washed with phosphate-free laboratory detergent and rinsed with de-ionized water. The equipment was allowed to air dry.

Equipment Calibration

Equipment used to perform field testing on groundwater samples included a YSI 556 with flow thru cell and a HF Scientific turbidity meter to measure pH, specific conductivity, temperature, and turbidity. Equipment calibration was verified on a daily basis.

Field Sampling Forms

Field personnel maintained a permanently bound field notebook. Each notebook was water resistant with sequentially numbered pages. Field activities were recorded with a waterproof

permanent marker. Additionally, monitoring well sampling forms were completed for each sample. The notebook, sampling forms, and chain-of-custody records contain sufficient information to allow reconstruction of the sample collection and handling procedures at a later time.

Chain-of-Custody

Sample custody was documented from the time of sample collection when the labeled sample was placed into an iced cooler in the possession of the sampling technician. A corresponding line item on the chain-of-custody record was filled out and initialed by the sampling technician. The chain-of-custody record is used to track custody of samples during transport and shipping. Upon completion of appropriate line items, or upon sample pick-up, the field representative signed, dated, listed the time, and confirmed the completeness of descriptive information contained on the form. The chain-of-custody form accompanied the samples. Each individual who subsequently assumed responsibility for the samples signed the chain-of-custody record. The field chain-of-custody record terminated upon laboratory receipt of samples. All entries were recorded in ink. In instances where the sample containers left the immediate control of the sampling team (e.g., shipment via a common carrier), the shipping container was sealed with a custody seal. Each sample had a corresponding entry on a chain-of-custody record.

Analytical Procedures and QA/QC

The groundwater samples were transported to TestAmerica in Savannah, Georgia under chain-of-custody protocol. The samples were analyzed for selected site-specific constituents using SW-846 Methods as shown on Table A1. Quality control samples, consisting of blind duplicates, trip blanks, and laboratory method blanks were also collected and analyzed.

Table A-1: Groundwater Sample Laboratory Analyses and Methods

Former Chlorate Plant Area – 7 wells		
Well ID	Analysis	EPA Method
CPW-1, CPW-3, CPW-4, CPW-7, CPW-10, CPW-13, CPW-14	Chromium	6020A

Trailer Parking Lot – 4 wells		
Well ID	Analysis	EPA Method
LOC06B-MW-01, LOC06-MW-01D LOC06-MW-02 LOC06-MW-04	Arsenic, Chromium, Nickel	6020A

Process Area – 10 wells		
Well ID	Analysis	EPA Method
LOC11D-MW-01 LOC11B-MW-02 LOC11B-MW-02D LOC11D-MW-03 LOC11B-MW-05 LOC11-MW-07 LOC11-MW-08 LOC11-MW-09 LOC11-MW-10 LOC17B-MW-01	Benzene, select SVOCs*, select Metals**	8260B, 8270C, 6020A

*SVOCs: Naphthalene, Phenanthrene, 4-methylphenol
**Metals: Antimony, Arsenic, Chromium, Lead, Nickel, Mercury

QA/QC

Former Chlorate Plant Area: 1 duplicate for chromium

Process Area: 1 trip blank for benzene; 1 duplicate for benzene, select SVOCs*, select metals**

Table A-2: Field Sampling Parameters

Well Location	Date	Volume Purged (gal.)	Temp (°C)	Sp. Cond. (uS/m)	pH	Turbidity (NTU)
CPW-1	11/6/12	5.55	25.92	38,933	5.17	8.53
	2/5/13	6.25	22.20	37,090	5.31	15.90
CPW-3	11/7/02	4.75	25.03	39,861	5.71	4.39
	2/5/13	5.70	21.22	34,440	5.71	7.26
CPW-4	11/6/12	3.90	26.63	44,473	6.09	9.00
	2/5/13	4.30	22.28	39,991	5.90	0.00
CPW-7	11/6/12	5.0	27.57	79,983	3.01	7.52
	2/5/13	4.25	23.27	74,712	2.20	8.19
CPW-10	11/7/12	3.2	25.54	19,991	5.55	0.41
	2/5/13	2.85	21.61	26,827	5.56	0.00
CPW-13	11/6/12	4.3	29.91	67,725	5.29	0.77
	2/5/13	4.75	23.35	58,418	4.96	1.93
CPW-14	11/6/12	3.75	27.69	63,857	6.41	0.60
	2/5/13	4.25	23.03	70,766	6.64	0.92
LOC06B-MW-01	11/5/12	4.50	22.00	22,210	12.80	0.00
	2/4/13	4.50	21.24	28,735	12.65	0.00
LOCO6-MW-01D	11/6/12	4.40	23.10	19,335	9.58	0.00
	2/5/13	9.20	21.52	6,630	7.06	0.10
LOC06-MW-02	11/5/12	6.2	22.61	10,605	12.38	0.00
	2/4/13	6.5	23.00	10,799	12.56	0.00
LOC06-MW-04	11/6/12	5.8	24.36	2,535	11.24	4.22
	2/4/13	5.8	19.50	2,780	11.89	2.75
LOC11D-MW-01	11/7/12	4.40	24.08	5,110	8.41	7.75
	2/5/13	4.35	19.82	5,891	9.25	9.11
LOC11B-MW-02	11/8/12	9.50	26.82	10,915	12.40	2.43
	2/6/13	9.30	24.37	8,961	12.17	1.90
LOC11B-MW-02D	11/8/12	14.46	28.37	21,053	10.06	2.91
	2/6/13	14.10	28.68	17,964	9.94	0.97
LOC11D-MW-03	11/28/12	4.10	21.53	3,045	7.85	1.48
	2/6/13	5.3	19.86	3,937	7.95	4.84
LOC11B-MW-05	11/7/12	9.5	23.29	9,446	12.28	80.98
	2/6/13	11.5	20.43	9,894	13.36	34.32
LOC11-MW-07	11/7/12	6.0	32.05	10,737	7.34	1.26
	2/5/13	6.4	29.18	9,139	7.31	0.12
LOC11-MW-08	11/7/12	6.20	29.20	3,175	8.40	6.74
	2/6/13	6.40	25.54	2,524	8.43	7.44
LOC11-MW-09	11/8/12	6.8	24.41	3,036	6.33	3.29
	2/5/13	7.5	22.57	3,024	6.09	0.73
LOC11-MW-10	11/6/12	7.2	22.98	3,801	7.12	8.25
	2/5/13	7.5	18.50	3,004	7.18	6.72
LOC17B-MW-01	11/7/12	8.05	22.48	5,520	6.79	2.41
	2/6/13	8.2	19.70	10,688	6.38	5.70

WELL SAMPLING FORMS

Date: 11/06/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick
		Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: 73 WIND: Light

Well # CPW-1 Diam. In. 2 TOC Elev. (ft, MSL) 9.31 Total Depth (ft) 11.71 Date ____ Time ____

Gal./ft. of Water 0.162 Depth to Water (ft) 2.01

(11.71 − ~~9.31~~ 1.22) = ~~2.4~~ 10.49 × 0.162 = ~~0.40~~ 1.67 × 3 = 5.10

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
15:30		0.20	27.87	64395	5.18	73.76	57.02	-79.3	1.22	
15:35		0.45	27.91	59946	5.17	97.06	34.70	-16.3	1.73	
15:40		0.70	28.03	56814	5.18	108.4	29.71	-16.1	1.79	
15:50		0.95	28.20	52778	5.18	96.08	25.14	94.7	1.76	
15:55		1.25	28.22	50042	5.18	80.28	23.46	75.7	1.76	
16:00		1.55	28.06	47565	5.18	72.88	21.34	32.5	1.75	
16:10		2.45	27.39	40213	5.19	59.89	18.05	31.3	1.78	
16:20		3.10	27.06	39243	5.19	23.53	16.80	82.5	1.75	
16:30		3.80	26.91	38950	5.18	35.50	15.76	86.9	1.76	
16:40		4.45	26.83	38373	5.18	26.77	14.92	79.2	1.76	
16:50		4.90	26.34	37847	5.17	11.64	14.42	115.1	1.72	
17:00		5.15	25.91	38343	5.17	9.88	14.42	124.5	1.72	
~~17:00~~	17:05	5.35	25.81	38412	5.17	8.71	14:31	124.0	1.74	
	17:10	5.55	25.92	38933	5.17	8.53	14.20	126.5	1.75	

EQUIPMENT USED/COMMENTS: Total gal purged = 5.55

Geopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start purge 15:25 Sampled - 17:10
End purge 17:10

CR

SIGNATURE: G.A. Ethridge DATE: 11/06/12

Purge water has light sheen.
Cut purge rate in half @ 16:40

Date: 11/07/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A.Ethridge	Project Name: GP Cellulose, Brunswick
		Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: 50 WIND: 10 mph

Well # CPW-3 Diam. In. 2 TOC Elev. (ft, MSL) 12.11 Total Depth (ft) 14.52 Date Time

Gal./ft. of Water 0.162 Depth to Water (ft) 4.78 (14.52 - 4.78) x 0.162 = 1.57 x 3 = 4.73 gal

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
0940	0.10	—	23.20	57617	5.70	83.42	2.72	147.1	5.10	
0945	0.25		23.13	54190	5.76	80.86	1.76	149.1	5.08	
0950	0.50		23.39	42220	5.85	34.52	1.59	155.5	5.12	
1000	0.90		24.07	40514	5.84	15.00	1.31	166.7	5.10	
1010	1.45		24.20	39537	5.83	10.60	1.16	172.1	5.14	
1020	1.95		24.87	38919	5.78	9.58	1.05	177.8	5.16	
1030	2.65		24.89	38320	5.76	8.25	0.99	179.3	5.19	
1040	3.35		25.23	38783	5.75	5.38	0.93	171.6	5.24	
1050	4.05		25.09	39013	5.72	4.58	0.88	179.5	5.29	
1100	4.75		25.03	39861	5.71	4.39	0.87	182.5	5.33	

EQUIPMENT USED/COMMENTS: Total gal purged = 4.75

Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start purge 0935 Sampled 1100
End purge 1100

CR

SIGNATURE: G.A. Ethridge DATE: 11/07/12

Date: 11/06/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: 60 WIND: Light

Well # CRW-4 Diam. In. 2 TOC Elev. (ft, MSL) 11.92 Total Depth (ft) 12.58 Date Time

(12.58 - 4.68) = 7.9 x 0.162 = 1.28 x 3 = 3.83

Gal./ft. of Water 0.162 Depth to Water (ft) 4.68

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1720	—	0.10	25.66	37172	5.73	0.27	17.93	119.2	4.58	
1725		0.45	26.07	42968	5.84	0.00	11.96	127.3	4.58	
1730		0.75	25.85	43675	5.95	0.00	10.12	120.6	4.62	
1740		1.40	26.06	43670	6.04	0.00	8.78	95.7	4.60	
1750		2.10	26.28	43902	6.06	0.00	8.06	87.0	4.62	
1800		3.00	26.55	44260	6.07	0.00	7.91	76.1	4.64	
1810		3.90	26.63	44473	6.09	0.00	7.47	82.2	4.65	

EQUIPMENT USED/COMMENTS: Total gal purged = 3.90

Geopump w/ 1/4" TeFlon Tubing
YSI 556
HF Scientific Turbidity Meter

Start purge - 1715 Sampled - 1810
End purge - 1810

CR

SIGNATURE: G.A. Ethridge DATE: 11/06/12

Date: 11/6/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K Davis	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Overcast AMBIENT TEMPERATURE: 60° WIND: Light

Well # CPW-7 Diam. In. 2 TOC Elev. (ft, MSL) 11.59 Total Depth (ft) 12.30 Date 11/6/12 Time 1850

Gal./ft. of Water 0.162 Depth to Water (ft) 5.01 7.3 x 1.2 gal/x 3 = 3.6 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1751	—	26.24	83,246	3.01	106.3	3.40	342.1	5.12	
1800	0.75	27.00	83,491	2.97	53.14	0.69	373.1	5.17	
1810	1.3	27.05	82,803	2.94	36.43	0.44	377.9	5.15	
1820	2.2	27.51	81,959	2.96	33.39	0.36	380.2	5.26	
1830	3.2	27.64	81,124	2.98	23.45	0.32	368.4	5.28	
1840	4.0	27.59	80,375	3.00	12.99	0.30	364.6	5.29	
1845	4.5	27.57	79,983	3.01	~~23.57~~ 7.52	0.30	359.6	5.30	

EQUIPMENT USED/COMMENTS: Total gal purged = 5.0

Geopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start Purge - ~~1849~~ 1749 Sampled = 1850
End Purge - 1846
CR

SIGNATURE Kenton Davis DATE

Date: 11/7/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick
		Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Clear AMBIENT TEMPERATURE: 47° WIND: Light

Well # CPW-10 Diam. In. 2 TOC Elev. (ft, MSL) 13.59 Total Depth (ft) 12.44 Date 11/7/12 Time 1020

Gal./ft. of Water 0.162 Depth to Water (ft) 7.03 5.41 = 0.9x3 = 2.6gal

Time

Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
0938	—	23.51	22,166	5.67	12.30	4.50	11.9	7.43	
0945	0.5	24.97	21,627	5.64	1.49	1.32	-7.4	7.57	
0955	1.25	25.35	22,647	5.57	0.69	0.70	-15.9	7.77	
1005	2.1	25.56	21,861	5.55	0.86	0.50	-19.4	7.90	
1015	2.9	25.54	19,991	5.55	0.41	0.89	-21.5	7.99	

EQUIPMENT USED/COMMENTS: TOTAL gal purged = 3.2gal

Geopump w/ 1/4" TEFLON TUBING
YSI 556
HF SCIENTIFIC TURBIDITY METER

START PURGE - 0936 Sampled - 1020
END PURGE - 1016

CR

SIGNATURE DATE

Date: 11/6/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): R. Davies	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Clear - Rain in morning AMBIENT TEMPERATURE: 65° WIND: Light

Well # CPW-13 Diam. In. 2 TOC Elev. (ft, MSL) 12.89 Total Depth (ft) 9.49 Date _____ Time _____

Gal./ft. of Water 0.162 Depth to Water (ft) 1.28 8.21 - 1.3 gal x 3 = 4.0

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1542	-	29.80	61,212	5.65	18.65	3.64	-8.5	1.13	
1550	0.9	30.07	64,992	5.57	2.63	0.97	-13.7	1.14	
1600	2.0	29.99	66,954	5.44	2.41	0.56	-8.5	1.15	
1610	2.9	29.84	66,568	5.38	1.08	0.47	-1.1	1.15	
1620	4.0	29.81	67,725	5.29	0.77	0.42	10.4	1.17	

EQUIPMENT USED/COMMENTS: Total gal Purged = 4.3 gal

Geopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Dup-1 collected Here

Start Purge - 1541 Sampled - 1625
End purge - 1621
CR

SIGNATURE: Kenton Davies DATE

Date: 11/6/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Poly Cloudy AMBIENT TEMPERATURE: 65° WIND: Light

Well # CAW-14 Diam. In. 2 TOC Elev. (ft, MSL) 12.89 Total Depth (ft) 12.49 Date 11/6/12 Time

Gal./ft. of Water 0.162 Depth to Water (ft) 5.38 7.11 = 1.16 gal/x 3 = 3.5 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1650	—	27.50	61,227	6.46	2.64	9.14	8.03	5.21	
1700	1.2	27.44	62,844	6.43	2.73	0.61	-16.7	5.22	
1710	2.0	27.62	65,732	6.41	1.13	0.46	-17.5	5.23	
1720	2.9	27.57	63,610	6.41	1.13	0.41	-17.8	5.23	
1727	3.5	27.69	63,857	6.41	0.60	0.36	-18.4	5.23	

EQUIPMENT USED/COMMENTS: Total gal purged = 3.25 gal

Geopump w/ 1/4" rubbery Teflon
YSI 556
HF Scientific Turbidity Meter

Start purge - 1644 Sampled - 1730
End purge - 1728
CR

SIGNATURE: Kenneth Davis DATE

Date: 11/05/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G. Ethridge	Project Name: GP Cellulose, Brunswick
		Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Clear AMBIENT TEMPERATURE: WIND: Light

Well # LOC 6B-MW-01 Diam. In. 2 TOC Elev. (ft, MSL) 24.63 Total Depth (ft) 29.89 Date Time

Gal./ft. of Water 0.162 Depth to Water (ft) 20.61 9.28×0.1632 = 1.51×3 = 4.54

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µS/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
17:13	—	0.50	21.49	33630	12.18	0.93	2.25	-522	20.82	
17:18		1.00	22.20	30890	12.51	0.00	3.51	-540	20.85	
17:23		1.50	22.19	29450	12.80	0.00	426	-542	20.87	
17:28		2.00	22.20	29130	12.79	0.00	426	-518	20.89	
17:38		2.50	21.99	28830	12.78	0.00	432	-553	20.85	
17:38	43	3.00	22.08	28600	12.81	0.00	430	-551	20.85	
17:48		3.50	22.07	28415	12.78	0.15	436	-566	20.85	
17:48	53	4.00	22.01	28280	12.80	0.10	432	-569	20.84	
17:50		4.50	22.00	22210	12.80	0.00	431	-570	20.84	

EQUIPMENT USED/COMMENTS: Total gal purged

Geopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity meter

Start Purge - 17:05 Sampled - 18:00
End purge -
Analyzed for CR, As, Ni

SIGNATURE G.A. Ethridge DATE 11/05/12

Stopped purge 17:28-17:33 to fix flow thru cell leak - did not fix wierd DO readings.

Date: 11/06/12
Page: 1 of 2

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: 70 WIND: Light

Well # LOC6-MW-01D Diam. In. 2 TOC Elev. (ft, MSL) 20.97 Total Depth (ft) 41.5 Date 11/06/12 Time 0935

(41.5 - 20.97) = 20.53 X 0.162 = 3.32 X 3 = 9.98

Gal./ft. of Water 0.162 Depth to Water (ft)

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
0940	—		21.68	16425	9.86	8.11	386.8	-436.9	21.52	O_2 reading not good.
0945		0.35	22.91	16580	9.86	3.99	375.4	-464.4	21.58	" "
0950		0.60	22.23	16617	9.86	1.48	388.19	-472.6	22.77	" "
0955		0.75	22.37	16676	9.86	2.00	399.16	-474.5	23.96	" "
1000		0.90	22.46	16668	9.85	1.07	397.65	-474.7	24.90	" "
1030		1.20	22.42	16867	9.82	13.30	379.04	-468.0	25.68	" "
11:20		1.70	22.68	18080	9.81	5.70	428.95	-475.6	26.47	" "
11:30		1.90	22.69	18330	9.78	5.17	427.91	-474.1	26.89	" "
11:40		2.20	22.99	19000	9.77	3.47	417.73	-476.6	27.39	" "
11:50		2.35	22.94	19632	9.76	2.83	418.61	-476.1	27.65	" "
12:00		2.55	22.86	20375	9.76	10.45	418.90	-477.7	27.93	" "
12:10		2.70	22.94	20941	9.75	1.78	416.18	-478.1	28.11	" "
12:20		2.90	23.22	21320	9.72	8.32	407.21	-474.8	28.11	" "
12:30		3.05	23.15	21595	9.63	1.62	408.80	-474.7	28.00	" "

EQUIPMENT USED/COMMENTS: Total gal purged

Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start Purge 9:35 Sampled - 13:45
End Purge 13:40

Analyze for CR, As, Ni

SIGNATURE: G.A. Ethridge DATE: 11/06/12

Battery died. Restarted purge @ 10 20. Pump down again @ 10 29. Check gator clip, fuse, cable. Called vendor. Running again @ 11 00. Down again @ 11 09. Changed pump head. Restart @ 11:10.

Date: 11/06/12
Page: 2 of 2

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s):	Project Name: GP Cellulose, Brunswick
		Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: WIND:

Well # LOC6-MW-01D Diam. In. 2 TOC Elev. (ft, MSL) 20.97 Total Depth (ft) 41.5 Date Time

Gal./ft. of Water 0.162 Depth to Water (ft)

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
12:40		+ 3.20	23.16	21658	9.57	1.94	460.70	-460.1	27.82	O_2 readings not good.
12:50		3.40	23.13	21502	9.53	1.25	409.93	-464.7	27.73	" "
13:00		3.65	23.29	21281	9.55	0.50	405.62	-467.5	27.58	" "
13:10		3.80	23.62	20809	9.51	0.00	396.72	-464.9	27.48	" "
13:20		4.00	23.40	20353	9.54	0.00	402.44	-465.9	27.60	" "
13:30		4.20	23.19	19846	9.57	0.00	410.71	-471.4	27.65	" "
13:40		4.40	23.10	19335	9.58	0.00	414.21	-470.1	27.63	" "
13:50										

EQUIPMENT USED/COMMENTS:

Pumping from max depth for peristaltic pump. Well slightly effected by Tide. Reading stable. Agreed to sample even though @ less than 50% of required purge volume.

SIGNATURE DATE

Date: 11/5/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick
		Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Clear AMBIENT TEMPERATURE: 65°-60° WIND: Light

Well # LOC6-MW-02 Diam. In. 2 TOC Elev. (ft, MSL) 16.95 Total Depth (ft) 25.3 Date 11/5/12 Time 1840

Gal./ft. of Water 0.162 Depth to Water (ft) 13.08 12.22 = 20 x 3 = 6 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1714	—	22.17	7944	12.21	5.08	2.31	-168.5	1315	
1725	1.0	22.61	8360	12.27	1.05	0.52	-177.5	1314	
1735	1.5	22.45	8694	12.29	0.75	0.31	-179.3	1314	
1745	2.2	22.68	8986	12.31	0.20	0.42	-176.3	1318	
1755	3.0	22.74	9517	12.33	0.23	0.21	-182.2	1318	
1805	3.75	22.64	9966	12.34	0.00	0.19	-180.2	13.18	
1815	4.3	22.67	10290	12.36	0.00	0.14	-179.3	13.19	
1825	5.2	22.65	10471	12.37	0.00	0.12	-182.5	13.19	
1835	6.0	22.61	10,605	12.38	0.00	0.11	-184.3	13.20	

EQUIPMENT USED/COMMENTS: Total gal purged - 6.2
Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start Purge - 1710 Sampled - 1840
End Purge - 1835 Analyze for As, Cr, Ni

SIGNATURE DATE

Date: 11/6/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): R Davis	Project Name: GP Cellulose, Brunswick
		Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Overcast AMBIENT TEMPERATURE: 61° WIND: Light

Well # LOC6-MW-04 Diam. In. 2 TOC Elev. (ft, MSL) 7.80 Total Depth (ft) 15.1 Date 11/6/12 Time 1100

Gal./ft. of Water 0.162 Depth to Water (ft) 4.08 11.0 = 1.8 gal x 3 = 5.4

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
0953	—	22.47	4746	12.20	147.9	2.23	-109.1	4.80	
1000	0.8	23.90	4910	12.17	107.9	0.77	-124.0	4.72	
1010	1.7	23.97	4074	11.95	22.61	0.33	-103.1	4.78	
1020	2.5	24.07	3357	11.80	22.34	0.25	-89.7	4.80	
1030	3.4	23.92	2904	11.60	26.00	0.21	-77.6	4.80	
1040	4.4	24.01	2668	11.44	14.74	0.17	-70.8	4.80	
1050	5.3	24.31	2559	11.28	5.22	0.14	-67.5	4.81	
1053	5.5	24.36	2535	11.24	4.22	0.14	-67.0	4.81	

EQUIPMENT USED/COMMENTS: Total gal purged - 5.8

Geopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start purge - 0950 Sampled - 1100
End purge - 1054 Analyze for As, Cr, Ni

SIGNATURE: [signature] DATE

Date: 11/7/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick
		Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: 55 WIND: Light

Well # LOC 11D - MW-6 Diam. In. 2 TOC Elev. (ft, MSL) 5.64 Total Depth (ft) ~~5.23~~ 12.36 Date 11/07/12 Time 1910

Gal./ft. of Water 0.162 Depth to Water (ft) 3.42 12.36

(~~5.23~~ - 3.42) x 0.162 = ~~0.30~~ = 1.45 x 3 = ~~0.90~~ 4.35 gallons

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1705 ~~1750~~	—	0.50	23.61	4333	7.50	17.08	1.54	-340.0	3.55	
1710 ~~1755~~		0.80	24.24	4621	7.71	39.27	0.77	-377.7	3.58	
1720 ~~1800~~		1.40	24.15	4505	7.74	16.98	0.54	-383.7	3.59	
1830 ~~1810~~		1.90	24.09	4672	7.92	7.66	0.49	-409.3	3.60	
1840		2.50	24.13	4856	8.16	6.15	0.45	-415.1	3.62	
1850		3.10	24.08	4961	8.23	6.19	0.41	-423.9	3.62	
1900		3.70	24.13	5092	8.40	6.06	0.41	-426.6	3.63	
1910		4.40	24.08	5110	8.41	7.75	0.40	-426.9	3.65	

EQUIPMENT USED/COMMENTS: Total gal purged = 4.40

Geopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start purge 17:45 Sampled - 1910
End purge 1910

8260, 8270, 6020A

Stopped pumping @ 17:53 - hole in tubing and changed YSI batteries.

SIGNATURE: G.A. Ethridge DATE: 11/07/12

Date: 11/8/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): KrDavis	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Clear AMBIENT TEMPERATURE: 61° WIND: Light

Well # LOC 11B-MW-02 Diam. In. 2 TOC Elev. (ft, MSL) 5.51 Total Depth (ft) 20.11 Date 11/8/12 Time 1325

Gal./ft. of Water 0.162 Depth to Water (ft) 1.29 18.8 = 3.1 x 3 = 9.2

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1132	—	26.03	9870	12.63	127.2	2.55	-120.8	1.80	
1140	0.75	26.74	10,195	12.51	108.8	0.45	-133.8	1.93	
1150	1.70	26.85	10,680	12.48	47.04	0.21	-141.7	2.05	
1200	2.6	26.88	10,776	12.47	26.25	0.16	-145.6	2.07	
1210	3.5	26.93	10,794	12.46	18.43	0.12	-147.2	2.14	
1220	4.5	26.91	10,807	12.44	13.10	0.11	-146.2	2.17	
1230	5.5	26.98	10,816	12.43	10.93	0.10	-149.0	2.18	
1240	6.5	26.97	10,850	12.42	6.62	0.10	-145.8	2.19	
1250	7.5	26.93	10,867	12.41	2.59	0.09	-148.7	2.21	
1300	8.5	26.86	10,879	12.40	1.59	0.08	-149.9	2.21	
~~1310~~ 1307	9.25	26.82	10,915	12.40	2.43	0.07	-150.3	2.21	

EQUIPMENT USED/COMMENTS: Total gal purged = 9.5 gal

Geopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start purge - 1124 Sampled - 1325
End purge - 1308
8260, 8270, 6020A

SIGNATURE: Kenton Davis DATE

Date: 11/08/12
Page: 1 of 2

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: 50 WIND: Light

Well # Loc113-MW-02D Diam. In. 2 TOC Elev. (ft, MSL) 5.47 Total Depth (ft) 35.0 Date Time

(35.00 - 5.70) x 0.162 = 4.75 x 3 = 14.25 gallons

Gal./ft. of Water 0.162 Depth to Water (ft) 5.70

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
11:25		0.30	28.12	20896	10.93	8.75	1.73	-495.8	6.05	
11:30		0.70	28.54	21150	9.92	10.58	0.82	-510.9	6.04	
11:40		1.90	28.88	21040	9.92	8.89	0.58	-519.5	6.12	
11:50		2.85	29.07	21031	9.95	6.06	0.49	-514.9	6.18	
12:00		4.00	29.16	20987	9.96	4.56	0.40	-503.2	6.21	
12:10		5.45	29.25	20996	9.97	3.09	0.33	-493.7	6.22	
12:20		6.80	29.36	20951	9.98	3.13	0.29	-491.8	6.25	
12:30		8.15	29.33	20961	10.00	2.93	0.28	-488.8	6.23	
12:40		9.30	29.31	20954	9.99	2.83	0.24	-517.6	6.16	
12:50		10.00	28.86	20971	10.06	11.04	0.22	-511.5	6.05	
1300		10.95	28.76	20955	10.02	3.87	0.20	-499.3	6.09	
1310		11.80	28.51	20895	10.04	3.40	0.19	-501.9	6.04	
1320	+ 12:03	12.70	28.43	20853	10.04	2.83	0.19	-489.0	6.02	
1330		13.55	28.41	21118	10.04	3.12	0.18	-512.1	6.02	

EQUIPMENT USED/COMMENTS: Total gal purged =
Geopump w/ 1/4" Teflon Tubing
Ysi 556 DUP-2
HF Scientific Turbidity Meter

Start Purge 11:20 Sampled 1345
End Purge 1340
8260, 8270, 6020A

SIGNATURE G.A. Ethridge DATE 11/08/12

high speed pump headed stopped @ 12:40. Switched to low speed side and continued sampling @ 12:45.

DUP-2 Collected here.

Date: 11/08/12
Page: 2 of 2

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: WIND:

Well # LOC 11B-MW-020 Diam. In. 2 TOC Elev. (ft, MSL) 5.47 Total Depth (ft) 35.0 Date Time

Gal./ft. of Water 0.162 Depth to Water (ft)

Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	COMMENTS
1340	14.46	28.37	21053	10.06	2.91	0.18	-516.5	6.42

EQUIPMENT USED/COMMENTS:

SIGNATURE DATE

Date: 11/28/12
Page: 1 of

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: 50 WIND: 10-20

Well # LOC11D-MW-03 Diam. In. 2 TOC Elev. (ft, MSL) 13.30 Total Depth (ft) 5.18 Date 11/28/12 Time 10 45

(13.30 - 5.18) x 0.162 = 1.32 x 3 = 3.95 gal.

Gal./ft. of Water 0.162 Depth to Water (ft)

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
10 20		0.25	20.54	3059	7.77	11.27	2.54	-328.5	5.30	
10 30		1.15	21.28	3083	7.82	4.47	0.81	-349.1	5.54	
10 40		1.90	21.14	3018	7.80	3.80	0.58	-346.2	5.67	
10 50		3.00	21.44	3010	7.81	2.23	0.48	-350.1	5.85	
11 00		4.10	21.53	3045	7.85	1.48	0.40	-351.3	5.93	

EQUIPMENT USED/COMMENTS: Total gal purged - 4.10 gal.
Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start purge 10 15 Sampled - 11 10
End purge 11 25 DUP 3 @ - 11 25
8260, 8270, 6020A Trip Blank - (2) 40 ml VOA's

SIGNATURE	DATE
G.A. Ethridge	11/28/12

Date: 11/7/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Clear (sheen on purge H_2O) AMBIENT TEMPERATURE: 59° WIND:

Well # LOC113-MW-05 Diam. In. 2 TOC Elev. (ft, MSL) 8.52 Total Depth (ft) 20.14 Date 11/7/12 Time 1800

Gal./ft. of Water 0.162 Depth to Water (ft) 1.41 18.7' = 3.05 x 3 = 9.2 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1543	—	22.50	9172	12.25	197.5	4.34	-95.7	2.45	
1550	0.5	22.71	9180	12.28	16.2	1.31	-97.9	2.61	
1600	1.25	22.92	9183	12.30	8.84	0.63	-95.3	2.94	
1610	1.90	23.11	9405	12.32	11.69	0.42	-92.5	3.16	
1620	2.7	23.44	9596	12.33	12.98	0.34	-96.9	3.27	
1630	3.4	23.54	9681	12.33	20.33	0.29	-106.4	3.36	
1640	4.2	23.53	9659	12.32	24.58	0.25	-105.2	3.51	
1650	5.0	23.57	9659	12.32	53.44	0.28	-96.9	3.60	
1700	5.25	23.33	9628	12.30	47.14	0.19	-92.2	3.62	
1710	6.50	23.45	9686	12.31	47.66	0.17	-88.0	3.71	
1720	7.50	23.35	9536	12.29	71.86	0.16	-87.0	3.77	
1730	8.25	23.33	9503	12.29	71.92	0.15	-85.3	3.77	
1740	9.0	23.29	9446	12.28	80.98	0.13	-85.6		

EQUIPMENT USED/COMMENTS: Total gal purged = 9.5

Geopump/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start purge - 1539 Sampled - 1800
End purge - 1743
6020A, 8270, 8260

SIGNATURE: Kenthu Davis DATE

Date: 11/7/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): R. Davis	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Pty Cloudy AMBIENT TEMPERATURE: 50° WIND: Light

Well # LOC11-MW-07 Diam. In. 2 TOC Elev. (ft, MSL) 8.11 Total Depth (ft) 15.25 Date 11/7/12 Time 1215

Gal./ft. of Water 0.162 Depth to Water (ft) 3.42 11.8 = 1.9 gal = 5.8 gal

Purge

Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1047	—	31.35	13,349	7.57	0.77	3.28	-60.0	3.67	
1055	1.0	32.04	10,902	7.34	0.98	0.44	-37.5	4.47	
1105	1.8	31.65	9,823	7.24	1.17	0.27	-36.7	4.98	
1115	2.7	31.50	9,033	7.20	1.11	0.26	-37.2	5.52	
1125	3.5	31.79	8,842	7.21	0.91	0.26	-44.8	5.96	
1135	4.2	31.94	9,366	7.26	0.79	0.25	-31.8	6.58	
1145	5.0	31.94	10,644	7.31	1.10	0.24	-41.1	7.15	
1155	5.7	32.05	10,737	7.34	1.26	0.25	-34.5	7.74	
									VOC samples effervescing ∴ bottles have bubbles

EQUIPMENT USED/COMMENTS: Total gal purged = 6.0 gal
Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start purge - 1045 Sampled - 1215
End purge - 1157
8260, 8270, 6020A

SIGNATURE: Kenton Davis DATE

Date: 11/07/12
Page:

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick
		Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: 55 WIND: 10 mph

Well # LOC11-MW-08 Diam. In. 2 TOC Elev. (ft, MSL) 7.58 Total Depth (ft) 15.50 Date Time

(15.50 - 3.22) x 0.162 = 1.99 X 3 = 5.97 gallons

Gal./ft. of Water 0.162 Depth to Water (ft) 3.22

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µS/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1135	—	0.10	27.96	3608	8.24	7.90	2.97	-282.8	3.03	
1140		0.35	28.52	3272	8.23	4.89 ~~5.85~~	1.15	-304.0	3.40	
1150		0.85	29.03	3111	8.27	5.41	0.66	-315.5	3.98	
1200		1.35	29.08	3110	8.26	6.48	0.47	-343.2	4.35	
1210		1.90	29.16	3136	8.31	6.52	0.42	-327.1	4.62	
1220		2.50	29.15	3158	8.33	5.85	0.38	-323.8	4.91	
1230		3.00+ 3.10	29.17	3179	8.32	5.78	0.37	-376.4	5.15	
1240		3.85	29.16	3262	8.36	5.56	0.34	-379.0	5.45	
1250		4.60 ~~5.60~~	29.33	3285	8.38	6.47	0.32	-384.7	5.67	
1300		5.40	29.32	3196	8.39	6.26	0.31	-380.3	5.79	
1310		6.20	29.21	3175	8.40	6.74	0.32	-366.1	5.65	

EQUIPMENT USED/COMMENTS: Total gal purged = 6.20

Cooper pump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start Purge 1130 Sampled - 1310
End Purge

8260, 8270, 6020A

SIGNATURE G.A. Ethridge DATE 11/07/12

Date: 11/08/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick
		Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: 45 WIND: Light

Well # LOC11-MW-09 Diam. In. 2 TOC Elev. (ft, MSL) 8.54 Total Depth (ft) 14.95 Date Time

(14.95 - 1.54) X 0.162 = 2.17 X 3 = 6.51 gallons

Gal./ft. of Water 0.162 Depth to Water (ft) 1.54

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µS/m	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
0935	—	0.10	23.43	5902	6.41	111.7	10.13	-225.1	1.45	
0940		0.45	23.42	5130	6.39	77.65	1.48	-264.9	1.45	
0950		1.20	23.71	3114	6.37	39.50	1.00	-232.7	1.48	
1000		2.05	23.77	3056	6.35	16.66	0.84	-228.1	1.50	
1010		3.00	24.17	3039	6.35	11.91	0.79	-231.3	1.53	
1020		4.10	24.22	3041	6.33	5.79	0.74	-228.0	1.55	
1030		5.20	24.37	3037	6.33	6.90	0.74	-244.5	1.57	
1035		6.35	24.39	3033	6.33	3.65	0.73	250.0	1.58	
1040		6.80	24.41	3036	6.33	3.29	0.73	235.6	1.60	

EQUIPMENT USED/COMMENTS: Total gal purged = 6.80

Geopump II/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

START purge 0930
End purge 1035
Sampled 1040

8260, 8270, 6020A

SIGNATURE G.A. Ethridge DATE 11/08/12

Date: 11/6/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Partly Cloudy AMBIENT TEMPERATURE: 70° WIND: Light

Well # LocILMW-10 Diam. In. 2 TOC Elev. (ft, MSL) 9.03 Total Depth (ft) 15.11 Date 11/6/12 Time 1325

Gal./ft. of Water 0.162 Depth to Water (ft) 1.44 13.7 = 22x3 = 6.7gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1158	–	22.45	2213	7.54	20.22	2.26	-84.2	1.50	
1205	0.7	22.44	2336	6.99	21.08	0.56	-92.0	1.53	
1215	1.6	22.38	2785	7.09	13.27	0.38	-109.2	1.55	
1225	2.5	22.70	3106	7.13	10.53	0.26	-116.9	1.55	
1235	3.5	22.81	3358	7.13	8.82	0.20	-118.1	1.58	
1245	4.5	22.85	3574	7.12	9.81	0.17	-120.0	1.58	
1255	5.6	22.78	3702	7.11	8.65	0.16	-119.8	1.59	
1305	6.8	22.98	3801	7.12	8.25	0.18	-120.9	1.58	

EQUIPMENT USED/COMMENTS: Total gal Purged - 7.2gal

Geopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start Purge - 1156 Sampled - 1325
End Purge - 1307
8260, 8270, 6020A

SIGNATURE DATE

Date: 11/07/12
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick
		Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: 50 WIND: 10 mph

Well # LOCMB-MW-01 Diam. In. 2 TOC Elev. (ft, MSL) 0.30 Total Depth (ft) 18.32 Date Time

(18.32 - 2.08) X 0.162 = 2.63 X 3 = 7.90 gallons

Gal./ft. of Water 0.162 Depth to Water (ft) 2.08

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
15:15	~	0.20	22.07	10295	6.59	30.18	2.07	-291.0	2.08	
15:20		0.45	22.22	10120	6.61	27.12	1.13	-314.6	2.17	
15:30		1.20	22.54	9302	6.69	17.69	0.84	-328.6	2.27	
15:40		2.00	22.48	8620	6.72	9.60	0.71	-331.6	2.38	
15:50		2.90	22.49	7750	6.74	3.94	0.66	-349.6	2.45	
16:00		3.85	22.46	7153	6.76	2.35	0.66	-342.7	2.48	
16:10		4.80	22.38	6573	6.76	1.99	0.66	-348.9	2.52	
16:20		5.85	22.47	5993	6.77	1.77	0.65	-349.2	2.57	
16:30		7.00	22.56	5729	6.79	2.75	0.63	-346.8	2.58	
16:40		8.05	22.48	5520	6.79	2.41	0.63	-349.9	2.60	

EQUIPMENT USED/COMMENTS: Total Gal Purged = 8.05

Geopump / 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start Purge ~~2200~~ 1510 Sampled 16:45
End Purge ~~2240~~ 1640
8200, 8270, 6020A

SIGNATURE: G.A. Ethridge DATE: 11/07/12

Date: 2/05/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s):	Project Name: GP Cellulose, Brunswick
		Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Partly Cloudy AMBIENT TEMPERATURE: 60 WIND: Calm

Well # CAW-1 Diam. In. 2 TOC Elev. (ft, MSL) 9.31 Total Depth (ft) 11.71 Date 2/05/13 Time

Gal./ft. of Water 0.162 Depth to Water (ft) 1.57 3.62 gal = 3 well volumes

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1115		0.25	22.98	96906	5.01	30.55	2.36	25.2	1.38	
1120		0.55	22.75	69946	5.02	24.57	0.75	33.8	1.38	
1130		1.35	22.53	51220	5.18	26.86	0.62	24.4	1.40	
1140		2.20	21.71	39007	5.33	48.79	0.91	31.6	1.41	
1150		2.85	21.62	36703	5.30	29.59	1.85	36.1	1.38	
200		3.50	21.58	35439	5.29	16.16	2.51	33.4	1.35	
210		4.10	22.04	37441	5.25	12.31	1.04	22.9	1.35	
220		4.75	22.32	37587	5.24	15.44	2.05	39.4	1.35	
230		5.50	22.56	37402	5.26	15.68	1.87	31.6	1.38	
240		6.25	22.20	37090	5.31	15.90	1.90	22.5	1.38	

EQUIPMENT USED/COMMENTS: Total gal purged =
GEOPUMP w/ 1/4" TEFLON TUBING
YSI 556
HF SCIENTIFIC Turbidity meter

START PURGE = 11 10
End purge = 12 40
Sampled = 12 40

CR - 60204

SIGNATURE: G. A. Ethridge DATE: 2/05/13

Date: _____
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s):	Project Name: GP Cellulose, Brunswick
		Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Partly Cloudy AMBIENT TEMPERATURE: 65 WIND: Calm

Well # CAW-3 Diam. In. 2 TOC Elev. (ft, MSL) 12.11 Total Depth (ft) 14.52 Date 2/05/13 Time _____

Gal./ft. of Water 0.162 Depth to Water (ft) 4.54 4.85 gal. = 3 well volumes

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	ΔTW	COMMENTS
1550		0.15	21.94	55817	5.60	166.7	1.88	68.2	4.58	
1555		0.45	21.68	54647	5.54	138.3	0.53	81.1	4.65	
1600		0.80	21.39	39100	5.74	59.61	0.61	59.4	4.68	
1610		1.55	21.34	35987	5.68	42.72	0.49	61.6	4.67	
1620		2.40	21.39	34845	5.70	21.40	0.45	71.0	4.70	
1630		3.25	21.32	34758	5.70	13.36	0.45	61.5	4.68	
1640		4.55	21.22	34552	5.71	8.52	0.68	36.0	4.68	
~~1650~~	1645	5.05	21.22	34661	5.71	27.02	0.63	29.9	4.69	
1650		5.70	21.22	34440	5.71	7.26	0.51	29.8	4.70	

EQUIPMENT USED/COMMENTS: Total gal purged = 5.70

GeoPump w/ 1/4" ~~tube~~ Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start purge = 1545 Sampled = 1650
End purge = 1650

CR - 60020A

SIGNATURE: H.G. Ethridge DATE: 2/05/13

Date: 2/05/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.R. Ethridge	Project Name: GP Cellulose, Brunswick
		Project No.: ~~206163~~ 02.2006 0163

SITE CONDITIONS/COMMENTS ON SAMPLING: Partly Cloudy AMBIENT TEMPERATURE: 70 WIND: Calm

Well # CAW-4 Diam. In. 2 TOC Elev. (ft, MSL) 11.97 Total Depth (ft) 12.58 Date 2/05/13 Time

Gal./ft. of Water 0.162 Depth to Water (ft) 4.00 4.17 gal = 3 Well volumes

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
435		0.25	22.64	43852	5.67	7.86	2.99	38.5	4.10	
440		0.75	22.57	41018	5.89	3.28	1.76	33.2	4.13	
450		1.35	22.58	40104	5.91	0.99	1.09	28.7	4.12	
500		2.00	22.72	40684	5.89	0.58	0.87	28.3	4.12	
510		2.85	22.59	40356	5.90	0.26	0.82	27.2	4.11	
520		3.50	22.45	40669	5.89	0.00	0.91	26.0	4.09	
530		4.30	22.28	39991	5.90	0.00	0.84	27.5		

EQUIPMENT USED/COMMENTS: Total gal purged = 4.30

Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start purge = 1430 Sampled = 1530
End purge = 1530

CR-020204

SIGNATURE G.R. Ethridge DATE 2/05/13

Date: 2/5/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Light yellow AMBIENT TEMPERATURE: 70° WIND: Light

Well # CAW-7 Diam. In. 2 TOC Elev. (ft, MSL) 11.59 Total Depth (ft) 12.30 Date 2/5/13 Time 1505

Gal./ft. of Water 0.162 Depth to Water (ft) 4.53 7.77 = 1.3 x 3 = 3.8 gal

Time

Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. μ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1420	—	24.36	81 130	2.20	144.2	34.0	392.2	5.01	
1430	1.0	23.19	77,221	2.14	64.07	2.08	404.2	5.02	
1440	1.9	23.17	76 031	2.14	23.81	1.72	404.8	5.01	
1450	2.9	23.24	75 297	2.17	17.23	1.47	404.3	5.02	
1500	3.8	23.27	74 712	2.20	8.19	0.97	407.0	5.02	

EQUIPMENT USED/COMMENTS: Total gal purged = 4.25 gal

Cooopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start purge = 1420 Sampled = 1505
End purge = 1501

CR-6020A

SIGNATURE DATE

Date: 2/05/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick
		Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Partly Cloudy AMBIENT TEMPERATURE: 60 WIND: Calm

Well # CAW-10 Diam. In. 2 TOC Elev. (ft, MSL) 13.59 Total Depth (ft) 12.44 Date 2/05/13 Time

Gal./ft. of Water 0.162 Depth to Water (ft) 6.58 2.85 gals. = 3 wellvolumes

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1710		0.05	21.55	35971	5.47	7.68	3.67	39.2	6.82	
1720		0.60	21.81	31972	5.52	10.26	1.88	32.8	7.00	
1730		1.25	21.66	27967	5.59	4.44	2.25	27.1	7.13	
1740		2.05	21.62	27167	5.58	0.23	1.88	22.2	7.21	
1750		2.85	21.61	26827	5.56	0.00	1.86	20.0	7.29	

EQUIPMENT USED/COMMENTS: Total gal purged = 2.85

Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start purge = 1705 Sampled = 1750
End purge = 1750

CR. 6020A

SIGNATURE Gerald A. Ethridge DATE 2/05/13

Date: 2/5/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick Project No.: ~~206163~~ 02.20060063

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: 55° WIND: Light

Well # CAW-13 Diam. In. 2 TOC Elev. (ft, MSL) 12.89 Total Depth (ft) 9.49 Date 2/5/13 Time 1050

Gal./ft. of Water 0.162 Depth to Water (ft) 0.92 8.57 = 1.4x3 = 4.2 gal

TNR

Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1007	—	22.97	58508	6.42	32.01	7.05	-127.0	1.00	
1015	1.1	23.26	58540	5.25	2.07	0.32	-153.0	1.00	
1025	2.25	23.35	58225	5.04	0.81	0.24	-146.3	1.01	
1035	3.50	23.35	58168	4.99	0.58	0.24	-127.9	1.02	
1042	4.50	23.35	58418	4.96	1.93	0.25	-102.8	1.00	

EQUIPMENT USED/COMMENTS: Total gal purged = 4.25

Geopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

DUP-1 collected Here

Start Purge = 1006
End Purge = 1043
Sampled = 1050

CR-6020A

SIGNATURE: [signature] DATE

Date: 2/5/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick Project No.: 206163

SITE CONDITIONS/COMMENTS ON SAMPLING: Tan-Yellow Tint AMBIENT TEMPERATURE: 63° WIND: Light

Well # CPW-14 Diam. In. 2 TOC Elev. (ft, MSL) 12.89 Total Depth (ft) 12.49 Date 2/5/13 Time

Gal./ft. of Water 0.162 Depth to Water (ft) 5.13 7.36 = 1.2 gal x 3 = 3.6 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1110	—	22.96	78,503	6.78	8.62	101.15	-13.6	5.20	
1120	1.3	23.06	71,147	6.74	1.27	0.78	-26.7	5.20	
1130	2.7	23.05	70,928	6.65	0.73	0.47	-26.8	5.20	
1140	4.0	23.03	70,766	6.64	0.83	0.33	-18.4	5.20	

EQUIPMENT USED/COMMENTS: Total gal purged = 4.25
Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start purge = 1108 Sampled =
End purge = 1142
CR-6020A

SIGNATURE DATE

Date: 2/04/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Partly Cloudy AMBIENT TEMPERATURE: 60° WIND: 5-10

Well # LOC613-MW-01 Diam. In. 2 TOC Elev. (ft, MSL) 24.63 Total Depth (ft) 29.89 Date 2/04/13 Time

Gal./ft. of Water 0.162 Depth to Water (ft) 20.65 3 well volumes = 4.50 gal.

Time	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
550		0.20	20.92	29785	11.89	—	0.30	-433.0	20.65	
555		0.70	21.49	29182	12.51	0.43	0.29	-457.0	20.87	
600		0.90	21.48	29100	12.55	0.21	0.21	-431.3	20.86	
610		1.40	21.50	28874	12.59	0.39	0.16	-442.7	20.86	
620		2.25	21.23	28716	12.61	0.20	0.20	-448.6	20.87	
630		3.00	21.31	28661	12.64	0.00	0.18	-453.6	20.88	
640		3.75	21.26	28656	12.64	0.00	0.15	-446.7	20.87	
1650		4.50	21.24	28735	12.65	0.00	0.15	-443.3	20.87	

EQUIPMENT USED/COMMENTS: Total gal purged =
Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity meter

Start purge = ~~1535~~ 1545 Sampled = 1650
End purge = 1650
60204 Analyzed for Cr, As, Ni

SIGNATURE: G.A. Ethridge DATE: 2/04/13

Date: 2/05/13
Page: 1 of 2

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick Project No.: ~~206103~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Overcast AMBIENT TEMPERATURE: 50 WIND: Calm

Well # LOC6-MW-01D Diam. In. 2 TOC Elev. (ft, MSL) 20.97 Total Depth (ft) 41.5 Date 2/05/13 Time

Gal./ft. of Water 0.162 Depth to Water (ft) 22.57 9.20 gal. = 3 well volumes

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
0830		0.70	20.93	2437	7.58	0.01	3.33	3.4	22.13	
0840		1.25	21.30	2437	7.50	0.00	2.56	3.5	22.55	
0850		2.00	21.38	2438	7.40	0.00	1.69	0.6	22.78	
0900		2.50	21.29	2440	7.34	0.00	0.95	1.7	22.88	
0910		3.15	21.42	2440	7.32	0.00	0.79	-0.1	23.02	
0920		3.75	21.36	2438	7.48	0.06	3.09	-1.1	23.42	
0930		4.45	21.43	2443	7.34	4.32	0.69	-10.5	23.50	
0940		5.10	21.52	2447	7.32	4.98	0.74	-64.7	23.55	
0950		5.75	21.47	2449	7.40	3.35	1.38	-58.5	23.50	
1000		6.55	21.56	2468	7.30	3.91	0.70	-76.4	23.68	
1010		7.10	21.47	2485	7.25	3.31	0.54	-85.7	23.51	
1020		7.75	21.62	2535	7.21	2.44	1.31	-100.0	23.65	
1030		8.50	21.54	2840	7.13	1.57	1.66	-106.1	23.58	
1040		9.20	21.52	6630	7.06	0.10	1.60	-149.6	23.55	

EQUIPMENT USED/COMMENTS: TOTAL gal purged = 9.20 gal.

Geopump II 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start Purge = 0820 Sampled = 1040
End Purge = 1040
6020A Analyze for Cr, As, Ni

SIGNATURE G.A. Ethridge DATE 2/05/13

Date: 2/4/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick Project No.: ~~206163~~ 02. 20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: DK Brown color AMBIENT TEMPERATURE: 60° WIND: Light

Well # LOC6-MW-02 Diam. In. 2 TOC Elev. (ft, MSL) 16.95 Total Depth (ft) 25.3 Date 2/4/13 Time 1650

Gal./ft. of Water 0.162 Depth to Water (ft) 13.16 12.14' = 1.98 gal x 3 = 5.9 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. μ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1546	–	22.05	7921	12.42	16.87	1.37	-419.8	13.25	
1555	0.8	22.87	8555	12.44	1.54	0.13	-443.8	13.27	increased rate
1605	1.9	22.93	9386	12.48	0.00	0.09	-446.9	13.29	
1615	3.0	22.90	10,131	12.52	0.00	0.08	-452.7	13.32	
1625	4.0	22.97	10,479	12.54	0.00	0.08	-467.6	13.31	
1635	5.1	22.95	10,705	12.55	0.00	0.07	-488.5	13.31	
1645	6.25	23.00	10,799	12.56	0.00	0.06	-494.5	13.31	

EQUIPMENT USED/COMMENTS: Total gal purged = 6.5
Geopump w/ 1/4" tubing Teflon
YSI 556
HF Scientific turbidity meter

Start purge = 1544 Sample = 1650
End purge = 1645
6020A Analyze for As, Cr, Ni

SIGNATURE Kenton Davis DATE

Date: 2/4/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Clear AMBIENT TEMPERATURE: 55° WIND: Light

Well # LOC 6-MW-04 Diam. In. 2 TOC Elev. (ft, MSL) 7.80 Total Depth (ft) 15.1 Date 2/4/13 Time 1825

Gal./ft. of Water 0.162 Depth to Water (ft) 3.98 11.12' = 1.8 gal x 3 = 5.4 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1722	–	19.52	3644	12.02	125.3	95.8	-348.2	5.05	
1730	0.8	19.50	3571	12.20	69.74	0.42	-360.2	4.99	
1740	1.75	19.41	3598	12.23	25.13	0.19	-366.2	5.04	
1750	2.75	19.49	3396	12.18	12.81	0.14	-377.8	5.13	
1800	3.75	19.51	3076	12.06	8.14	0.13	-362.3	5.14	
1810	4.75	19.47	2842	11.95	8.46	0.13	-368.1	5.07	
1817	5.5	19.50	2780	11.89	2.75	0.10	-373.9	5.07	

EQUIPMENT USED/COMMENTS: Total gal purged = 5.8 gal

Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start purge = 1720 Sampled = 1825
End purge = 1819
6020A Analyze for As, Cr, Ni

SIGNATURE: Kenton Davis DATE

Date: 2/05/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick	
		Project No.: ~~206163~~ 02, 20060163	

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: WIND:

Well # LOC11D-MW-01 Diam. In. 2 TOC Elev. (ft, MSL) 5.64 Total Depth (ft) 12.36 Date Time

Gal./ft. of Water 0.162 Depth to Water (ft) 3.47 4.32 gal. = 3 well volumes

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Depth to water	COMMENTS
1840		0.40	20.18	4336	8.50	68.2	~~6.83~~ 1.45	-262.1	3.74	
1850		1.00	19.71	3232	7.39	50.18	1.17	-328.3	3.75	
1900		1.70	19.69	3140	7.41	20.39	0.80	-345.2	3.83	
1910		2.25	19.56	5234	9.01	16.20	0.55	-430.2	3.80	
1920		3.00	19.58	5846	9.21	11.18	0.48	-426.4	3.80	
1925		3.30	19.70	5854	9.21	9.80	0.46	-434.8	3.83	
1930		3.75	19.81	5870	9.23	9.02	0.41	-426.6	3.88	
1935		4.35	19.82	5891	9.25	9.11	0.39	-428.1	3.96	

EQUIPMENT USED/COMMENTS: Total Gal purged =

Geopump w/ 1/4" TeFlon Tubing
YSI 556
HF Scientific Turbidity Meter

START purge = ~~1830~~ 1835
End purge = 1935
Sampled = 1940

8260, 8270, 6020A

SIGNATURE: G.A. Ethridge DATE: 2/05/13

Date: 2/06/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): G.A. Ethridge	Project Name: GP Cellulose, Brunswick Project No.: ~~206163~~ 02. 20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Sunny AMBIENT TEMPERATURE: 75 WIND: Calm

Well # LOC1113-MW-02 Diam. In. 2 TOC Elev. (ft, MSL) 5.51 Total Depth (ft) 20.11 Date 2/06/13 Time

Gal./ft. of Water 0.162 Depth to Water (ft) 1.20 9.19 gal. = 3 well volumes

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	COMMENTS
1200		0.15	25.39	7377	12.10	191.9	2.43	-252.6	1.62
1210		1.00	24.64	7431	12.13	77.89	0.62	-247.6	1.75
1220		1.90	24.56	7933	12.17	43.33	0.55	-260.3	1.95
1230		2.85	24.52	8288	12.19	22.68	0.50	-262.0	1.99
1240		3.90	24.39	8383	12.20	10.17	0.51	-279.1	2.08
1250		4.95	24.38	8448	12.20	5.17	0.47	-270.1	2.11
1300		6.00	24.20	8478	12.20	2.33	0.48	-269.1	2.20
1310		7.20	24.33	8566	12.19	5.31	0.48	-273.9	2.18
1320		8.25	24.40	8790	12.18	1.97	0.45	-285.1	2.17
1330		9.30	24.37	8961	12.17	1.90	0.44	-286.1	2.17

EQUIPMENT USED/COMMENTS: Total gal purged = 9.30

Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start purge = 1150 Sampled = 1330
End purge = 1330

8260, 8270, 6020A

SIGNATURE G.A. Ethridge DATE 2/06/13

Date: 2/06/13
Page: 1 of 2

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI
Sampler(s): Ethridge
Project Name: GP Cellulose, Brunswick
Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Sunny
AMBIENT TEMPERATURE: 75
WIND: Calm

Well # LOC 113-MW-02D
Diam. In. 2
TOC Elev. (ft, MSL) 5.47
Total Depth (ft) 35.0
Date
Time
Gal./ft. of Water 0.162
Depth to Water (ft) 6.18
14.00 gal. = 3 well volumes

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Depth to water	COMMENTS
500		1.25	27.37	19755	8.79	6.96	1.14	-441.2	6.25	
510		1.70	27.65	19761	8.78	8.20	0.78	-448.5	6.33	
520		2.75	28.01	19608	8.88	6.57	0.66	-450.2	6.32	
530		3.90	28.45	18544	9.53	5.85	0.50	-462.2	6.40	
540		5.10	28.50	18188	9.74	5.91	0.42	-473.9	6.40	
550		6.25	28.57	18031	9.83	3.07	0.42	-478.1	6.40	
600		7.35	28.50	18080	9.86	2.02	0.49	-476.3	6.41	
610		8.75	28.65	18035	9.91	1.56	0.49	-465.7	6.45	
620		10.05	28.57	17999	9.92	1.18	0.37	-458.4	6.45	
630		11.40	28.68	17993	9.94	1.06	0.38	-456.7	6.47	
640		12.75	28.68	17971	9.94	0.98	0.37	-453.7	6.47	
1650		14.10	28.68	17964	9.94	0.97	0.36	-451.0	6.47	

EQUIPMENT USED/COMMENTS:
Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

TOTAL gal purged =

Dup-2 collected here

START purge = 1450
End purge = 1650

Sampled = 1700

8260, 8270, 6020A

SIGNATURE: J.A. Ethridge
DATE: 2/06/13

Date: _____
Page: 2 of 2

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s):	Project Name: GP Cellulose, Brunswick Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: AMBIENT TEMPERATURE: WIND:

Well # LOC113-MW-02D Diam. In. 2 TOC Elev. (ft, MSL) 5.47 Total Depth (ft) 35.0 Date _____ Time _____

Gal./ft. of Water 0.162 Depth to Water (ft) _____

Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	COMMENTS

EQUIPMENT USED/COMMENTS:

SIGNATURE DATE

Date: 2/6/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI
Sampler(s): K. Davis
Project Name: GP Cellulose, Brunswick
Project No.: ~~206163~~ 02 20060163

SITE CONDITIONS/COMMENTS ON SAMPLING:
AMBIENT TEMPERATURE:
WIND:

Well # LOC 11D-MW-03 Diam. In. 2 TOC Elev. (ft, MSL) 13.30 Total Depth (ft) 15.18 Date 2/6/13 Time 1250

Gal./ft. of Water 0.162 Depth to Water (ft) 4.89 10.29 = 1.743 = 5.0 gal

Time

Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. μ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1155	—	20.53	3897	9.14	14.74	48.00	-293.2	5.56	
1205	1.2	20.22	3999	7.85	22.36	0.84	-333.7	5.85	
1215	2.25	19.83	3771	7.87	11.38	0.76	-378.9	5.95	
1225	3.3	19.81	3743	7.90	6.28	0.68	-377.3	5.98	
1235	4.4	19.85	3878	7.93	5.73	0.52	-386.7	6.00	
1241	5.0	19.86	3937	7.95	4.84	0.88	-383.6	6.02	

EQUIPMENT USED/COMMENTS:
TOTAL gal purged = 5.3 gal
Geopump w/ 1/4" TeFlon Tubing
YSI 556
HF Scientific Turbidity Meter

START purge = 1152
Sampled - 1250
End purge = 1243
8260, 8270, 6020A

SIGNATURE
DATE

Date: 2/6/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI
Sampler(s): K. Davis
Project Name: GP Cellulose, Brunswick
Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Sheen on water
AMBIENT TEMPERATURE: 60°
WIND: Light

Well # LOC113-MW-05
Diam. In. 2
TOC Elev. (ft, MSL) 8.52
Total Depth (ft) 20.14
Date 2/6/13
Time 1120

Gal./ft. of Water 0.162
Depth to Water (ft) 2.17
18 = 2.9 x 3 = 8.8 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	ΔTW	COMMENTS
0925	—	20.95	10033	13.15	58.36	14.22	-301.8	3.35	
0935	1.2	20.52	10447	13.43	6.98	1.75	-310.9	4.50	
0945	2.2	20.34	10407	13.43	5.04	0.66	-303.1	4.95	
0955	3.25	20.30	10414	13.43	5.44	0.43	-396.5	5.07	
1005	4.3	20.35	10277	13.41	17.02	0.36	-335.1	5.16	
1015	5.4	20.31	10086	13.40	55.42	0.33	-324.5	5.26	
1025	6.6	20.31	9906	13.38	83.20	0.32	-401.6	5.52	
1035	7.7	20.38	9789	13.37	65.31	0.32	-419.6	5.68	
1045	8.8	20.38	~~9835~~ 9832	13.37	30.21	0.30	-416.7	5.77	
1055	10.0	20.40	9882	13.36	30.91	0.28	-405.3	5.98	
1105	11.2	20.43	9894	13.36	34.32	0.26	-402.1		

EQUIPMENT USED/COMMENTS:
Total gal purged = 11.5 gal
Geopump w/ 1/4" Teflon tubing
YSI 556
HF Scient IFC Turbidity Meter

Start purge = 0924
End purge = 1106
Sampled = 1120
8260, 8270, 60204

SIGNATURE
DATE

Turbidity got worse as purging went along

Date: 2/5/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI
Sampler(s): R. Davis
Project Name: GP Cellulose, Brunswick
Project No.: ~~200163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Cola color
AMBIENT TEMPERATURE: 70°
WIND: Light

Well # LOC11-MW-07
Diam. In. 2
TOC Elev. (ft, MSL) 8.11
Total Depth (ft) 15.25
Date 2/5/13
Time 1650

Gal./ft. of Water 0.162
Depth to Water (ft) 3.02
12.23 = 2.0 x 3 = 6 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1540	—	29.78	14535	7.30	1.40	7.80	-151.2	3.52	
1550	1.2	29.08	9151	7.26	1.25	1.03	-127.3	4.65	
1600	2.3	28.81	8289	7.18	0.55	0.85	-156.8	5.41	
1610	3.5	28.63	7491	7.14	0.00	0.79	-152.7	5.78	
1620	4.5	28.86	8006	7.19	0.03	0.79	-165.0	6.65	
1630	5.5	29.02	8675	7.27	0.01	0.67	-158.4	7.52	
1635	6.0	29.18	9137	7.31	0.12	0.71	-187.9	7.98	

EQUIPMENT USED/COMMENTS:
Total gal purged = 6.4 gal
Geopump II / 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start purge = 1538
Sampled = 1650
End purge = 1636

8260, 8270, 6020A

SIGNATURE
DATE

Date: 2/06/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): Ethridge	Project Name: GP Cellulose, Brunswick Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Mostly Cloudy AMBIENT TEMPERATURE: 60 WIND: Calm

Well # LOC11-MW-08 Diam. In. 2 TOC Elev. (ft, MSL) 7.58 Total Depth (ft) 15.50 Date Time

Gal./ft. of Water 0.162 Depth to Water (ft) 3.03 6.06 galo. = 3 well volumes

	Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. (S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Depth to Water	COMMENTS
1940		0.1	24.32	2574	8.52	8.43	2.66	-181.0	3.70	
1950		0.9	25.15	2544	8.43	5.59	0.72	-192.1	5.05	
0000		1.65	25.19	2568	8.40	6.34	0.66	-201.4	5.79	
0100		2.40	25.25	2592	8.39	5.24	0.57	-198.4	5.81	
0200		3.20	25.30	2632	8.36	4.54	0.47	-190.3	5.82	
0300		4.00	25.34	2674	8.34	4.74	0.45	-192.1	6.28	
0400		4.85	25.35	2681	8.37	5.92	0.50	-197.0	6.83	
0500		5.65	25.48	2618	8.40	6.44	0.49	-197.0	7.23	
1100		6.40	25.54	2524	843	7.44	0.47	-206.7	7.40	

EQUIPMENT USED/COMMENTS: TOTAL gal purged = 6.40
Geopump/ 1/4" Teflon tubing
YSI 556
HF Scientific Turbidity Meter

Start purge = 0935 Sampled = 1100
End purge = 1100
8260, 8270, 6020A

SIGNATURE: S.A. Ethridge DATE: 2/06/13

Date: 2/5/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick
		Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Clear AMBIENT TEMPERATURE: 65° WIND: Light

Well # LEC11-MW-09 Diam. In. 2 TOC Elev. (ft, MSL) 8.54 Total Depth (ft) 14.95 Date 2/5/13 Time 1925

Gal./ft. of Water 0.162 Depth to Water (ft) 1.06 13.90 * 2.3 x 3 = 6.8 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
1815	—	22.63	3092	6.39	33.60	92.0	-157.1	1.28	
1825	1.25	22.40	3034	6.13	6.44	1.55	-166.7	1.38	
1835	2.6	22.43	3041	6.10	5.85	1.63	-170.0	1.42	
1845	3.75	22.49	3029	6.10	2.57	1.04	-180.0	1.44	
1855	4.8	22.54	3025	6.09	1.87	1.00	-182.7	1.46	
1905	6.1	22.57	3021	6.09	2.71	0.91	-185.4	1.48	
1915	7.0	22.57	3024	6.09	0.73	0.85	-180.8	1.49	

EQUIPMENT USED/COMMENTS: Total gal purged = 7.5 gal

Geopump w/ 1/4" Tubing Teflon
YSI 556
HF Scientific Turbidity Meter

Start purge = 1813 Sampled = 1925
End purge = 1914

8260, 8270, 6020A

SIGNATURE: Kenton Davis DATE

Date: 2/5/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): R Davis	Project Name: GP Cellulose, Brunswick Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Cloudy AMBIENT TEMPERATURE: 54° WIND: Light

Well # LOC11-MW-10 Diam. In. 2 TOC Elev. (ft, MSL) 9.03 Total Depth (ft) 15.11 Date 2/5/13 Time 0940

Gal./ft. of Water 0.162 Depth to Water (ft) 0.98 14.13 = 2.3 gal/ft = 6.9 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	DTW	COMMENTS
0828	—	18.10	2147	7.21	20.30	192.36	-150.1	1.17	
0840	1.5	18.19	2430	7.13	15.10	0.34	-228.7	1.22	
0850	2.75	18.24	2643	7.22	8.56	0.15	-287.1	1.23	
0900	4.0	18.34	2752	7.21	7.97	0.08	-312.7	1.25	
0910	5.25	18.45	2865	7.21	8.01	0.07	-332.2	1.27	
0920	6.60	18.43	2965	7.19	7.45	0.06	-337.4	1.28	
0924	7.10	18.50	3004	7.18	6.72	0.06	-340.0	1.29	

EQUIPMENT USED/COMMENTS: Total gal purged = 7.5 gal

Geopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start Purge = 0827 Sampled = 0940
End Purge = 0925

8260, 8270, 6020A

SIGNATURE DATE

Date: 2/6/13
Page: 1

EarthCon
Low Flow Monitoring Well Sampling Form

Location: BCI	Sampler(s): K. Davis	Project Name: GP Cellulose, Brunswick Project No.: ~~206163~~ 02.20060163

SITE CONDITIONS/COMMENTS ON SAMPLING: Great Time AMBIENT TEMPERATURE: 70° WIND: Light

Well # LOC17B-MW-01 Diam. In. 2 TOC Elev. (ft, MSL) 0.30 Total Depth (ft) 18.32 Date 2/6/13 Time

Gal./ft. of Water 0.162 Depth to Water (ft) 2.52 15.8 = 2.6 x 3 = 7.7 gal

Time Well Volume	Cum. Vol. (gal)	Temp. (°C)	Sp. Cond. µ(S/m)	pH (std. units)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	ATW	COMMENTS
1505	—	21.38	19704	6.52	17.73	85.00	-302.4	3.15	
1515	1.25	20.53	14105	6.51	13.85	1.58	-297.0	3.62	
1525	2.5	20.25	12523	6.53	11.31	1.30	-311.1	4.32	
1535	3.7	20.04	11324	6.45	7.60	0.99	-302.1	5.50	
1545	4.8	19.95	10705	6.40	16.04	0.91	-312.4	6.05	
1555	6.1	19.31	9086	6.32	12.74	0.83	-305.3	6.80	
1605	7.3	19.65	10456	6.37	5.91	0.77	-305.9	7.40	
1610	7.75	19.70	10688	6.38	5.70	0.75	-297.7		

EQUIPMENT USED/COMMENTS: Total gal Purged = 8.2 gal

Geopump w/ 1/4" Teflon Tubing
YSI 556
HF Scientific Turbidity Meter

Start Purge = 1504 Sampled = 1625
End Purge = 1612

8260, 8270, 6020A

SIGNATURE: Kenton Davis DATE

APPENDIX B

LABORATORY ANALYTICAL RESULTS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-84557-1
Client Project/Site: EarthCon /Brunswick Site

For:
EarthCon Consultants Inc
1880 West Oak Parkway, Bldg. 100
Suite 106
Marietta, Georgia 30062

Attn: Ms. Carol Northern

Authorized for release by:
11/30/2012 2:55:01 PM

Linda Wolfe
Project Manager I
linda.wolfe@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 5
Method Summary 6
Definitions 7
Detection Summary 8
Client Sample Results 10
Surrogate Summary 17
QC Sample Results 19
QC Association 25
Chronicle 28
Chain of Custody 32
Receipt Checklists 34
Certification Summary 35

Job ID: 680-84557-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: EarthCon Consultants Inc

Project: EarthCon /Brunswick Site

Report Number: 680-84557-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/8/2012 11:12 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.4º C and 1.2º C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples LOC11-MW-10 (680-84557-4), LOC11-MW-07 (680-84557-14), TRIP BLANK (680-84557-15), LOC11-MW-08 (680-84557-16), LOC17B-MW-01 (680-84557-17), LOC11B-MW-05 (680-84557-18) and LOC11D-MW-01 (680-84557-19) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/13/2012, 11/15/2012 and 11/21/2012.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples LOC11-MW-10 (680-84557-4), LOC11-MW-07 (680-84557-14), LOC11-MW-08 (680-84557-16), LOC17B-MW-01 (680-84557-17), LOC11B-MW-05 (680-84557-18) and LOC11D-MW-01 (680-84557-19) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 11/12/2012 and analyzed on 11/18/2012 and 11/19/2012.

Due to the level of naphthalene in sample LOC11-MW-07 (680-84557-14) a 1:2 dilution was required prior to analysis. Naphthalene and phenanthrene are repoted from the 1:2 dilution and the 3,&4, methylphenol is reported from the 1:1 run.

No other difficulties were encountered during the semivolatiles analyses.

All other quality control parameters were within the acceptance limits.

METALS (ICPMS)

Samples LOC6B-MW-01 (680-84557-1), LOC6-MW-02 (680-84557-2), LOC6-MW-04 (680-84557-3), LOC11-MW-10 (680-84557-4), LOC6-MW-01D (680-84557-5), CPW-13 (680-84557-6), CPW-1 (680-84557-7), Dup-1 (680-84557-8), CPW-14 (680-84557-9), CPW-7 (680-84557-10), CPW-4 (680-84557-11), CPW-10 (680-84557-12), CPW-3 (680-84557-13), LOC11-MW-07 (680-84557-14), LOC11-MW-08 (680-84557-16), LOC17B-MW-01 (680-84557-17), LOC11B-MW-05 (680-84557-18) and LOC11D-MW-01 (680-84557-19) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 11/10/2012 and analyzed on 11/16/2012 and 11/19/2012.

Job ID: 680-84557-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

The matrix of the following samples caused interference with our Internal standards and could not be reported from a straight run: CPW-13 (680-84557-6)[5X], Dup-1 (680-84557-8)[4X], CPW-14 (680-84557-9)[4X], CPW-4 (680-84557-11)[4X] and CPW-10 (680-84557-12)[4X]. In order to meet the project specific reporting limits these samples are reported to the MDL with J values.

Samples CPW-1 (680-84557-7)[4X], CPW-7 (680-84557-10)[4X], and CPW-3 (680-84557-13)[4X] also required dilutions prior to analysis. Chromium was detected in these samples.

No other difficulties were encountered during the metals analyses.

All other quality control parameters were within the acceptance limits.

Sample Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-84557-1	LOC6B-MW-01	Water	11/05/12 18:00	11/08/12 11:12
680-84557-2	LOC6-MW-02	Water	11/05/12 18:40	11/08/12 11:12
680-84557-3	LOC6-MW-04	Water	11/06/12 11:00	11/08/12 11:12
680-84557-4	LOC11-MW-10	Water	11/06/12 13:25	11/08/12 11:12
680-84557-5	LOC6-MW-01D	Water	11/06/12 13:45	11/08/12 11:12
680-84557-6	CPW-13	Water	11/06/12 16:25	11/08/12 11:12
680-84557-7	CPW-1	Water	11/06/12 17:10	11/08/12 11:12
680-84557-8	Dup-1	Water	11/06/12 00:00	11/08/12 11:12
680-84557-9	CPW-14	Water	11/06/12 17:30	11/08/12 11:12
680-84557-10	CPW-7	Water	11/06/12 18:50	11/08/12 11:12
680-84557-11	CPW-4	Water	11/06/12 18:10	11/08/12 11:12
680-84557-12	CPW-10	Water	11/07/12 10:20	11/08/12 11:12
680-84557-13	CPW-3	Water	11/07/12 11:00	11/08/12 11:12
680-84557-14	LOC11-MW-07	Water	11/07/12 12:15	11/08/12 11:12
680-84557-15	TRIP BLANK	Water	11/07/12 00:00	11/08/12 11:12
680-84557-16	LOC11-MW-08	Water	11/07/12 13:10	11/08/12 11:12
680-84557-17	LOC17B-MW-01	Water	11/07/12 16:45	11/08/12 11:12
680-84557-18	LOC11B-MW-05	Water	11/07/12 18:00	11/08/12 11:12
680-84557-19	LOC11D-MW-01	Water	11/07/12 19:10	11/08/12 11:12

Method Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits
F	MS or MSD exceeds the control limits

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Client Sample ID: LOC6B-MW-01 — Lab Sample ID: 680-84557-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.039		0.010		mg/L	1		6020A	Total/NA
Chromium	0.17		0.10		mg/L	1		6020A	Total/NA
Nickel	0.31		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: LOC6-MW-02 — Lab Sample ID: 680-84557-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.013		0.010		mg/L	1		6020A	Total/NA
Chromium	0.12		0.10		mg/L	1		6020A	Total/NA
Nickel	0.12		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: LOC6-MW-04 — Lab Sample ID: 680-84557-3

No Detections

Client Sample ID: LOC11-MW-10 — Lab Sample ID: 680-84557-4

No Detections

Client Sample ID: LOC6-MW-01D — Lab Sample ID: 680-84557-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.039		0.010		mg/L	1		6020A	Total/NA
Chromium	0.19		0.10		mg/L	1		6020A	Total/NA
Nickel	0.25		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: CPW-13 — Lab Sample ID: 680-84557-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.20	J	0.50	0.013	mg/L	5		6020A	Total/NA

Client Sample ID: CPW-1 — Lab Sample ID: 680-84557-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	1.2		0.40		mg/L	4		6020A	Total/NA

Client Sample ID: Dup-1 — Lab Sample ID: 680-84557-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.34	J	0.40	0.010	mg/L	4		6020A	Total/NA

Client Sample ID: CPW-14 — Lab Sample ID: 680-84557-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.084	J	0.40	0.010	mg/L	4		6020A	Total/NA

Client Sample ID: CPW-7 — Lab Sample ID: 680-84557-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	26		0.40		mg/L	4		6020A	Total/NA

Detection Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Client Sample ID: CPW-4 — Lab Sample ID: 680-84557-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.017	J	0.40	0.010	mg/L	4		6020A	Total/NA

Client Sample ID: CPW-10 — Lab Sample ID: 680-84557-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.16	J	0.40	0.010	mg/L	4		6020A	Total/NA

Client Sample ID: CPW-3 — Lab Sample ID: 680-84557-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.87		0.40		mg/L	4		6020A	Total/NA

Client Sample ID: LOC11-MW-07 — Lab Sample ID: 680-84557-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.24		0.020		mg/L	2		8270C	Total/NA
Phenanthrene	0.041		0.020		mg/L	2		8270C	Total/NA
Chromium	0.14		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 680-84557-15

No Detections

Client Sample ID: LOC11-MW-08 — Lab Sample ID: 680-84557-16

No Detections

Client Sample ID: LOC17B-MW-01 — Lab Sample ID: 680-84557-17

No Detections

Client Sample ID: LOC11B-MW-05 — Lab Sample ID: 680-84557-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.099		0.0098		mg/L	1		8270C	Total/NA
3 & 4 Methylphenol	0.015		0.0098		mg/L	1		8270C	Total/NA

Client Sample ID: LOC11D-MW-01 — Lab Sample ID: 680-84557-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.13		0.0099		mg/L	1		8270C	Total/NA

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Client Sample ID: LOC6B-MW-01

Lab Sample ID: 680-84557-1
Matrix: Water

Date Collected: 11/05/12 18:00
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.039		0.010		mg/L		11/10/12 07:37	11/16/12 04:13	1
Chromium	0.17		0.10		mg/L		11/10/12 07:37	11/16/12 04:13	1
Nickel	0.31		0.10		mg/L		11/10/12 07:37	11/16/12 04:13	1

Client Sample ID: LOC6-MW-02

Lab Sample ID: 680-84557-2
Matrix: Water

Date Collected: 11/05/12 18:40
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.013		0.010		mg/L		11/10/12 07:37	11/16/12 04:20	1
Chromium	0.12		0.10		mg/L		11/10/12 07:37	11/16/12 04:20	1
Nickel	0.12		0.10		mg/L		11/10/12 07:37	11/16/12 04:20	1

Client Sample ID: LOC6-MW-04

Lab Sample ID: 680-84557-3
Matrix: Water

Date Collected: 11/06/12 11:00
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.010	U	0.010		mg/L		11/10/12 07:37	11/16/12 04:28	1
Chromium	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 04:28	1
Nickel	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 04:28	1

Client Sample ID: LOC11-MW-10

Lab Sample ID: 680-84557-4
Matrix: Water

Date Collected: 11/06/12 13:25
Date Received: 11/08/12 11:12

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/15/12 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*70 - 130*		*11/15/12 18:58*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*11/15/12 18:58*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/15/12 18:58*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.0099	U	0.0099		mg/L		11/12/12 15:00	11/19/12 21:06	1
3 & 4 Methylphenol	0.0099	U	0.0099		mg/L		11/12/12 15:00	11/19/12 21:06	1
Phenanthrene	0.0099	U	0.0099		mg/L		11/12/12 15:00	11/19/12 21:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*38*		*25 - 130*	*11/12/12 15:00*	*11/19/12 21:06*	*1*
2-Fluorophenol	*35*		*25 - 130*	*11/12/12 15:00*	*11/19/12 21:06*	*1*
2,4,6-Tribromophenol	*63*		*31 - 141*	*11/12/12 15:00*	*11/19/12 21:06*	*1*
Nitrobenzene-d5	*41*		*39 - 130*	*11/12/12 15:00*	*11/19/12 21:06*	*1*
2-Fluorobiphenyl	*44*		*38 - 130*	*11/12/12 15:00*	*11/19/12 21:06*	*1*
Terphenyl-d14	*43*		*10 - 143*	*11/12/12 15:00*	*11/19/12 21:06*	*1*

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Client Sample ID: LOC11-MW-10

Lab Sample ID: 680-84557-4
Date Collected: 11/06/12 13:25
Matrix: Water
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		11/10/12 07:37	11/16/12 04:35	1
Arsenic	0.010	U	0.010		mg/L		11/10/12 07:37	11/16/12 04:35	1
Chromium	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 04:35	1
Lead	0.015	U	0.015		mg/L		11/10/12 07:37	11/16/12 04:35	1
Mercury	0.0020	U	0.0020		mg/L		11/10/12 07:37	11/16/12 04:35	1
Nickel	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 04:35	1

Client Sample ID: LOC6-MW-01D

Lab Sample ID: 680-84557-5
Date Collected: 11/06/12 13:45
Matrix: Water
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.039		0.010		mg/L		11/10/12 07:37	11/16/12 04:43	1
Chromium	0.19		0.10		mg/L		11/10/12 07:37	11/16/12 04:43	1
Nickel	0.25		0.10		mg/L		11/10/12 07:37	11/16/12 04:43	1

Client Sample ID: CPW-13

Lab Sample ID: 680-84557-6
Date Collected: 11/06/12 16:25
Matrix: Water
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.20	J	0.50	0.013	mg/L		11/10/12 07:37	11/19/12 19:49	5

Client Sample ID: CPW-1

Lab Sample ID: 680-84557-7
Date Collected: 11/06/12 17:10
Matrix: Water
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	1.2		0.40		mg/L		11/10/12 07:37	11/16/12 04:50	4

Client Sample ID: Dup-1

Lab Sample ID: 680-84557-8
Date Collected: 11/06/12 00:00
Matrix: Water
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.34	J	0.40	0.010	mg/L		11/10/12 07:37	11/16/12 04:57	4

Client Sample ID: CPW-14

Lab Sample ID: 680-84557-9
Date Collected: 11/06/12 17:30
Matrix: Water
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.084	J	0.40	0.010	mg/L		11/10/12 07:37	11/16/12 05:05	4

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Client Sample ID: CPW-7 — Lab Sample ID: 680-84557-10

Date Collected: 11/06/12 18:50 — **Matrix: Water**
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	26		0.40		mg/L		11/10/12 07:37	11/16/12 05:27	4

Client Sample ID: CPW-4 — Lab Sample ID: 680-84557-11

Date Collected: 11/06/12 18:10 — **Matrix: Water**
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.017	J	0.40	0.010	mg/L		11/10/12 07:37	11/16/12 05:34	4

Client Sample ID: CPW-10 — Lab Sample ID: 680-84557-12

Date Collected: 11/07/12 10:20 — **Matrix: Water**
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.16	J	0.40	0.010	mg/L		11/10/12 07:37	11/16/12 05:42	4

Client Sample ID: CPW-3 — Lab Sample ID: 680-84557-13

Date Collected: 11/07/12 11:00 — **Matrix: Water**
Date Received: 11/08/12 11:12

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.87		0.40		mg/L		11/10/12 07:37	11/16/12 05:49	4

Client Sample ID: LOC11-MW-07 — Lab Sample ID: 680-84557-14

Date Collected: 11/07/12 12:15 — **Matrix: Water**
Date Received: 11/08/12 11:12

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/21/12 14:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*105*		*70 - 130*		*11/21/12 14:18*	*1*
Dibromofluoromethane	*95*		*70 - 130*		*11/21/12 14:18*	*1*
Toluene-d8 (Surr)	*90*		*70 - 130*		*11/21/12 14:18*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.24		0.020		mg/L		11/12/12 15:00	11/19/12 22:04	2
3 & 4 Methylphenol	0.0098	U	0.0098		mg/L		11/12/12 15:00	11/18/12 16:52	1
Phenanthrene	0.041		0.020		mg/L		11/12/12 15:00	11/19/12 22:04	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*41*		*25 - 130*	*11/12/12 15:00*	*11/18/12 16:52*	*1*
Phenol-d5	*35*		*25 - 130*	*11/12/12 15:00*	*11/19/12 22:04*	*2*
2-Fluorophenol	*40*		*25 - 130*	*11/12/12 15:00*	*11/18/12 16:52*	*1*
2-Fluorophenol	*36*		*25 - 130*	*11/12/12 15:00*	*11/19/12 22:04*	*2*
2,4,6-Tribromophenol	*58*		*31 - 141*	*11/12/12 15:00*	*11/18/12 16:52*	*1*

Client Sample ID: LOC11-MW-07

Lab Sample ID: 680-84557-14

Date Collected: 11/07/12 12:15
Matrix: Water
Date Received: 11/08/12 11:12

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	53		31 - 141	11/12/12 15:00	11/19/12 22:04	2
Nitrobenzene-d5	46		39 - 130	11/12/12 15:00	11/18/12 16:52	1
Nitrobenzene-d5	41		39 - 130	11/12/12 15:00	11/19/12 22:04	2
2-Fluorobiphenyl	41		38 - 130	11/12/12 15:00	11/18/12 16:52	1
2-Fluorobiphenyl	38		38 - 130	11/12/12 15:00	11/19/12 22:04	2
Terphenyl-d14	7	X	10 - 143	11/12/12 15:00	11/18/12 16:52	1
Terphenyl-d14	6	X	10 - 143	11/12/12 15:00	11/19/12 22:04	2

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		11/10/12 07:37	11/16/12 05:57	1
Arsenic	0.010	U	0.010		mg/L		11/10/12 07:37	11/16/12 05:57	1
Chromium	**0.14**		0.10		mg/L		11/10/12 07:37	11/16/12 05:57	1
Lead	0.015	U	0.015		mg/L		11/10/12 07:37	11/16/12 05:57	1
Mercury	0.0020	U	0.0020		mg/L		11/10/12 07:37	11/16/12 05:57	1
Nickel	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 05:57	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 680-84557-15

Date Collected: 11/07/12 00:00
Matrix: Water
Date Received: 11/08/12 11:12

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/15/12 18:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		70 - 130		11/15/12 18:12	1
Dibromofluoromethane	109		70 - 130		11/15/12 18:12	1
Toluene-d8 (Surr)	99		70 - 130		11/15/12 18:12	1

Client Sample ID: LOC11-MW-08

Lab Sample ID: 680-84557-16

Date Collected: 11/07/12 13:10
Matrix: Water
Date Received: 11/08/12 11:12

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/15/12 19:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		70 - 130		11/15/12 19:44	1
Dibromofluoromethane	111		70 - 130		11/15/12 19:44	1
Toluene-d8 (Surr)	99		70 - 130		11/15/12 19:44	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.0096	U	0.0096		mg/L		11/12/12 15:00	11/18/12 18:47	1
3 & 4 Methylphenol	0.0096	U	0.0096		mg/L		11/12/12 15:00	11/18/12 18:47	1
Phenanthrene	0.0096	U	0.0096		mg/L		11/12/12 15:00	11/18/12 18:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5	68		25 - 130	11/12/12 15:00	11/18/12 18:47	1

Client Sample ID: LOC11-MW-08

Lab Sample ID: 680-84557-16

Date Collected: 11/07/12 13:10

Matrix: Water

Date Received: 11/08/12 11:12

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*64*		*25 - 130*	*11/12/12 15:00*	*11/18/12 18:47*	*1*
2,4,6-Tribromophenol	*83*		*31 - 141*	*11/12/12 15:00*	*11/18/12 18:47*	*1*
Nitrobenzene-d5	*72*		*39 - 130*	*11/12/12 15:00*	*11/18/12 18:47*	*1*
2-Fluorobiphenyl	*65*		*38 - 130*	*11/12/12 15:00*	*11/18/12 18:47*	*1*
Terphenyl-d14	*10*		*10 - 143*	*11/12/12 15:00*	*11/18/12 18:47*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		11/10/12 07:37	11/16/12 06:04	1
Arsenic	0.010	U	0.010		mg/L		11/10/12 07:37	11/16/12 06:04	1
Chromium	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 06:04	1
Lead	0.015	U	0.015		mg/L		11/10/12 07:37	11/16/12 06:04	1
Mercury	0.0020	U	0.0020		mg/L		11/10/12 07:37	11/16/12 06:04	1
Nickel	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 06:04	1

Client Sample ID: LOC17B-MW-01

Lab Sample ID: 680-84557-17

Date Collected: 11/07/12 16:45

Matrix: Water

Date Received: 11/08/12 11:12

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/13/12 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*70 - 130*		*11/13/12 20:28*	*1*
Dibromofluoromethane	*106*		*70 - 130*		*11/13/12 20:28*	*1*
Toluene-d8 (Surr)	*90*		*70 - 130*		*11/13/12 20:28*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.0096	U	0.0096		mg/L		11/12/12 15:00	11/18/12 17:21	1
3 & 4 Methylphenol	0.0096	U	0.0096		mg/L		11/12/12 15:00	11/18/12 17:21	1
Phenanthrene	0.0096	U	0.0096		mg/L		11/12/12 15:00	11/18/12 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*51*		*25 - 130*	*11/12/12 15:00*	*11/18/12 17:21*	*1*
2-Fluorophenol	*48*		*25 - 130*	*11/12/12 15:00*	*11/18/12 17:21*	*1*
2,4,6-Tribromophenol	*90*		*31 - 141*	*11/12/12 15:00*	*11/18/12 17:21*	*1*
Nitrobenzene-d5	*58*		*39 - 130*	*11/12/12 15:00*	*11/18/12 17:21*	*1*
2-Fluorobiphenyl	*65*		*38 - 130*	*11/12/12 15:00*	*11/18/12 17:21*	*1*
Terphenyl-d14	*27*		*10 - 143*	*11/12/12 15:00*	*11/18/12 17:21*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		11/10/12 07:37	11/16/12 06:12	1
Arsenic	0.010	U	0.010		mg/L		11/10/12 07:37	11/16/12 06:12	1
Chromium	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 06:12	1
Lead	0.015	U	0.015		mg/L		11/10/12 07:37	11/16/12 06:12	1
Mercury	0.0020	U	0.0020		mg/L		11/10/12 07:37	11/16/12 06:12	1
Nickel	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 06:12	1

Client Sample ID: LOC11B-MW-05

Lab Sample ID: 680-84557-18

Date Collected: 11/07/12 18:00

Matrix: Water

Date Received: 11/08/12 11:12

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/15/12 20:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*70 - 130*		*11/15/12 20:30*	*1*
Dibromofluoromethane	*111*		*70 - 130*		*11/15/12 20:30*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/15/12 20:30*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.099**		0.0098		mg/L		11/12/12 15:00	11/18/12 17:50	1
3 & 4 Methylphenol	**0.015**		0.0098		mg/L		11/12/12 15:00	11/18/12 17:50	1
Phenanthrene	0.0098	U	0.0098		mg/L		11/12/12 15:00	11/18/12 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*47*		*25 - 130*	*11/12/12 15:00*	*11/18/12 17:50*	*1*
2-Fluorophenol	*46*		*25 - 130*	*11/12/12 15:00*	*11/18/12 17:50*	*1*
2,4,6-Tribromophenol	*71*		*31 - 141*	*11/12/12 15:00*	*11/18/12 17:50*	*1*
Nitrobenzene-d5	*49*		*39 - 130*	*11/12/12 15:00*	*11/18/12 17:50*	*1*
2-Fluorobiphenyl	*47*		*38 - 130*	*11/12/12 15:00*	*11/18/12 17:50*	*1*
Terphenyl-d14	*13*		*10 - 143*	*11/12/12 15:00*	*11/18/12 17:50*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		11/10/12 07:37	11/16/12 06:19	1
Arsenic	0.010	U	0.010		mg/L		11/10/12 07:37	11/16/12 06:19	1
Chromium	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 06:19	1
Lead	0.015	U	0.015		mg/L		11/10/12 07:37	11/16/12 06:19	1
Mercury	0.0020	U	0.0020		mg/L		11/10/12 07:37	11/16/12 06:19	1
Nickel	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 06:19	1

Client Sample ID: LOC11D-MW-01

Lab Sample ID: 680-84557-19

Date Collected: 11/07/12 19:10

Matrix: Water

Date Received: 11/08/12 11:12

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/15/12 20:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*70 - 130*		*11/15/12 20:53*	*1*
Dibromofluoromethane	*110*		*70 - 130*		*11/15/12 20:53*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/15/12 20:53*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.13**		0.0099		mg/L		11/12/12 15:00	11/18/12 18:18	1
3 & 4 Methylphenol	0.0099	U	0.0099		mg/L		11/12/12 15:00	11/18/12 18:18	1
Phenanthrene	0.0099	U	0.0099		mg/L		11/12/12 15:00	11/18/12 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*58*		*25 - 130*	*11/12/12 15:00*	*11/18/12 18:18*	*1*

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Client Sample ID: LOC11D-MW-01

Lab Sample ID: 680-84557-19

Date Collected: 11/07/12 19:10

Matrix: Water

Date Received: 11/08/12 11:12

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*59*		*25 - 130*	*11/12/12 15:00*	*11/18/12 18:18*	*1*
2,4,6-Tribromophenol	*80*		*31 - 141*	*11/12/12 15:00*	*11/18/12 18:18*	*1*
Nitrobenzene-d5	*55*		*39 - 130*	*11/12/12 15:00*	*11/18/12 18:18*	*1*
2-Fluorobiphenyl	*64*		*38 - 130*	*11/12/12 15:00*	*11/18/12 18:18*	*1*
Terphenyl-d14	*10*		*10 - 143*	*11/12/12 15:00*	*11/18/12 18:18*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		11/10/12 07:37	11/16/12 06:27	1
Arsenic	0.010	U	0.010		mg/L		11/10/12 07:37	11/16/12 06:27	1
Chromium	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 06:27	1
Lead	0.015	U	0.015		mg/L		11/10/12 07:37	11/16/12 06:27	1
Mercury	0.0020	U	0.0020		mg/L		11/10/12 07:37	11/16/12 06:27	1
Nickel	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 06:27	1

Surrogate Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
680-84557-4	LOC11-MW-10	102	109	100
680-84557-14	LOC11-MW-07	105	95	90
680-84557-15	TRIP BLANK	100	109	99
680-84557-16	LOC11-MW-08	101	111	99
680-84557-17	LOC17B-MW-01	101	106	90
680-84557-18	LOC11B-MW-05	100	111	100
680-84557-18 MS	LOC11B-MW-05	101	104	97
680-84557-18 MSD	LOC11B-MW-05	100	105	97
680-84557-19	LOC11D-MW-01	103	110	100
LCS 680-256223/15	Lab Control Sample	105	111	101
LCS 680-256578/4	Lab Control Sample	105	101	102
LCS 680-256745/4	Lab Control Sample	101	96	95
LCS 680-257298/3	Lab Control Sample	107	101	96
LCSD 680-256223/18	Lab Control Sample Dup	88	92	87
LCSD 680-256578/5	Lab Control Sample Dup	102	95	100
LCSD 680-256745/5	Lab Control Sample Dup	99	101	96
LCSD 680-257298/12	Lab Control Sample Dup	116	105	106
MB 680-256223/5	Method Blank	103	108	91
MB 680-256578/7	Method Blank	100	106	100
MB 680-256745/7	Method Blank	99	109	95
MB 680-257298/5	Method Blank	97	100	88

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		PHL	2FP	TBP	NBZ	FBP	TPH
Lab Sample ID	Client Sample ID	(25-130)	(25-130)	(31-141)	(39-130)	(38-130)	(10-143)
680-84557-4	LOC11-MW-10	38	35	63	41	44	43
680-84557-4 MS	LOC11-MW-10	40	39	68	46	48	40
680-84557-4 MSD	LOC11-MW-10	33	34	53	37 X	35 X	33
680-84557-14	LOC11-MW-07	41	40	58	46	41	7 X
680-84557-14	LOC11-MW-07	35	36	53	41	38	6 X
680-84557-16	LOC11-MW-08	68	64	83	72	65	10
680-84557-17	LOC17B-MW-01	51	48	90	58	65	27
680-84557-18	LOC11B-MW-05	47	46	71	49	47	13
680-84557-19	LOC11D-MW-01	58	59	80	55	64	10
LCS 680-256000/20-A	Lab Control Sample	66	65	86	72	74	63
MB 680-256000/19-A	Method Blank	58	64	73	74	60	63

Surrogate Legend

PHL = Phenol-d5
2FP = 2-Fluorophenol
TBP = 2,4,6-Tribromophenol
NBZ = Nitrobenzene-d5

Surrogate Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

FBP = 2-Fluorobiphenyl
TPH = Terphenyl-d14

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-256223/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256223

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/13/12 11:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*70 - 130*		*11/13/12 11:15*	*1*
Dibromofluoromethane	*108*		*70 - 130*		*11/13/12 11:15*	*1*
Toluene-d8 (Surr)	*91*		*70 - 130*		*11/13/12 11:15*	*1*

Lab Sample ID: LCS 680-256223/15 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256223

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0513		mg/L		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*111*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 680-256223/18 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256223

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.0458		mg/L		92	70 - 130	11	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*88*		*70 - 130*
Dibromofluoromethane	*92*		*70 - 130*
Toluene-d8 (Surr)	*87*		*70 - 130*

Lab Sample ID: MB 680-256578/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256578

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/15/12 17:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*70 - 130*		*11/15/12 17:49*	*1*
Dibromofluoromethane	*106*		*70 - 130*		*11/15/12 17:49*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*11/15/12 17:49*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-256578/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256578

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0486		mg/L		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*101*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: LCSD 680-256578/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256578

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.0474		mg/L		95	70 - 130	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*70 - 130*
Dibromofluoromethane	*95*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: MB 680-256745/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256745

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/16/12 16:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*70 - 130*		*11/16/12 16:55*	*1*
Dibromofluoromethane	*109*		*70 - 130*		*11/16/12 16:55*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*11/16/12 16:55*	*1*

Lab Sample ID: LCS 680-256745/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256745

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0462		mg/L		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
Dibromofluoromethane	*96*		*70 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-256745/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256745

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.0464		mg/L		93	70 - 130	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*70 - 130*
Dibromofluoromethane	*101*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: 680-84557-18 MS — **Client Sample ID: LOC11B-MW-05**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256745

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	0.0050	U	0.0500	0.0464		mg/L		89	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
Dibromofluoromethane	*104*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: 680-84557-18 MSD — **Client Sample ID: LOC11B-MW-05**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256745

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0050	U	0.0500	0.0485		mg/L		94	70 - 130	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*70 - 130*
Dibromofluoromethane	*105*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: MB 680-257298/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257298

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/21/12 10:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*11/21/12 10:27*	*1*
Dibromofluoromethane	*100*		*70 - 130*		*11/21/12 10:27*	*1*
Toluene-d8 (Surr)	*88*		*70 - 130*		*11/21/12 10:27*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-257298/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257298

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0481		mg/L		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*107*		*70 - 130*
Dibromofluoromethane	*101*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 680-257298/12 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257298

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.0538		mg/L		108	70 - 130	11	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*116*		*70 - 130*
Dibromofluoromethane	*105*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-256000/19-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256900 — **Prep Batch: 256000**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.010	U	0.010		mg/L		11/12/12 15:00	11/14/12 21:37	1
3 & 4 Methylphenol	0.010	U	0.010		mg/L		11/12/12 15:00	11/14/12 21:37	1
Phenanthrene	0.010	U	0.010		mg/L		11/12/12 15:00	11/14/12 21:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*58*		*25 - 130*	*11/12/12 15:00*	*11/14/12 21:37*	*1*
2-Fluorophenol	*64*		*25 - 130*	*11/12/12 15:00*	*11/14/12 21:37*	*1*
2,4,6-Tribromophenol	*73*		*31 - 141*	*11/12/12 15:00*	*11/14/12 21:37*	*1*
Nitrobenzene-d5	*74*		*39 - 130*	*11/12/12 15:00*	*11/14/12 21:37*	*1*
2-Fluorobiphenyl	*60*		*38 - 130*	*11/12/12 15:00*	*11/14/12 21:37*	*1*
Terphenyl-d14	*63*		*10 - 143*	*11/12/12 15:00*	*11/14/12 21:37*	*1*

Lab Sample ID: LCS 680-256000/20-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256900 — **Prep Batch: 256000**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	0.100	0.0727		mg/L		73	50 - 130
3 & 4 Methylphenol	0.100	0.0717		mg/L		72	35 - 130
Phenanthrene	0.100	0.0910		mg/L		91	62 - 130

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-256000/20-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256900 — **Prep Batch: 256000**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Phenol-d5	66		25 - 130
2-Fluorophenol	65		25 - 130
2,4,6-Tribromophenol	86		31 - 141
Nitrobenzene-d5	72		39 - 130
2-Fluorobiphenyl	74		38 - 130
Terphenyl-d14	63		10 - 143

Lab Sample ID: 680-84557-4 MS — **Client Sample ID: LOC11-MW-10**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256900 — **Prep Batch: 256000**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	0.0099	U	0.0996	0.0463	F	mg/L		46	50 - 130
3 & 4 Methylphenol	0.0099	U	0.0996	0.0464		mg/L		47	35 - 130
Phenanthrene	0.0099	U	0.0996	0.0693		mg/L		70	62 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Phenol-d5	40		25 - 130
2-Fluorophenol	39		25 - 130
2,4,6-Tribromophenol	68		31 - 141
Nitrobenzene-d5	46		39 - 130
2-Fluorobiphenyl	48		38 - 130
Terphenyl-d14	40		10 - 143

Lab Sample ID: 680-84557-4 MSD — **Client Sample ID: LOC11-MW-10**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256900 — **Prep Batch: 256000**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	0.0099	U	0.0957	0.0376	F	mg/L		39	50 - 130	21	50
3 & 4 Methylphenol	0.0099	U	0.0957	0.0358		mg/L		37	35 - 130	26	50
Phenanthrene	0.0099	U	0.0957	0.0516	F	mg/L		54	62 - 130	29	50

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Phenol-d5	33		25 - 130
2-Fluorophenol	34		25 - 130
2,4,6-Tribromophenol	53		31 - 141
Nitrobenzene-d5	37	X	39 - 130
2-Fluorobiphenyl	35	X	38 - 130
Terphenyl-d14	33		10 - 143

QC Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-255909/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256640 — **Prep Batch: 255909**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0050	U	0.0050		mg/L		11/10/12 07:37	11/16/12 03:58	1
Arsenic	0.010	U	0.010		mg/L		11/10/12 07:37	11/16/12 03:58	1
Chromium	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 03:58	1
Lead	0.0015	U	0.0015		mg/L		11/10/12 07:37	11/16/12 03:58	1
Mercury	0.00080	U	0.00080		mg/L		11/10/12 07:37	11/16/12 03:58	1
Nickel	0.10	U	0.10		mg/L		11/10/12 07:37	11/16/12 03:58	1

Lab Sample ID: LCS 680-255909/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256640 — **Prep Batch: 255909**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0570		mg/L		114	75 - 125
Arsenic	0.100	0.103		mg/L		103	75 - 125
Chromium	0.100	0.104		mg/L		104	75 - 125
Lead	0.0500	0.0507		mg/L		101	75 - 125
Mercury	0.00500	0.00503		mg/L		101	75 - 125
Nickel	0.100	0.108		mg/L		108	75 - 125

Lab Sample ID: 680-84557-6 MS — **Client Sample ID: CPW-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257137 — **Prep Batch: 255909**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.20	J	0.100	0.306	J	mg/L		104	75 - 125

Lab Sample ID: 680-84557-6 MSD — **Client Sample ID: CPW-13**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257137 — **Prep Batch: 255909**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	0.20	J	0.100	0.304	J	mg/L		102	75 - 125	1	20

QC Association Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

GC/MS VOA

Analysis Batch: 256223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-17	LOC17B-MW-01	Total/NA	Water	8260B	
LCS 680-256223/15	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-256223/18	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-256223/5	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 256578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-4	LOC11-MW-10	Total/NA	Water	8260B	
680-84557-15	TRIP BLANK	Total/NA	Water	8260B	
680-84557-16	LOC11-MW-08	Total/NA	Water	8260B	
680-84557-18	LOC11B-MW-05	Total/NA	Water	8260B	
680-84557-19	LOC11D-MW-01	Total/NA	Water	8260B	
LCS 680-256578/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-256578/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-256578/7	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 256745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-18 MS	LOC11B-MW-05	Total/NA	Water	8260B	
680-84557-18 MSD	LOC11B-MW-05	Total/NA	Water	8260B	
LCS 680-256745/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-256745/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-256745/7	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 257298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-14	LOC11-MW-07	Total/NA	Water	8260B	
LCS 680-257298/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-257298/12	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-257298/5	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 256000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-4	LOC11-MW-10	Total/NA	Water	3520C	
680-84557-4 MS	LOC11-MW-10	Total/NA	Water	3520C	
680-84557-4 MSD	LOC11-MW-10	Total/NA	Water	3520C	
680-84557-14	LOC11-MW-07	Total/NA	Water	3520C	
680-84557-16	LOC11-MW-08	Total/NA	Water	3520C	
680-84557-17	LOC17B-MW-01	Total/NA	Water	3520C	
680-84557-18	LOC11B-MW-05	Total/NA	Water	3520C	
680-84557-19	LOC11D-MW-01	Total/NA	Water	3520C	
LCS 680-256000/20-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-256000/19-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 256858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-14	LOC11-MW-07	Total/NA	Water	8270C	256000
680-84557-16	LOC11-MW-08	Total/NA	Water	8270C	256000

GC/MS Semi VOA (Continued)

Analysis Batch: 256858 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-17	LOC17B-MW-01	Total/NA	Water	8270C	256000
680-84557-18	LOC11B-MW-05	Total/NA	Water	8270C	256000
680-84557-19	LOC11D-MW-01	Total/NA	Water	8270C	256000

Analysis Batch: 256900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-4 MS	LOC11-MW-10	Total/NA	Water	8270C	256000
680-84557-4 MSD	LOC11-MW-10	Total/NA	Water	8270C	256000
LCS 680-256000/20-A	Lab Control Sample	Total/NA	Water	8270C	256000
MB 680-256000/19-A	Method Blank	Total/NA	Water	8270C	256000

Analysis Batch: 257024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-4	LOC11-MW-10	Total/NA	Water	8270C	256000
680-84557-14	LOC11-MW-07	Total/NA	Water	8270C	256000

Metals

Prep Batch: 255909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-1	LOC6B-MW-01	Total/NA	Water	3010A	
680-84557-2	LOC6-MW-02	Total/NA	Water	3010A	
680-84557-3	LOC6-MW-04	Total/NA	Water	3010A	
680-84557-4	LOC11-MW-10	Total/NA	Water	3010A	
680-84557-5	LOC6-MW-01D	Total/NA	Water	3010A	
680-84557-6	CPW-13	Total/NA	Water	3010A	
680-84557-6 MS	CPW-13	Total/NA	Water	3010A	
680-84557-6 MSD	CPW-13	Total/NA	Water	3010A	
680-84557-7	CPW-1	Total/NA	Water	3010A	
680-84557-8	Dup-1	Total/NA	Water	3010A	
680-84557-9	CPW-14	Total/NA	Water	3010A	
680-84557-10	CPW-7	Total/NA	Water	3010A	
680-84557-11	CPW-4	Total/NA	Water	3010A	
680-84557-12	CPW-10	Total/NA	Water	3010A	
680-84557-13	CPW-3	Total/NA	Water	3010A	
680-84557-14	LOC11-MW-07	Total/NA	Water	3010A	
680-84557-16	LOC11-MW-08	Total/NA	Water	3010A	
680-84557-17	LOC17B-MW-01	Total/NA	Water	3010A	
680-84557-18	LOC11B-MW-05	Total/NA	Water	3010A	
680-84557-19	LOC11D-MW-01	Total/NA	Water	3010A	
LCS 680-255909/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 680-255909/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 256640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-1	LOC6B-MW-01	Total/NA	Water	6020A	255909
680-84557-2	LOC6-MW-02	Total/NA	Water	6020A	255909
680-84557-3	LOC6-MW-04	Total/NA	Water	6020A	255909
680-84557-4	LOC11-MW-10	Total/NA	Water	6020A	255909
680-84557-5	LOC6-MW-01D	Total/NA	Water	6020A	255909

Metals (Continued)

Analysis Batch: 256640 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-7	CPW-1	Total/NA	Water	6020A	255909
680-84557-8	Dup-1	Total/NA	Water	6020A	255909
680-84557-9	CPW-14	Total/NA	Water	6020A	255909
680-84557-10	CPW-7	Total/NA	Water	6020A	255909
680-84557-11	CPW-4	Total/NA	Water	6020A	255909
680-84557-12	CPW-10	Total/NA	Water	6020A	255909
680-84557-13	CPW-3	Total/NA	Water	6020A	255909
680-84557-14	LOC11-MW-07	Total/NA	Water	6020A	255909
680-84557-16	LOC11-MW-08	Total/NA	Water	6020A	255909
680-84557-17	LOC17B-MW-01	Total/NA	Water	6020A	255909
680-84557-18	LOC11B-MW-05	Total/NA	Water	6020A	255909
680-84557-19	LOC11D-MW-01	Total/NA	Water	6020A	255909
LCS 680-255909/2-A	Lab Control Sample	Total/NA	Water	6020A	255909
MB 680-255909/1-A	Method Blank	Total/NA	Water	6020A	255909

Analysis Batch: 257137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84557-6	CPW-13	Total/NA	Water	6020A	255909
680-84557-6 MS	CPW-13	Total/NA	Water	6020A	255909
680-84557-6 MSD	CPW-13	Total/NA	Water	6020A	255909

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Client Sample ID: LOC6B-MW-01 — Lab Sample ID: 680-84557-1

Date Collected: 11/05/12 18:00 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		1	256640	11/16/12 04:13	BR	TAL SAV

Client Sample ID: LOC6-MW-02 — Lab Sample ID: 680-84557-2

Date Collected: 11/05/12 18:40 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		1	256640	11/16/12 04:20	BR	TAL SAV

Client Sample ID: LOC6-MW-04 — Lab Sample ID: 680-84557-3

Date Collected: 11/06/12 11:00 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		1	256640	11/16/12 04:28	BR	TAL SAV

Client Sample ID: LOC11-MW-10 — Lab Sample ID: 680-84557-4

Date Collected: 11/06/12 13:25 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	256578	11/15/12 18:58	WJC	TAL SAV
Total/NA	Prep	3520C			256000	11/12/12 15:00	RBS	TAL SAV
Total/NA	Analysis	8270C		1	257024	11/19/12 21:06	BB	TAL SAV
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		1	256640	11/16/12 04:35	BR	TAL SAV

Client Sample ID: LOC6-MW-01D — Lab Sample ID: 680-84557-5

Date Collected: 11/06/12 13:45 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		1	256640	11/16/12 04:43	BR	TAL SAV

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Client Sample ID: CPW-13 — Lab Sample ID: 680-84557-6

Date Collected: 11/06/12 16:25 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		5	257137	11/19/12 19:49	CE	TAL SAV

Client Sample ID: CPW-1 — Lab Sample ID: 680-84557-7

Date Collected: 11/06/12 17:10 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		4	256640	11/16/12 04:50	BR	TAL SAV

Client Sample ID: Dup-1 — Lab Sample ID: 680-84557-8

Date Collected: 11/06/12 00:00 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		4	256640	11/16/12 04:57	BR	TAL SAV

Client Sample ID: CPW-14 — Lab Sample ID: 680-84557-9

Date Collected: 11/06/12 17:30 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		4	256640	11/16/12 05:05	BR	TAL SAV

Client Sample ID: CPW-7 — Lab Sample ID: 680-84557-10

Date Collected: 11/06/12 18:50 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		4	256640	11/16/12 05:27	BR	TAL SAV

Client Sample ID: CPW-4 — Lab Sample ID: 680-84557-11

Date Collected: 11/06/12 18:10 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		4	256640	11/16/12 05:34	BR	TAL SAV

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Client Sample ID: CPW-10 — Lab Sample ID: 680-84557-12

Date Collected: 11/07/12 10:20 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		4	256640	11/16/12 05:42	BR	TAL SAV

Client Sample ID: CPW-3 — Lab Sample ID: 680-84557-13

Date Collected: 11/07/12 11:00 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		4	256640	11/16/12 05:49	BR	TAL SAV

Client Sample ID: LOC11-MW-07 — Lab Sample ID: 680-84557-14

Date Collected: 11/07/12 12:15 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	257298	11/21/12 14:18	AJMC	TAL SAV
Total/NA	Prep	3520C			256000	11/12/12 15:00	RBS	TAL SAV
Total/NA	Analysis	8270C		1	256858	11/18/12 16:52	BB	TAL SAV
Total/NA	Analysis	8270C		2	257024	11/19/12 22:04	BB	TAL SAV
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		1	256640	11/16/12 05:57	BR	TAL SAV

Client Sample ID: TRIP BLANK — Lab Sample ID: 680-84557-15

Date Collected: 11/07/12 00:00 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	256578	11/15/12 18:12	WJC	TAL SAV

Client Sample ID: LOC11-MW-08 — Lab Sample ID: 680-84557-16

Date Collected: 11/07/12 13:10 — **Matrix: Water**
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	256578	11/15/12 19:44	WJC	TAL SAV
Total/NA	Prep	3520C			256000	11/12/12 15:00	RBS	TAL SAV
Total/NA	Analysis	8270C		1	256858	11/18/12 18:47	BB	TAL SAV
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		1	256640	11/16/12 06:04	BR	TAL SAV

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Client Sample ID: LOC17B-MW-01

Lab Sample ID: 680-84557-17

Date Collected: 11/07/12 16:45
Matrix: Water
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	256223	11/13/12 20:28	AJMC	TAL SAV
Total/NA	Prep	3520C			256000	11/12/12 15:00	RBS	TAL SAV
Total/NA	Analysis	8270C		1	256858	11/18/12 17:21	BB	TAL SAV
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		1	256640	11/16/12 06:12	BR	TAL SAV

Client Sample ID: LOC11B-MW-05

Lab Sample ID: 680-84557-18

Date Collected: 11/07/12 18:00
Matrix: Water
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	256578	11/15/12 20:30	WJC	TAL SAV
Total/NA	Prep	3520C			256000	11/12/12 15:00	RBS	TAL SAV
Total/NA	Analysis	8270C		1	256858	11/18/12 17:50	BB	TAL SAV
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		1	256640	11/16/12 06:19	BR	TAL SAV

Client Sample ID: LOC11D-MW-01

Lab Sample ID: 680-84557-19

Date Collected: 11/07/12 19:10
Matrix: Water
Date Received: 11/08/12 11:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	256578	11/15/12 20:53	WJC	TAL SAV
Total/NA	Prep	3520C			256000	11/12/12 15:00	RBS	TAL SAV
Total/NA	Analysis	8270C		1	256858	11/18/12 18:18	BB	TAL SAV
Total/NA	Prep	3010A			255909	11/10/12 07:37	VHB	TAL SAV
Total/NA	Analysis	6020A		1	256640	11/16/12 06:27	BR	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 0 4 0 - 2 8

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
GP Cellulose Brunswick	206163	GA

TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Carol Northern	770-973-2100	770-973-7345

CLIENT NAME	CLIENT E-MAIL
Earthcon	CNorthern@Earthcon.com

CLIENT ADDRESS: 1880 West Oak Pkwy Bld. 100, Ste 106 Marietta, GA 30062

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF 2

STANDARD REPORT DELIVERY ☒

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

PRESERVATIVE

REQUIRED ANALYSIS

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	As, Cr, Ni (6020A) HNO3	Cr (6020A) HNO3	Select SVOCs 8270	As, Cr, Pb, Ni, Sb, Hg HNO3	Benzene 8260 HCl						REMARKS
11/5/12	1800	LOC63-MW-01	G	X				1										
↓	1840	LOC6-MW-02	G	X				1										
11/6/12	1100	LOC6-MW-04	G	X				1										
	1325	LOC11-MW-10	G	X						2	1	3						
	1345	LOC6-MW-01D	G	X				1										
	1625	CPW-13	G	X					1									
	1710	CPW-1	G	X					1									
	—	DUP-1	G	X					1									
	1730	CPW-14	G	X					1									
	1850	CPW-7	G	X					1									
↓	1810	CPW-4	G	X					1									
11/7/12	1020	CPW-10	G	X					1									

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	11/8/12	0930	[signature]	11/8/12	0930	[signature]	11/8/12	1112

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	11/08/12	1112	YES ○ NO ○		680-87557	0.4/1.2

TAL 8240-680 (1008)

Page 32 of 35

11/30/2012

Serial Number 60059

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE: GA Cellulose, Brunswick	PROJECT NO.: 206163	PROJECT LOCATION (STATE): GA
TAL (LAB) PROJECT MANAGER:	P.O. NUMBER:	CONTRACT NO.:
CLIENT (SITE) PM: Carol Northern	CLIENT PHONE: 770-973-2100	CLIENT FAX: 770-973-7395
CLIENT NAME: Earthcon	CLIENT E-MAIL: CNorthern@Earthcon.com	
CLIENT ADDRESS: 1880 West Oak Pkwy, Bld 100, Ste 106 Marietta, GA 30062		
COMPANY CONTRACTING THIS WORK (if applicable):		

PAGE 2 OF 2

STANDARD REPORT DELIVERY ◯

DATE DUE _____

EXPEDITED REPORT DELIVERY (SURCHARGE) ◯

DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT: _____

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS / NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	Benzene (8260)	Metals 1 (6020A)	SVOCs 2 (8270)	CR 6020A							REMARKS
								HCl	HNO3	T	NaOH							
11/7/12	1100	CPW-3	G	X							1							* Naphthalene
	1215	LOC11-MW-07	G	X				3*	1	2								Phenanthrene
	—	TRIP Blank	G	X				2										4-Methylphenol
	1310	LOC11-MW-08	G	X				3	1	2								
	1645	LOC12B-MW-01	G	X				3	1	2								2 Antimony, Arsenic
	1800	LOC11B-MW-05	G	X				3	1	2								Chromium, lead
	1910	LOC11B-MW-01	G	X				3	1	2								Nickel, Mercury
11/8/12																		
																		* VOC bottles have bubbles due to effervescing

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	11/8/12	0930	[signature]	11/8/12	1130	[signature]	11/8/12	1112
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	11/08/12	1112	YES ◯ NO ◯		68-84557	0.4/1.2

TAL 8240-680 (1008)

Login Sample Receipt Checklist

Client: EarthCon Consultants Inc

Job Number: 680-84557-1

Login Number: 84557

List Source: TestAmerica Savannah

List Number: 1

Creator: Conner, Keaton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	line 1,2,5,14,18 and 19 ph needs to be adjusted
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84557-1

Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	02-28-13
A2LA	ISO/IEC 17025		399.01	02-28-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13
California	NELAC	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-12
Connecticut	State Program	1	PH-0161	03-31-13
Florida	NELAC	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-12
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Guam	State Program	9	09-005r	04-17-13
Hawaii	State Program	9	N/A	06-30-13
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13
Kentucky	State Program	4	90084	12-31-12
Kentucky (UST)	State Program	4	18	02-28-13
Louisiana	NELAC	6	30690	06-30-13
Louisiana	NELAC	6	LA100015	12-31-12
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-12
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	12-31-12
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13
New Jersey	NELAC	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAC	2	10842	04-01-13
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAC	3	68-00474	06-30-13
Puerto Rico	State Program	2	GA00006	01-01-13
Rhode Island	State Program	1	LAO00244	12-30-12
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAC	3	460161	06-14-13
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-12
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-84622-1
Client Project/Site: EarthCon /Brunswick Site

For:
EarthCon Consultants Inc
1880 West Oak Parkway, Bldg. 100
Suite 106
Marietta, Georgia 30062

Attn: Ms. Carol Northern

Authorized for release by:
12/5/2012 3:30:57 PM

Linda Wolfe
Project Manager I
linda.wolfe@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 5
Method Summary 6
Definitions 7
Detection Summary 8
Client Sample Results 9
Surrogate Summary 12
QC Sample Results 13
QC Association 18
Chronicle 20
Chain of Custody 21
Receipt Checklists 22
Certification Summary 23

Job ID: 680-84622-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: EarthCon Consultants Inc

Project: EarthCon /Brunswick Site

Report Number: 680-84622-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 11/09/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.4 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples LOC11-MW-09 (680-84622-1), LOC11B-MW-02 (680-84622-2), LOC11B-MW-02D (680-84622-3) and DUP-2 (680-84622-4) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 11/19/2012 and 11/20/2012.

Samples LOC11B-MW-02D (680-84622-3)[5X] and DUP-2 (680-84622-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples LOC11-MW-09 (680-84622-1), LOC11B-MW-02 (680-84622-2), LOC11B-MW-02D (680-84622-3) and DUP-2 (680-84622-4) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 11/14/2012 and analyzed on 11/18/2012, 11/20/2012 and 11/21/2012.

Samples LOC11B-MW-02 (680-84622-2)[50X], LOC11B-MW-02D (680-84622-3)[100X] and DUP-2 (680-84622-4)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the semivolatiles analyses.

All other quality control parameters were within the acceptance limits.

METALS (ICPMS)
Samples LOC11-MW-09 (680-84622-1), LOC11B-MW-02 (680-84622-2), LOC11B-MW-02D (680-84622-3) and DUP-2 (680-84622-4) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 11/16/2012 and 11/23/2012 and analyzed on 11/22/2012, 11/26/2012 and 11/27/2012.

No difficulties were encountered during the metals analyses.

Job ID: 680-84622-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

All quality control parameters were within the acceptance limits.

Sample Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84622-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-84622-1	LOC11-MW-09	Water	11/08/12 10:40	11/09/12 09:55
680-84622-2	LOC11B-MW-02	Water	11/08/12 13:25	11/09/12 09:55
680-84622-3	LOC11B-MW-02D	Water	11/08/12 13:45	11/09/12 09:55
680-84622-4	DUP-2	Water	11/08/12 00:00	11/09/12 09:55

Method Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84622-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84622-1

Client Sample ID: LOC11-MW-09 — Lab Sample ID: 680-84622-1

No Detections

Client Sample ID: LOC11B-MW-02 — Lab Sample ID: 680-84622-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	1.9		0.49	0.034	mg/L	50		8270C	Total/NA
Phenanthrene	0.28	J	0.49	0.038	mg/L	50		8270C	Total/NA
Antimony	0.033		0.0060		mg/L	1		6020A	Total/NA
Arsenic	0.013		0.010		mg/L	1		6020A	Total/NA

Client Sample ID: LOC11B-MW-02D — Lab Sample ID: 680-84622-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.015	J	0.025	0.0013	mg/L	5		8260B	Total/NA
Naphthalene	4.4		0.95	0.067	mg/L	100		8270C	Total/NA
Phenanthrene	0.092	J	0.95	0.073	mg/L	100		8270C	Total/NA
Arsenic	0.019		0.010		mg/L	1		6020A	Total/NA
Chromium	0.28		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: DUP-2 — Lab Sample ID: 680-84622-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.012	J	0.025	0.0013	mg/L	5		8260B	Total/NA
Naphthalene	5.3		0.95	0.067	mg/L	100		8270C	Total/NA
Phenanthrene	0.093	J	0.95	0.073	mg/L	100		8270C	Total/NA
Arsenic	0.019		0.010		mg/L	1		6020A	Total/NA
Chromium	0.28		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: LOC11-MW-09

Lab Sample ID: 680-84622-1

Date Collected: 11/08/12 10:40

Matrix: Water

Date Received: 11/09/12 09:55

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/19/12 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*70 - 130*		*11/19/12 17:09*	*1*
Dibromofluoromethane	*97*		*70 - 130*		*11/19/12 17:09*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*11/19/12 17:09*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.0096	U	0.0096		mg/L		11/14/12 15:42	11/18/12 21:12	1
3 & 4 Methylphenol	0.0096	U	0.0096		mg/L		11/14/12 15:42	11/18/12 21:12	1
Phenanthrene	0.0096	U	0.0096		mg/L		11/14/12 15:42	11/18/12 21:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*47*		*25 - 130*	*11/14/12 15:42*	*11/18/12 21:12*	*1*
2-Fluorophenol	*44*		*25 - 130*	*11/14/12 15:42*	*11/18/12 21:12*	*1*
2,4,6-Tribromophenol	*70*		*31 - 141*	*11/14/12 15:42*	*11/18/12 21:12*	*1*
Nitrobenzene-d5	*49*		*39 - 130*	*11/14/12 15:42*	*11/18/12 21:12*	*1*
2-Fluorobiphenyl	*54*		*38 - 130*	*11/14/12 15:42*	*11/18/12 21:12*	*1*
Terphenyl-d14	*25*		*10 - 143*	*11/14/12 15:42*	*11/18/12 21:12*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		11/23/12 14:47	11/26/12 23:52	1
Arsenic	0.010	U	0.010		mg/L		11/23/12 14:47	11/26/12 23:52	1
Chromium	0.10	U	0.10		mg/L		11/23/12 14:47	11/26/12 23:52	1
Lead	0.015	U	0.015		mg/L		11/23/12 14:47	11/26/12 23:52	1
Mercury	0.0020	U	0.0020		mg/L		11/23/12 14:47	11/26/12 23:52	1
Nickel	0.10	U	0.10		mg/L		11/23/12 14:47	11/26/12 23:52	1

Client Sample ID: LOC11B-MW-02

Lab Sample ID: 680-84622-2

Date Collected: 11/08/12 13:25

Matrix: Water

Date Received: 11/09/12 09:55

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/16/12 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*70 - 130*		*11/16/12 18:23*	*1*
Dibromofluoromethane	*101*		*70 - 130*		*11/16/12 18:23*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*11/16/12 18:23*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**1.9**		0.49	0.034	mg/L		11/14/12 15:42	11/21/12 11:41	50
3 & 4 Methylphenol	0.063	U	0.49	0.063	mg/L		11/14/12 15:42	11/21/12 11:41	50
Phenanthrene	**0.28**	**J**	0.49	0.038	mg/L		11/14/12 15:42	11/21/12 11:41	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*0*	*D*	*25 - 130*	*11/14/12 15:42*	*11/21/12 11:41*	*50*

Client Sample ID: LOC11B-MW-02

Lab Sample ID: 680-84622-2

Date Collected: 11/08/12 13:25

Matrix: Water

Date Received: 11/09/12 09:55

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*0*	*D*	*25 - 130*	*11/14/12 15:42*	*11/21/12 11:41*	*50*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*	*11/14/12 15:42*	*11/21/12 11:41*	*50*
Nitrobenzene-d5	*0*	*D*	*39 - 130*	*11/14/12 15:42*	*11/21/12 11:41*	*50*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*	*11/14/12 15:42*	*11/21/12 11:41*	*50*
Terphenyl-d14	*0*	*D*	*10 - 143*	*11/14/12 15:42*	*11/21/12 11:41*	*50*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.033**		0.0060		mg/L		11/23/12 14:47	11/30/12 21:46	1
Arsenic	**0.013**		0.010		mg/L		11/23/12 14:47	11/30/12 21:46	1
Chromium	0.10	U	0.10		mg/L		11/23/12 14:47	11/30/12 21:46	1
Lead	0.015	U	0.015		mg/L		11/23/12 14:47	11/30/12 21:46	1
Mercury	0.0020	U	0.0020		mg/L		11/23/12 14:47	11/30/12 21:46	1
Nickel	0.10	U	0.10		mg/L		11/23/12 14:47	11/30/12 21:46	1

Client Sample ID: LOC11B-MW-02D

Lab Sample ID: 680-84622-3

Date Collected: 11/08/12 13:45

Matrix: Water

Date Received: 11/09/12 09:55

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.015**	**J**	0.025	0.0013	mg/L			11/19/12 18:05	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*112*		*70 - 130*		*11/19/12 18:05*	*5*
Dibromofluoromethane	*118*		*70 - 130*		*11/19/12 18:05*	*5*
Toluene-d8 (Surr)	*103*		*70 - 130*		*11/19/12 18:05*	*5*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**4.4**		0.95	0.067	mg/L		11/14/12 15:42	11/20/12 18:17	100
3 & 4 Methylphenol	0.12	U	0.95	0.12	mg/L		11/14/12 15:42	11/20/12 18:17	100
Phenanthrene	**0.092**	**J**	0.95	0.073	mg/L		11/14/12 15:42	11/20/12 18:17	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*0*	*D*	*25 - 130*	*11/14/12 15:42*	*11/20/12 18:17*	*100*
2-Fluorophenol	*0*	*D*	*25 - 130*	*11/14/12 15:42*	*11/20/12 18:17*	*100*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*	*11/14/12 15:42*	*11/20/12 18:17*	*100*
Nitrobenzene-d5	*0*	*D*	*39 - 130*	*11/14/12 15:42*	*11/20/12 18:17*	*100*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*	*11/14/12 15:42*	*11/20/12 18:17*	*100*
Terphenyl-d14	*0*	*D*	*10 - 143*	*11/14/12 15:42*	*11/20/12 18:17*	*100*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		11/23/12 14:47	11/30/12 21:52	1
Arsenic	**0.019**		0.010		mg/L		11/23/12 14:47	11/30/12 21:52	1
Chromium	**0.28**		0.10		mg/L		11/23/12 14:47	11/30/12 21:52	1
Lead	0.015	U	0.015		mg/L		11/23/12 14:47	11/30/12 21:52	1
Mercury	0.0020	U	0.0020		mg/L		11/23/12 14:47	11/30/12 21:52	1
Nickel	0.10	U	0.10		mg/L		11/23/12 14:47	11/30/12 21:52	1

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84622-1

Client Sample ID: DUP-2

Date Collected: 11/08/12 00:00
Date Received: 11/09/12 09:55

Lab Sample ID: 680-84622-4

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.012**	**J**	0.025	0.0013	mg/L			11/19/12 18:33	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*120*		*70 - 130*		*11/19/12 18:33*	*5*
Dibromofluoromethane	*92*		*70 - 130*		*11/19/12 18:33*	*5*
Toluene-d8 (Surr)	*108*		*70 - 130*		*11/19/12 18:33*	*5*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**5.3**		0.95	0.067	mg/L		11/14/12 15:42	11/20/12 17:48	100
3 & 4 Methylphenol	0.12	U	0.95	0.12	mg/L		11/14/12 15:42	11/20/12 17:48	100
Phenanthrene	**0.093**	**J**	0.95	0.073	mg/L		11/14/12 15:42	11/20/12 17:48	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*0*	*D*	*25 - 130*	*11/14/12 15:42*	*11/20/12 17:48*	*100*
2-Fluorophenol	*0*	*D*	*25 - 130*	*11/14/12 15:42*	*11/20/12 17:48*	*100*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*	*11/14/12 15:42*	*11/20/12 17:48*	*100*
Nitrobenzene-d5	*0*	*D*	*39 - 130*	*11/14/12 15:42*	*11/20/12 17:48*	*100*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*	*11/14/12 15:42*	*11/20/12 17:48*	*100*
Terphenyl-d14	*0*	*D*	*10 - 143*	*11/14/12 15:42*	*11/20/12 17:48*	*100*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		11/23/12 14:47	11/30/12 22:04	1
Arsenic	**0.019**		0.010		mg/L		11/23/12 14:47	11/30/12 22:04	1
Chromium	**0.28**		0.10		mg/L		11/23/12 14:47	11/30/12 22:04	1
Lead	0.015	U	0.015		mg/L		11/23/12 14:47	11/30/12 22:04	1
Mercury	0.0020	U	0.0020		mg/L		11/23/12 14:47	11/30/12 22:04	1
Nickel	0.10	U	0.10		mg/L		11/23/12 14:47	11/30/12 22:04	1

Surrogate Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84622-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
680-84622-1	LOC11-MW-09	104	97	94
680-84622-2	LOC11B-MW-02	101	101	101
680-84622-3	LOC11B-MW-02D	112	118	103
680-84622-3 MS	LOC11B-MW-02D	126	104	116
680-84622-4	DUP-2	120	92	108
LCS 680-256686/5	Lab Control Sample	105	101	107
LCS 680-256991/3	Lab Control Sample	105	103	101
LCS 680-257200/3	Lab Control Sample	101	94	95
LCSD 680-256686/6	Lab Control Sample Dup	92	95	98
LCSD 680-256991/4	Lab Control Sample Dup	98	93	94
LCSD 680-257200/4	Lab Control Sample Dup	104	103	97
MB 680-256686/9	Method Blank	94	103	99
MB 680-256991/6	Method Blank	102	98	88
MB 680-257200/6	Method Blank	104	101	89

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		PHL	2FP	TBP	NBZ	FBP	TPH
Lab Sample ID	Client Sample ID	(25-130)	(25-130)	(31-141)	(39-130)	(38-130)	(10-143)
680-84622-1	LOC11-MW-09	47	44	70	49	54	25
680-84622-2	LOC11B-MW-02	0 D	0 D	0 D	0 D	0 D	0 D
680-84622-3	LOC11B-MW-02D	0 D	0 D	0 D	0 D	0 D	0 D
680-84622-4	DUP-2	0 D	0 D	0 D	0 D	0 D	0 D
LCS 680-256304/14-A	Lab Control Sample	67	69	85	74	74	60
MB 680-256304/13-A	Method Blank	73	76	85	87	90	71

Surrogate Legend

PHL = Phenol-d5
2FP = 2-Fluorophenol
TBP = 2,4,6-Tribromophenol
NBZ = Nitrobenzene-d5
FBP = 2-Fluorobiphenyl
TPH = Terphenyl-d14

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-256686/9 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256686

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/16/12 13:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*70 - 130*		*11/16/12 13:17*	*1*
Dibromofluoromethane	*103*		*70 - 130*		*11/16/12 13:17*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*11/16/12 13:17*	*1*

Lab Sample ID: LCS 680-256686/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256686

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0503		mg/L		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*101*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 680-256686/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256686

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.0475		mg/L		95	70 - 130	6	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*92*		*70 - 130*
Dibromofluoromethane	*95*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 680-256991/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256991

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/19/12 14:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*70 - 130*		*11/19/12 14:20*	*1*
Dibromofluoromethane	*98*		*70 - 130*		*11/19/12 14:20*	*1*
Toluene-d8 (Surr)	*88*		*70 - 130*		*11/19/12 14:20*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-256991/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256991

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0491		mg/L		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*103*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 680-256991/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256991

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.0468		mg/L		94	70 - 130	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*70 - 130*
Dibromofluoromethane	*93*		*70 - 130*
Toluene-d8 (Surr)	*94*		*70 - 130*

Lab Sample ID: MB 680-257200/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257200

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			11/20/12 11:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*70 - 130*		*11/20/12 11:58*	*1*
Dibromofluoromethane	*101*		*70 - 130*		*11/20/12 11:58*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*		*11/20/12 11:58*	*1*

Lab Sample ID: LCS 680-257200/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257200

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0477		mg/L		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
Dibromofluoromethane	*94*		*70 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-257200/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257200

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.0486		mg/L		97	70 - 130	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*70 - 130*
Dibromofluoromethane	*103*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: 680-84622-3 MS — **Client Sample ID: LOC11B-MW-02D**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257200

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.015	J	0.250	0.304		mg/L		115	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*126*		*70 - 130*
Dibromofluoromethane	*104*		*70 - 130*
Toluene-d8 (Surr)	*116*		*70 - 130*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-256304/13-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256670 — **Prep Batch: 256304**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.010	U	0.010		mg/L		11/14/12 15:42	11/16/12 11:23	1
3 & 4 Methylphenol	0.010	U	0.010		mg/L		11/14/12 15:42	11/16/12 11:23	1
Phenanthrene	0.010	U	0.010		mg/L		11/14/12 15:42	11/16/12 11:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*73*		*25 - 130*	*11/14/12 15:42*	*11/16/12 11:23*	*1*
2-Fluorophenol	*76*		*25 - 130*	*11/14/12 15:42*	*11/16/12 11:23*	*1*
2,4,6-Tribromophenol	*85*		*31 - 141*	*11/14/12 15:42*	*11/16/12 11:23*	*1*
Nitrobenzene-d5	*87*		*39 - 130*	*11/14/12 15:42*	*11/16/12 11:23*	*1*
2-Fluorobiphenyl	*90*		*38 - 130*	*11/14/12 15:42*	*11/16/12 11:23*	*1*
Terphenyl-d14	*71*		*10 - 143*	*11/14/12 15:42*	*11/16/12 11:23*	*1*

Lab Sample ID: LCS 680-256304/14-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256670 — **Prep Batch: 256304**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	0.100	0.0755		mg/L		75	50 - 130
3 & 4 Methylphenol	0.100	0.0752		mg/L		75	35 - 130
Phenanthrene	0.100	0.0864		mg/L		86	62 - 130

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-256304/14-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 256670 — **Prep Batch: 256304**

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Phenol-d5	*67*		*25 - 130*
2-Fluorophenol	*69*		*25 - 130*
2,4,6-Tribromophenol	*85*		*31 - 141*
Nitrobenzene-d5	*74*		*39 - 130*
2-Fluorobiphenyl	*74*		*38 - 130*
Terphenyl-d14	*60*		*10 - 143*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-257428/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257750 — **Prep Batch: 257428**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		11/23/12 14:47	11/26/12 23:37	1
Arsenic	0.010	U	0.010		mg/L		11/23/12 14:47	11/26/12 23:37	1
Chromium	0.10	U	0.10		mg/L		11/23/12 14:47	11/26/12 23:37	1
Lead	0.015	U	0.015		mg/L		11/23/12 14:47	11/26/12 23:37	1
Mercury	0.0020	U	0.0020		mg/L		11/23/12 14:47	11/26/12 23:37	1
Nickel	0.10	U	0.10		mg/L		11/23/12 14:47	11/26/12 23:37	1

Lab Sample ID: LCS 680-257428/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257750 — **Prep Batch: 257428**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0552		mg/L		110	75 - 125
Arsenic	0.100	0.102		mg/L		102	75 - 125
Chromium	0.100	0.10	U	mg/L		97	75 - 125
Lead	0.0500	0.0536		mg/L		107	75 - 125
Mercury	0.00500	0.00415		mg/L		83	75 - 125
Nickel	0.100	0.102		mg/L		102	75 - 125

Lab Sample ID: 680-84622-1 MS — **Client Sample ID: LOC11-MW-09**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 257750 — **Prep Batch: 257428**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0060	U	0.0500	0.0574		mg/L		115	75 - 125
Arsenic	0.010	U	0.100	0.108		mg/L		108	75 - 125
Chromium	0.10	U	0.100	0.104		mg/L		104	75 - 125
Lead	0.015	U	0.0500	0.0522		mg/L		104	75 - 125
Mercury	0.0020	U	0.00500	0.00511		mg/L		102	75 - 125
Nickel	0.10	U	0.100	0.102		mg/L		102	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-84622-1 MSD
Matrix: Water
Analysis Batch: 257750

Client Sample ID: LOC11-MW-09
Prep Type: Total/NA
Prep Batch: 257428

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0060	U	0.0500	0.0554		mg/L		111	75 - 125	3	20
Arsenic	0.010	U	0.100	0.107		mg/L		107	75 - 125	1	20
Chromium	0.10	U	0.100	0.102		mg/L		102	75 - 125	2	20
Lead	0.015	U	0.0500	0.0502		mg/L		100	75 - 125	4	20
Mercury	0.0020	U	0.00500	0.00483		mg/L		97	75 - 125	5	20
Nickel	0.10	U	0.100	0.101		mg/L		101	75 - 125	2	20

QC Association Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84622-1

GC/MS VOA

Analysis Batch: 256686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84622-2	LOC11B-MW-02	Total/NA	Water	8260B	
LCS 680-256686/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-256686/6	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-256686/9	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 256991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84622-1	LOC11-MW-09	Total/NA	Water	8260B	
680-84622-3	LOC11B-MW-02D	Total/NA	Water	8260B	
680-84622-4	DUP-2	Total/NA	Water	8260B	
LCS 680-256991/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-256991/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-256991/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 257200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84622-3 MS	LOC11B-MW-02D	Total/NA	Water	8260B	
LCS 680-257200/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-257200/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-257200/6	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 256304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84622-1	LOC11-MW-09	Total/NA	Water	3520C	
680-84622-2	LOC11B-MW-02	Total/NA	Water	3520C	
680-84622-3	LOC11B-MW-02D	Total/NA	Water	3520C	
680-84622-4	DUP-2	Total/NA	Water	3520C	
LCS 680-256304/14-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-256304/13-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 256670

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-256304/14-A	Lab Control Sample	Total/NA	Water	8270C	256304
MB 680-256304/13-A	Method Blank	Total/NA	Water	8270C	256304

Analysis Batch: 256858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84622-1	LOC11-MW-09	Total/NA	Water	8270C	256304

Analysis Batch: 257116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84622-3	LOC11B-MW-02D	Total/NA	Water	8270C	256304
680-84622-4	DUP-2	Total/NA	Water	8270C	256304

Analysis Batch: 257250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84622-2	LOC11B-MW-02	Total/NA	Water	8270C	256304

QC Association Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84622-1

Metals

Prep Batch: 257428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84622-1	LOC11-MW-09	Total/NA	Water	3010A	
680-84622-1 MS	LOC11-MW-09	Total/NA	Water	3010A	
680-84622-1 MSD	LOC11-MW-09	Total/NA	Water	3010A	
680-84622-2	LOC11B-MW-02	Total/NA	Water	3010A	
680-84622-3	LOC11B-MW-02D	Total/NA	Water	3010A	
680-84622-4	DUP-2	Total/NA	Water	3010A	
LCS 680-257428/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 680-257428/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 257750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84622-1	LOC11-MW-09	Total/NA	Water	6020A	257428
680-84622-1 MS	LOC11-MW-09	Total/NA	Water	6020A	257428
680-84622-1 MSD	LOC11-MW-09	Total/NA	Water	6020A	257428
LCS 680-257428/2-A	Lab Control Sample	Total/NA	Water	6020A	257428
MB 680-257428/1-A	Method Blank	Total/NA	Water	6020A	257428

Analysis Batch: 258286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-84622-2	LOC11B-MW-02	Total/NA	Water	6020A	257428
680-84622-3	LOC11B-MW-02D	Total/NA	Water	6020A	257428
680-84622-4	DUP-2	Total/NA	Water	6020A	257428

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84622-1

Client Sample ID: LOC11-MW-09 — Lab Sample ID: 680-84622-1

Date Collected: 11/08/12 10:40 — **Matrix: Water**
Date Received: 11/09/12 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	256991	11/19/12 17:09	AJMC	TAL SAV
Total/NA	Prep	3520C			256304	11/14/12 15:42	RBS	TAL SAV
Total/NA	Analysis	8270C		1	256858	11/18/12 21:12	BB	TAL SAV
Total/NA	Prep	3010A			257428	11/23/12 14:47	JKL	TAL SAV
Total/NA	Analysis	6020A		1	257750	11/26/12 23:52	BR	TAL SAV

Client Sample ID: LOC11B-MW-02 — Lab Sample ID: 680-84622-2

Date Collected: 11/08/12 13:25 — **Matrix: Water**
Date Received: 11/09/12 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	256686	11/16/12 18:23	AJMC	TAL SAV
Total/NA	Prep	3520C			256304	11/14/12 15:42	RBS	TAL SAV
Total/NA	Analysis	8270C		50	257250	11/21/12 11:41	BB	TAL SAV
Total/NA	Prep	3010A			257428	11/23/12 14:47	JKL	TAL SAV
Total/NA	Analysis	6020A		1	258286	11/30/12 21:46	BR	TAL SAV

Client Sample ID: LOC11B-MW-02D — Lab Sample ID: 680-84622-3

Date Collected: 11/08/12 13:45 — **Matrix: Water**
Date Received: 11/09/12 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	256991	11/19/12 18:05	AJMC	TAL SAV
Total/NA	Prep	3520C			256304	11/14/12 15:42	RBS	TAL SAV
Total/NA	Analysis	8270C		100	257116	11/20/12 18:17	BB	TAL SAV
Total/NA	Prep	3010A			257428	11/23/12 14:47	JKL	TAL SAV
Total/NA	Analysis	6020A		1	258286	11/30/12 21:52	BR	TAL SAV

Client Sample ID: DUP-2 — Lab Sample ID: 680-84622-4

Date Collected: 11/08/12 00:00 — **Matrix: Water**
Date Received: 11/09/12 09:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	256991	11/19/12 18:33	AJMC	TAL SAV
Total/NA	Prep	3520C			256304	11/14/12 15:42	RBS	TAL SAV
Total/NA	Analysis	8270C		100	257116	11/20/12 17:48	BB	TAL SAV
Total/NA	Prep	3010A			257428	11/23/12 14:47	JKL	TAL SAV
Total/NA	Analysis	6020A		1	258286	11/30/12 22:04	BR	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 60060

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE: GA Cellulose Brunswick	PROJECT NO.: 206163	PROJECT LOCATION (STATE): GA
TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Carol Northrow	CLIENT PHONE: 770-973-2100	CLIENT FAX: 770-973-7596
CLIENT NAME: Eastman	CLIENT E-MAIL: CNorthrow@Eastman.com	
CLIENT ADDRESS: 1880 West Oak Pkwy, Bldg 100 Suite 106 Marietta, GA 30062		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 1 OF 1

STANDARD REPORT DELIVERY: X
DATE DUE:
EXPEDITED REPORT DELIVERY (SURCHARGE): ○
DATE DUE:
NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	Benzene 8260	Select SVOC 8270	Select Metals 6020A[2]							REMARKS
								HCl	-	HNO3	PRESERVATIVE						
11/8/12	1040	LOC11-MW-09	G	X				3	2	1							1 Naphthalene,
	1325	LOC11B-MW-02	G	X				3	2	1							Phenanthrene
	1345	LOC11B-MW-02D	G	X				3	2	1							4-Methylphenol
	—	Dup-2	G	X				3	2	1							
																	[2] As, Cr, Pb, Ni, Sb
																	Hg

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
D.A. Elkins	11/09/12	0955						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
George K C	11/9/12	0955	YES ○ NO ○		680-84622	0.4°C

TAL8240-680 (1008)

Login Sample Receipt Checklist

Client: EarthCon Consultants Inc

Job Number: 680-84622-1

Login Number: 84622

List Source: TestAmerica Savannah

List Number: 1

Creator: Conner, Keaton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	line 2,3 and 4 ph needs to be adjusted
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-84622-1

Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	02-28-13
A2LA	ISO/IEC 17025		399.01	02-28-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13
California	NELAC	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-12
Connecticut	State Program	1	PH-0161	03-31-13
Florida	NELAC	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-12
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Guam	State Program	9	09-005r	04-17-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAC	5	200022	11-30-12
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13
Kentucky	State Program	4	90084	12-31-12
Kentucky (UST)	State Program	4	18	02-28-13
Louisiana	NELAC	6	30690	06-30-13
Louisiana	NELAC	6	LA100015	12-31-12
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-12
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	12-31-12
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13
New Jersey	NELAC	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAC	2	10842	04-01-13
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAC	3	68-00474	06-30-13
Puerto Rico	State Program	2	GA00006	01-01-13
Rhode Island	State Program	1	LAO00244	12-30-12
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAC	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAC	3	460161	06-14-13
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-12
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-85175-1
Client Project/Site: EarthCon /Brunswick Site

For:
EarthCon Consultants Inc
1880 West Oak Parkway, Bldg. 100
Suite 106
Marietta, Georgia 30062

Attn: Ms. Carol Northern

Authorized for release by:
12/14/2012 5:46:39 PM

Linda Wolfe
Project Manager I
linda.wolfe@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 5
Method Summary 6
Definitions 7
Detection Summary 8
Client Sample Results 9
Surrogate Summary 11
QC Sample Results 12
QC Association 17
Chronicle 19
Chain of Custody 20
Receipt Checklists 21
Certification Summary 22

Job ID: 680-85175-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: EarthCon Consultants Inc

Project: EarthCon /Brunswick Site

Report Number: 680-85175-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 11/28/2012 2:11 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.4º C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples LOC11D-MW-03 (680-85175-1), DUP 3 (680-85175-2) and TRIP BLANK (680-85175-3) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 12/03/2012.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples LOC11D-MW-03 (680-85175-1) and DUP 3 (680-85175-2) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 11/30/2012 and 12/12/2012 and analyzed on 12/06/2012 and 12/14/2012.

Surrogate recovery for the following sample DUP 3 (680-85175-2) was outside control limits. Re-extraction was performed outside of holding time with acceptable results. Both sets of data are reported.

Phenanthrene failed the recovery criteria low for the MS and MSD of sample LOC11D-MW-03MS (680-85175-1) in batch 680-258948.

No other difficulties were encountered during the semivolatiles analyses.

All other quality control parameters were within the acceptance limits.

METALS (ICPMS)
Samples LOC11D-MW-03 (680-85175-1) and DUP 3 (680-85175-2) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 12/03/2012 and analyzed on 12/05/2012.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

Job ID: 680-85175-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

Sample Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-85175-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-85175-1	LOC11D-MW-03	Water	11/28/12 11:10	11/28/12 14:11
680-85175-2	DUP 3	Water	11/28/12 11:20	11/28/12 14:11
680-85175-3	TRIP BLANK	Water	11/28/12 00:00	11/28/12 14:11

Method Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-85175-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
U	Indicates the analyte was analyzed for but not detected.
F	MS or MSD exceeds the control limits
H	Sample was prepped or analyzed beyond the specified holding time

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-85175-1

Client Sample ID: LOC11D-MW-03 — Lab Sample ID: 680-85175-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.028		0.0099		mg/L	1		8270C	Total/NA
Phenanthrene	0.016		0.0099		mg/L	1		8270C	Total/NA

Client Sample ID: DUP 3 — Lab Sample ID: 680-85175-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.046		0.0096		mg/L	1		8270C	Total/NA
Phenanthrene	0.021		0.0096		mg/L	1		8270C	Total/NA
Naphthalene - RE	0.054	H	0.0096		mg/L	1		8270C	Total/NA
Phenanthrene - RE	0.026	H	0.0096		mg/L	1		8270C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 680-85175-3

No Detections

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-85175-1

Client Sample ID: LOC11D-MW-03

Lab Sample ID: 680-85175-1
Date Collected: 11/28/12 11:10
Matrix: Water
Date Received: 11/28/12 14:11

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			12/03/12 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*110*		*70 - 130*		*12/03/12 14:28*	*1*
Dibromofluoromethane	*94*		*70 - 130*		*12/03/12 14:28*	*1*
Toluene-d8 (Surr)	*88*		*70 - 130*		*12/03/12 14:28*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.028**		0.0099		mg/L		11/30/12 14:57	12/06/12 18:01	1
3 & 4 Methylphenol	0.0099	U	0.0099		mg/L		11/30/12 14:57	12/06/12 18:01	1
Phenanthrene	**0.016**		0.0099		mg/L		11/30/12 14:57	12/06/12 18:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*34*		*25 - 130*	*11/30/12 14:57*	*12/06/12 18:01*	*1*
2-Fluorophenol	*33*		*25 - 130*	*11/30/12 14:57*	*12/06/12 18:01*	*1*
2,4,6-Tribromophenol	*50*		*31 - 141*	*11/30/12 14:57*	*12/06/12 18:01*	*1*
Nitrobenzene-d5	*40*		*39 - 130*	*11/30/12 14:57*	*12/06/12 18:01*	*1*
2-Fluorobiphenyl	*34*	*X*	*38 - 130*	*11/30/12 14:57*	*12/06/12 18:01*	*1*
Terphenyl-d14	*15*		*10 - 143*	*11/30/12 14:57*	*12/06/12 18:01*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		12/03/12 06:38	12/05/12 07:40	1
Arsenic	0.010	U	0.010		mg/L		12/03/12 06:38	12/05/12 07:40	1
Chromium	0.10	U	0.10		mg/L		12/03/12 06:38	12/05/12 07:40	1
Lead	0.015	U	0.015		mg/L		12/03/12 06:38	12/05/12 07:40	1
Mercury	0.0020	U	0.0020		mg/L		12/03/12 06:38	12/05/12 07:40	1
Nickel	0.10	U	0.10		mg/L		12/03/12 06:38	12/05/12 07:40	1

Client Sample ID: DUP 3

Lab Sample ID: 680-85175-2
Date Collected: 11/28/12 11:20
Matrix: Water
Date Received: 11/28/12 14:11

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			12/03/12 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*105*		*70 - 130*		*12/03/12 14:57*	*1*
Dibromofluoromethane	*92*		*70 - 130*		*12/03/12 14:57*	*1*
Toluene-d8 (Surr)	*90*		*70 - 130*		*12/03/12 14:57*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.046**		0.0096		mg/L		11/30/12 14:57	12/06/12 18:30	1
3 & 4 Methylphenol	0.0096	U	0.0096		mg/L		11/30/12 14:57	12/06/12 18:30	1
Phenanthrene	**0.021**		0.0096		mg/L		11/30/12 14:57	12/06/12 18:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*46*		*25 - 130*	*11/30/12 14:57*	*12/06/12 18:30*	*1*

Client Sample ID: DUP 3

Lab Sample ID: 680-85175-2

Date Collected: 11/28/12 11:20

Matrix: Water

Date Received: 11/28/12 14:11

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*43*		*25 - 130*	*11/30/12 14:57*	*12/06/12 18:30*	*1*
2,4,6-Tribromophenol	*61*		*31 - 141*	*11/30/12 14:57*	*12/06/12 18:30*	*1*
Nitrobenzene-d5	*52*		*39 - 130*	*11/30/12 14:57*	*12/06/12 18:30*	*1*
2-Fluorobiphenyl	*45*		*38 - 130*	*11/30/12 14:57*	*12/06/12 18:30*	*1*
Terphenyl-d14	*6*	*X*	*10 - 143*	*11/30/12 14:57*	*12/06/12 18:30*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.054**	**H**	0.0096		mg/L		12/12/12 15:46	12/14/12 16:32	1
3 & 4 Methylphenol	0.0096	U H	0.0096		mg/L		12/12/12 15:46	12/14/12 16:32	1
Phenanthrene	**0.026**	**H**	0.0096		mg/L		12/12/12 15:46	12/14/12 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*58*		*25 - 130*	*12/12/12 15:46*	*12/14/12 16:32*	*1*
2-Fluorophenol	*44*		*25 - 130*	*12/12/12 15:46*	*12/14/12 16:32*	*1*
2,4,6-Tribromophenol	*74*		*31 - 141*	*12/12/12 15:46*	*12/14/12 16:32*	*1*
Nitrobenzene-d5	*61*		*39 - 130*	*12/12/12 15:46*	*12/14/12 16:32*	*1*
2-Fluorobiphenyl	*61*		*38 - 130*	*12/12/12 15:46*	*12/14/12 16:32*	*1*
Terphenyl-d14	*16*		*10 - 143*	*12/12/12 15:46*	*12/14/12 16:32*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		12/03/12 06:38	12/05/12 07:47	1
Arsenic	0.010	U	0.010		mg/L		12/03/12 06:38	12/05/12 07:47	1
Chromium	0.10	U	0.10		mg/L		12/03/12 06:38	12/05/12 07:47	1
Lead	0.015	U	0.015		mg/L		12/03/12 06:38	12/05/12 07:47	1
Mercury	0.0020	U	0.0020		mg/L		12/03/12 06:38	12/05/12 07:47	1
Nickel	0.10	U	0.10		mg/L		12/03/12 06:38	12/05/12 07:47	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 680-85175-3

Date Collected: 11/28/12 00:00

Matrix: Water

Date Received: 11/28/12 14:11

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			12/03/12 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*		*70 - 130*		*12/03/12 13:04*	*1*
Dibromofluoromethane	*97*		*70 - 130*		*12/03/12 13:04*	*1*
Toluene-d8 (Surr)	*87*		*70 - 130*		*12/03/12 13:04*	*1*

Surrogate Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-85175-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
680-85175-1	LOC11D-MW-03	110	94	88
680-85175-1 MS	LOC11D-MW-03	101	93	94
680-85175-1 MSD	LOC11D-MW-03	104	102	101
680-85175-2	DUP 3	105	92	90
680-85175-3	TRIP BLANK	108	97	87
LCS 680-258433/12	Lab Control Sample	106	122	117
LCSD 680-258433/13	Lab Control Sample Dup	105	120	116
MB 680-258433/4	Method Blank	104	90	89

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		PHL	2FP	TBP	NBZ	FBP	TPH
Lab Sample ID	Client Sample ID	(25-130)	(25-130)	(31-141)	(39-130)	(38-130)	(10-143)
680-85175-1	LOC11D-MW-03	34	33	50	40	34 X	15
680-85175-1 MS	LOC11D-MW-03	40	40	50	47	40	13
680-85175-1 MSD	LOC11D-MW-03	48	50	57	54	44	16
680-85175-2	DUP 3	46	43	61	52	45	6 X
680-85175-2 - RE	DUP 3	58	44	74	61	61	16
LCS 680-258144/4-A	Lab Control Sample	63	64	70	68	65	54
LCS 680-259460/15-A	Lab Control Sample	63	59	71	77	74	52
MB 680-258144/3-A	Method Blank	67	64	66	75	71	57
MB 680-259460/14-A	Method Blank	62	55	53	75	71	55

Surrogate Legend

PHL = Phenol-d5
2FP = 2-Fluorophenol
TBP = 2,4,6-Tribromophenol
NBZ = Nitrobenzene-d5
FBP = 2-Fluorobiphenyl
TPH = Terphenyl-d14

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-258433/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258433

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			12/03/12 12:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*70 - 130*		*12/03/12 12:36*	*1*
Dibromofluoromethane	*90*		*70 - 130*		*12/03/12 12:36*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*		*12/03/12 12:36*	*1*

Lab Sample ID: LCS 680-258433/12 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258433

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0554		mg/L		111	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*70 - 130*
Dibromofluoromethane	*122*		*70 - 130*
Toluene-d8 (Surr)	*117*		*70 - 130*

Lab Sample ID: LCSD 680-258433/13 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258433

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.0560		mg/L		112	70 - 130	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*105*		*70 - 130*
Dibromofluoromethane	*120*		*70 - 130*
Toluene-d8 (Surr)	*116*		*70 - 130*

Lab Sample ID: 680-85175-1 MS — **Client Sample ID: LOC11D-MW-03**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258433

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0050	U	0.0500	0.0431		mg/L		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
Dibromofluoromethane	*93*		*70 - 130*
Toluene-d8 (Surr)	*94*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-85175-1 MSD — **Client Sample ID: LOC11D-MW-03**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258433

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0050	U	0.0500	0.0474		mg/L		95	70 - 130	10	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*70 - 130*
Dibromofluoromethane	*102*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-258144/3-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258948 — **Prep Batch: 258144**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.010	U	0.010		mg/L		11/30/12 14:57	12/06/12 16:05	1
3 & 4 Methylphenol	0.010	U	0.010		mg/L		11/30/12 14:57	12/06/12 16:05	1
Phenanthrene	0.010	U	0.010		mg/L		11/30/12 14:57	12/06/12 16:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*67*		*25 - 130*	*11/30/12 14:57*	*12/06/12 16:05*	*1*
2-Fluorophenol	*64*		*25 - 130*	*11/30/12 14:57*	*12/06/12 16:05*	*1*
2,4,6-Tribromophenol	*66*		*31 - 141*	*11/30/12 14:57*	*12/06/12 16:05*	*1*
Nitrobenzene-d5	*75*		*39 - 130*	*11/30/12 14:57*	*12/06/12 16:05*	*1*
2-Fluorobiphenyl	*71*		*38 - 130*	*11/30/12 14:57*	*12/06/12 16:05*	*1*
Terphenyl-d14	*57*		*10 - 143*	*11/30/12 14:57*	*12/06/12 16:05*	*1*

Lab Sample ID: LCS 680-258144/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258948 — **Prep Batch: 258144**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	0.100	0.0639		mg/L		64	50 - 130
3 & 4 Methylphenol	0.100	0.0716		mg/L		72	35 - 130
Phenanthrene	0.100	0.0748		mg/L		75	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Phenol-d5	*63*		*25 - 130*
2-Fluorophenol	*64*		*25 - 130*
2,4,6-Tribromophenol	*70*		*31 - 141*
Nitrobenzene-d5	*68*		*39 - 130*
2-Fluorobiphenyl	*65*		*38 - 130*
Terphenyl-d14	*54*		*10 - 143*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-85175-1 MS — **Client Sample ID: LOC11D-MW-03**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258948 — **Prep Batch: 258144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	0.028		0.0988	0.0818		mg/L		54	50 - 130
3 & 4 Methylphenol	0.0099	U	0.0988	0.0500		mg/L		51	35 - 130
Phenanthrene	0.016		0.0988	0.0654	F	mg/L		50	62 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Phenol-d5	*40*		*25 - 130*
2-Fluorophenol	*40*		*25 - 130*
2,4,6-Tribromophenol	*50*		*31 - 141*
Nitrobenzene-d5	*47*		*39 - 130*
2-Fluorobiphenyl	*40*		*38 - 130*
Terphenyl-d14	*13*		*10 - 143*

Lab Sample ID: 680-85175-1 MSD — **Client Sample ID: LOC11D-MW-03**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258948 — **Prep Batch: 258144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	0.028		0.0911	0.0896		mg/L		67	50 - 130	9	50
3 & 4 Methylphenol	0.0099	U	0.0911	0.0532		mg/L		58	35 - 130	6	50
Phenanthrene	0.016		0.0911	0.0638	F	mg/L		52	62 - 130	2	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Phenol-d5	*48*		*25 - 130*
2-Fluorophenol	*50*		*25 - 130*
2,4,6-Tribromophenol	*57*		*31 - 141*
Nitrobenzene-d5	*54*		*39 - 130*
2-Fluorobiphenyl	*44*		*38 - 130*
Terphenyl-d14	*16*		*10 - 143*

Lab Sample ID: MB 680-259460/14-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 259910 — **Prep Batch: 259460**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.010	U	0.010		mg/L		12/12/12 15:46	12/14/12 15:35	1
3 & 4 Methylphenol	0.010	U	0.010		mg/L		12/12/12 15:46	12/14/12 15:35	1
Phenanthrene	0.010	U	0.010		mg/L		12/12/12 15:46	12/14/12 15:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*62*		*25 - 130*	*12/12/12 15:46*	*12/14/12 15:35*	*1*
2-Fluorophenol	*55*		*25 - 130*	*12/12/12 15:46*	*12/14/12 15:35*	*1*
2,4,6-Tribromophenol	*53*		*31 - 141*	*12/12/12 15:46*	*12/14/12 15:35*	*1*
Nitrobenzene-d5	*75*		*39 - 130*	*12/12/12 15:46*	*12/14/12 15:35*	*1*
2-Fluorobiphenyl	*71*		*38 - 130*	*12/12/12 15:46*	*12/14/12 15:35*	*1*
Terphenyl-d14	*55*		*10 - 143*	*12/12/12 15:46*	*12/14/12 15:35*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-259460/15-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 259910 — **Prep Batch: 259460**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	0.100	0.0724		mg/L		72	50 - 130
3 & 4 Methylphenol	0.100	0.0732		mg/L		73	35 - 130
Phenanthrene	0.100	0.0825		mg/L		83	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Phenol-d5	*63*		*25 - 130*
2-Fluorophenol	*59*		*25 - 130*
2,4,6-Tribromophenol	*71*		*31 - 141*
Nitrobenzene-d5	*77*		*39 - 130*
2-Fluorobiphenyl	*74*		*38 - 130*
Terphenyl-d14	*52*		*10 - 143*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-258330/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258702 — **Prep Batch: 258330**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		12/03/12 06:38	12/05/12 04:41	1
Arsenic	0.010	U	0.010		mg/L		12/03/12 06:38	12/05/12 04:41	1
Chromium	0.10	U	0.10		mg/L		12/03/12 06:38	12/05/12 04:41	1
Lead	0.015	U	0.015		mg/L		12/03/12 06:38	12/05/12 04:41	1
Mercury	0.0020	U	0.0020		mg/L		12/03/12 06:38	12/05/12 04:41	1
Nickel	0.10	U	0.10		mg/L		12/03/12 06:38	12/05/12 04:41	1

Lab Sample ID: LCS 680-258330/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258702 — **Prep Batch: 258330**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0576		mg/L		115	75 - 125
Arsenic	0.100	0.118		mg/L		118	75 - 125
Chromium	0.100	0.117		mg/L		117	75 - 125
Lead	0.0500	0.0540		mg/L		108	75 - 125
Mercury	0.00500	0.00423		mg/L		85	75 - 125
Nickel	0.100	0.119		mg/L		119	75 - 125

Lab Sample ID: 680-85097-C-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258702 — **Prep Batch: 258330**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0060	U	0.0500	0.0587		mg/L		117	75 - 125
Arsenic	0.010	U	0.100	0.114		mg/L		114	75 - 125
Chromium	0.10	U	0.100	0.114		mg/L		114	75 - 125
Lead	0.015	U	0.0500	0.0543		mg/L		109	75 - 125
Mercury	0.0020	U	0.00500	0.00416		mg/L		83	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-85097-C-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258702 — **Prep Batch: 258330**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nickel	0.10	U	0.100	0.127		mg/L		114	75 - 125		

Lab Sample ID: 680-85097-C-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 258702 — **Prep Batch: 258330**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0060	U	0.0500	0.0552		mg/L		110	75 - 125	6	20
Arsenic	0.010	U	0.100	0.108		mg/L		108	75 - 125	6	20
Chromium	0.10	U	0.100	0.108		mg/L		108	75 - 125	5	20
Lead	0.015	U	0.0500	0.0511		mg/L		102	75 - 125	6	20
Mercury	0.0020	U	0.00500	0.00396		mg/L		79	75 - 125	5	20
Nickel	0.10	U	0.100	0.120		mg/L		107	75 - 125	5	20

QC Association Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-85175-1

GC/MS VOA

Analysis Batch: 258433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-85175-1	LOC11D-MW-03	Total/NA	Water	8260B	
680-85175-1 MS	LOC11D-MW-03	Total/NA	Water	8260B	
680-85175-1 MSD	LOC11D-MW-03	Total/NA	Water	8260B	
680-85175-2	DUP 3	Total/NA	Water	8260B	
680-85175-3	TRIP BLANK	Total/NA	Water	8260B	
LCS 680-258433/12	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-258433/13	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-258433/4	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 258144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-85175-1	LOC11D-MW-03	Total/NA	Water	3520C	
680-85175-1 MS	LOC11D-MW-03	Total/NA	Water	3520C	
680-85175-1 MSD	LOC11D-MW-03	Total/NA	Water	3520C	
680-85175-2	DUP 3	Total/NA	Water	3520C	
LCS 680-258144/4-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-258144/3-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 258948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-85175-1	LOC11D-MW-03	Total/NA	Water	8270C	258144
680-85175-1 MS	LOC11D-MW-03	Total/NA	Water	8270C	258144
680-85175-1 MSD	LOC11D-MW-03	Total/NA	Water	8270C	258144
680-85175-2	DUP 3	Total/NA	Water	8270C	258144
LCS 680-258144/4-A	Lab Control Sample	Total/NA	Water	8270C	258144
MB 680-258144/3-A	Method Blank	Total/NA	Water	8270C	258144

Prep Batch: 259460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-85175-2 - RE	DUP 3	Total/NA	Water	3520C	
LCS 680-259460/15-A	Lab Control Sample	Total/NA	Water	3520C	
MB 680-259460/14-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 259910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-85175-2 - RE	DUP 3	Total/NA	Water	8270C	259460
LCS 680-259460/15-A	Lab Control Sample	Total/NA	Water	8270C	259460
MB 680-259460/14-A	Method Blank	Total/NA	Water	8270C	259460

Metals

Prep Batch: 258330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-85097-C-1-B MS	Matrix Spike	Total/NA	Water	3010A	
680-85097-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	
680-85175-1	LOC11D-MW-03	Total/NA	Water	3010A	
680-85175-2	DUP 3	Total/NA	Water	3010A	
LCS 680-258330/2-A	Lab Control Sample	Total/NA	Water	3010A	

Metals (Continued)

Prep Batch: 258330 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-258330/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 258702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-85097-C-1-B MS	Matrix Spike	Total/NA	Water	6020A	258330
680-85097-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	6020A	258330
680-85175-1	LOC11D-MW-03	Total/NA	Water	6020A	258330
680-85175-2	DUP 3	Total/NA	Water	6020A	258330
LCS 680-258330/2-A	Lab Control Sample	Total/NA	Water	6020A	258330
MB 680-258330/1-A	Method Blank	Total/NA	Water	6020A	258330

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-85175-1

Client Sample ID: LOC11D-MW-03

Lab Sample ID: 680-85175-1

Date Collected: 11/28/12 11:10

Matrix: Water

Date Received: 11/28/12 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	258433	12/03/12 14:28	AJMC	TAL SAV
Total/NA	Prep	3520C			258144	11/30/12 14:57	RBS	TAL SAV
Total/NA	Analysis	8270C		1	258948	12/06/12 18:01	BB	TAL SAV
Total/NA	Prep	3010A			258330	12/03/12 06:38	JKL	TAL SAV
Total/NA	Analysis	6020A		1	258702	12/05/12 07:40	BR	TAL SAV

Client Sample ID: DUP 3

Lab Sample ID: 680-85175-2

Date Collected: 11/28/12 11:20

Matrix: Water

Date Received: 11/28/12 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	258433	12/03/12 14:57	AJMC	TAL SAV
Total/NA	Prep	3520C			258144	11/30/12 14:57	RBS	TAL SAV
Total/NA	Analysis	8270C		1	258948	12/06/12 18:30	BB	TAL SAV
Total/NA	Prep	3520C	RE		259460	12/12/12 15:46	RBS	TAL SAV
Total/NA	Analysis	8270C	RE	1	259910	12/14/12 16:32	BB	TAL SAV
Total/NA	Prep	3010A			258330	12/03/12 06:38	JKL	TAL SAV
Total/NA	Analysis	6020A		1	258702	12/05/12 07:47	BR	TAL SAV

Client Sample ID: TRIP BLANK

Lab Sample ID: 680-85175-3

Date Collected: 11/28/12 00:00

Matrix: Water

Date Received: 11/28/12 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	258433	12/03/12 13:04	AJMC	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 62550

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

◯ TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

◯ Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
GP Cellulose Brunswick	24616 3	GA

TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Carol Northern	770-973-2106	770-973-7395

CLIENT NAME	CLIENT E-MAIL
Earthcon	cnorthern@earthcon.com

CLIENT ADDRESS: 1680 W. Oak Pkwy Bldg 100 Suite 106 Marietta, GA 30062

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE ___ OF ___

STANDARD REPORT DELIVERY ⊗

DATE DUE ___

EXPEDITED REPORT DELIVERY (SURCHARGE) ◯

DATE DUE ___

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSIS

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	HCL Benzene 8260	— Select SVOC 8270	HNO3 Select Metals 6020							REMARKS
								NUMBER OF CONTAINERS SUBMITTED									
11-28-12	11:10	LOCHD-MW-03	6	X				3	2	1							① Naphthalene, Phenanthrene, 4-methylphenol
↓	11:20	DUP 3	6	X				3	2	1							
↓		TRIP BLANK	2	X				2									
																	② As, Cr, Pb, Ni, Sb, Hg

PRESERVATIVE

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
H. A. Ethridge	11/28/12	1:15						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
Robin Johnson	11/28/12	1411						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
Morgan K Cr	11/28/12	1411	YES ◯ NO ◯		680-85175	1.4° C

TAL 8240-680 (1008)

Login Sample Receipt Checklist

Client: EarthCon Consultants Inc

Job Number: 680-85175-1

Login Number: 85175

List Source: TestAmerica Savannah

List Number: 1

Creator: Conner, Keaton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-85175-1

Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	02-28-13
A2LA	ISO/IEC 17025		399.01	02-28-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13
California	NELAC	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-12
Connecticut	State Program	1	PH-0161	03-31-13
Florida	NELAC	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-12
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Guam	State Program	9	09-005r	04-17-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAC	5	200022	11-30-12
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13
Kentucky	State Program	4	90084	12-31-12
Kentucky (UST)	State Program	4	18	02-28-13
Louisiana	NELAC	6	30690	06-30-13
Louisiana	NELAC	6	LA100015	12-31-12
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-12
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	12-31-12
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13
New Jersey	NELAC	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAC	2	10842	04-01-13
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAC	3	68-00474	06-30-13
Puerto Rico	State Program	2	GA00006	01-01-13
Rhode Island	State Program	1	LAO00244	12-30-12
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAC	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAC	3	460161	06-14-13
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-12
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-87213-1
Client Project/Site: EarthCon /Brunswick Site

For:
EarthCon Consultants Inc
1880 West Oak Parkway, Bldg. 100
Suite 106
Marietta, Georgia 30062

Attn: Ms. Carol Northern

Authorized for release by:
2/26/2013 10:52:55 AM

Linda Wolfe
Project Manager I
linda.wolfe@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 5
Method Summary 6
Definitions 7
Detection Summary 8
Client Sample Results 10
Surrogate Summary 18
QC Sample Results 19
QC Association 26
Chronicle 29
Chain of Custody 34
Receipt Checklists 36
Certification Summary 38

Job ID: 680-87213-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: EarthCon Consultants Inc

Project: EarthCon /Brunswick Site

Report Number: 680-87213-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 2/7/2013 8:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.4º C, 2.6º C, 2.6º C and 3.0º C.

The following samples were received in this shipment but are reported on a separate report: LOC11-MW-10 (680-87213-5), CPW-14 (680-87213-9), LOC11-MW-07 (680-87213-13), LOC11B-MW-02D (680-87213-23) and Dup-2 (680-87213-24).

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples Trip Blank (680-87213-6), LOC11-MW-07 (680-87213-13), LOC11-MW-09 (680-87213-16), LOC11D-MW-01 (680-87213-17), LOC11B-MW-05 (680-87213-18), LOC11-MW-08 (680-87213-19), LOC11D-MW-03 (680-87213-20), LOC11B-MW-02 (680-87213-21), and LOC17B-MW-01 (680-87213-22) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 02/08/2013.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples LOC11-MW-07 (680-87213-13), LOC11-MW-09 (680-87213-16), LOC11D-MW-01 (680-87213-17), LOC11B-MW-05 (680-87213-18), LOC11-MW-08 (680-87213-19), LOC11D-MW-03 (680-87213-20), LOC11B-MW-02 (680-87213-21), LOC17B-MW-01 (680-87213-22), were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 02/08/2013 and analyzed on 02/22/2013 and 02/23/2013.

Samples LOC11D-MW-01 (680-87213-17)[5X] and LOC11B-MW-02 (680-87213-21)[10X], required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the semivolatiles analyses.

All other quality control parameters were within the acceptance limits.

METALS (ICPMS)

Samples LOC06-MW-02 (680-87213-1), LOC06B-MW-01 (680-87213-2), LOC06-MW-04 (680-87213-3), LOC06-MW-01D (680-87213-4),

Job ID: 680-87213-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

LOC11-MW-10 (680-87213-5), CPW-13 (680-87213-7), Dup-1 (680-87213-8), CPW-1 (680-87213-10), CPW-4 (680-87213-11), CPW-7 (680-87213-12), CPW-3 (680-87213-14), CPW-10 (680-87213-15), LOC11-MW-09 (680-87213-16), LOC11D-MW-01 (680-87213-17), LOC11B-MW-05 (680-87213-18), LOC11-MW-08 (680-87213-19), LOC11D-MW-03 (680-87213-20), LOC11B-MW-02 (680-87213-21), and LOC17B-MW-01 (680-87213-22) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/13/2013 and 02/20/2013 and analyzed on 02/15/2013, 02/16/2013, 02/20/2013 and 02/21/2013.

Samples CPW-7 (680-87213-12)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

Sample Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-87213-1	LOC06-MW-02	Water	02/04/13 16:50	02/07/13 08:10
680-87213-2	LOC06B-MW-01	Water	02/04/13 16:50	02/07/13 08:10
680-87213-3	LOC06-MW-04	Water	02/04/13 18:25	02/07/13 08:10
680-87213-4	LOC06-MW-01D	Water	02/05/13 10:40	02/07/13 08:10
680-87213-6	Trip Blank	Water	02/05/13 00:00	02/07/13 08:10
680-87213-7	CPW-13	Water	02/05/13 10:50	02/07/13 08:10
680-87213-8	Dup-1	Water	02/05/13 00:00	02/07/13 08:10
680-87213-10	CPW-1	Water	02/05/13 12:40	02/07/13 08:10
680-87213-11	CPW-4	Water	02/05/13 15:30	02/07/13 08:10
680-87213-12	CPW-7	Water	02/05/13 15:05	02/07/13 08:10
680-87213-14	CPW-3	Water	02/05/13 16:50	02/07/13 08:10
680-87213-15	CPW-10	Water	02/05/13 17:50	02/07/13 08:10
680-87213-16	LOC11-MW-09	Water	02/05/13 19:25	02/07/13 08:10
680-87213-17	LOC11D-MW-01	Water	02/05/13 19:40	02/07/13 08:10
680-87213-18	LOC11B-MW-05	Water	02/06/13 11:20	02/07/13 08:10
680-87213-19	LOC11-MW-08	Water	02/06/13 11:00	02/07/13 08:10
680-87213-20	LOC11D-MW-03	Water	02/06/13 12:50	02/07/13 08:10
680-87213-21	LOC11B-MW-02	Water	02/06/13 13:30	02/07/13 08:10
680-87213-22	LOC17B-MW-01	Water	02/06/13 16:25	02/07/13 08:10

Method Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC06-MW-02 — Lab Sample ID: 680-87213-1

No Detections

Client Sample ID: LOC06B-MW-01 — Lab Sample ID: 680-87213-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.019		0.010		mg/L	1		6020A	Total/NA
Nickel	0.12		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: LOC06-MW-04 — Lab Sample ID: 680-87213-3

No Detections

Client Sample ID: LOC06-MW-01D — Lab Sample ID: 680-87213-4

No Detections

Client Sample ID: Trip Blank — Lab Sample ID: 680-87213-6

No Detections

Client Sample ID: CPW-13 — Lab Sample ID: 680-87213-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.11		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: Dup-1 — Lab Sample ID: 680-87213-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.12		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: CPW-1 — Lab Sample ID: 680-87213-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.70		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: CPW-4 — Lab Sample ID: 680-87213-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.13		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: CPW-7 — Lab Sample ID: 680-87213-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	15		1.0		mg/L	10		6020A	Total/NA

Client Sample ID: CPW-3 — Lab Sample ID: 680-87213-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.57		0.10		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: CPW-10 — Lab Sample ID: 680-87213-15

No Detections

Client Sample ID: LOC11-MW-09 — Lab Sample ID: 680-87213-16

No Detections

Client Sample ID: LOC11D-MW-01 — Lab Sample ID: 680-87213-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
3 & 4 Methylphenol	0.028		0.0096		mg/L	1		8270C	Total/NA
Phenanthrene	0.025		0.0096		mg/L	1		8270C	Total/NA
Naphthalene - DL	0.45		0.048		mg/L	5		8270C	Total/NA

Client Sample ID: LOC11B-MW-05 — Lab Sample ID: 680-87213-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.11		0.0098		mg/L	1		8270C	Total/NA
3 & 4 Methylphenol	0.024		0.0098		mg/L	1		8270C	Total/NA

Client Sample ID: LOC11-MW-08 — Lab Sample ID: 680-87213-19

No Detections

Client Sample ID: LOC11D-MW-03 — Lab Sample ID: 680-87213-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.067		0.010		mg/L	1		8270C	Total/NA
Phenanthrene	0.032		0.010		mg/L	1		8270C	Total/NA

Client Sample ID: LOC11B-MW-02 — Lab Sample ID: 680-87213-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.12		0.0096		mg/L	1		8270C	Total/NA
Naphthalene - DL	1.5		0.096		mg/L	10		8270C	Total/NA
Antimony	0.014		0.0060		mg/L	1		6020A	Total/NA

Client Sample ID: LOC17B-MW-01 — Lab Sample ID: 680-87213-22

No Detections

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC06-MW-02

Lab Sample ID: 680-87213-1
Date Collected: 02/04/13 16:50
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 20:02	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 20:02	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 20:02	1

Client Sample ID: LOC06B-MW-01

Lab Sample ID: 680-87213-2
Date Collected: 02/04/13 16:50
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.019**		0.010		mg/L		02/13/13 12:01	02/15/13 20:09	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 20:09	1
Nickel	**0.12**		0.10		mg/L		02/13/13 12:01	02/15/13 20:09	1

Client Sample ID: LOC06-MW-04

Lab Sample ID: 680-87213-3
Date Collected: 02/04/13 18:25
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 20:15	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 20:15	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 20:15	1

Client Sample ID: LOC06-MW-01D

Lab Sample ID: 680-87213-4
Date Collected: 02/05/13 10:40
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 20:49	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 20:49	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 20:49	1

Client Sample ID: Trip Blank

Lab Sample ID: 680-87213-6
Date Collected: 02/05/13 00:00
Matrix: Water
Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 13:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*02/08/13 13:12*	*1*
Dibromofluoromethane	*101*		*70 - 130*		*02/08/13 13:12*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*02/08/13 13:12*	*1*

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: CPW-13
Lab Sample ID: 680-87213-7
Date Collected: 02/05/13 10:50
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.11		0.10		mg/L		02/13/13 12:01	02/15/13 21:17	1

Client Sample ID: Dup-1
Lab Sample ID: 680-87213-8
Date Collected: 02/05/13 00:00
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.12		0.10		mg/L		02/13/13 12:01	02/15/13 21:23	1

Client Sample ID: CPW-1
Lab Sample ID: 680-87213-10
Date Collected: 02/05/13 12:40
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.70		0.10		mg/L		02/13/13 12:01	02/15/13 21:37	1

Client Sample ID: CPW-4
Lab Sample ID: 680-87213-11
Date Collected: 02/05/13 15:30
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.13		0.10		mg/L		02/13/13 12:01	02/15/13 21:43	1

Client Sample ID: CPW-7
Lab Sample ID: 680-87213-12
Date Collected: 02/05/13 15:05
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	15		1.0		mg/L		02/13/13 12:01	02/15/13 21:50	10

Client Sample ID: CPW-3
Lab Sample ID: 680-87213-14
Date Collected: 02/05/13 16:50
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.57		0.10		mg/L		02/13/13 12:01	02/15/13 22:04	1

Client Sample ID: CPW-10
Lab Sample ID: 680-87213-15
Date Collected: 02/05/13 17:50
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 22:10	1

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC11-MW-09

Lab Sample ID: 680-87213-16

Date Collected: 02/05/13 19:25
Matrix: Water
Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 14:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*02/08/13 14:11*	*1*
Dibromofluoromethane	*100*		*70 - 130*		*02/08/13 14:11*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/08/13 14:11*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.0099	U	0.0099		mg/L		02/08/13 14:56	02/22/13 15:31	1
3 & 4 Methylphenol	0.0099	U	0.0099		mg/L		02/08/13 14:56	02/22/13 15:31	1
Phenanthrene	0.0099	U	0.0099		mg/L		02/08/13 14:56	02/22/13 15:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*80*		*25 - 130*	*02/08/13 14:56*	*02/22/13 15:31*	*1*
2-Fluorophenol	*73*		*25 - 130*	*02/08/13 14:56*	*02/22/13 15:31*	*1*
2,4,6-Tribromophenol	*82*		*31 - 141*	*02/08/13 14:56*	*02/22/13 15:31*	*1*
Nitrobenzene-d5	*82*		*39 - 130*	*02/08/13 14:56*	*02/22/13 15:31*	*1*
2-Fluorobiphenyl	*82*		*38 - 130*	*02/08/13 14:56*	*02/22/13 15:31*	*1*
Terphenyl-d14	*45*		*10 - 143*	*02/08/13 14:56*	*02/22/13 15:31*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		02/13/13 12:01	02/16/13 12:35	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 22:31	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 22:31	1
Lead	0.015	U	0.015		mg/L		02/13/13 12:01	02/15/13 22:31	1
Mercury	0.0020	U	0.0020		mg/L		02/20/13 10:42	02/21/13 01:15	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 22:31	1

Client Sample ID: LOC11D-MW-01

Lab Sample ID: 680-87213-17

Date Collected: 02/05/13 19:40
Matrix: Water
Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*02/08/13 15:39*	*1*
Dibromofluoromethane	*102*		*70 - 130*		*02/08/13 15:39*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*02/08/13 15:39*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	**0.028**		0.0096		mg/L		02/08/13 14:56	02/22/13 16:01	1
Phenanthrene	**0.025**		0.0096		mg/L		02/08/13 14:56	02/22/13 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*81*		*25 - 130*	*02/08/13 14:56*	*02/22/13 16:01*	*1*
2-Fluorophenol	*75*		*25 - 130*	*02/08/13 14:56*	*02/22/13 16:01*	*1*

Client Sample ID: LOC11D-MW-01

Lab Sample ID: 680-87213-17

Date Collected: 02/05/13 19:40

Matrix: Water

Date Received: 02/07/13 08:10

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*101*		*31 - 141*	*02/08/13 14:56*	*02/22/13 16:01*	*1*
Nitrobenzene-d5	*52*		*39 - 130*	*02/08/13 14:56*	*02/22/13 16:01*	*1*
2-Fluorobiphenyl	*69*		*38 - 130*	*02/08/13 14:56*	*02/22/13 16:01*	*1*
Terphenyl-d14	*13*		*10 - 143*	*02/08/13 14:56*	*02/22/13 16:01*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.45**		0.048		mg/L		02/08/13 14:56	02/23/13 13:37	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*0*	*D*	*25 - 130*	*02/08/13 14:56*	*02/23/13 13:37*	*5*
2-Fluorophenol	*0*	*D*	*25 - 130*	*02/08/13 14:56*	*02/23/13 13:37*	*5*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*	*02/08/13 14:56*	*02/23/13 13:37*	*5*
Nitrobenzene-d5	*0*	*D*	*39 - 130*	*02/08/13 14:56*	*02/23/13 13:37*	*5*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*	*02/08/13 14:56*	*02/23/13 13:37*	*5*
Terphenyl-d14	*0*	*D*	*10 - 143*	*02/08/13 14:56*	*02/23/13 13:37*	*5*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		02/13/13 12:01	02/16/13 12:42	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 22:37	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 22:37	1
Lead	0.015	U	0.015		mg/L		02/13/13 12:01	02/15/13 22:37	1
Mercury	0.0020	U	0.0020		mg/L		02/20/13 10:42	02/21/13 01:19	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 22:37	1

Client Sample ID: LOC11B-MW-05

Lab Sample ID: 680-87213-18

Date Collected: 02/06/13 11:20

Matrix: Water

Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*02/08/13 15:10*	*1*
Dibromofluoromethane	*103*		*70 - 130*		*02/08/13 15:10*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/08/13 15:10*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.11**		0.0098		mg/L		02/08/13 14:56	02/22/13 16:30	1
3 & 4 Methylphenol	**0.024**		0.0098		mg/L		02/08/13 14:56	02/22/13 16:30	1
Phenanthrene	0.0098	U	0.0098		mg/L		02/08/13 14:56	02/22/13 16:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*64*		*25 - 130*	*02/08/13 14:56*	*02/22/13 16:30*	*1*
2-Fluorophenol	*61*		*25 - 130*	*02/08/13 14:56*	*02/22/13 16:30*	*1*
2,4,6-Tribromophenol	*85*		*31 - 141*	*02/08/13 14:56*	*02/22/13 16:30*	*1*
Nitrobenzene-d5	*69*		*39 - 130*	*02/08/13 14:56*	*02/22/13 16:30*	*1*
2-Fluorobiphenyl	*62*		*38 - 130*	*02/08/13 14:56*	*02/22/13 16:30*	*1*

Client Sample ID: LOC11B-MW-05

Lab Sample ID: 680-87213-18

Date Collected: 02/06/13 11:20

Matrix: Water

Date Received: 02/07/13 08:10

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*23*		*10 - 143*	*02/08/13 14:56*	*02/22/13 16:30*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		02/13/13 12:01	02/16/13 12:49	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 22:44	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 22:44	1
Lead	0.015	U	0.015		mg/L		02/13/13 12:01	02/15/13 22:44	1
Mercury	0.0020	U	0.0020		mg/L		02/20/13 10:42	02/21/13 01:23	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 22:44	1

Client Sample ID: LOC11-MW-08

Lab Sample ID: 680-87213-19

Date Collected: 02/06/13 11:00

Matrix: Water

Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*02/08/13 17:08*	*1*
Dibromofluoromethane	*102*		*70 - 130*		*02/08/13 17:08*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/08/13 17:08*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.0096	U	0.0096		mg/L		02/08/13 14:56	02/22/13 16:59	1
3 & 4 Methylphenol	0.0096	U	0.0096		mg/L		02/08/13 14:56	02/22/13 16:59	1
Phenanthrene	0.0096	U	0.0096		mg/L		02/08/13 14:56	02/22/13 16:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*89*		*25 - 130*	*02/08/13 14:56*	*02/22/13 16:59*	*1*
2-Fluorophenol	*86*		*25 - 130*	*02/08/13 14:56*	*02/22/13 16:59*	*1*
2,4,6-Tribromophenol	*96*		*31 - 141*	*02/08/13 14:56*	*02/22/13 16:59*	*1*
Nitrobenzene-d5	*99*		*39 - 130*	*02/08/13 14:56*	*02/22/13 16:59*	*1*
2-Fluorobiphenyl	*76*		*38 - 130*	*02/08/13 14:56*	*02/22/13 16:59*	*1*
Terphenyl-d14	*12*		*10 - 143*	*02/08/13 14:56*	*02/22/13 16:59*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		02/13/13 12:01	02/16/13 12:55	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 22:51	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 22:51	1
Lead	0.015	U	0.015		mg/L		02/13/13 12:01	02/15/13 22:51	1
Mercury	0.0020	U	0.0020		mg/L		02/20/13 10:42	02/21/13 01:27	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 22:51	1

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC11D-MW-03

Lab Sample ID: 680-87213-20

Date Collected: 02/06/13 12:50
Matrix: Water
Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*02/08/13 16:09*	*1*
Dibromofluoromethane	*102*		*70 - 130*		*02/08/13 16:09*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/08/13 16:09*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.067**		0.010		mg/L		02/08/13 14:56	02/22/13 17:28	1
3 & 4 Methylphenol	0.010	U	0.010		mg/L		02/08/13 14:56	02/22/13 17:28	1
Phenanthrene	**0.032**		0.010		mg/L		02/08/13 14:56	02/22/13 17:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*82*		*25 - 130*	*02/08/13 14:56*	*02/22/13 17:28*	*1*
2-Fluorophenol	*80*		*25 - 130*	*02/08/13 14:56*	*02/22/13 17:28*	*1*
2,4,6-Tribromophenol	*93*		*31 - 141*	*02/08/13 14:56*	*02/22/13 17:28*	*1*
Nitrobenzene-d5	*92*		*39 - 130*	*02/08/13 14:56*	*02/22/13 17:28*	*1*
2-Fluorobiphenyl	*76*		*38 - 130*	*02/08/13 14:56*	*02/22/13 17:28*	*1*
Terphenyl-d14	*11*		*10 - 143*	*02/08/13 14:56*	*02/22/13 17:28*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		02/13/13 12:01	02/16/13 13:02	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 22:58	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 22:58	1
Lead	0.015	U	0.015		mg/L		02/13/13 12:01	02/15/13 22:58	1
Mercury	0.0020	U	0.0020		mg/L		02/20/13 10:42	02/21/13 01:31	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 22:58	1

Client Sample ID: LOC11B-MW-02

Lab Sample ID: 680-87213-21

Date Collected: 02/06/13 13:30
Matrix: Water
Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*02/08/13 16:39*	*1*
Dibromofluoromethane	*102*		*70 - 130*		*02/08/13 16:39*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/08/13 16:39*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	0.0096	U	0.0096		mg/L		02/08/13 14:56	02/22/13 17:57	1
Phenanthrene	**0.12**		0.0096		mg/L		02/08/13 14:56	02/22/13 17:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*49*		*25 - 130*	*02/08/13 14:56*	*02/22/13 17:57*	*1*
2-Fluorophenol	*42*		*25 - 130*	*02/08/13 14:56*	*02/22/13 17:57*	*1*

Client Sample ID: LOC11B-MW-02

Lab Sample ID: 680-87213-21

Date Collected: 02/06/13 13:30

Matrix: Water

Date Received: 02/07/13 08:10

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*67*		*31 - 141*	*02/08/13 14:56*	*02/22/13 17:57*	*1*
Nitrobenzene-d5	*39*		*39 - 130*	*02/08/13 14:56*	*02/22/13 17:57*	*1*
2-Fluorobiphenyl	*47*		*38 - 130*	*02/08/13 14:56*	*02/22/13 17:57*	*1*
Terphenyl-d14	*34*		*10 - 143*	*02/08/13 14:56*	*02/22/13 17:57*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**1.5**		0.096		mg/L		02/08/13 14:56	02/23/13 14:06	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*0*	*D*	*25 - 130*	*02/08/13 14:56*	*02/23/13 14:06*	*10*
2-Fluorophenol	*0*	*D*	*25 - 130*	*02/08/13 14:56*	*02/23/13 14:06*	*10*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*	*02/08/13 14:56*	*02/23/13 14:06*	*10*
Nitrobenzene-d5	*0*	*D*	*39 - 130*	*02/08/13 14:56*	*02/23/13 14:06*	*10*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*	*02/08/13 14:56*	*02/23/13 14:06*	*10*
Terphenyl-d14	*0*	*D*	*10 - 143*	*02/08/13 14:56*	*02/23/13 14:06*	*10*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.014**		0.0060		mg/L		02/13/13 12:03	02/16/13 13:09	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:03	02/15/13 23:05	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:03	02/15/13 23:05	1
Lead	0.015	U	0.015		mg/L		02/13/13 12:03	02/15/13 23:05	1
Mercury	0.0020	U	0.0020		mg/L		02/20/13 10:42	02/21/13 01:34	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:03	02/15/13 23:05	1

Client Sample ID: LOC17B-MW-01

Lab Sample ID: 680-87213-22

Date Collected: 02/06/13 16:25

Matrix: Water

Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 14:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*02/08/13 14:40*	*1*
Dibromofluoromethane	*101*		*70 - 130*		*02/08/13 14:40*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/08/13 14:40*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.0098	U	0.0098		mg/L		02/08/13 14:56	02/22/13 18:26	1
3 & 4 Methylphenol	0.0098	U	0.0098		mg/L		02/08/13 14:56	02/22/13 18:26	1
Phenanthrene	0.0098	U	0.0098		mg/L		02/08/13 14:56	02/22/13 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*85*		*25 - 130*	*02/08/13 14:56*	*02/22/13 18:26*	*1*
2-Fluorophenol	*78*		*25 - 130*	*02/08/13 14:56*	*02/22/13 18:26*	*1*
2,4,6-Tribromophenol	*98*		*31 - 141*	*02/08/13 14:56*	*02/22/13 18:26*	*1*
Nitrobenzene-d5	*90*		*39 - 130*	*02/08/13 14:56*	*02/22/13 18:26*	*1*
2-Fluorobiphenyl	*90*		*38 - 130*	*02/08/13 14:56*	*02/22/13 18:26*	*1*

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC17B-MW-01

Lab Sample ID: 680-87213-22

Date Collected: 02/06/13 16:25

Matrix: Water

Date Received: 02/07/13 08:10

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*55*		*10 - 143*	*02/08/13 14:56*	*02/22/13 18:26*	*1*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		02/13/13 12:05	02/15/13 07:38	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:05	02/15/13 07:38	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:05	02/15/13 07:38	1
Lead	0.015	U	0.015		mg/L		02/13/13 12:05	02/15/13 07:38	1
Mercury	0.0020	U	0.0020		mg/L		02/13/13 12:05	02/21/13 14:12	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:05	02/15/13 07:38	1

Surrogate Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
680-87213-6	Trip Blank	97	101	101
680-87213-16	LOC11-MW-09	97	100	100
680-87213-17	LOC11D-MW-01	97	102	98
680-87213-18	LOC11B-MW-05	97	103	100
680-87213-19	LOC11-MW-08	97	102	100
680-87213-20	LOC11D-MW-03	97	102	100
680-87213-21	LOC11B-MW-02	96	102	100
680-87213-22	LOC17B-MW-01	97	101	100

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		PHL	2FP	TBP	NBZ	FBP	TPH
Lab Sample ID	Client Sample ID	(25-130)	(25-130)	(31-141)	(39-130)	(38-130)	(10-143)
680-87213-16	LOC11-MW-09	80	73	82	82	82	45
680-87213-17	LOC11D-MW-01	81	75	101	52	69	13
680-87213-17 - DL	LOC11D-MW-01	0 D	0 D	0 D	0 D	0 D	0 D
680-87213-18	LOC11B-MW-05	64	61	85	69	62	23
680-87213-19	LOC11-MW-08	89	86	96	99	76	12
680-87213-20	LOC11D-MW-03	82	80	93	92	76	11
680-87213-21	LOC11B-MW-02	49	42	67	39	47	34
680-87213-21 - DL	LOC11B-MW-02	0 D	0 D	0 D	0 D	0 D	0 D
680-87213-22	LOC17B-MW-01	85	78	98	90	90	55

Surrogate Legend

PHL = Phenol-d5
2FP = 2-Fluorophenol
TBP = 2,4,6-Tribromophenol
NBZ = Nitrobenzene-d5
FBP = 2-Fluorobiphenyl
TPH = Terphenyl-d14

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-265644/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265644

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 12:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*02/08/13 12:28*	*1*
Dibromofluoromethane	*101*		*70 - 130*		*02/08/13 12:28*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*02/08/13 12:28*	*1*

Lab Sample ID: LCS 680-265644/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265644

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0515		mg/L		103	74 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*70 - 130*
Dibromofluoromethane	*98*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 680-265644/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265644

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.0504		mg/L		101	74 - 123	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*70 - 130*
Dibromofluoromethane	*98*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 680-265985/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/12/13 12:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*02/12/13 12:46*	*1*
Dibromofluoromethane	*105*		*70 - 130*		*02/12/13 12:46*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/12/13 12:46*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-265985/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265985

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0543		mg/L		109	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*88*		*70 - 130*
Dibromofluoromethane	*109*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 680-265985/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265985

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.0579		mg/L		116	74 - 123	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*70 - 130*
Dibromofluoromethane	*118*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*

Lab Sample ID: 680-87213-20 MS — **Client Sample ID: LOC11D-MW-03**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265985

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0050	U	0.0500	0.0485		mg/L		94	74 - 123

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*88*		*70 - 130*
Dibromofluoromethane	*96*		*70 - 130*
Toluene-d8 (Surr)	*93*		*70 - 130*

Lab Sample ID: 680-87213-20 MSD — **Client Sample ID: LOC11D-MW-03**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265985

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0050	U	0.0500	0.0602		mg/L		118	74 - 123	22	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*110*		*70 - 130*
Dibromofluoromethane	*120*		*70 - 130*
Toluene-d8 (Surr)	*117*		*70 - 130*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-265580/13-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 267245 — **Prep Batch: 265580**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.010	U	0.010		mg/L		02/08/13 14:56	02/22/13 11:10	1
3 & 4 Methylphenol	0.010	U	0.010		mg/L		02/08/13 14:56	02/22/13 11:10	1
Phenanthrene	0.010	U	0.010		mg/L		02/08/13 14:56	02/22/13 11:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*88*		*25 - 130*	*02/08/13 14:56*	*02/22/13 11:10*	*1*
2-Fluorophenol	*83*		*25 - 130*	*02/08/13 14:56*	*02/22/13 11:10*	*1*
2,4,6-Tribromophenol	*90*		*31 - 141*	*02/08/13 14:56*	*02/22/13 11:10*	*1*
Nitrobenzene-d5	*91*		*39 - 130*	*02/08/13 14:56*	*02/22/13 11:10*	*1*
2-Fluorobiphenyl	*86*		*38 - 130*	*02/08/13 14:56*	*02/22/13 11:10*	*1*
Terphenyl-d14	*93*		*10 - 143*	*02/08/13 14:56*	*02/22/13 11:10*	*1*

Lab Sample ID: LCS 680-265580/14-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 267245 — **Prep Batch: 265580**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	0.100	0.0824		mg/L		82	50 - 130
3 & 4 Methylphenol	0.100	0.0903		mg/L		90	35 - 130
Phenanthrene	0.100	0.0862		mg/L		86	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Phenol-d5	*94*		*25 - 130*
2-Fluorophenol	*91*		*25 - 130*
2,4,6-Tribromophenol	*95*		*31 - 141*
Nitrobenzene-d5	*95*		*39 - 130*
2-Fluorobiphenyl	*87*		*38 - 130*
Terphenyl-d14	*96*		*10 - 143*

Lab Sample ID: 680-87213-5 MS — **Client Sample ID: LOC11-MW-10**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 267245 — **Prep Batch: 265580**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	0.099	U	0.0987	0.099	U F	mg/L		43	50 - 130
3 & 4 Methylphenol	0.099	U	0.0987	0.099	U	mg/L		57	35 - 130
Phenanthrene	0.099	U	0.0987	0.099	U F	mg/L		61	62 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Phenol-d5	*0*	*D*	*25 - 130*
2-Fluorophenol	*0*	*D*	*25 - 130*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*
Nitrobenzene-d5	*0*	*D*	*39 - 130*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*
Terphenyl-d14	*0*	*D*	*10 - 143*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-87213-5 MSD — **Client Sample ID: LOC11-MW-10**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 267245 — **Prep Batch: 265580**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	0.099	U	0.101	0.10	U	mg/L		54	50 - 130	26	50
3 & 4 Methylphenol	0.099	U	0.101	0.10	U	mg/L		58	35 - 130	4	50
Phenanthrene	0.099	U	0.101	0.10	U	mg/L		68	62 - 130	12	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Phenol-d5	*0*	*D*	*25 - 130*
2-Fluorophenol	*0*	*D*	*25 - 130*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*
Nitrobenzene-d5	*0*	*D*	*39 - 130*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*
Terphenyl-d14	*0*	*D*	*10 - 143*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-266106/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266613 — **Prep Batch: 266106**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0050	U	0.0050		mg/L		02/13/13 12:01	02/15/13 19:49	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 19:49	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 19:49	1
Lead	0.0015	U	0.0015		mg/L		02/13/13 12:01	02/15/13 19:49	1
Mercury	0.00080	U	0.00080		mg/L		02/13/13 12:01	02/15/13 19:49	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 19:49	1

Lab Sample ID: LCS 680-266106/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266613 — **Prep Batch: 266106**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0496		mg/L		99	75 - 125
Arsenic	0.100	0.107		mg/L		107	75 - 125
Chromium	0.100	0.108		mg/L		108	75 - 125
Lead	0.0500	0.0551		mg/L		110	75 - 125
Nickel	0.100	0.108		mg/L		108	75 - 125

Lab Sample ID: 680-87213-3 MS — **Client Sample ID: LOC06-MW-04**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266613 — **Prep Batch: 266106**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0050		0.0500	0.0505		mg/L		101	75 - 125
Arsenic	0.010	U	0.100	0.0995		mg/L		100	75 - 125
Chromium	0.10	U	0.100	0.10	U	mg/L		93	75 - 125
Lead	0.0015		0.0500	0.0473		mg/L		95	75 - 125
Nickel	0.10	U	0.100	0.10	U	mg/L		90	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-87213-3 MSD — **Client Sample ID: LOC06-MW-04**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266613 — **Prep Batch: 266106**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0050		0.0500	0.0481		mg/L		96	75 - 125	5	20
Arsenic	0.010	U	0.100	0.0933		mg/L		93	75 - 125	6	20
Chromium	0.10	U	0.100	0.10	U	mg/L		87	75 - 125	7	20
Lead	0.0015		0.0500	0.0445		mg/L		89	75 - 125	6	20
Nickel	0.10	U	0.100	0.10	U	mg/L		85	75 - 125	6	20

Lab Sample ID: MB 680-266107/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266421 — **Prep Batch: 266107**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		02/13/13 12:05	02/15/13 07:23	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:05	02/15/13 07:23	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:05	02/15/13 07:23	1
Lead	0.015	U	0.015		mg/L		02/13/13 12:05	02/15/13 07:23	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:05	02/15/13 07:23	1

Lab Sample ID: MB 680-266107/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266107**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020		mg/L		02/13/13 12:05	02/20/13 15:26	1

Lab Sample ID: LCS 680-266107/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266421 — **Prep Batch: 266107**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0598		mg/L		120	75 - 125
Arsenic	0.100	0.112		mg/L		112	75 - 125
Chromium	0.100	0.110		mg/L		110	75 - 125
Lead	0.0500	0.0560		mg/L		112	75 - 125
Nickel	0.100	0.114		mg/L		114	75 - 125

Lab Sample ID: LCS 680-266107/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266107**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00498		mg/L		100	75 - 125

Lab Sample ID: 680-87213-22 MS — **Client Sample ID: LOC17B-MW-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266421 — **Prep Batch: 266107**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0060	U	0.0500	0.0595		mg/L		119	75 - 125
Arsenic	0.010	U	0.100	0.106		mg/L		106	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-87213-22 MS — **Client Sample ID: LOC17B-MW-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266421 — **Prep Batch: 266107**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chromium	0.10	U	0.100	0.107		mg/L		107	75 - 125		
Lead	0.015	U	0.0500	0.0495		mg/L		99	75 - 125		
Nickel	0.10	U	0.100	0.104		mg/L		104	75 - 125		

Lab Sample ID: 680-87213-22 MS — **Client Sample ID: LOC17B-MW-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266107**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.0020	U	0.00500	0.00563		mg/L		113	75 - 125		

Lab Sample ID: 680-87213-22 MSD — **Client Sample ID: LOC17B-MW-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266421 — **Prep Batch: 266107**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0060	U	0.0500	0.0585		mg/L		117	75 - 125	2	20
Arsenic	0.010	U	0.100	0.107		mg/L		107	75 - 125	1	20
Chromium	0.10	U	0.100	0.109		mg/L		109	75 - 125	1	20
Lead	0.015	U	0.0500	0.0486		mg/L		97	75 - 125	2	20
Nickel	0.10	U	0.100	0.105		mg/L		105	75 - 125	1	20

Lab Sample ID: 680-87213-22 MSD — **Client Sample ID: LOC17B-MW-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266107**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0020	U	0.00500	0.00523		mg/L		105	75 - 125	7	20

Lab Sample ID: MB 680-266801/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266801**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020		mg/L		02/20/13 10:42	02/21/13 00:59	1

Lab Sample ID: LCS 680-266801/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266801**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			0.00500	0.00482		mg/L		96	75 - 125		

Lab Sample ID: 680-87510-E-7-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266801**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.0020	U	0.00500	0.00457		mg/L		91	75 - 125		

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-87510-E-7-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266801**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0020	U	0.00500	0.00471		mg/L		94	75 - 125	3	20

QC Association Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

GC/MS VOA

Analysis Batch: 265644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-6	Trip Blank	Total/NA	Water	8260B	
680-87213-16	LOC11-MW-09	Total/NA	Water	8260B	
680-87213-17	LOC11D-MW-01	Total/NA	Water	8260B	
680-87213-18	LOC11B-MW-05	Total/NA	Water	8260B	
680-87213-19	LOC11-MW-08	Total/NA	Water	8260B	
680-87213-20	LOC11D-MW-03	Total/NA	Water	8260B	
680-87213-21	LOC11B-MW-02	Total/NA	Water	8260B	
680-87213-22	LOC17B-MW-01	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 265580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-16	LOC11-MW-09	Total/NA	Water	3520C	
680-87213-17	LOC11D-MW-01	Total/NA	Water	3520C	
680-87213-17 - DL	LOC11D-MW-01	Total/NA	Water	3520C	
680-87213-18	LOC11B-MW-05	Total/NA	Water	3520C	
680-87213-19	LOC11-MW-08	Total/NA	Water	3520C	
680-87213-20	LOC11D-MW-03	Total/NA	Water	3520C	
680-87213-21	LOC11B-MW-02	Total/NA	Water	3520C	
680-87213-21 - DL	LOC11B-MW-02	Total/NA	Water	3520C	
680-87213-22	LOC17B-MW-01	Total/NA	Water	3520C	

Analysis Batch: 267245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-16	LOC11-MW-09	Total/NA	Water	8270C	265580
680-87213-17	LOC11D-MW-01	Total/NA	Water	8270C	265580
680-87213-18	LOC11B-MW-05	Total/NA	Water	8270C	265580
680-87213-19	LOC11-MW-08	Total/NA	Water	8270C	265580
680-87213-20	LOC11D-MW-03	Total/NA	Water	8270C	265580
680-87213-21	LOC11B-MW-02	Total/NA	Water	8270C	265580
680-87213-22	LOC17B-MW-01	Total/NA	Water	8270C	265580

Analysis Batch: 267270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-17 - DL	LOC11D-MW-01	Total/NA	Water	8270C	265580
680-87213-21 - DL	LOC11B-MW-02	Total/NA	Water	8270C	265580

Metals

Prep Batch: 266106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-1	LOC06-MW-02	Total/NA	Water	3010A	
680-87213-2	LOC06B-MW-01	Total/NA	Water	3010A	
680-87213-3	LOC06-MW-04	Total/NA	Water	3010A	
680-87213-4	LOC06-MW-01D	Total/NA	Water	3010A	
680-87213-7	CPW-13	Total/NA	Water	3010A	
680-87213-8	Dup-1	Total/NA	Water	3010A	
680-87213-10	CPW-1	Total/NA	Water	3010A	
680-87213-11	CPW-4	Total/NA	Water	3010A	

Metals (Continued)

Prep Batch: 266106 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-12	CPW-7	Total/NA	Water	3010A	
680-87213-14	CPW-3	Total/NA	Water	3010A	
680-87213-15	CPW-10	Total/NA	Water	3010A	
680-87213-16	LOC11-MW-09	Total/NA	Water	3010A	
680-87213-17	LOC11D-MW-01	Total/NA	Water	3010A	
680-87213-18	LOC11B-MW-05	Total/NA	Water	3010A	
680-87213-19	LOC11-MW-08	Total/NA	Water	3010A	
680-87213-20	LOC11D-MW-03	Total/NA	Water	3010A	
680-87213-21	LOC11B-MW-02	Total/NA	Water	3010A	

Prep Batch: 266107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-22	LOC17B-MW-01	Total/NA	Water	3010A	

Analysis Batch: 266421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-22	LOC17B-MW-01	Total/NA	Water	6020A	266107

Analysis Batch: 266613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-1	LOC06-MW-02	Total/NA	Water	6020A	266106
680-87213-2	LOC06B-MW-01	Total/NA	Water	6020A	266106
680-87213-3	LOC06-MW-04	Total/NA	Water	6020A	266106
680-87213-4	LOC06-MW-01D	Total/NA	Water	6020A	266106
680-87213-7	CPW-13	Total/NA	Water	6020A	266106
680-87213-8	Dup-1	Total/NA	Water	6020A	266106
680-87213-10	CPW-1	Total/NA	Water	6020A	266106
680-87213-11	CPW-4	Total/NA	Water	6020A	266106
680-87213-12	CPW-7	Total/NA	Water	6020A	266106
680-87213-14	CPW-3	Total/NA	Water	6020A	266106
680-87213-15	CPW-10	Total/NA	Water	6020A	266106
680-87213-16	LOC11-MW-09	Total/NA	Water	6020A	266106
680-87213-16	LOC11-MW-09	Total/NA	Water	6020A	266106
680-87213-17	LOC11D-MW-01	Total/NA	Water	6020A	266106
680-87213-17	LOC11D-MW-01	Total/NA	Water	6020A	266106
680-87213-18	LOC11B-MW-05	Total/NA	Water	6020A	266106
680-87213-18	LOC11B-MW-05	Total/NA	Water	6020A	266106
680-87213-19	LOC11-MW-08	Total/NA	Water	6020A	266106
680-87213-19	LOC11-MW-08	Total/NA	Water	6020A	266106
680-87213-20	LOC11D-MW-03	Total/NA	Water	6020A	266106
680-87213-20	LOC11D-MW-03	Total/NA	Water	6020A	266106
680-87213-21	LOC11B-MW-02	Total/NA	Water	6020A	266106
680-87213-21	LOC11B-MW-02	Total/NA	Water	6020A	266106

Prep Batch: 266801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-16	LOC11-MW-09	Total/NA	Water	3010A	
680-87213-17	LOC11D-MW-01	Total/NA	Water	3010A	
680-87213-18	LOC11B-MW-05	Total/NA	Water	3010A	
680-87213-19	LOC11-MW-08	Total/NA	Water	3010A	
680-87213-20	LOC11D-MW-03	Total/NA	Water	3010A	

Metals (Continued)

Prep Batch: 266801 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-21	LOC11B-MW-02	Total/NA	Water	3010A	

Analysis Batch: 266912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-16	LOC11-MW-09	Total/NA	Water	6020A	266801
680-87213-17	LOC11D-MW-01	Total/NA	Water	6020A	266801
680-87213-18	LOC11B-MW-05	Total/NA	Water	6020A	266801
680-87213-19	LOC11-MW-08	Total/NA	Water	6020A	266801
680-87213-20	LOC11D-MW-03	Total/NA	Water	6020A	266801
680-87213-21	LOC11B-MW-02	Total/NA	Water	6020A	266801

Analysis Batch: 267020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-22	LOC17B-MW-01	Total/NA	Water	6020A	266107

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC06-MW-02 — Lab Sample ID: 680-87213-1

Date Collected: 02/04/13 16:50 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 20:02	BR	TAL SAV

Client Sample ID: LOC06B-MW-01 — Lab Sample ID: 680-87213-2

Date Collected: 02/04/13 16:50 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 20:09	BR	TAL SAV

Client Sample ID: LOC06-MW-04 — Lab Sample ID: 680-87213-3

Date Collected: 02/04/13 18:25 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 20:15	BR	TAL SAV

Client Sample ID: LOC06-MW-01D — Lab Sample ID: 680-87213-4

Date Collected: 02/05/13 10:40 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 20:49	BR	TAL SAV

Client Sample ID: Trip Blank — Lab Sample ID: 680-87213-6

Date Collected: 02/05/13 00:00 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	265644	02/08/13 13:12	AJMC	TAL SAV

Client Sample ID: CPW-13 — Lab Sample ID: 680-87213-7

Date Collected: 02/05/13 10:50 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 21:17	BR	TAL SAV

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: Dup-1 — Lab Sample ID: 680-87213-8

Date Collected: 02/05/13 00:00 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 21:23	BR	TAL SAV

Client Sample ID: CPW-1 — Lab Sample ID: 680-87213-10

Date Collected: 02/05/13 12:40 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 21:37	BR	TAL SAV

Client Sample ID: CPW-4 — Lab Sample ID: 680-87213-11

Date Collected: 02/05/13 15:30 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 21:43	BR	TAL SAV

Client Sample ID: CPW-7 — Lab Sample ID: 680-87213-12

Date Collected: 02/05/13 15:05 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		10	266613	02/15/13 21:50	BR	TAL SAV

Client Sample ID: CPW-3 — Lab Sample ID: 680-87213-14

Date Collected: 02/05/13 16:50 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 22:04	BR	TAL SAV

Client Sample ID: CPW-10 — Lab Sample ID: 680-87213-15

Date Collected: 02/05/13 17:50 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 22:10	BR	TAL SAV

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC11-MW-09

Lab Sample ID: 680-87213-16

Date Collected: 02/05/13 19:25

Matrix: Water

Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	265644	02/08/13 14:11	AJMC	TAL SAV
Total/NA	Prep	3520C			265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C		1	267245	02/22/13 15:31	LEG	TAL SAV
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 22:31	BR	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/16/13 12:35	BR	TAL SAV
Total/NA	Prep	3010A			266801	02/20/13 10:42	JKL	TAL SAV
Total/NA	Analysis	6020A		1	266912	02/21/13 01:15	BR	TAL SAV

Client Sample ID: LOC11D-MW-01

Lab Sample ID: 680-87213-17

Date Collected: 02/05/13 19:40

Matrix: Water

Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	265644	02/08/13 15:39	AJMC	TAL SAV
Total/NA	Prep	3520C			265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C		1	267245	02/22/13 16:01	LEG	TAL SAV
Total/NA	Prep	3520C	DL		265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C	DL	5	267270	02/23/13 13:37	LEG	TAL SAV
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 22:37	BR	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/16/13 12:42	BR	TAL SAV
Total/NA	Prep	3010A			266801	02/20/13 10:42	JKL	TAL SAV
Total/NA	Analysis	6020A		1	266912	02/21/13 01:19	BR	TAL SAV

Client Sample ID: LOC11B-MW-05

Lab Sample ID: 680-87213-18

Date Collected: 02/06/13 11:20

Matrix: Water

Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	265644	02/08/13 15:10	AJMC	TAL SAV
Total/NA	Prep	3520C			265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C		1	267245	02/22/13 16:30	LEG	TAL SAV
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 22:44	BR	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/16/13 12:49	BR	TAL SAV
Total/NA	Prep	3010A			266801	02/20/13 10:42	JKL	TAL SAV
Total/NA	Analysis	6020A		1	266912	02/21/13 01:23	BR	TAL SAV

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC11-MW-08

Lab Sample ID: 680-87213-19

Date Collected: 02/06/13 11:00

Matrix: Water

Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	265644	02/08/13 17:08	AJMC	TAL SAV
Total/NA	Prep	3520C			265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C		1	267245	02/22/13 16:59	LEG	TAL SAV
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/16/13 12:55	BR	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 22:51	BR	TAL SAV
Total/NA	Prep	3010A			266801	02/20/13 10:42	JKL	TAL SAV
Total/NA	Analysis	6020A		1	266912	02/21/13 01:27	BR	TAL SAV

Client Sample ID: LOC11D-MW-03

Lab Sample ID: 680-87213-20

Date Collected: 02/06/13 12:50

Matrix: Water

Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	265644	02/08/13 16:09	AJMC	TAL SAV
Total/NA	Prep	3520C			265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C		1	267245	02/22/13 17:28	LEG	TAL SAV
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/16/13 13:02	BR	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 22:58	BR	TAL SAV
Total/NA	Prep	3010A			266801	02/20/13 10:42	JKL	TAL SAV
Total/NA	Analysis	6020A		1	266912	02/21/13 01:31	BR	TAL SAV

Client Sample ID: LOC11B-MW-02

Lab Sample ID: 680-87213-21

Date Collected: 02/06/13 13:30

Matrix: Water

Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	265644	02/08/13 16:39	AJMC	TAL SAV
Total/NA	Prep	3520C			265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C		1	267245	02/22/13 17:57	LEG	TAL SAV
Total/NA	Prep	3520C	DL		265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C	DL	10	267270	02/23/13 14:06	LEG	TAL SAV
Total/NA	Prep	3010A			266106	02/13/13 12:03	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/16/13 13:09	BR	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 23:05	BR	TAL SAV
Total/NA	Prep	3010A			266801	02/20/13 10:42	JKL	TAL SAV
Total/NA	Analysis	6020A		1	266912	02/21/13 01:34	BR	TAL SAV

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC17B-MW-01

Lab Sample ID: 680-87213-22

Date Collected: 02/06/13 16:25

Matrix: Water

Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	265644	02/08/13 14:40	AJMC	TAL SAV
Total/NA	Prep	3520C			265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C		1	267245	02/22/13 18:26	LEG	TAL SAV
Total/NA	Prep	3010A			266107	02/13/13 12:05	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266421	02/15/13 07:38	BR	TAL SAV
Total/NA	Analysis	6020A		1	267020	02/21/13 14:12	BR	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 59770

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING 02-2006-0163

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
GP Cellulose, Brunswick	~~30-0136~~	GA

TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Carol Northern	770 973-2100	770 973-7395

CLIENT NAME	CLIENT E-MAIL
Environ	cnorthern@Environ.com

CLIENT ADDRESS: 1000 West Oak Pkwy Bldg 100, Suite 100 Marietta, GA 30062

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF

STANDARD REPORT DELIVERY ☒

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	As, CR, Ni (HNO3)	Benzene (HCl)	Select Sulfides (-)	As, Cr, Pb, Ni, Sb, Hg (HNO3)	CR (HNO3)						REMARKS
2/4/13	1650	LOC6-MW-02		X				1										
↓	1650	LOC6-B-MW-01		X				1										
↓	1825	LOC6-MW-04		X				1										
2/5/13	1040	LOC6-MW-01D		X														
	0940	LOC11-MW-10		X					3	2	1							
	—	TRIP Blank		X					2									
	1050	CPW-13		X								1						
	—	Dup-1		X								1						
	1145	CPW-14		X								1						
	1240	CPW-1		X								1						
	1530	CPW-4		X								1						
	1505	CPW-7		X								1						

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/6/13	1715	[signature]	02/06/13	18:58			

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
[signature]	02/06/13	17:15						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	02/07/13	0810	YES ○ NO ○		57813	

TAL8240-680 (1008)

Serial Number 59773

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE: GP Cellulose, Beaverville	PROJECT NO.: 02.20016.103	PROJECT LOCATION (STATE): GA
TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Carol Northern	CLIENT PHONE: 770-973-2100	CLIENT FAX: 770-973-7325
CLIENT NAME: Earthcon	CLIENT E-MAIL	
CLIENT ADDRESS: 1880 Austonk Mary Bird Blvd, STE 6 Marietta, GA 30062		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 2 OF

STANDARD REPORT DELIVERY ☒

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSIS / NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	Benzene (HCl)	Select Svocs (1)	As, Cr, Pb, Ni, Sb, Hg (HNO_3)	Cr (HNO_3)							REMARKS
2/5/13	1650	LOC11-MW-07		X				3	2	1								
	1650	CPW-3		X							1							
	1750	CPW-10		X							1							
	1925	LOC11-MW-09		X				3	2	1								
	1940	LOC11D-MW-01		X				3	2	1								
2/6/13	1120	LOC11B-MW-05		X				3	2	1								
	1100	LOC11-MW-08		X				3	2	1								
	1250	LOC11D-MW-03		X				3	2	1								
	1330	LOC11D-MW-02		X				3	2	1								
	1625	LOC17B-MW-01		X				3	2	1								
	1700	LOC11B-MW-02A		X				3	2	1								
	—	DUP-2		X				2	3	1								

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/6/13	1715	[signature]	02/06/13	18:58			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
[signature]	02/06/13	17:15						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	02/07/13	0810	YES ○ NO ○		650-870-13	3.4° / 2.6° / 2.6° / 3.7°

TAL8240-680 (1008)

Login Sample Receipt Checklist

Client: EarthCon Consultants Inc

Job Number: 680-87213-1

Login Number: 87213
List Number: 1
Creator: Barnett, Eddie T

List Source: TestAmerica Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	False	pH needs adjusting A1/A2/C13/C17/C18/C21/C23/C24
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: EarthCon Consultants Inc

Job Number: 680-87213-1

Login Number: 87213

List Source: TestAmerica Savannah

List Number: 1

Creator: Barnett, Eddie T

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	False	pH needs adjusting A1/A2/C13/C17/C18/C21/C23/C24
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	03-31-13
A2LA	ISO/IEC 17025		399.01	02-28-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
California	NELAP	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-12
Connecticut	State Program	1	PH-0161	03-31-13
Florida	NELAP	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-13
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Guam	State Program	9	09-005r	04-17-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAP	5	200022	11-30-12
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13
Kentucky	State Program	4	90084	12-31-12
Kentucky (UST)	State Program	4	18	02-28-13
Louisiana	NELAP	6	30690	06-30-13
Louisiana	NELAP	6	LA100015	12-31-13
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-12
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	12-31-12
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13
New Jersey	NELAP	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAP	2	10842	04-01-13
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAP	3	68-00474	06-30-13
Puerto Rico	State Program	2	GA00006	01-01-13
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAP	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-13
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-12
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-87213-1
Client Project/Site: EarthCon /Brunswick Site

For:
EarthCon Consultants Inc
1880 West Oak Parkway, Bldg. 100
Suite 106
Marietta, Georgia 30062

Attn: Ms. Carol Northern

Authorized for release by:
2/27/2013 5:03:15 PM

Linda Wolfe
Project Manager I
linda.wolfe@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 5
Method Summary 6
Definitions 7
Detection Summary 8
Client Sample Results 9
Surrogate Summary 13
QC Sample Results 14
QC Association 21
Chronicle 23
Chain of Custody 25
Receipt Checklists 27
Certification Summary 28

Job ID: 680-87213-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: EarthCon Consultants Inc

Project: EarthCon /Brunswick Site

Report Number: 680-87213-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 2/7/2013 8:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.4º C, 2.6º C, 2.6º C and 3.0º C.

The following samples are reported in this report: LOC11-MW-10 (680-87213-5), CPW-14 (680-87213-9), LOC11-MW-07 (680-87213-13), LOC11B-MW-02D (680-87213-23) and Dup-2 (680-87213-24).

Samples LOC06-MW-02 (680-87213-1), LOC06B-MW-01 (680-87213-2), LOC06-MW-04 (680-87213-3), LOC06-MW-01D (680-87213-4), LOC11-MW-10 (680-87213-5),Trip Blank (680-87213-6),
CPW-13 (680-87213-7), Dup-1 (680-87213-8), CPW-1 (680-87213-10), CPW-4 (680-87213-11), CPW-7 (680-87213-12), CPW-3 (680-87213-14), CPW-10 (680-87213-15), LOC11-MW-09 (680-87213-16), LOC11D-MW-01 (680-87213-17), LOC11B-MW-05 (680-87213-18), LOC11-MW-08 (680-87213-19), LOC11D-MW-03 (680-87213-20), LOC11B-MW-02 (680-87213-21), and LOC17B-MW-01 (680-87213-22) are reported separately.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples LOC11B-MW-02D (680-87213-23) and Dup-2 (680-87213-24). were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 02/08/2013.

Samples LOC11B-MW-02D (680-87213-23) and Dup-2 (680-87213-24) required dilution prior to analysis.

No difficulties were encountered during the volatiles analyses.

All quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples LOC11-MW-10 (680-87213-5), LOC11-MW-07 (680-87213-13), LOC11B-MW-02D (680-87213-23) and Dup-2 (680-87213-24). were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 02/08/2013 and analyzed on 02/22/2013, 02/23/2013 and 2/27/2013.

Samples LOC11-MW-10 (680-87213-5), LOC11-MW-07 (680-87213-13), LOC11B-MW-02D (680-87213-23) and Dup-2 (680-87213-24) required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the semivolatiles analyses.

Job ID: 680-87213-1 (Continued)

Laboratory: TestAmerica Savannah (Continued)

All other quality control parameters were within the acceptance limits.

METALS (ICPMS)

Samples CPW-14 (680-87213-9), LOC11B-MW-02D (680-87213-23) and Dup-2 (680-87213-24) were analyzed for Metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 02/13/2013 and 02/20/2013 and analyzed on 02/15/2013 and 02/20/2013.

Samples CPW-14 (680-87213-9), LOC11B-MW-02D (680-87213-23) and Dup-2 (680-87213-24) required dilution prior to analysis due to matrix interference with the Internal Standard. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the metals analyses.

All quality control parameters were within the acceptance limits.

Sample Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-87213-5	LOC11-MW-10	Water	02/05/13 09:40	02/07/13 08:10
680-87213-9	CPW-14	Water	02/05/13 11:45	02/07/13 08:10
680-87213-13	LOC11-MW-07	Water	02/05/13 16:50	02/07/13 08:10
680-87213-23	LOC11B-MW-02D	Water	02/06/13 17:00	02/07/13 08:10
680-87213-24	Dup-2	Water	02/06/13 00:00	02/07/13 08:10

Method Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC11-MW-10 — Lab Sample ID: 680-87213-5

No Detections

Client Sample ID: CPW-14 — Lab Sample ID: 680-87213-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	0.14	J	0.50	0.013	mg/L	5		6020A	Total/NA

Client Sample ID: LOC11-MW-07 — Lab Sample ID: 680-87213-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.31		0.020		mg/L	2		8270C	Total/NA
Phenanthrene	0.049		0.0098		mg/L	1		8270C	Total/NA
Chromium	0.13		0.10		mg/L	1		6020A	Total/NA

Client Sample ID: LOC11B-MW-02D — Lab Sample ID: 680-87213-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.019	J	0.025	0.0013	mg/L	5		8260B	Total/NA
3 & 4 Methylphenol	0.16		0.094		mg/L	10		8270C	Total/NA
Phenanthrene	0.14		0.094		mg/L	10		8270C	Total/NA
Naphthalene - DL	4.8		0.94		mg/L	100		8270C	Total/NA
Antimony	0.0047	J	0.012	0.0040	mg/L	2		6020A	Total/NA
Arsenic	0.020		0.010	0.0013	mg/L	1		6020A	Total/NA
Chromium	0.29		0.10	0.0025	mg/L	1		6020A	Total/NA
Lead	0.0023	J	0.015	0.00050	mg/L	1		6020A	Total/NA
Nickel	0.080	J	0.10	0.0020	mg/L	1		6020A	Total/NA

Client Sample ID: Dup-2 — Lab Sample ID: 680-87213-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.017	J	0.025	0.0013	mg/L	5		8260B	Total/NA
3 & 4 Methylphenol	0.21		0.095		mg/L	10		8270C	Total/NA
Phenanthrene	0.12		0.095		mg/L	10		8270C	Total/NA
Naphthalene - DL	4.6		0.95		mg/L	100		8270C	Total/NA
Arsenic	0.020		0.010	0.0013	mg/L	1		6020A	Total/NA
Chromium	0.29		0.10	0.0025	mg/L	1		6020A	Total/NA
Lead	0.0024	J	0.015	0.00050	mg/L	1		6020A	Total/NA
Nickel	0.082	J	0.10	0.0020	mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC11-MW-10

Lab Sample ID: 680-87213-5
Date Collected: 02/05/13 09:40
Matrix: Water
Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 13:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*02/08/13 13:41*	*1*
Dibromofluoromethane	*101*		*70 - 130*		*02/08/13 13:41*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*02/08/13 13:41*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.0069	U	0.099	0.0069	mg/L		02/08/13 14:56	02/22/13 13:35	10
3 & 4 Methylphenol	0.013	U	0.099	0.013	mg/L		02/08/13 14:56	02/22/13 13:35	10
Phenanthrene	0.0076	U	0.099	0.0076	mg/L		02/08/13 14:56	02/22/13 13:35	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*0*	*D*	*25 - 130*	*02/08/13 14:56*	*02/22/13 13:35*	*10*
2-Fluorophenol	*0*	*D*	*25 - 130*	*02/08/13 14:56*	*02/22/13 13:35*	*10*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*	*02/08/13 14:56*	*02/22/13 13:35*	*10*
Nitrobenzene-d5	*0*	*D*	*39 - 130*	*02/08/13 14:56*	*02/22/13 13:35*	*10*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*	*02/08/13 14:56*	*02/22/13 13:35*	*10*
Terphenyl-d14	*0*	*D*	*10 - 143*	*02/08/13 14:56*	*02/22/13 13:35*	*10*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		02/13/13 12:01	02/16/13 12:21	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 21:10	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 21:10	1
Lead	0.015	U	0.015		mg/L		02/13/13 12:01	02/15/13 21:10	1
Mercury	0.0020	U	0.0020		mg/L		02/20/13 10:42	02/21/13 01:07	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 21:10	1

Client Sample ID: CPW-14

Lab Sample ID: 680-87213-9
Date Collected: 02/05/13 11:45
Matrix: Water
Date Received: 02/07/13 08:10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	**0.14**	**J**	0.50	0.013	mg/L		02/13/13 12:01	02/15/13 21:30	5

Client Sample ID: LOC11-MW-07

Lab Sample ID: 680-87213-13
Date Collected: 02/05/13 16:50
Matrix: Water
Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*70 - 130*		*02/08/13 17:38*	*1*
Dibromofluoromethane	*102*		*70 - 130*		*02/08/13 17:38*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*02/08/13 17:38*	*1*

Client Sample ID: LOC11-MW-07

Lab Sample ID: 680-87213-13

Date Collected: 02/05/13 16:50

Matrix: Water

Date Received: 02/07/13 08:10

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.31**		0.020		mg/L		02/08/13 14:56	02/26/13 22:42	2
3 & 4 Methylphenol	0.0098	U	0.0098		mg/L		02/08/13 14:56	02/22/13 15:02	1
Phenanthrene	**0.049**		0.0098		mg/L		02/08/13 14:56	02/22/13 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*68*		*25 - 130*	*02/08/13 14:56*	*02/22/13 15:02*	*1*
Phenol-d5	*71*		*25 - 130*	*02/08/13 14:56*	*02/26/13 22:42*	*2*
2-Fluorophenol	*65*		*25 - 130*	*02/08/13 14:56*	*02/22/13 15:02*	*1*
2-Fluorophenol	*67*		*25 - 130*	*02/08/13 14:56*	*02/26/13 22:42*	*2*
2,4,6-Tribromophenol	*77*		*31 - 141*	*02/08/13 14:56*	*02/22/13 15:02*	*1*
2,4,6-Tribromophenol	*87*		*31 - 141*	*02/08/13 14:56*	*02/26/13 22:42*	*2*
Nitrobenzene-d5	*75*		*39 - 130*	*02/08/13 14:56*	*02/22/13 15:02*	*1*
Nitrobenzene-d5	*77*		*39 - 130*	*02/08/13 14:56*	*02/26/13 22:42*	*2*
2-Fluorobiphenyl	*66*		*38 - 130*	*02/08/13 14:56*	*02/22/13 15:02*	*1*
2-Fluorobiphenyl	*72*		*38 - 130*	*02/08/13 14:56*	*02/26/13 22:42*	*2*
Terphenyl-d14	*11*		*10 - 143*	*02/08/13 14:56*	*02/22/13 15:02*	*1*
Terphenyl-d14	*12*		*10 - 143*	*02/08/13 14:56*	*02/26/13 22:42*	*2*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		02/13/13 12:01	02/16/13 12:28	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 21:57	1
Chromium	**0.13**		0.10		mg/L		02/13/13 12:01	02/15/13 21:57	1
Lead	0.015	U	0.015		mg/L		02/13/13 12:01	02/15/13 21:57	1
Mercury	0.0020	U	0.0020		mg/L		02/20/13 10:42	02/21/13 01:11	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 21:57	1

Client Sample ID: LOC11B-MW-02D

Lab Sample ID: 680-87213-23

Date Collected: 02/06/13 17:00

Matrix: Water

Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.019**	**J**	0.025	0.0013	mg/L			02/08/13 19:06	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*70 - 130*		*02/08/13 19:06*	*5*
Dibromofluoromethane	*100*		*70 - 130*		*02/08/13 19:06*	*5*
Toluene-d8 (Surr)	*102*		*70 - 130*		*02/08/13 19:06*	*5*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	**0.16**		0.094		mg/L		02/08/13 14:56	02/22/13 18:55	10
Phenanthrene	**0.14**		0.094		mg/L		02/08/13 14:56	02/22/13 18:55	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*0*	*D*	*25 - 130*	*02/08/13 14:56*	*02/22/13 18:55*	*10*
2-Fluorophenol	*0*	*D*	*25 - 130*	*02/08/13 14:56*	*02/22/13 18:55*	*10*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*	*02/08/13 14:56*	*02/22/13 18:55*	*10*
Nitrobenzene-d5	*0*	*D*	*39 - 130*	*02/08/13 14:56*	*02/22/13 18:55*	*10*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*	*02/08/13 14:56*	*02/22/13 18:55*	*10*

Client Sample ID: LOC11B-MW-02D

Lab Sample ID: 680-87213-23

Date Collected: 02/06/13 17:00

Matrix: Water

Date Received: 02/07/13 08:10

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	0	D	10 - 143	02/08/13 14:56	02/22/13 18:55	10

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	4.8		0.94		mg/L		02/08/13 14:56	02/23/13 23:18	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5	0	D	25 - 130	02/08/13 14:56	02/23/13 23:18	100
2-Fluorophenol	0	D	25 - 130	02/08/13 14:56	02/23/13 23:18	100
2,4,6-Tribromophenol	0	D	31 - 141	02/08/13 14:56	02/23/13 23:18	100
Nitrobenzene-d5	0	D	39 - 130	02/08/13 14:56	02/23/13 23:18	100
2-Fluorobiphenyl	0	D	38 - 130	02/08/13 14:56	02/23/13 23:18	100
Terphenyl-d14	0	D	10 - 143	02/08/13 14:56	02/23/13 23:18	100

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0047	J	0.012	0.0040	mg/L		02/13/13 12:05	02/15/13 11:04	2
Arsenic	0.020		0.010	0.0013	mg/L		02/13/13 12:05	02/15/13 08:15	1
Chromium	0.29		0.10	0.0025	mg/L		02/13/13 12:05	02/15/13 08:15	1
Lead	0.0023	J	0.015	0.00050	mg/L		02/13/13 12:05	02/15/13 08:15	1
Mercury	0.0016	U	0.0080	0.0016	mg/L		02/13/13 12:05	02/20/13 15:49	4
Nickel	0.080	J	0.10	0.0020	mg/L		02/13/13 12:05	02/15/13 08:15	1

Client Sample ID: Dup-2

Lab Sample ID: 680-87213-24

Date Collected: 02/06/13 00:00

Matrix: Water

Date Received: 02/07/13 08:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.017	J	0.025	0.0013	mg/L			02/08/13 19:36	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	103		70 - 130		02/08/13 19:36	5
Dibromofluoromethane	103		70 - 130		02/08/13 19:36	5
Toluene-d8 (Surr)	104		70 - 130		02/08/13 19:36	5

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	0.21		0.095		mg/L		02/08/13 14:56	02/22/13 19:24	10
Phenanthrene	0.12		0.095		mg/L		02/08/13 14:56	02/22/13 19:24	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5	0	D	25 - 130	02/08/13 14:56	02/22/13 19:24	10
2-Fluorophenol	0	D	25 - 130	02/08/13 14:56	02/22/13 19:24	10
2,4,6-Tribromophenol	0	D	31 - 141	02/08/13 14:56	02/22/13 19:24	10
Nitrobenzene-d5	0	D	39 - 130	02/08/13 14:56	02/22/13 19:24	10
2-Fluorobiphenyl	0	D	38 - 130	02/08/13 14:56	02/22/13 19:24	10
Terphenyl-d14	0	D	10 - 143	02/08/13 14:56	02/22/13 19:24	10

Client Sample Results

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: Dup-2

Date Collected: 02/06/13 00:00
Date Received: 02/07/13 08:10

Lab Sample ID: 680-87213-24

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**4.6**		0.95		mg/L		02/08/13 14:56	02/23/13 23:47	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*0*	*D*	*25 - 130*	*02/08/13 14:56*	*02/23/13 23:47*	*100*
2-Fluorophenol	*0*	*D*	*25 - 130*	*02/08/13 14:56*	*02/23/13 23:47*	*100*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*	*02/08/13 14:56*	*02/23/13 23:47*	*100*
Nitrobenzene-d5	*0*	*D*	*39 - 130*	*02/08/13 14:56*	*02/23/13 23:47*	*100*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*	*02/08/13 14:56*	*02/23/13 23:47*	*100*
Terphenyl-d14	*0*	*D*	*10 - 143*	*02/08/13 14:56*	*02/23/13 23:47*	*100*

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0040	U	0.012	0.0040	mg/L		02/13/13 12:05	02/15/13 11:19	2
Arsenic	**0.020**		0.010	0.0013	mg/L		02/13/13 12:05	02/15/13 08:22	1
Chromium	**0.29**		0.10	0.0025	mg/L		02/13/13 12:05	02/15/13 08:22	1
Lead	**0.0024**	**J**	0.015	0.00050	mg/L		02/13/13 12:05	02/15/13 08:22	1
Mercury	0.0016	U	0.0080	0.0016	mg/L		02/13/13 12:05	02/20/13 15:53	4
Nickel	**0.082**	**J**	0.10	0.0020	mg/L		02/13/13 12:05	02/15/13 08:22	1

Surrogate Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
680-87213-5	LOC11-MW-10	96	101	102
680-87213-13	LOC11-MW-07	96	102	99
680-87213-23	LOC11B-MW-02D	102	100	102
680-87213-24	Dup-2	103	103	104

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		PHL	2FP	TBP	NBZ	FBP	TPH
Lab Sample ID	Client Sample ID	(25-130)	(25-130)	(31-141)	(39-130)	(38-130)	(10-143)
680-87213-5	LOC11-MW-10	0 D	0 D	0 D	0 D	0 D	0 D
680-87213-13	LOC11-MW-07	68	65	77	75	66	11
680-87213-13	LOC11-MW-07	71	67	87	77	72	12
680-87213-23	LOC11B-MW-02D	0 D	0 D	0 D	0 D	0 D	0 D
680-87213-23 - DL	LOC11B-MW-02D	0 D	0 D	0 D	0 D	0 D	0 D
680-87213-24	Dup-2	0 D	0 D	0 D	0 D	0 D	0 D
680-87213-24 - DL	Dup-2	0 D	0 D	0 D	0 D	0 D	0 D

Surrogate Legend

PHL = Phenol-d5
2FP = 2-Fluorophenol
TBP = 2,4,6-Tribromophenol
NBZ = Nitrobenzene-d5
FBP = 2-Fluorobiphenyl
TPH = Terphenyl-d14

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-265644/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265644

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/08/13 12:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*70 - 130*		*02/08/13 12:28*	*1*
Dibromofluoromethane	*101*		*70 - 130*		*02/08/13 12:28*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*02/08/13 12:28*	*1*

Lab Sample ID: LCS 680-265644/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265644

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0515		mg/L		103	74 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*70 - 130*
Dibromofluoromethane	*98*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 680-265644/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265644

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.0504		mg/L		101	74 - 123	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*95*		*70 - 130*
Dibromofluoromethane	*98*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 680-265985/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265985

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0050	U	0.0050		mg/L			02/12/13 12:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*70 - 130*		*02/12/13 12:46*	*1*
Dibromofluoromethane	*105*		*70 - 130*		*02/12/13 12:46*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/12/13 12:46*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-265985/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265985

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0543		mg/L		109	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*88*		*70 - 130*
Dibromofluoromethane	*109*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 680-265985/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265985

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.0579		mg/L		116	74 - 123	7	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*70 - 130*
Dibromofluoromethane	*118*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*

Lab Sample ID: 680-87213-20 MS — **Client Sample ID: LOC11D-MW-03**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265985

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0050	U	0.0500	0.0485		mg/L		94	74 - 123

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*88*		*70 - 130*
Dibromofluoromethane	*96*		*70 - 130*
Toluene-d8 (Surr)	*93*		*70 - 130*

Lab Sample ID: 680-87213-20 MSD — **Client Sample ID: LOC11D-MW-03**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 265985

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0050	U	0.0500	0.0602		mg/L		118	74 - 123	22	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*110*		*70 - 130*
Dibromofluoromethane	*120*		*70 - 130*
Toluene-d8 (Surr)	*117*		*70 - 130*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-265580/13-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 267245 — **Prep Batch: 265580**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.010	U	0.010		mg/L		02/08/13 14:56	02/22/13 11:10	1
3 & 4 Methylphenol	0.010	U	0.010		mg/L		02/08/13 14:56	02/22/13 11:10	1
Phenanthrene	0.010	U	0.010		mg/L		02/08/13 14:56	02/22/13 11:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5	*88*		*25 - 130*	*02/08/13 14:56*	*02/22/13 11:10*	*1*
2-Fluorophenol	*83*		*25 - 130*	*02/08/13 14:56*	*02/22/13 11:10*	*1*
2,4,6-Tribromophenol	*90*		*31 - 141*	*02/08/13 14:56*	*02/22/13 11:10*	*1*
Nitrobenzene-d5	*91*		*39 - 130*	*02/08/13 14:56*	*02/22/13 11:10*	*1*
2-Fluorobiphenyl	*86*		*38 - 130*	*02/08/13 14:56*	*02/22/13 11:10*	*1*
Terphenyl-d14	*93*		*10 - 143*	*02/08/13 14:56*	*02/22/13 11:10*	*1*

Lab Sample ID: LCS 680-265580/14-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 267245 — **Prep Batch: 265580**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	0.100	0.0824		mg/L		82	50 - 130
3 & 4 Methylphenol	0.100	0.0903		mg/L		90	35 - 130
Phenanthrene	0.100	0.0862		mg/L		86	62 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Phenol-d5	*94*		*25 - 130*
2-Fluorophenol	*91*		*25 - 130*
2,4,6-Tribromophenol	*95*		*31 - 141*
Nitrobenzene-d5	*95*		*39 - 130*
2-Fluorobiphenyl	*87*		*38 - 130*
Terphenyl-d14	*96*		*10 - 143*

Lab Sample ID: 680-87213-5 MS — **Client Sample ID: LOC11-MW-10**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 267245 — **Prep Batch: 265580**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	0.099	U	0.0987	0.099	U F	mg/L		43	50 - 130
3 & 4 Methylphenol	0.099	U	0.0987	0.099	U	mg/L		57	35 - 130
Phenanthrene	0.099	U	0.0987	0.099	U F	mg/L		61	62 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Phenol-d5	*0*	*D*	*25 - 130*
2-Fluorophenol	*0*	*D*	*25 - 130*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*
Nitrobenzene-d5	*0*	*D*	*39 - 130*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*
Terphenyl-d14	*0*	*D*	*10 - 143*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-87213-5 MSD — **Client Sample ID: LOC11-MW-10**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 267245 — **Prep Batch: 265580**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	0.099	U	0.101	0.10	U	mg/L		54	50 - 130	26	50
3 & 4 Methylphenol	0.099	U	0.101	0.10	U	mg/L		58	35 - 130	4	50
Phenanthrene	0.099	U	0.101	0.10	U	mg/L		68	62 - 130	12	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Phenol-d5	*0*	*D*	*25 - 130*
2-Fluorophenol	*0*	*D*	*25 - 130*
2,4,6-Tribromophenol	*0*	*D*	*31 - 141*
Nitrobenzene-d5	*0*	*D*	*39 - 130*
2-Fluorobiphenyl	*0*	*D*	*38 - 130*
Terphenyl-d14	*0*	*D*	*10 - 143*

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-266106/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266613 — **Prep Batch: 266106**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0050	U	0.0050		mg/L		02/13/13 12:01	02/15/13 19:49	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:01	02/15/13 19:49	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 19:49	1
Lead	0.0015	U	0.0015		mg/L		02/13/13 12:01	02/15/13 19:49	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:01	02/15/13 19:49	1

Lab Sample ID: LCS 680-266106/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266613 — **Prep Batch: 266106**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0496		mg/L		99	75 - 125
Arsenic	0.100	0.107		mg/L		107	75 - 125
Chromium	0.100	0.108		mg/L		108	75 - 125
Lead	0.0500	0.0551		mg/L		110	75 - 125
Nickel	0.100	0.108		mg/L		108	75 - 125

Lab Sample ID: 680-87213-3 MS — **Client Sample ID: LOC06-MW-04**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266613 — **Prep Batch: 266106**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.010	U	0.100	0.0995		mg/L		100	75 - 125
Chromium	0.10	U	0.100	0.10	U	mg/L		93	75 - 125
Nickel	0.10	U	0.100	0.10	U	mg/L		90	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-87213-3 MSD — **Client Sample ID: LOC06-MW-04**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266613 — **Prep Batch: 266106**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.010	U	0.100	0.0933		mg/L		93	75 - 125	6	20
Chromium	0.10	U	0.100	0.10	U	mg/L		87	75 - 125	7	20
Nickel	0.10	U	0.100	0.10	U	mg/L		85	75 - 125	6	20

Lab Sample ID: MB 680-266107/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266421 — **Prep Batch: 266107**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.0060	U	0.0060		mg/L		02/13/13 12:05	02/15/13 07:23	1
Arsenic	0.010	U	0.010		mg/L		02/13/13 12:05	02/15/13 07:23	1
Chromium	0.10	U	0.10		mg/L		02/13/13 12:05	02/15/13 07:23	1
Lead	0.015	U	0.015		mg/L		02/13/13 12:05	02/15/13 07:23	1
Nickel	0.10	U	0.10		mg/L		02/13/13 12:05	02/15/13 07:23	1

Lab Sample ID: MB 680-266107/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266107**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020		mg/L		02/13/13 12:05	02/20/13 15:26	1

Lab Sample ID: LCS 680-266107/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266421 — **Prep Batch: 266107**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0500	0.0598		mg/L		120	75 - 125
Arsenic	0.100	0.112		mg/L		112	75 - 125
Chromium	0.100	0.110		mg/L		110	75 - 125
Lead	0.0500	0.0560		mg/L		112	75 - 125
Nickel	0.100	0.114		mg/L		114	75 - 125

Lab Sample ID: LCS 680-266107/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266107**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00498		mg/L		100	75 - 125

Lab Sample ID: 680-87213-22 MS — **Client Sample ID: LOC17B-MW-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266421 — **Prep Batch: 266107**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0060	U	0.0500	0.0595		mg/L		119	75 - 125
Arsenic	0.010	U	0.100	0.106		mg/L		106	75 - 125
Chromium	0.10	U	0.100	0.107		mg/L		107	75 - 125
Lead	0.015	U	0.0500	0.0495		mg/L		99	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-87213-22 MS — **Client Sample ID: LOC17B-MW-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266421 — **Prep Batch: 266107**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nickel	0.10	U	0.100	0.104		mg/L		104	75 - 125

Lab Sample ID: 680-87213-22 MS — **Client Sample ID: LOC17B-MW-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266107**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0020	U	0.00500	0.00563		mg/L		113	75 - 125

Lab Sample ID: 680-87213-22 MSD — **Client Sample ID: LOC17B-MW-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266421 — **Prep Batch: 266107**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.0060	U	0.0500	0.0585		mg/L		117	75 - 125	2	20
Arsenic	0.010	U	0.100	0.107		mg/L		107	75 - 125	1	20
Chromium	0.10	U	0.100	0.109		mg/L		109	75 - 125	1	20
Lead	0.015	U	0.0500	0.0486		mg/L		97	75 - 125	2	20
Nickel	0.10	U	0.100	0.105		mg/L		105	75 - 125	1	20

Lab Sample ID: 680-87213-22 MSD — **Client Sample ID: LOC17B-MW-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266107**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0020	U	0.00500	0.00523		mg/L		105	75 - 125	7	20

Lab Sample ID: MB 680-266801/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266801**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020		mg/L		02/20/13 10:42	02/21/13 00:59	1

Lab Sample ID: LCS 680-266801/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266801**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00482		mg/L		96	75 - 125

Lab Sample ID: 680-87510-E-7-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 266912 — **Prep Batch: 266801**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0020	U	0.00500	0.00457		mg/L		91	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-87510-E-7-D MSD
Matrix: Water
Analysis Batch: 266912

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 266801

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0020	U	0.00500	0.00471		mg/L		94	75 - 125	3	20

QC Association Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

GC/MS VOA

Analysis Batch: 265644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-5	LOC11-MW-10	Total/NA	Water	8260B	
680-87213-13	LOC11-MW-07	Total/NA	Water	8260B	
680-87213-23	LOC11B-MW-02D	Total/NA	Water	8260B	
680-87213-24	Dup-2	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 265580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-5	LOC11-MW-10	Total/NA	Water	3520C	
680-87213-13	LOC11-MW-07	Total/NA	Water	3520C	
680-87213-23	LOC11B-MW-02D	Total/NA	Water	3520C	
680-87213-23 - DL	LOC11B-MW-02D	Total/NA	Water	3520C	
680-87213-24	Dup-2	Total/NA	Water	3520C	
680-87213-24 - DL	Dup-2	Total/NA	Water	3520C	

Analysis Batch: 267245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-5	LOC11-MW-10	Total/NA	Water	8270C	265580
680-87213-13	LOC11-MW-07	Total/NA	Water	8270C	265580
680-87213-23	LOC11B-MW-02D	Total/NA	Water	8270C	265580
680-87213-24	Dup-2	Total/NA	Water	8270C	265580

Analysis Batch: 267270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-23 - DL	LOC11B-MW-02D	Total/NA	Water	8270C	265580
680-87213-24 - DL	Dup-2	Total/NA	Water	8270C	265580

Analysis Batch: 267554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-13	LOC11-MW-07	Total/NA	Water	8270C	265580

Metals

Prep Batch: 266106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-5	LOC11-MW-10	Total/NA	Water	3010A	
680-87213-9	CPW-14	Total/NA	Water	3010A	
680-87213-13	LOC11-MW-07	Total/NA	Water	3010A	

Prep Batch: 266107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-23	LOC11B-MW-02D	Total/NA	Water	3010A	
680-87213-24	Dup-2	Total/NA	Water	3010A	

Analysis Batch: 266421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-23	LOC11B-MW-02D	Total/NA	Water	6020A	266107
680-87213-23	LOC11B-MW-02D	Total/NA	Water	6020A	266107
680-87213-24	Dup-2	Total/NA	Water	6020A	266107

Metals (Continued)

Analysis Batch: 266421 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-24	Dup-2	Total/NA	Water	6020A	266107

Analysis Batch: 266613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-5	LOC11-MW-10	Total/NA	Water	6020A	266106
680-87213-5	LOC11-MW-10	Total/NA	Water	6020A	266106
680-87213-9	CPW-14	Total/NA	Water	6020A	266106
680-87213-13	LOC11-MW-07	Total/NA	Water	6020A	266106
680-87213-13	LOC11-MW-07	Total/NA	Water	6020A	266106

Prep Batch: 266801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-5	LOC11-MW-10	Total/NA	Water	3010A	
680-87213-13	LOC11-MW-07	Total/NA	Water	3010A	

Analysis Batch: 266912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-87213-5	LOC11-MW-10	Total/NA	Water	6020A	266801
680-87213-13	LOC11-MW-07	Total/NA	Water	6020A	266801
680-87213-23	LOC11B-MW-02D	Total/NA	Water	6020A	266107
680-87213-24	Dup-2	Total/NA	Water	6020A	266107

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC11-MW-10 — Lab Sample ID: 680-87213-5

Date Collected: 02/05/13 09:40 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	265644	02/08/13 13:41	AJMC	TAL SAV
Total/NA	Prep	3520C			265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C		10	267245	02/22/13 13:35	LEG	TAL SAV
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 21:10	BR	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/16/13 12:21	BR	TAL SAV
Total/NA	Prep	3010A			266801	02/20/13 10:42	JKL	TAL SAV
Total/NA	Analysis	6020A		1	266912	02/21/13 01:07	BR	TAL SAV

Client Sample ID: CPW-14 — Lab Sample ID: 680-87213-9

Date Collected: 02/05/13 11:45 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		5	266613	02/15/13 21:30	BR	TAL SAV

Client Sample ID: LOC11-MW-07 — Lab Sample ID: 680-87213-13

Date Collected: 02/05/13 16:50 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	265644	02/08/13 17:38	AJMC	TAL SAV
Total/NA	Prep	3520C			265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C		1	267245	02/22/13 15:02	LEG	TAL SAV
Total/NA	Analysis	8270C		2	267554	02/26/13 22:42	LEG	TAL SAV
Total/NA	Prep	3010A			266106	02/13/13 12:01	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/15/13 21:57	BR	TAL SAV
Total/NA	Analysis	6020A		1	266613	02/16/13 12:28	BR	TAL SAV
Total/NA	Prep	3010A			266801	02/20/13 10:42	JKL	TAL SAV
Total/NA	Analysis	6020A		1	266912	02/21/13 01:11	BR	TAL SAV

Client Sample ID: LOC11B-MW-02D — Lab Sample ID: 680-87213-23

Date Collected: 02/06/13 17:00 — **Matrix: Water**
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	265644	02/08/13 19:06	AJMC	TAL SAV
Total/NA	Prep	3520C			265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C		10	267245	02/22/13 18:55	LEG	TAL SAV
Total/NA	Prep	3520C	DL		265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C	DL	100	267270	02/23/13 23:18	LEG	TAL SAV

Lab Chronicle

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Client Sample ID: LOC11B-MW-02D

Lab Sample ID: 680-87213-23

Date Collected: 02/06/13 17:00
Matrix: Water
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			266107	02/13/13 12:05	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266421	02/15/13 08:15	BR	TAL SAV
Total/NA	Analysis	6020A		2	266421	02/15/13 11:04	BR	TAL SAV
Total/NA	Analysis	6020A		4	266912	02/20/13 15:49	BR	TAL SAV

Client Sample ID: Dup-2

Lab Sample ID: 680-87213-24

Date Collected: 02/06/13 00:00
Matrix: Water
Date Received: 02/07/13 08:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	265644	02/08/13 19:36	AJMC	TAL SAV
Total/NA	Prep	3520C			265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C		10	267245	02/22/13 19:24	LEG	TAL SAV
Total/NA	Prep	3520C	DL		265580	02/08/13 14:56	RBS	TAL SAV
Total/NA	Analysis	8270C	DL	100	267270	02/23/13 23:47	LEG	TAL SAV
Total/NA	Prep	3010A			266107	02/13/13 12:05	RAM	TAL SAV
Total/NA	Analysis	6020A		1	266421	02/15/13 08:22	BR	TAL SAV
Total/NA	Analysis	6020A		2	266421	02/15/13 11:19	BR	TAL SAV
Total/NA	Analysis	6020A		4	266912	02/20/13 15:53	BR	TAL SAV

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 59770

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING 02-2006-0163

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION (STATE)
GP Cellulose, Brunswick	~~30-0136~~	GA

TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.

CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Carol Northern	770 973-2100	770 973-7395

CLIENT NAME	CLIENT E-MAIL
Environ	carolnorthern@Environ.com

CLIENT ADDRESS: 1000 West Oak Pkwy Bldg 100, Suite 100 Marietta, GA 30062

COMPANY CONTRACTING THIS WORK (if applicable):

PAGE 1 OF

STANDARD REPORT DELIVERY ☒

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ○

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE

REQUIRED ANALYSIS / NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	As, Cr, Ni (HNO3)	Benzene (HCl)	Select Sulfides (–)	As, Cr, Pb, Ni, Sb, Hg (HNO3)	Cr (HNO3)						REMARKS
02/4/13	1650	LOC6-MW-02		X				1										
↓	1650	LOC6-13-MW-01		X				1										
↓	1825	LOC6-MW-04		X				1										
02/5/13	1040	LOC6-MW-01D		X														
	0940	LOC11-MW-10		X					3	2	1							
	—	TRIP Blank		X					2									
	1050	CPW-13		X								1						
	—	Dup-1		X								1						
	1145	CPW-14		X								1						
	1240	CPW-1		X								1						
	1530	CPW-4		X								1						
	1505	CPW-7		X								1						

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/6/13	1715	[signature]	02/06/13	18:58			

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
[signature]	02/06/13	17:15						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	02/07/13	0810	YES ○ NO ○		57813	

TAL8240-680 (1008)

Serial Number 59773

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE: GP Cellulose, Brunswick	PROJECT NO.: 02.20016.163	PROJECT LOCATION (STATE): GA
TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Carol Northern	CLIENT PHONE: 770-973-2100	CLIENT FAX: 770-973-7325
CLIENT NAME: Earthcon	CLIENT E-MAIL	
CLIENT ADDRESS: 1880 Austonk Mark Bldg 100, STE 6 Marietta, GA 30062		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 2 OF

STANDARD REPORT DELIVERY ☒

DATE DUE

EXPEDITED REPORT DELIVERY (SURCHARGE) ◯

DATE DUE

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	Benzene (HCl)	Select Svocs (1)	As, Cr, Pb, Ni, Sb, Hg (HNO_3)	Cr (HNO3)							REMARKS
2/5/13	1650	LOC11-MW-07		X				3	2	1								
	1650	CPW-3		X							1							
	1750	CPW-10		X							1							
	1925	LOC11-MW-09		X				3	2	1								
	1940	LOC11D-MW-01		X				3	2	1								
2/6/13	1120	LOC11B-MW-05		X				3	2	1								
	1100	LOC11-MW-08		X				3	2	1								
	1250	LOC11D-MW-03		X				3	2	1								
	1330	LOC11D-MW-02		X				3	2	1								
	1625	LOC17B-MW-01		X				3	2	1								
	1700	LOC11B-MW-02A		X				3	2	1								
	—	DUP-2		X				2	3	1								

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	2/6/13	1715	[signature]	02/06/13	18:58			
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
[signature]	02/06/13	17:15						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
[signature]	02/07/13	0810	YES ◯ NO ◯		670-13	3.4° / 2.6° / 2.6° / 3.7°

TAL8240-680 (1008)

Login Sample Receipt Checklist

Client: EarthCon Consultants Inc

Job Number: 680-87213-1

Login Number: 87213

List Source: TestAmerica Savannah

List Number: 1

Creator: Barnett, Eddie T

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	False	pH needs adjusting A1/A2/C13/C17/C18/C21/C23/C24
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: EarthCon Consultants Inc
Project/Site: EarthCon /Brunswick Site

TestAmerica Job ID: 680-87213-1

Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	03-31-13
A2LA	ISO/IEC 17025		399.01	02-28-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
California	NELAP	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-12
Connecticut	State Program	1	PH-0161	03-31-13
Florida	NELAP	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-13
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Guam	State Program	9	09-005r	04-17-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAP	5	200022	11-30-12
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13
Kentucky	State Program	4	90084	12-31-12
Kentucky (UST)	State Program	4	18	02-28-13
Louisiana	NELAP	6	30690	06-30-13
Louisiana	NELAP	6	LA100015	12-31-13
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-12
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	12-31-12
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13
New Jersey	NELAP	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAP	2	10842	04-01-13
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAP	3	68-00474	06-30-13
Puerto Rico	State Program	2	GA00006	01-01-13
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAP	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-13
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-12
West Virginia DEP	State Program	3	94	06-30-13
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

APPENDIX C

GROUNDWATER MODELING RESULTS

Appendix C - Table 1: Input Coefficients for BIOSCREEN Model

Coefficient	Value	Source:
Hydraulic Conductivity, K	1.53E-03	VRP report
Hydraulic Gradient, i	0.0036	VRP report
Effective porosity, n	0.3	VRP report
Plume Length	*variable*	based on constituent
Soil Bulk Density, rho	1.7	BIOSCREEN default value
Partition Coefficient, Kd	*variable*	based on constituent
Fractional Organic Carbon, foc	0.002	default value
Half-Life	*variable*	based on constituent

Chemicals	Half-Life	Half-Life (year)	Kd (L/kg)	foc	Koc (L/kg)	Delineation Criteria (mg/L)	Approved RRS (mg/L)
Benzene	240 days	0.657	--	0.002	59	0.005	0.00872
4-methylphenol	< 1 week	0.019	120	1	120	0.1	0.395
Naphthalene	>88 days	0.241	--	0.002	2000	0.02	0.02
Phenanthrene	<200 days	0.547	3700	1	3700	0.1	0.1
Antimony [Sb]		10,000	45	1	45	0.006	0.0409
Arsenic [As]		10,000	29	1	29	0.01	0.01
Chromium [Cr+6]		10,000	19	1	19	0.1	0.1
Lead [Pb]		10,000	900	1	900	0.015	0.015
Mercury [Hg]		10,000	52	1	52	0.002	0.002
Nickel [Ni]		10,000	65	1	65	0.1	0.313

Notes:

1) The BIOSCREEN model does not allow for direct input of Kd; therefore, when a Kd value is provided, Koc is set equal to Kd and foc is set equal to 1. (Kd=Koc*foc)
2) Default values were obtained from Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites (EPA 2002) unless otherwise noted.
3) Kd values for 4-methylphenol, phenanthrene and lead are from the Superfund Chemical Data Matrix (SDCM, March 2012)
4) Half-life for metals was assumed to be 10,000 because of the low rate of degradation in metals.

References:

US EPA. (1996) "BIOSCREEN, Natural Attenuation Decision Support System – User's Manual, Version 1.3." Publication No. EPA/600/R-96/087. August 1996
VRP Report - Voluntary Remediation Plan. EarthCon Consultants. October 2011.

Half Life References:

benzene	http://www.dtsc.ca.gov/AssessingRisk/Upload/benzene.pdf	1/2 life in Ground-Water Zone Soil
4-methylphenol	http://www.atsdr.cdc.gov/toxprofiles/tp34-c6.pdf	From Section 6.3.2.3 Soils
naphthalene	http://www.atsdr.cdc.gov/ToxProfiles/tp67-c6.pdf	From Section 6.3.2.3 Soils
Phenanthrene	USEPA, 2000, Bioaccumulation Testing and Interpretation for the Purpose of Sediment Quality Assessment, Status and Needs, U.S. Environmental Protection Agency, EPA-823-R-00-001, February 2000.	

Appendix C - Table 2: Discharge Evaluation for Turtle River

Coefficient	Value	Source:
Hydraulic Conductivity, K	1.53E-03	VRP report
Hydraulic Gradient, i	0.0036	VRP report
Effective porosity, n	0.3	VRP report

PROCESS AREA

Dilution Calculations

Darcy Velocity	1.68E-04	ft/sec
Aquifer depth	25	ft
Average River Flow	45	cfs
Max River Flow Rate	6750	cfs

Constituents	Maximum Plume Width (ft)	Max Detected Concentration[1] (mg/L)	Max. River Concentration with Average Flow Rate (mg/L)	Max. River Concentration with Max Flow Rate (mg/L)	In Stream Water Quality Standard[2] (mg/L)
Benzene	100	0.02	NA[3]	NA[3]	0.07128
Antimony [Sb]	150	0.036	NA[3]	NA[3]	4.308
Arsenic [As]	150	0.033	NA[3]	NA[3]	0.036
Chromium [Cr]	900	0.32	0.027	0.00018	0.05
Lead [Pb]	100	0.0023	NA[3]	NA[3]	0.0056
Mercury [Hg]	100	0.0028	0.000026	0.00000017	0.000025
Nickel [Ni]	900	0.081	0.0068	0.000045	0.0083
4-methylphenol (p-cresol)	350	0.17	0.006	--	--
Naphthalene	1100	4.8	0.49	--	--
Phenanthrene	800	0.28	0.02	--	--

TRAILER PARKING LOT AREA

Dilution Calculations

Darcy Velocity	1.68E-04	ft/sec
Aquifer depth	25	ft
Average River Flow	45	cfs
Max River Flow Rate	6750	cfs

Constituents	Maximum Plume Width (ft)	Max Detected Concentration[1] (mg/L)	Max. River Concentration with Average Flow Rate (mg/L)	Max. River Concentration with Max Flow Rate (mg/L)	In Stream Water Quality Standard[2] (mg/L)
Arsenic [As]	650	0.039	0.0024	0.00002	0.036
Chromium [Cr]	650	0.21	0.0127	0.0001	0.05
Nickel [Ni]	600	0.31	0.0173	0.0001	0.0083

[1] Max concentration detected during the quarterly sampling events
[2] Source: http://www.gaepd.org/Files_PDF/plans/chatt/chatt-b.pdf
[3] Maximum Concentration Detected is less than In Stream Water Quality Standard
Average flow rate = 45 cubic feet per second (cfs); maximum flow rate = 6,750 cfs

Average flow rate - calculated from flow rate data from January 1, 1998 to December 31, 2007 provided by Tetra Tech (Correspondence records, Appendix C)

$$\text{River Concentration} = \frac{(\text{Darcy Velocity} * \text{Plume Width} * \text{Aquifer Depth})}{\text{Flow Rate}} * \text{Concentration}$$

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

***Chromium** in FCP (Eastern Property Bounday)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or* *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

0.02

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	9.3	*(ft)*
Transverse Dispersivity*	*alpha y*	0.9	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	150	*(ft)*

3. ADSORPTION

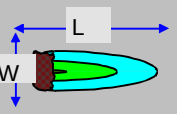
Retardation Factor*	*R*	108.7	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	19	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	2300	*(ft)*
Modeled Area Width*	400	*(ft)*
Simulation Time*	9000	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

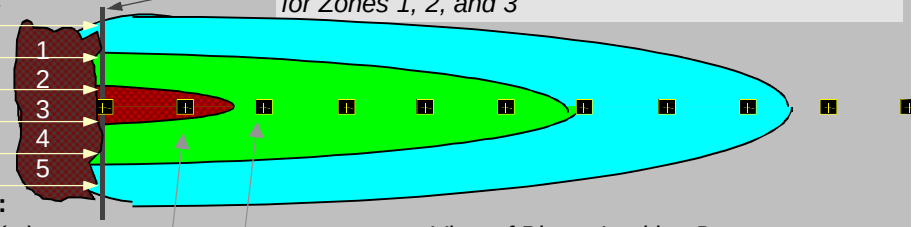
Source Zones:

Width* (ft)	Conc. (mg/L)*
95	0
95	0
20	26
95	0
95	0

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	26.0										.0
Dist. from Source (ft)	0	230	460	690	920	1150	1380	1610	1840	2070	2300

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

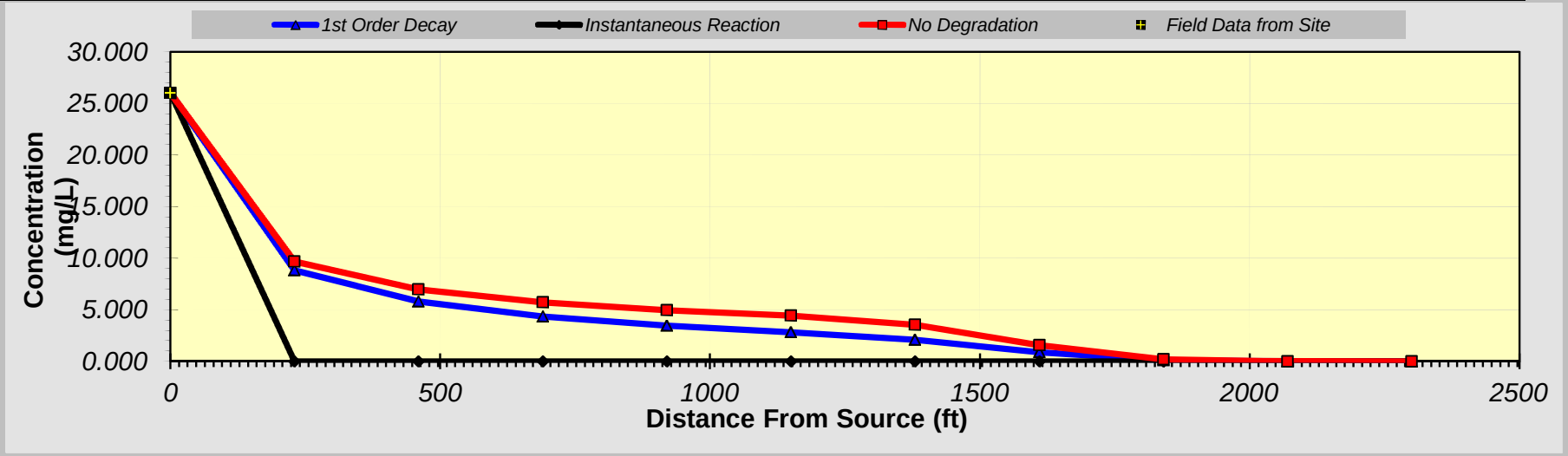
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

CHROMIUM (FCP) CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	230	460	690	920	1150	1380	1610	1840	2070	2300
No Degradation	26.000	9.674	6.972	5.730	4.978	4.432	3.553	1.568	0.209	0.006	0.000
1st Order Decay	26.000	8.833	5.814	4.363	3.461	2.817	2.092	0.883	0.115	0.003	0.000
Inst. Reaction	26.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	26.000										



Calculate Animation

Time:
9,000 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

***Arsenic** in Trailer Parking Lot (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or* *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

0.02

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	9.3	*(ft)*
Transverse Dispersivity*	*alpha y*	0.9	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	150	*(ft)*

3. ADSORPTION

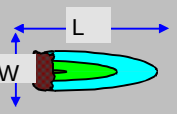
Retardation Factor*	*R*	165.3	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	29	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	200	*(ft)*
Modeled Area Width*	650	*(ft)*
Simulation Time*	800	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

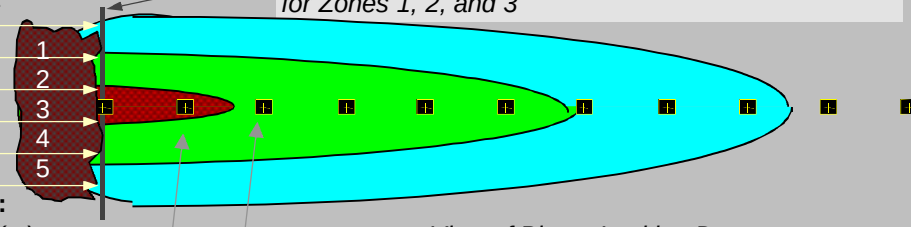
Source Zones:

Width* (ft)	Conc. (mg/L)*
120	0.0075
200	0.0225
150	0.039
90	0.0225
90	0.0075

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.039										
Dist. from Source (ft)	0	20	40	60	80	100	120	140	160	180	200

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

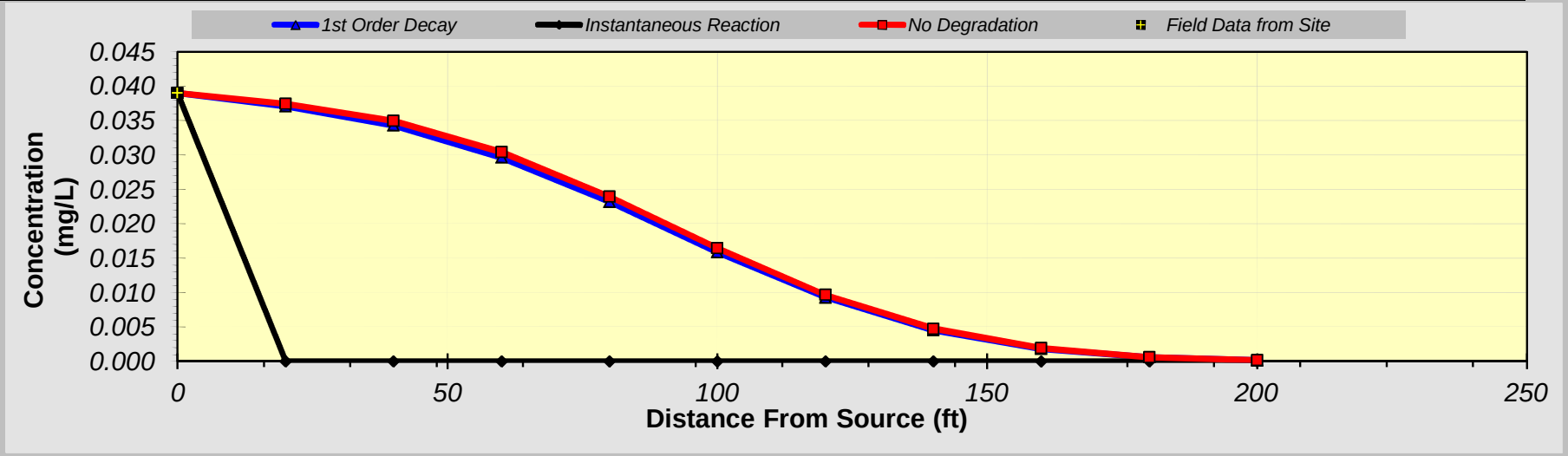
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

ARSENIC CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	20	40	60	80	100	120	140	160	180	200
No Degradation	0.039	0.037	0.035	0.030	0.024	0.016	0.010	0.005	0.002	0.001	0.000
1st Order Decay	0.039	0.037	0.034	0.030	0.023	0.016	0.009	0.005	0.002	0.001	0.000
Inst. Reaction	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.039										



Replay Animation

Next Timestep

Prev Timestep

Time:

800 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

***Chromium** in Trailer Parking (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or*

0.02 → *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	9.3	*(ft)*
Transverse Dispersivity*	*alpha y*	0.9	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	150	*(ft)*

3. ADSORPTION

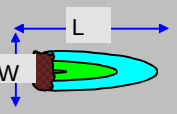
Retardation Factor*	*R*	108.7	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	19	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	260	*(ft)*
Modeled Area Width*	650	*(ft)*
Simulation Time*	500	*(yr)*



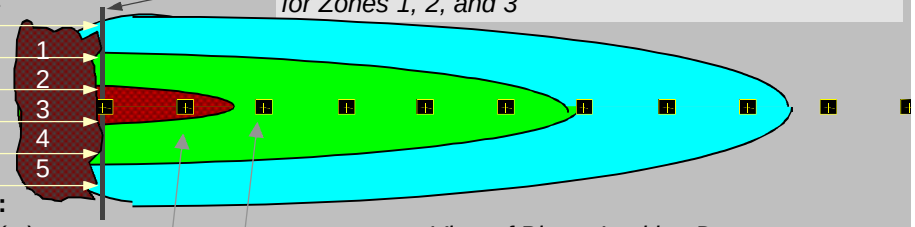
6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3

Source Zones:

Width* (ft)	Conc. (mg/L)*
100	0.5
100	0.15
225	0.21
125	0.15
100	0.5



View of Plume Looking Down

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Observed Centerline Concentrations at Monitoring Wells
If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.21										
Dist. from Source (ft)	0	26	52	78	104	130	156	182	208	234	260

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

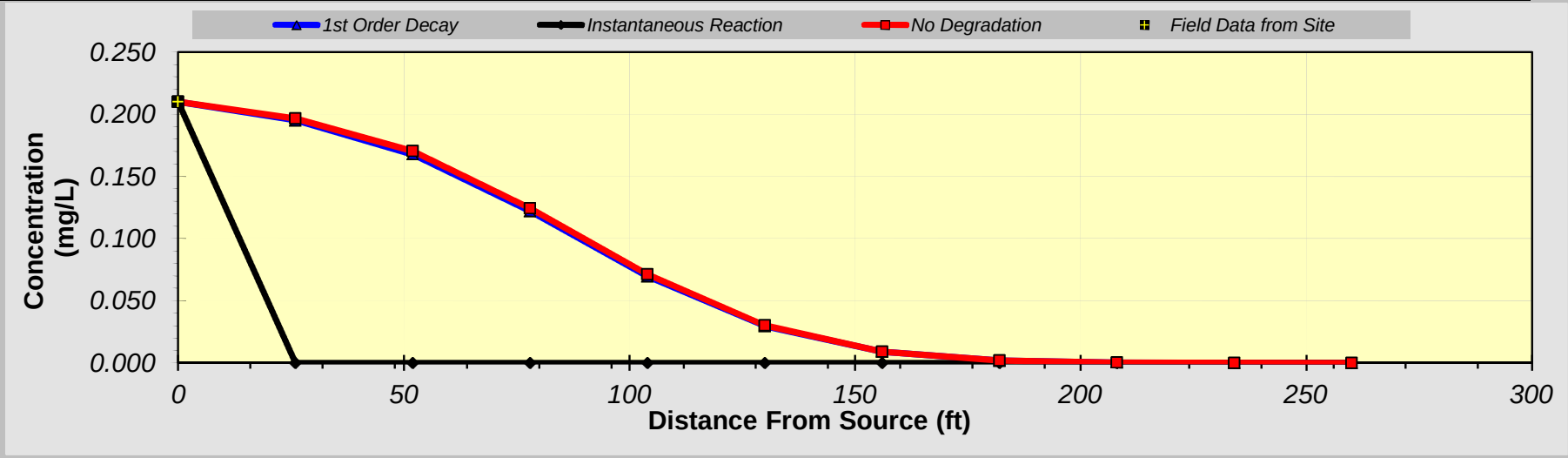
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

CHROMIUM CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	26	52	78	104	130	156	182	208	234	260
No Degradation	0.210	0.197	0.170	0.124	0.071	0.030	0.009	0.002	0.000	0.000	0.000
1st Order Decay	0.210	0.195	0.168	0.122	0.070	0.030	0.009	0.002	0.000	0.000	0.000
Inst. Reaction	0.210	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.210										



Calculate Animation

Time:

500 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

Nickel *in Trailer Parking (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or*

0.02 → *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	9.3	*(ft)*
Transverse Dispersivity*	*alpha y*	0.9	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	150	*(ft)*

3. ADSORPTION

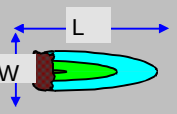
Retardation Factor*	*R*	369.3	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	65	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	200	*(ft)*
Modeled Area Width*	600	*(ft)*
Simulation Time*	1500	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

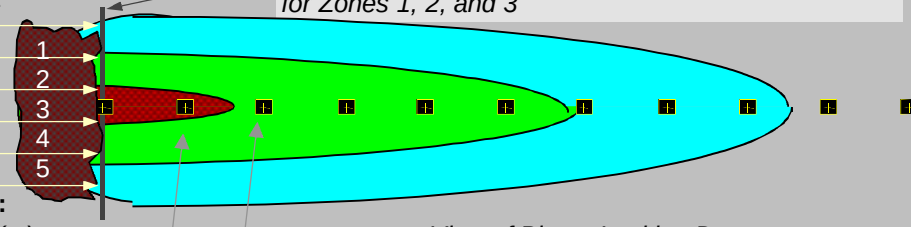
Source Zones:

Width* (ft)	Conc. (mg/L)*
100	0.075
200	0.225
100	0.31
120	0.225
80	0.075

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells
If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.26										.0
Dist. from Source (ft)	0	20	40	60	80	100	120	140	160	180	200

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

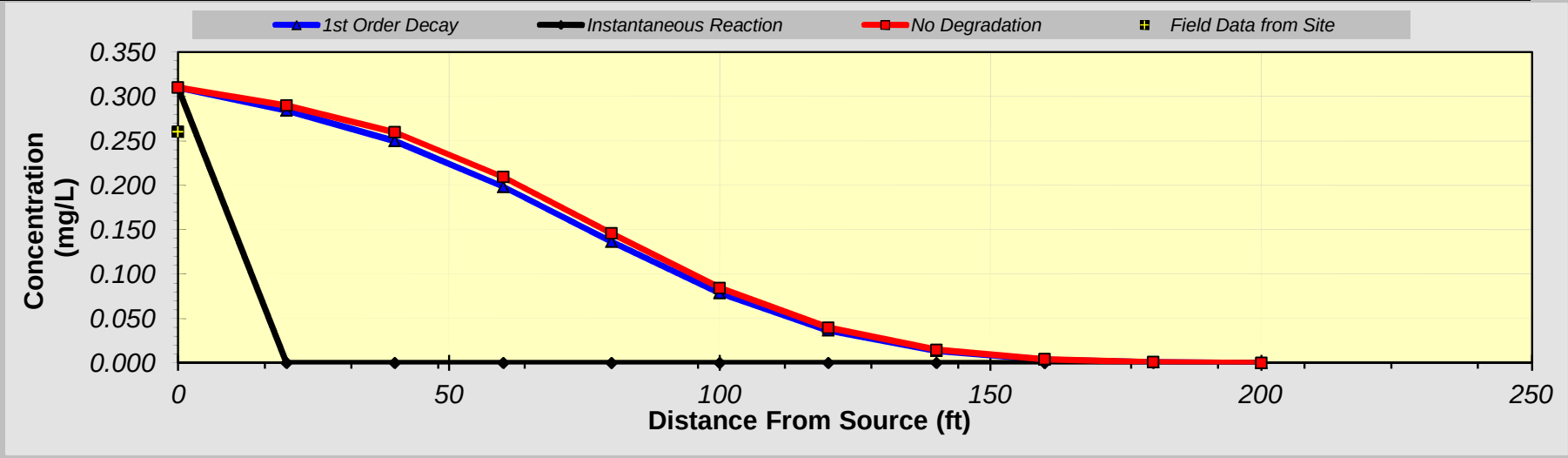
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

NICKEL CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	20	40	60	80	100	120	140	160	180	200
No Degradation	0.310	0.290	0.260	0.209	0.146	0.085	0.040	0.015	0.004	0.001	0.000
1st Order Decay	0.310	0.284	0.250	0.198	0.137	0.079	0.037	0.014	0.004	0.001	0.000
Inst. Reaction	0.310	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.260										



Calculate Animation

Time:
1,500 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

***Benzene** in Process Area (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or* *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

0.02

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	4.1	*(ft)*
Transverse Dispersivity*	*alpha y*	0.4	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	50	*(ft)*

3. ADSORPTION

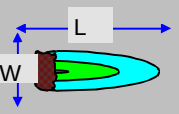
Retardation Factor*	*R*	1.7	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	59	*(L/kg)*
FractionOrganicCarbon	*foc*	2.0E-3	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	1.1E+0	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	1	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	700	*(ft)*
Modeled Area Width*	100	*(ft)*
Simulation Time*	50	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

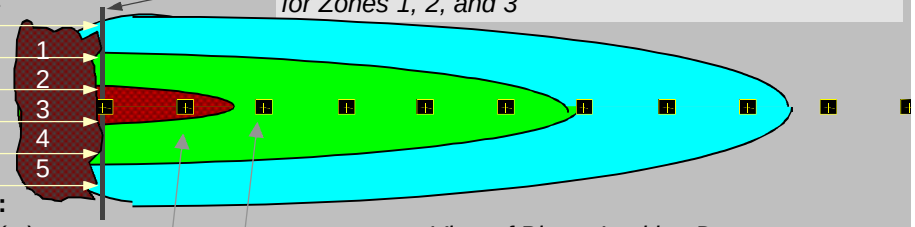
Source Zones:

Width* (ft)	Conc. (mg/L)*
20	0
20	0
20	0.02
20	0
20	0

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	↑ 1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.02										.0
Dist. from Source (ft)	0	70	140	210	280	350	420	490	560	630	700

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

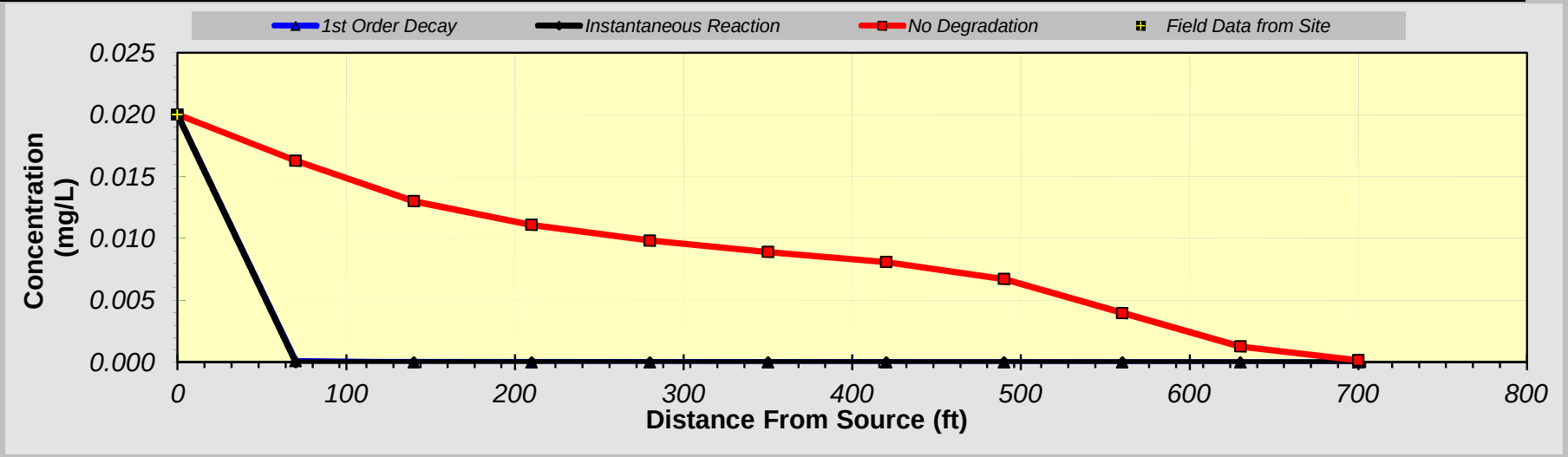
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

BENZENE CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	70	140	210	280	350	420	490	560	630	700
No Degradation	0.020	0.016	0.013	0.011	0.010	0.009	0.008	0.007	0.004	0.001	0.000
1st Order Decay	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Inst. Reaction	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.020										



Calculate Animation

Time:
50 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

***4-methylphenol** in Process Area (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or*

0.02 → *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	11.0	*(ft)*
Transverse Dispersivity*	*alpha y*	1.1	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	200	*(ft)*

3. ADSORPTION

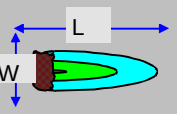
Retardation Factor*	*R*	681.0	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	120	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	3.6E+1	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	0	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	700	*(ft)*
Modeled Area Width*	350	*(ft)*
Simulation Time*	10000	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

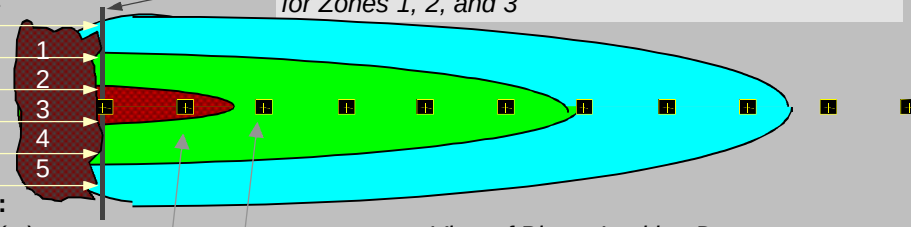
Source Zones:

Width* (ft)	Conc. (mg/L)*
75	0
75	0
50	0.17
75	0
75	0

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.17										.0
Dist. from Source (ft)	0	70	140	210	280	350	420	490	560	630	700

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

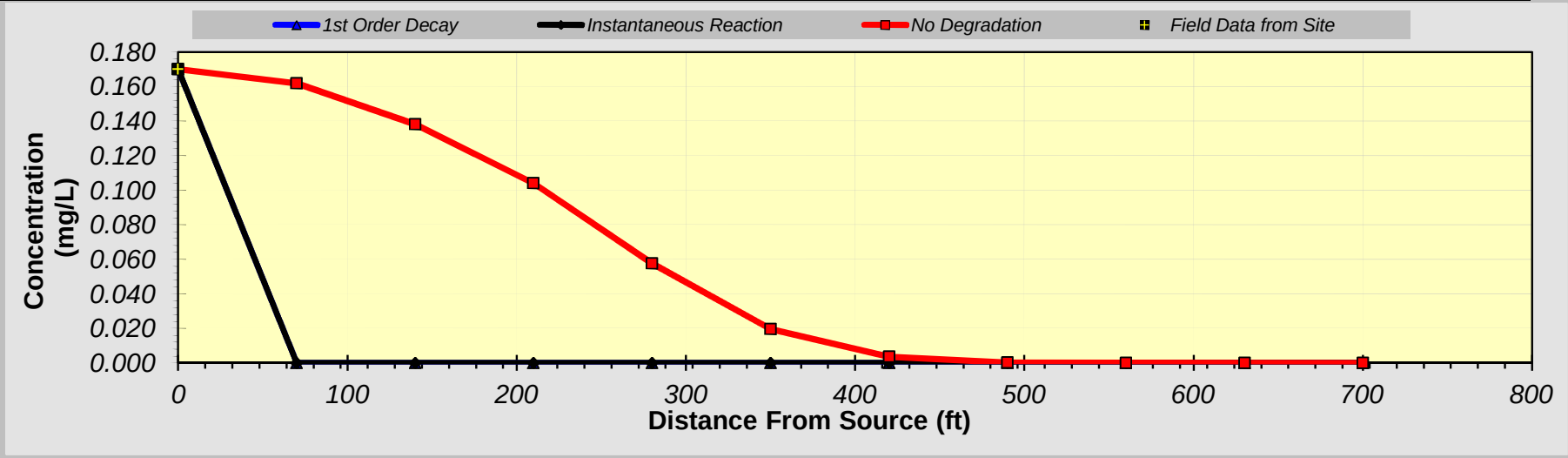
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

4-METHYLPHENOL CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	70	140	210	280	350	420	490	560	630	700
No Degradation	0.170	0.162	0.138	0.104	0.058	0.020	0.004	0.000	0.000	0.000	0.000
1st Order Decay	0.170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Inst. Reaction	0.170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.170										



Calculate Animation

Time:
10,000 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

***Naphthalene** in Process Area (Eastern Property Boundary)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or*

0.02 → *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	19.5	*(ft)*
Transverse Dispersivity*	*alpha y*	2.0	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	600	*(ft)*

3. ADSORPTION

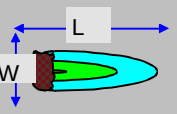
Retardation Factor*	*R*	23.7	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	2000	*(L/kg)*
FractionOrganicCarbon	*foc*	2.0E-3	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	2.9E+0	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	0	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	2700	*(ft)*
Modeled Area Width*	1200	*(ft)*
Simulation Time*	2000	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

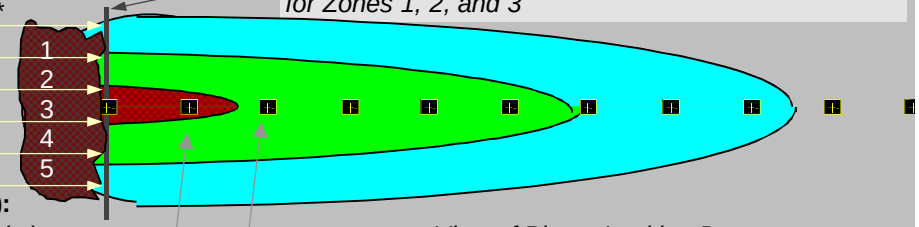
Source Zones:

Width* (ft)	Conc. (mg/L)*
60	0.05
220	2
200	4.8
620	2
100	0.05

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	↑ 1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells
If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	4.8										.0
Dist. from Source (ft)	0	270	540	810	1080	1350	1620	1890	2160	2430	2700

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

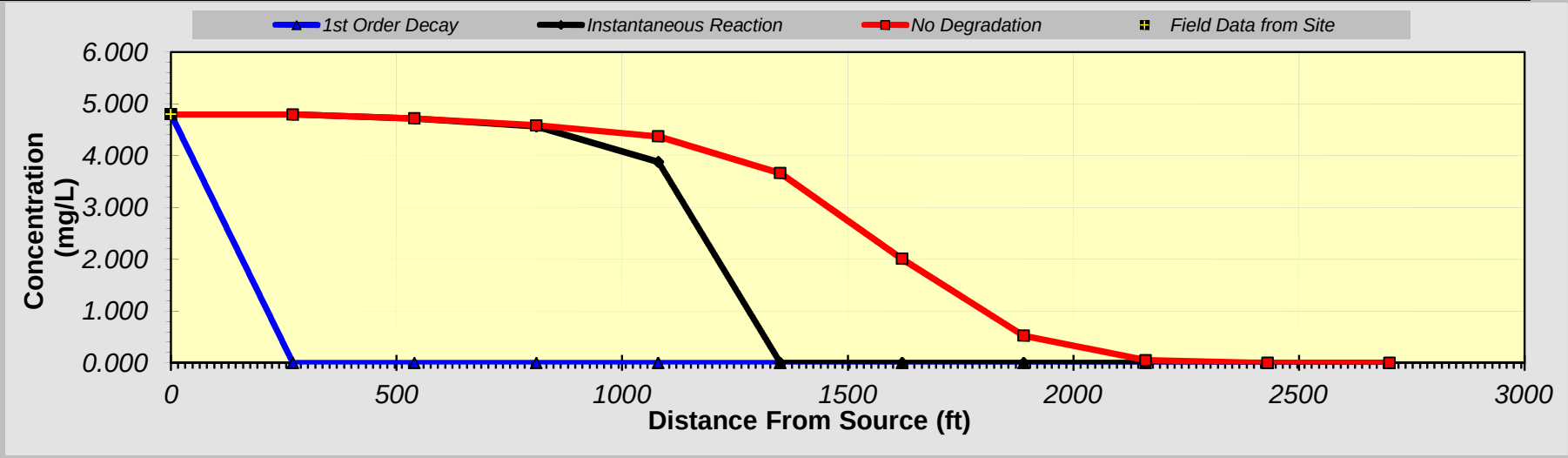
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

NAPHTHALENE CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	270	540	810	1080	1350	1620	1890	2160	2430	2700
No Degradation	4.800	4.794	4.717	4.585	4.374	3.662	2.009	0.526	0.054	0.002	0.000
1st Order Decay	4.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Inst. Reaction	4.800	4.794	4.717	4.565	3.877	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	4.800										



Calculate Animation

Time:
2,000 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

***Naphthalene** in Process Area (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or*

0.02 → *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	17.9	*(ft)*
Transverse Dispersivity*	*alpha y*	1.8	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	500	*(ft)*

3. ADSORPTION

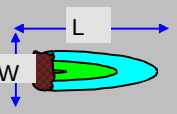
Retardation Factor*	*R*	23.7	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	2000	*(L/kg)*
FractionOrganicCarbon	*foc*	2.0E-3	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	2.9E+0	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	0	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	700	*(ft)*
Modeled Area Width*	1100	*(ft)*
Simulation Time*	350	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

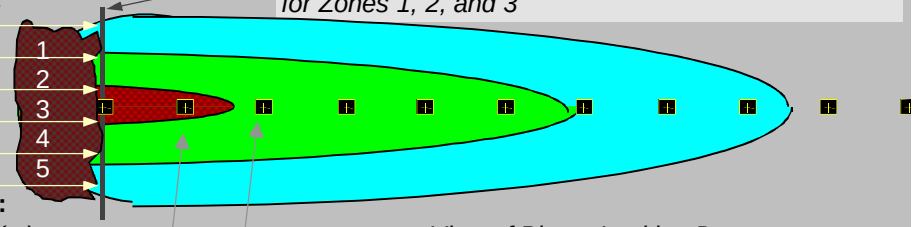
Source Zones:

Width* (ft)	Conc. (mg/L)*
70	0.05
150	2
200	4.8
600	2
80	0.05

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	↑ 1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	4.8							.067			
Dist. from Source (ft)	0	70	140	210	280	350	420	490	560	630	700

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

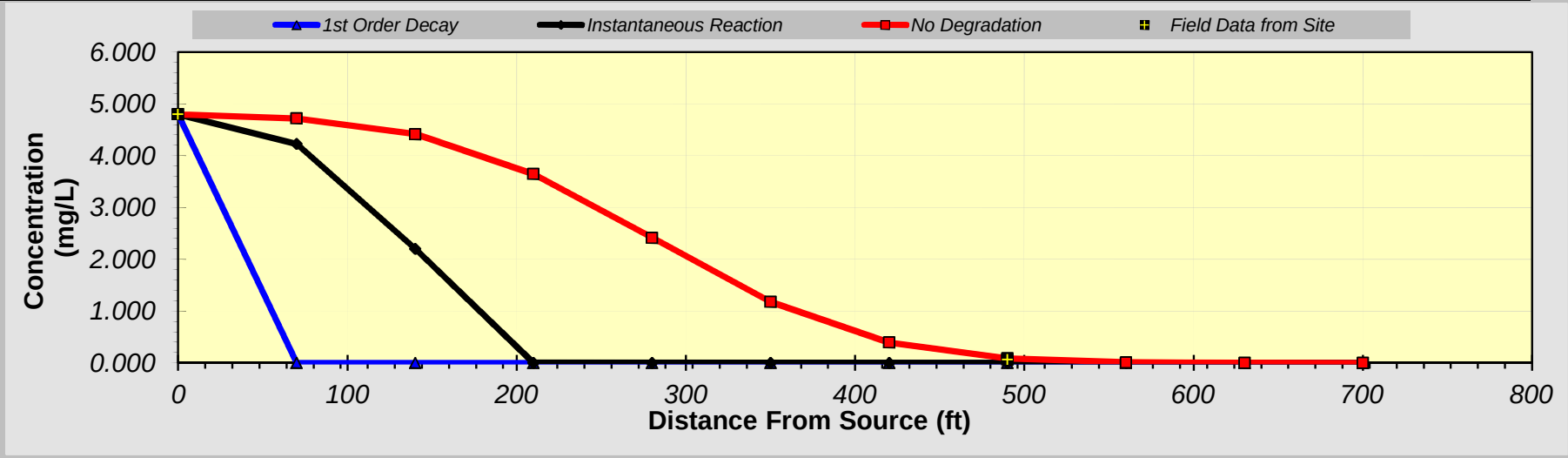
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

NAPHTHALENE CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	70	140	210	280	350	420	490	560	630	700
No Degradation	4.800	4.715	4.415	3.648	2.415	1.176	0.396	0.088	0.013	0.001	0.000
1st Order Decay	4.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Inst. Reaction	4.800	4.223	2.201	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	4.800							0.067			



Calculate Animation

Time:
350 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

***Phenanthrene** in Process Area (Eastern Property Boundary)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or* *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

0.02

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	17.9	*(ft)*
Transverse Dispersivity*	*alpha y*	1.8	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	500	*(ft)*

3. ADSORPTION

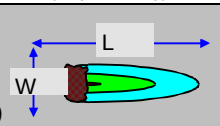
Retardation Factor*	*R*	20967.7	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	3700	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	1.3E+0	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	1	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	2700	*(ft)*
Modeled Area Width*	950	*(ft)*
Simulation Time*	10000	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

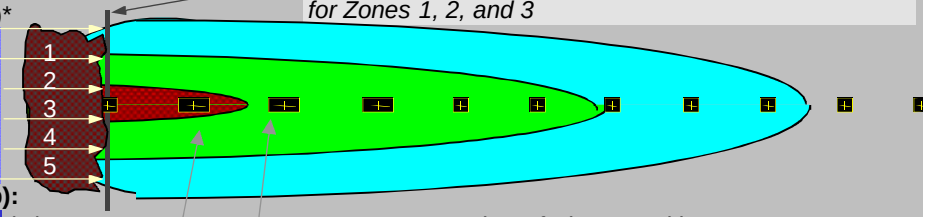
Source Zones:

Width* (ft)	Conc. (mg/L)*
160	0.05
40	0.15
100	0.28
500	0.15
150	0.05

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React. ↑	↑ 1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.28										.0
Dist. from Source (ft)	*0*	*270*	*540*	*810*	*1080*	*1350*	*1620*	*1890*	*2160*	*2430*	*2700*

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

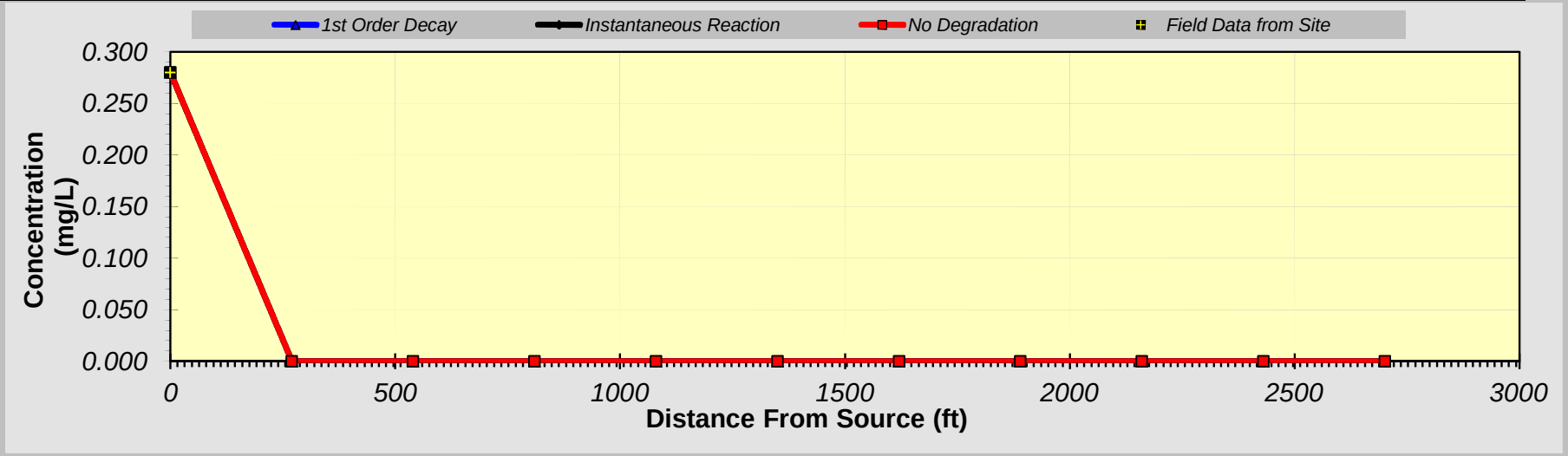
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

PHENANTHRENE CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	270	540	810	1080	1350	1620	1890	2160	2430	2700
No Degradation	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1st Order Decay	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Inst. Reaction	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.280										



Replay Animation

Next Timestep

Prev Timestep

Time:

10,000 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence — *Version 1.4*

Brunswick Cellulose

Phenanthrene *in Process Area (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*
↑ *or* — *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*
0.02

Variable* → *Data used directly in model.*
20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	17.9	*(ft)*
Transverse Dispersivity*	*alpha y*	1.8	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	500	*(ft)*

3. ADSORPTION

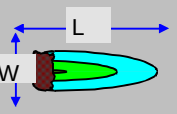
Retardation Factor*	*R*	20967.7	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	3700	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	1.3E+0	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	1	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	700	*(ft)*
Modeled Area Width*	800	*(ft)*
Simulation Time*	10000	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

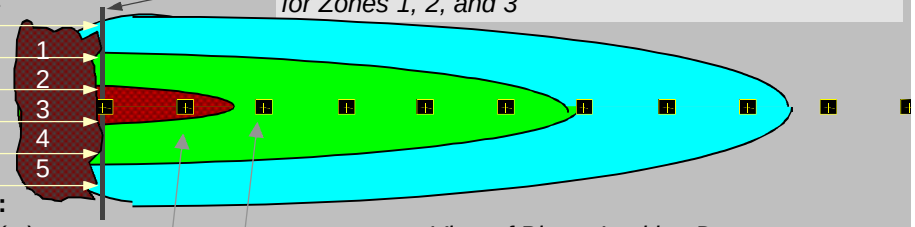
Source Zones:

Width* (ft)	Conc. (mg/L)*
120	0.5
40	0.15
100	0.28
390	0.15
150	0.5

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	↑ 1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.28										.0
Dist. from Source (ft)	0	70	140	210	280	350	420	490	560	630	700

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN — **View Output**

RUN ARRAY — **View Output**

Help — Recalculate

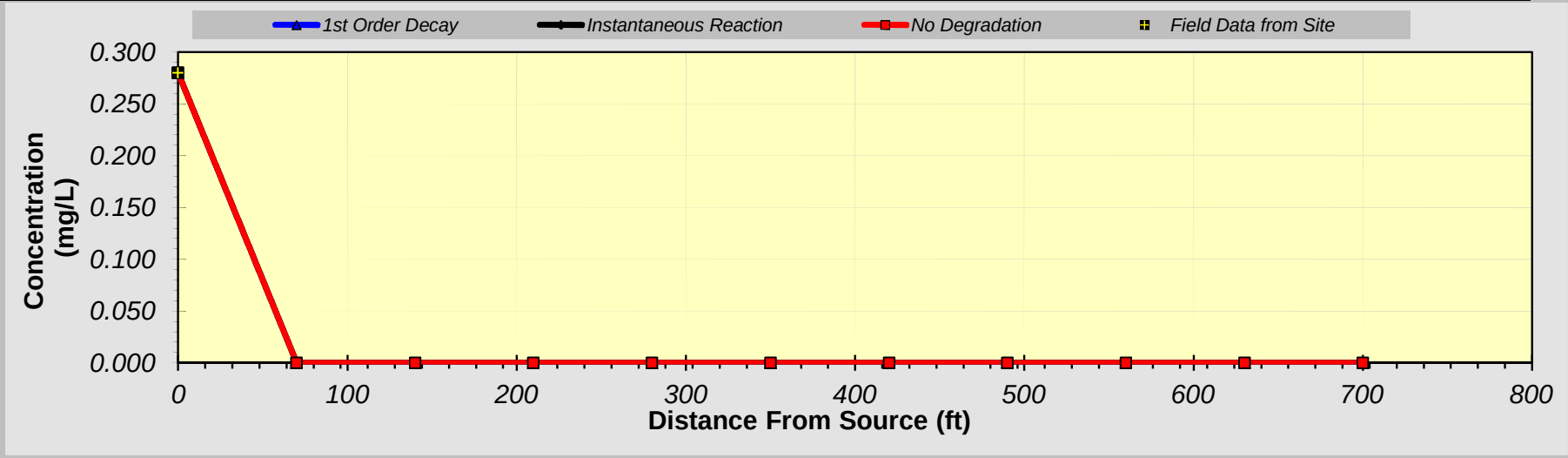
Paste Example Dataset

Restore Formulas for Vs,

PHENANTHRENE CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	70	140	210	280	350	420	490	560	630	700
No Degradation	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1st Order Decay	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Inst. Reaction	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.280										



Calculate Animation

Time:
10,000 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

Antimony *in Process Area (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or* *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

0.02

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	4.1	*(ft)*
Transverse Dispersivity*	*alpha y*	0.4	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	50	*(ft)*

3. ADSORPTION

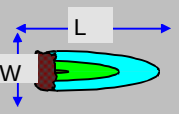
Retardation Factor*	*R*	256.0	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	45	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	700	*(ft)*
Modeled Area Width*	150	*(ft)*
Simulation Time*	7500	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

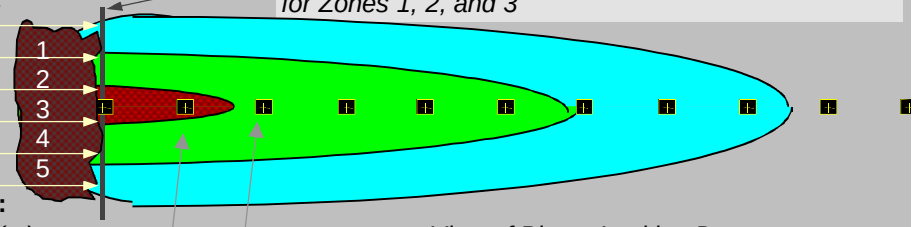
Source Zones:

Width* (ft)	Conc. (mg/L)*
25	0
25	0
50	0.036
25	0
25	0

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React. ↖	↑ 1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.036										.0
Dist. from Source (ft)	0	70	140	210	280	350	420	490	560	630	700

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

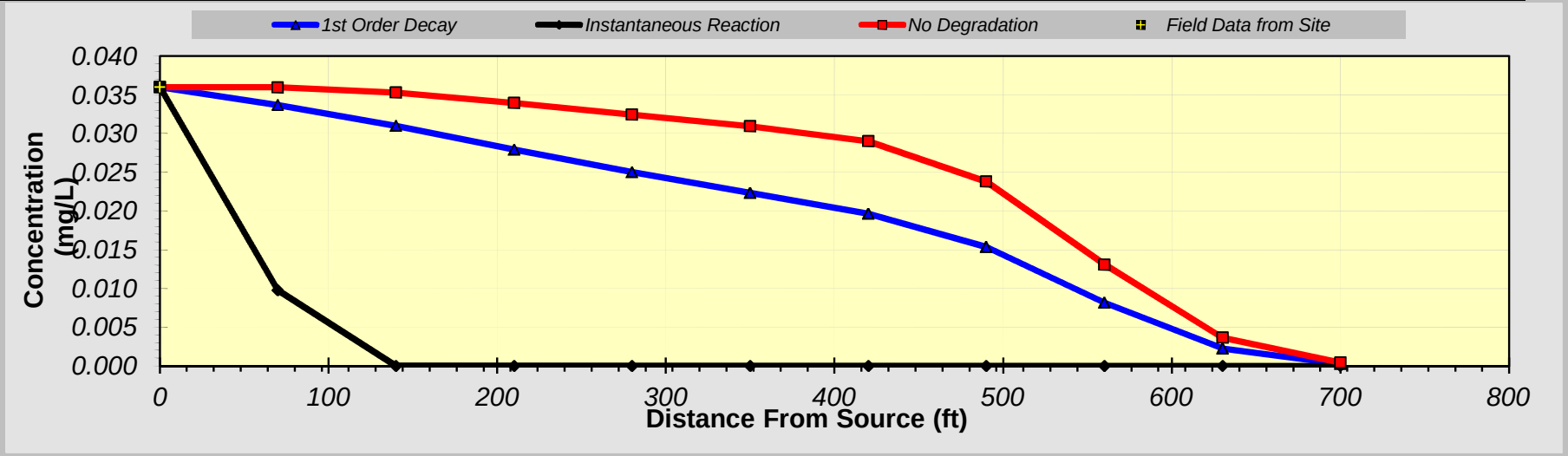
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

ANTIMONY (PROCESS AREA) CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	70	140	210	280	350	420	490	560	630	700
No Degradation	0.036	0.036	0.035	0.034	0.032	0.031	0.029	0.024	0.013	0.004	0.000
1st Order Decay	0.036	0.034	0.031	0.028	0.025	0.022	0.020	0.015	0.008	0.002	0.000
Inst. Reaction	0.036	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.036										



Calculate Animation

Time:
7,500 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence — *Version 1.4*

Brunswick Cellulose
***Arsenic** in Process Area (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*
↑ *or* — *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*
0.02

Variable* → *Data used directly in model.*
20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	7.1	*(ft)*
Transverse Dispersivity*	*alpha y*	0.7	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	100	*(ft)*

3. ADSORPTION

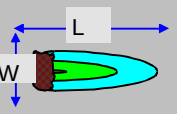
Retardation Factor*	*R*	165.3	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	29	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	700	*(ft)*
Modeled Area Width*	150	*(ft)*
Simulation Time*	4500	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

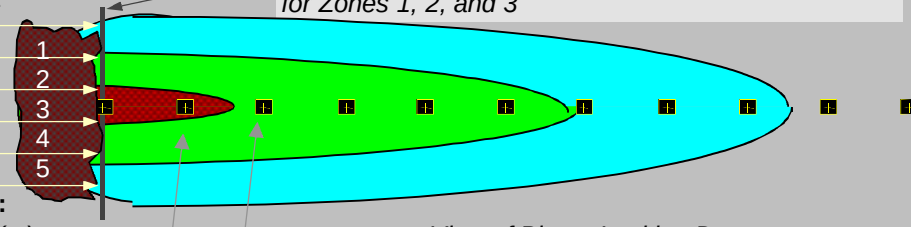
Source Zones:

Width* (ft)	Conc. (mg/L)*
30	0
30	0
30	0.033
30	0
30	0

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.033										.0
Dist. from Source (ft)	0	70	140	210	280	350	420	490	560	630	700

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN — **View Output**

RUN ARRAY — **View Output**

Help — Recalculate

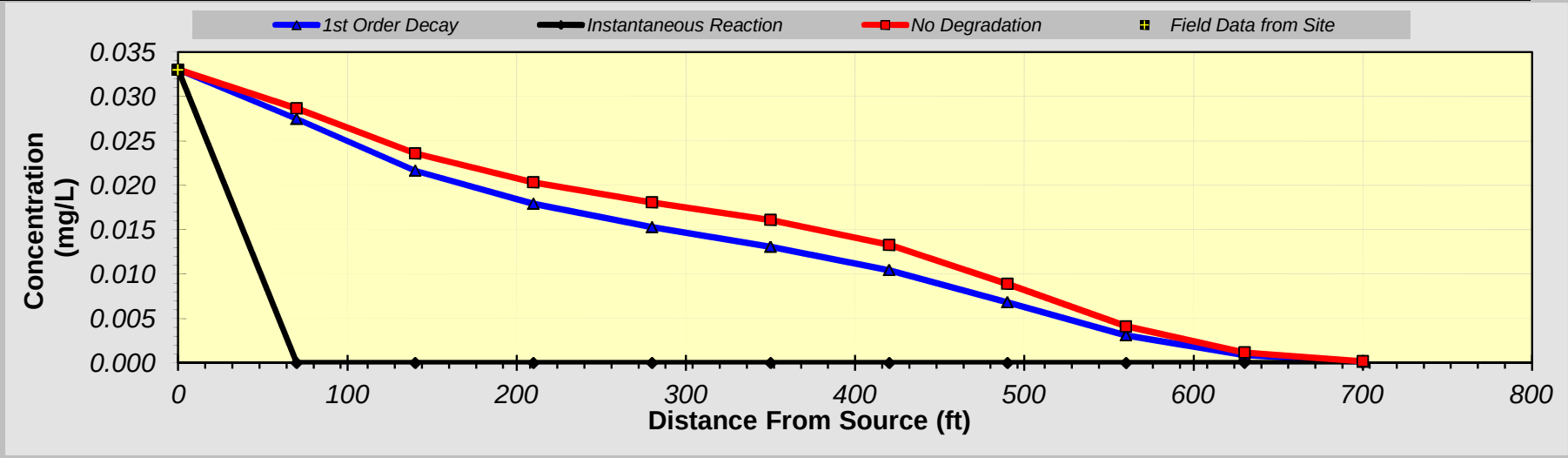
Paste Example Dataset

Restore Formulas for Vs,

ARSENIC CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	70	140	210	280	350	420	490	560	630	700
No Degradation	0.033	0.029	0.024	0.020	0.018	0.016	0.013	0.009	0.004	0.001	0.000
1st Order Decay	0.033	0.027	0.022	0.018	0.015	0.013	0.010	0.007	0.003	0.001	0.000
Inst. Reaction	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.033										



Calculate Animation

Time:
4,500 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

***Chromium** in Process Area*
(Eastern Property Boundary)

Data Input Instructions:

115 → *1. Enter value directly....or*
↑ *or* *2. Calculate by filling in grey*
0.02 → *cells below. (To restore formulas, hit button below).*

Variable* → *Data used directly in model.*
20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	21.0	*(ft)*
Transverse Dispersivity*	*alpha y*	2.1	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	700	*(ft)*

3. ADSORPTION

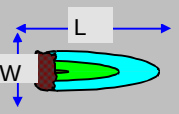
Retardation Factor*	*R*	108.7	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	19	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	2700	*(ft)*
Modeled Area Width*	900	*(ft)*
Simulation Time*	10000	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

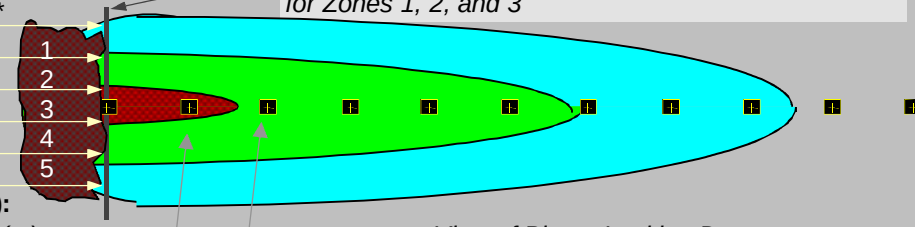
Source Zones:

Width* (ft)	Conc. (mg/L)*
10	0.05
10	0.2
150	0.32
600	0.2
130	0.05

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells
If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.32										.0
Dist. from Source (ft)	0	270	540	810	1080	1350	1620	1890	2160	2430	2700

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

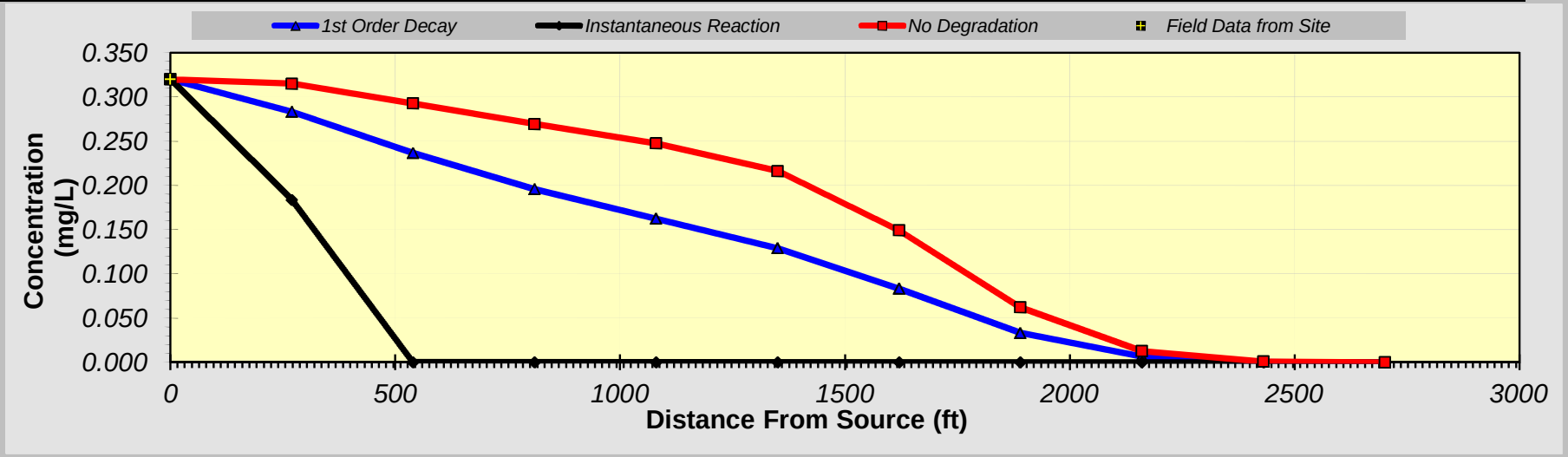
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

CHROMIUM (PROCESS AREA) CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	270	540	810	1080	1350	1620	1890	2160	2430	2700
No Degradation	0.320	0.315	0.293	0.269	0.248	0.216	0.149	0.062	0.013	0.001	0.000
1st Order Decay	0.320	0.283	0.237	0.196	0.162	0.129	0.083	0.033	0.007	0.001	0.000
Inst. Reaction	0.320	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.320										



Calculate Animation

Time:
10,000 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

***Chromium** in Process Area (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or*

0.02 → *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	13.8	*(ft)*
Transverse Dispersivity*	*alpha y*	1.4	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	300	*(ft)*

3. ADSORPTION

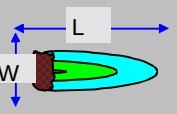
Retardation Factor*	*R*	108.7	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	19	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	700	*(ft)*
Modeled Area Width*	900	*(ft)*
Simulation Time*	2000	*(yr)*



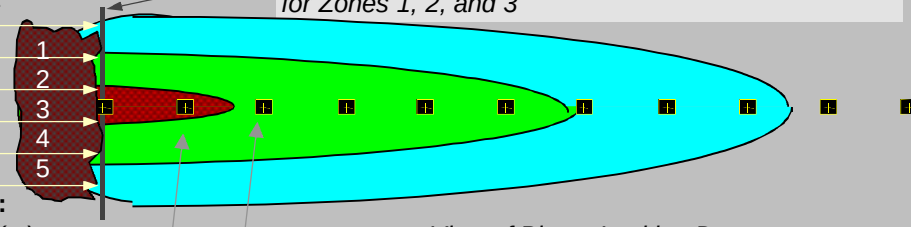
6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3

Source Zones:

Width* (ft)	Conc. (mg/L)*
10	0.05
10	0.2
150	0.32
500	0.2
130	0.05



View of Plume Looking Down

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React. ↑	↑ 1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.32										.0
Dist. from Source (ft)	0	70	140	210	280	350	420	490	560	630	700

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

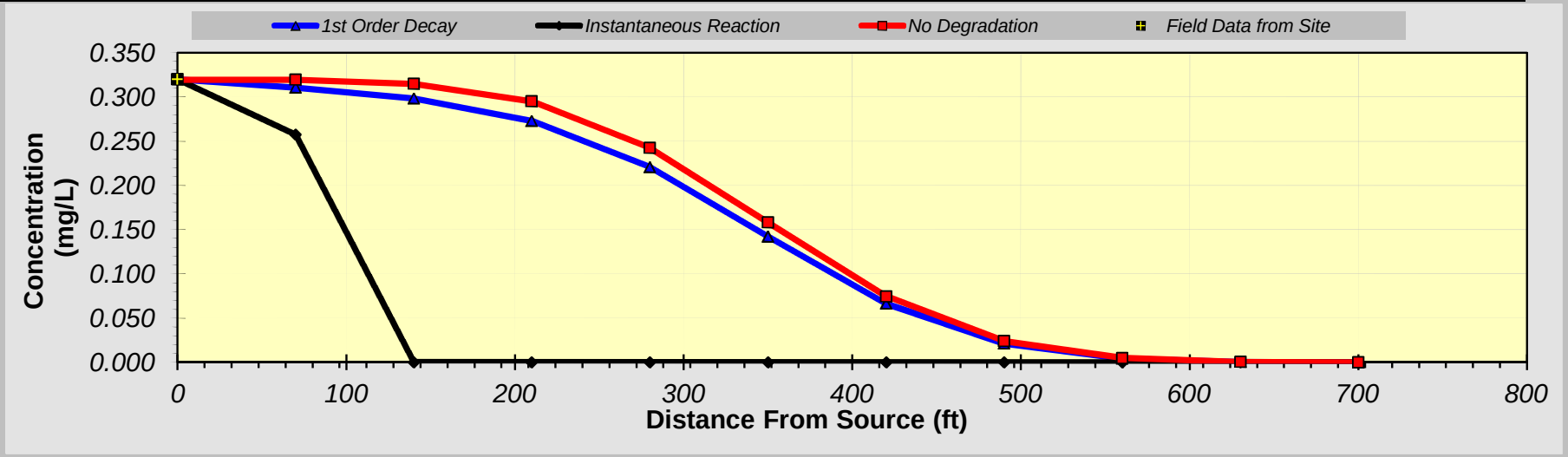
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

CHROMIUM (PROCESS AREA) CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	70	140	210	280	350	420	490	560	630	700
No Degradation	0.320	0.319	0.315	0.295	0.242	0.158	0.075	0.024	0.005	0.001	0.000
1st Order Decay	0.320	0.311	0.298	0.273	0.220	0.142	0.066	0.021	0.004	0.001	0.000
Inst. Reaction	0.320	0.257	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.320										



Calculate Animation

Time:
2,000 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

***Lead** in Process Area (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or*

0.02 → *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	4.1	*(ft)*
Transverse Dispersivity*	*alpha y*	0.4	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	50	*(ft)*

3. ADSORPTION

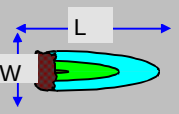
Retardation Factor*	*R*	5101.0	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	900	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	400	*(ft)*
Modeled Area Width*	100	*(ft)*
Simulation Time*	10000	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

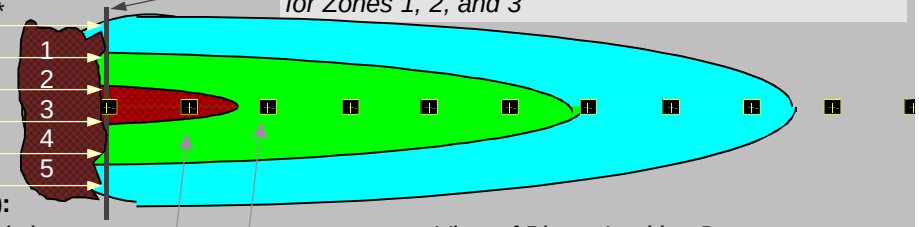
Source Zones:

Width* (ft)	Conc. (mg/L)*
20	0
20	0
20	0.24
20	0
20	0

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.24										.0
Dist. from Source (ft)	0	40	80	120	160	200	240	280	320	360	400

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

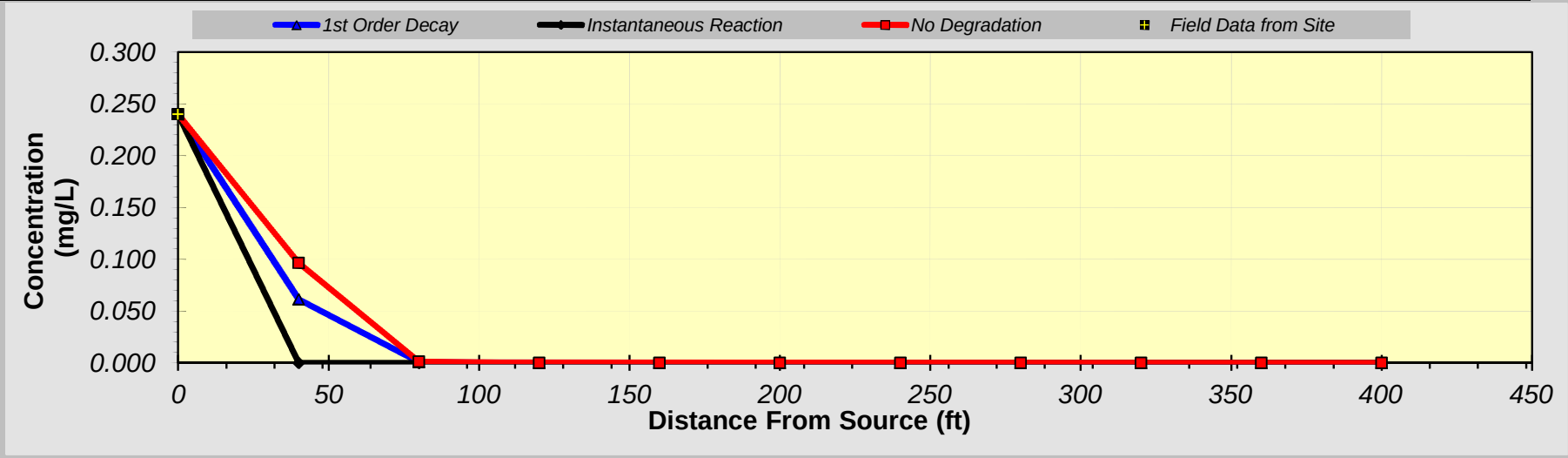
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

LEAD CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	40	80	120	160	200	240	280	320	360	400
No Degradation	0.240	0.096	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1st Order Decay	0.240	0.061	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Inst. Reaction	0.240	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.240										



Calculate Animation

Time:
10,000 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

Mercury *in Process Area (towards Turtle River)*

Data Input Instructions:

115 ↑ *or* 0.02

1. *Enter value directly....or*
2. *Calculate by filling in grey cells below. (To restore formulas, hit button below).*

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	4.1	*(ft)*
Transverse Dispersivity*	*alpha y*	0.4	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	50	*(ft)*

3. ADSORPTION

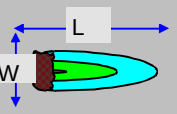
Retardation Factor*	*R*	295.7	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	52	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	680	*(ft)*
Modeled Area Width*	100	*(ft)*
Simulation Time*	9000	*(yr)*



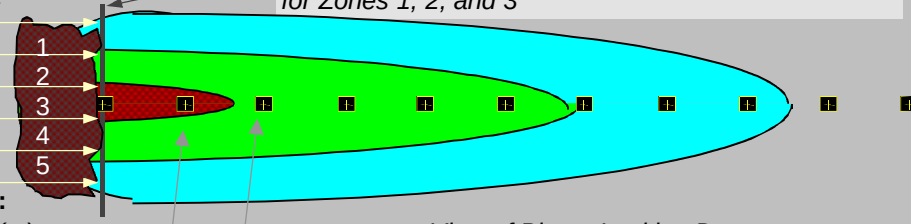
6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3

Source Zones:

Width* (ft)	Conc. (mg/L)*
20	0
20	0
20	0.0028
20	0
20	0



View of Plume Looking Down

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.003										.0
Dist. from Source (ft)	0	68	136	204	272	340	408	476	544	612	680

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

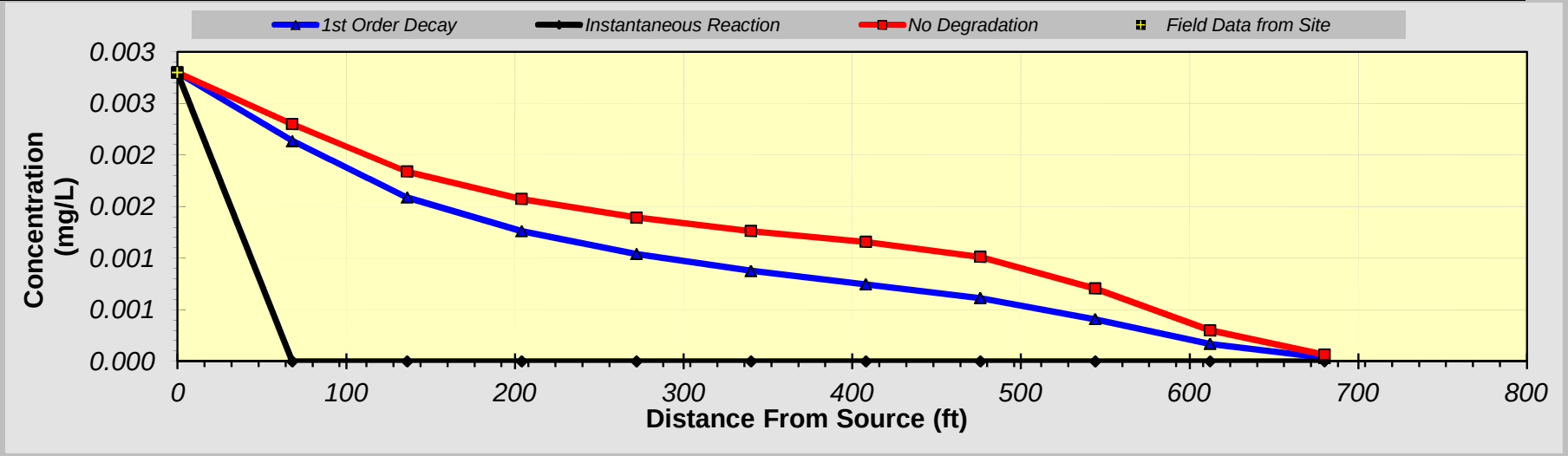
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

MERCURY CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	68	136	204	272	340	408	476	544	612	680
No Degradation	0.003	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.000	0.000
1st Order Decay	0.003	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.000	0.000	0.000
Inst. Reaction	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.003										



Calculate Animation

Time:
9,000 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

Nickel *in Process Area (Eastern Property Boundary)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or*

0.02 → *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	21.6	*(ft)*
Transverse Dispersivity*	*alpha y*	2.2	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	750	*(ft)*

3. ADSORPTION

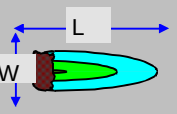
Retardation Factor*	*R*	369.3	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	65	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	2700	*(ft)*
Modeled Area Width*	900	*(ft)*
Simulation Time*	10000	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

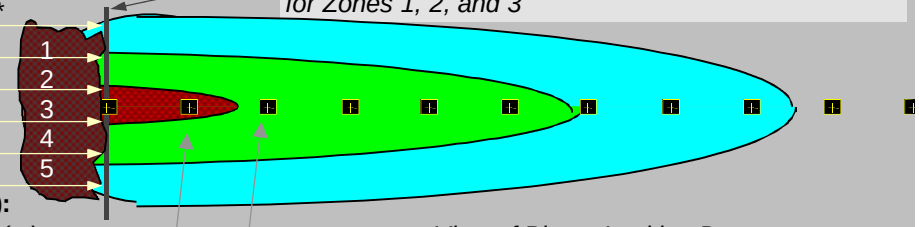
Source Zones:

Width* (ft)	Conc. (mg/L)*
20	0.007
30	0.04
80	0.081
720	0.04
50	0.007

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	↑ 1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.081										.0
Dist. from Source (ft)	0	270	540	810	1080	1350	1620	1890	2160	2430	2700

8. CHOOSE TYPE OF OUTPUT TO SEE:

RUN | **RUN ARRAY** | ***Help*** | Recalculate

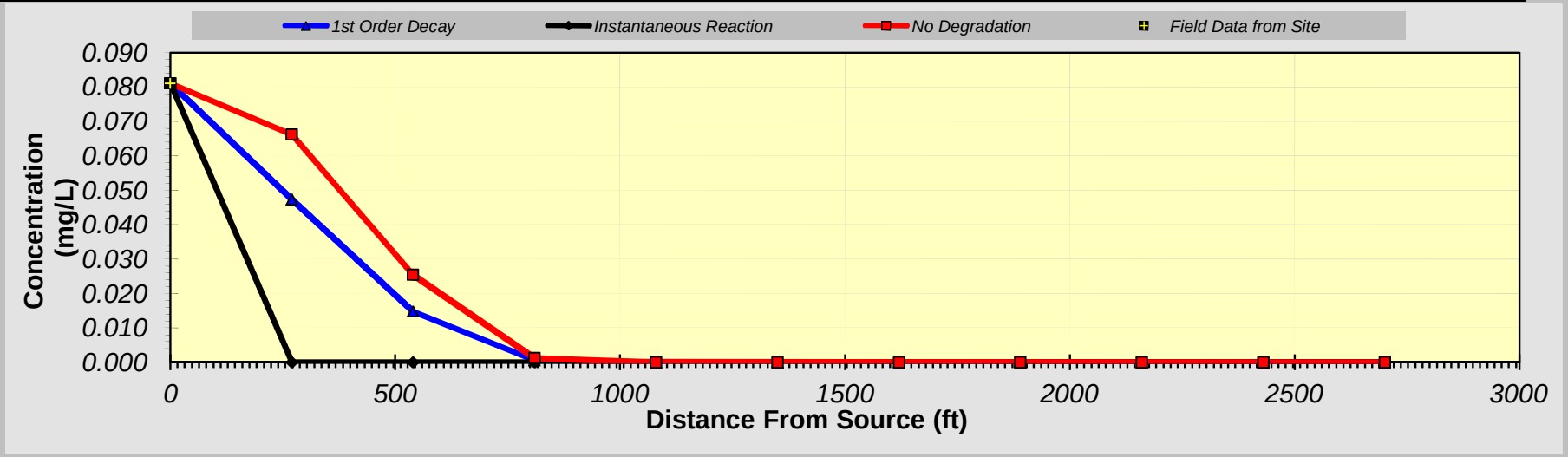
View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

NICKEL CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

Distance from Source (ft)

TYPE OF MODEL	0	270	540	810	1080	1350	1620	1890	2160	2430	2700
No Degradation	0.081	0.066	0.025	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1st Order Decay	0.081	0.047	0.015	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Inst. Reaction	0.081	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.081										



Calculate Animation

Time:

10,000 Years

Return to

Recalculate This

BIOSCREEN Natural Attenuation Decision Support System

Air Force Center for Environmental Excellence

Version 1.4

Brunswick Cellulose

Nickel *in Process Area (towards Turtle River)*

Data Input Instructions:

115 → *1. Enter value directly....or*

↑ *or*

0.02 → *2. Calculate by filling in grey cells below. (To restore formulas, hit button below).*

Variable* → *Data used directly in model.*

20 → *Value calculated by model. (Don't enter any data).*

1. HYDROGEOLOGY

Seepage Velocity*	*Vs*	19.0	*(ft/yr)*
or		↑ *or*	
Hydraulic Conductivity	*K*	1.5E-03	*(cm/sec)*
Hydraulic Gradient	*i*	0.0036	*(ft/ft)*
Porosity	*n*	0.3	*(-)*

2. DISPERSION

Longitudinal Dispersivity*	*alpha x*	11.0	*(ft)*
Transverse Dispersivity*	*alpha y*	1.1	*(ft)*
Vertical Dispersivity*	*alpha z*	0.0	*(ft)*
or		↑ *or*	
Estimated Plume Length	*Lp*	200	*(ft)*

3. ADSORPTION

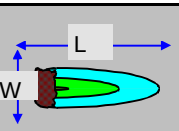
Retardation Factor*	*R*	369.3	*(-)*
or		↑ *or*	
Soil Bulk Density	*rho*	1.7	*(kg/l)*
Partition Coefficient	*Koc*	65	*(L/kg)*
FractionOrganicCarbon	*foc*	1.0E+0	*(-)*

4. BIODEGRADATION

1st Order Decay Coeff*	*lambda*	6.9E-5	*(per yr)*
or		↑ *or*	
Solute Half-Life	*t-half*	10000	*(year)*
or Instantaneous Reaction Model			
Delta Oxygen*	*DO*	5.78	*(mg/L)*
Delta Nitrate*	*NO3*	17	*(mg/L)*
Observed Ferrous Iron*	*Fe2+*	11.3	*(mg/L)*
Delta Sulfate*	*SO4*	100	*(mg/L)*
Observed Methane*	*CH4*	0.414	*(mg/L)*

5. GENERAL

Modeled Area Length*	700	*(ft)*
Modeled Area Width*	900	*(ft)*
Simulation Time*	8500	*(yr)*



6. SOURCE DATA

Source Thickness in Sat.Zone* 5 *(ft)*

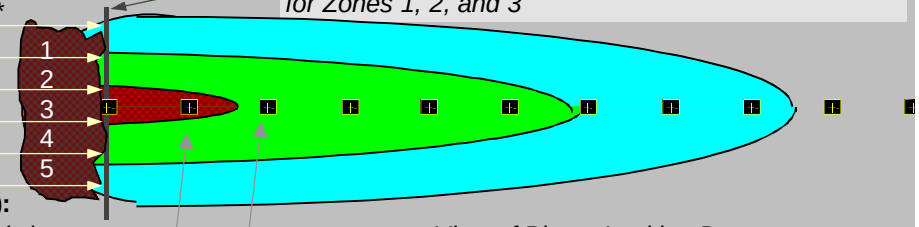
Source Zones:

Width* (ft)	Conc. (mg/L)*
30	0.007
40	0.04
100	0.081
700	0.04
30	0.007

Source Halflife (see Help):

Infinite	Infinite	*(yr)*
Inst. React.	1st Order	
Soluble Mass	Infinite	*(Kg)*
In Source NAPL, Soil		

Vertical Plane Source: Look at Plume Cross-Section and Input Concentrations & Widths for Zones 1, 2, and 3



View of Plume Looking Down

Observed Centerline Concentrations at Monitoring Wells If No Data Leave Blank or Enter "0"

7. FIELD DATA FOR COMPARISON

Concentration (mg/L)	.081										.0
Dist. from Source (ft)	0	70	140	210	280	350	420	490	560	630	700

8. CHOOSE TYPE OF OUTPUT TO SEE:

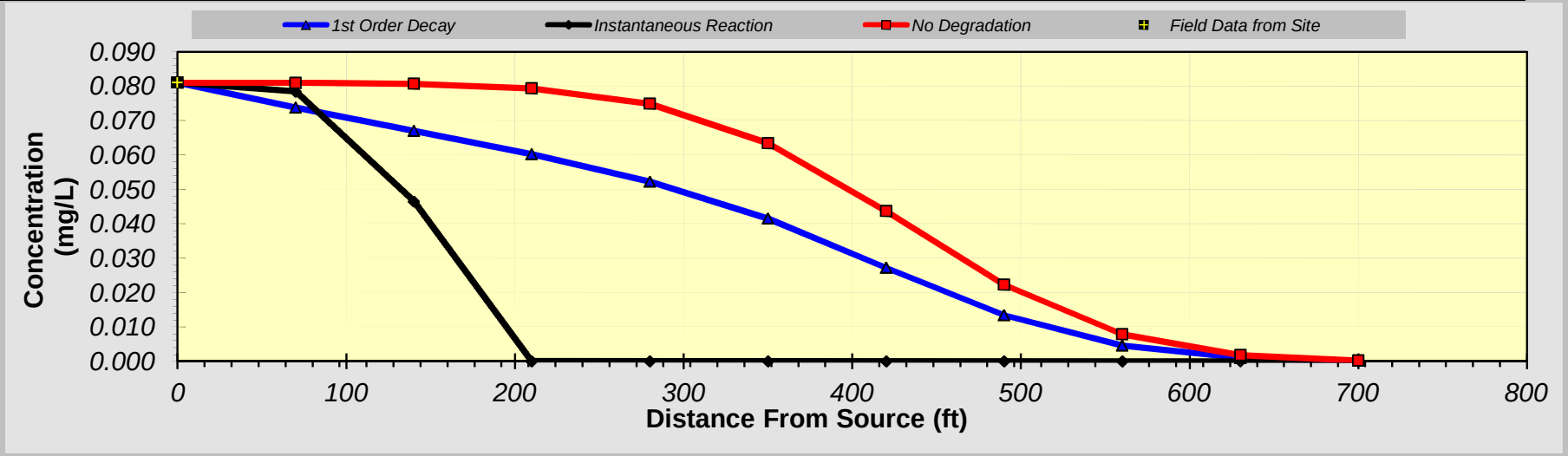
RUN | **RUN ARRAY** | ***Help*** | Recalculate

View Output | **View Output** | Paste Example Dataset

Restore Formulas for Vs,

NICKEL CONCENTRATION ALONG PLUME CENTERLINE (mg/L at Z=0)

TYPE OF MODEL	Distance from Source (ft) 0	70	140	210	280	350	420	490	560	630	700
No Degradation	0.081	0.081	0.081	0.079	0.075	0.063	0.044	0.022	0.008	0.002	0.000
1st Order Decay	0.081	0.074	0.067	0.060	0.052	0.041	0.027	0.013	0.005	0.001	0.000
Inst. Reaction	0.081	0.078	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Field Data from Site	0.081										

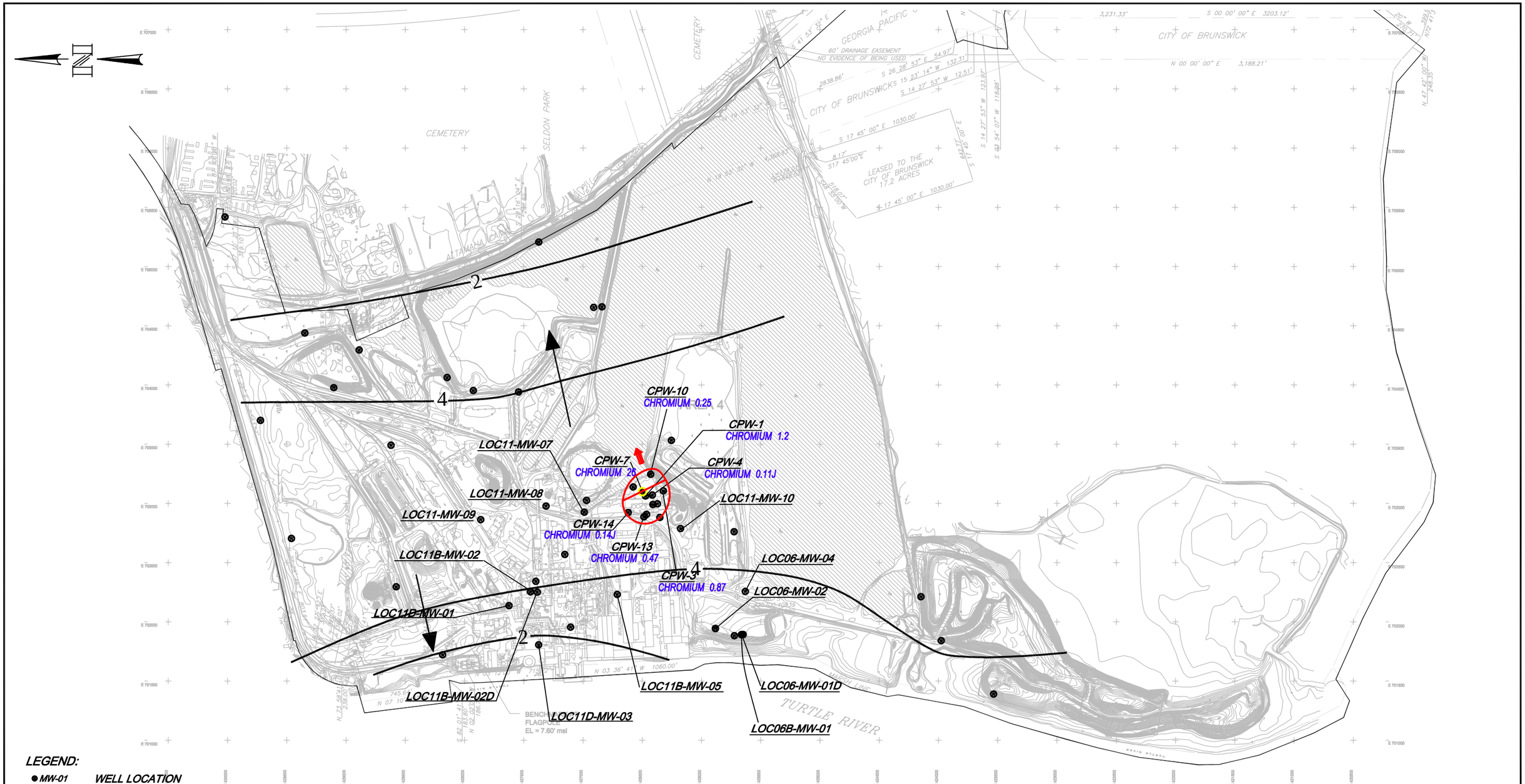


Calculate Animation

Time:
8,500 Years

Return to

Recalculate This



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

CHROMIUM IN FORMER CHLORATE PLANT AREA

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-1

FILENAME: 206163 - GW COMPL_REV FIG5

LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

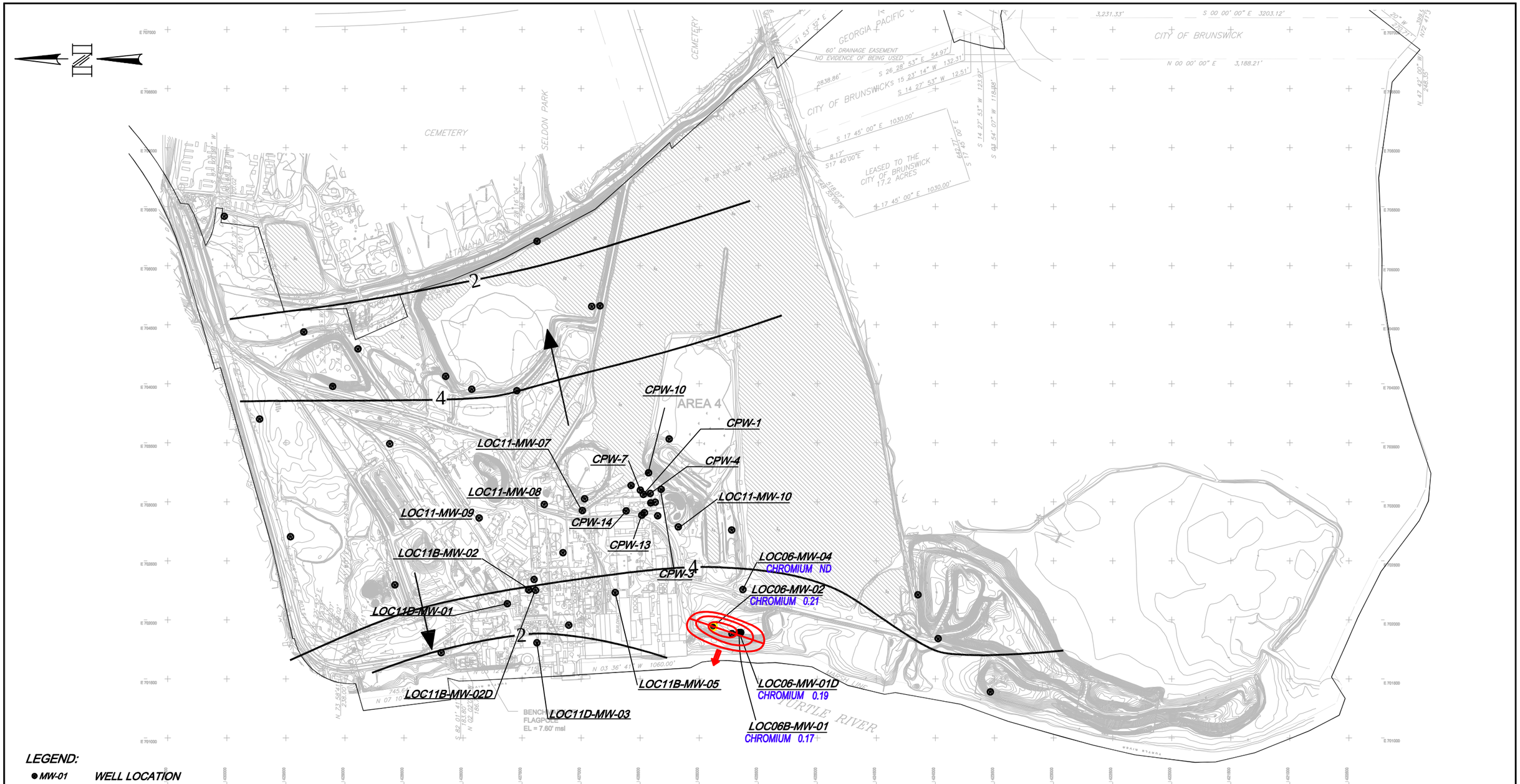
PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

ARSENIC IN TRAILER PARKING LOT

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-2

FILENAME: 206163 - GW COMPL REV FIG5



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

CHROMIUM IN TRAILER PARKING LOT

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-3

FILENAME: 206163 - GW COMPL REV FIG5

LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

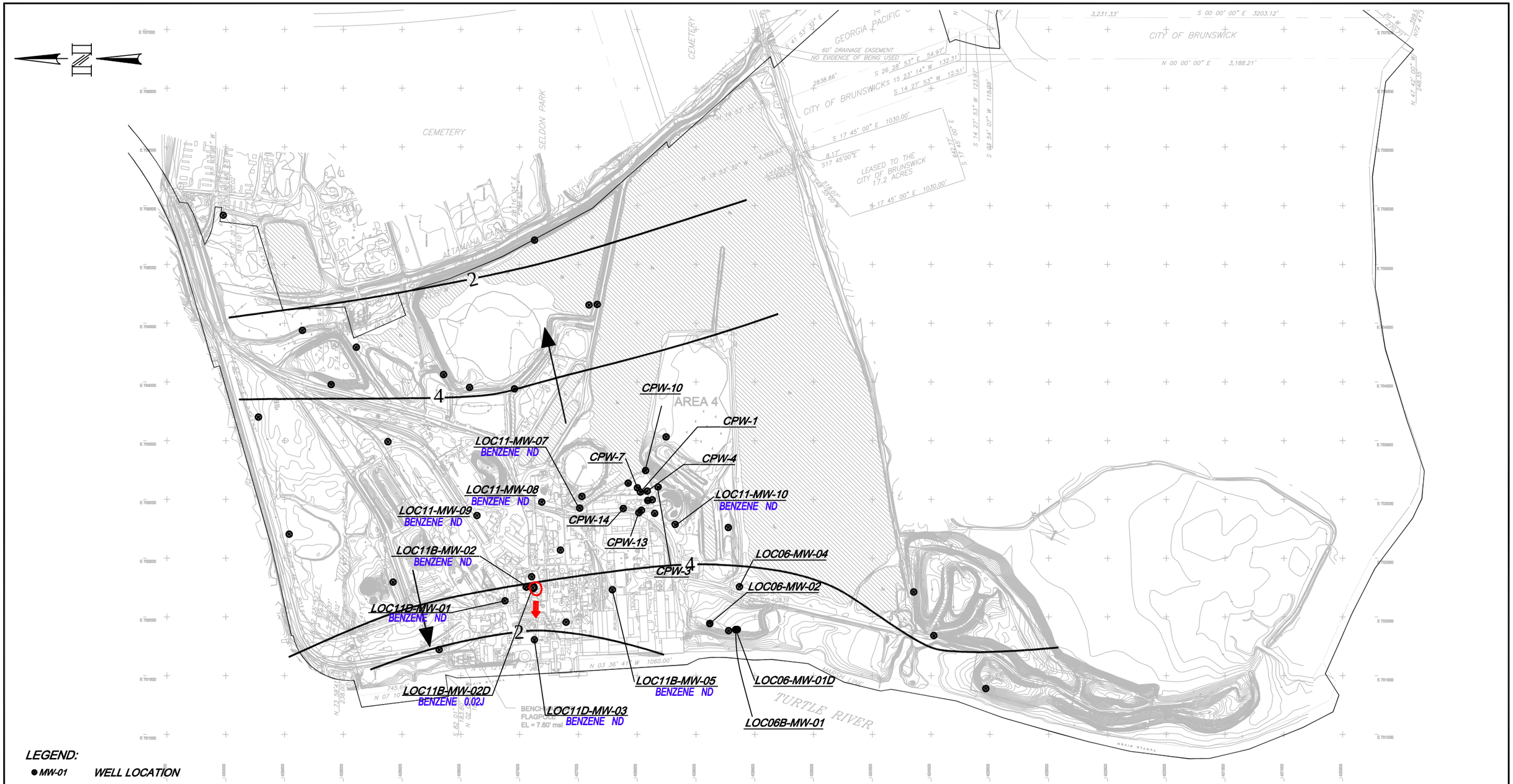
PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

NICKEL IN TRAILER PARKING LOT

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-4

FILENAME: 206163 - GW COMPL REV FIG5



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

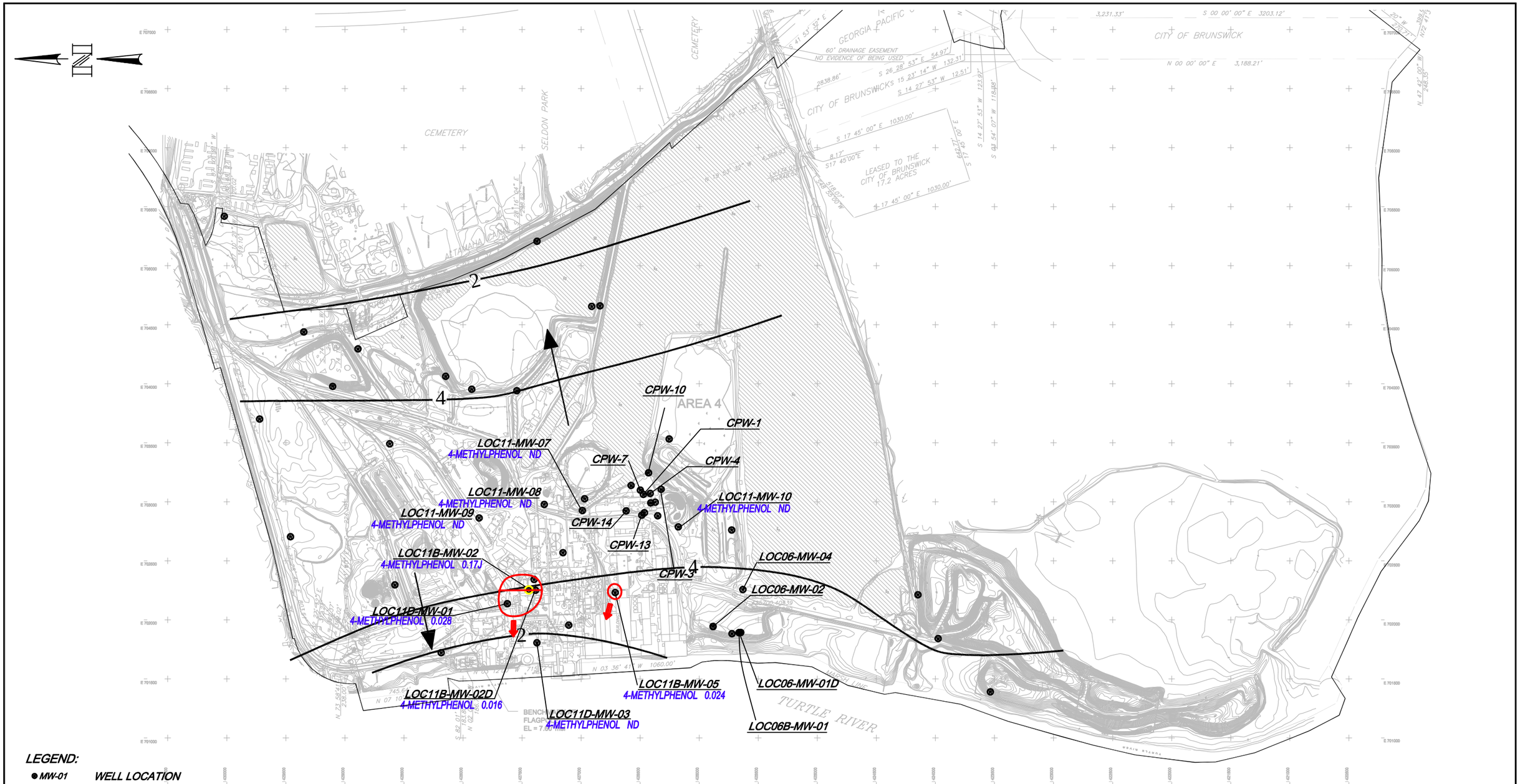
PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

BENZENE IN PROCESS AREA

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-5

FILENAME: 206163 - GW COMPL REV FIG5



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

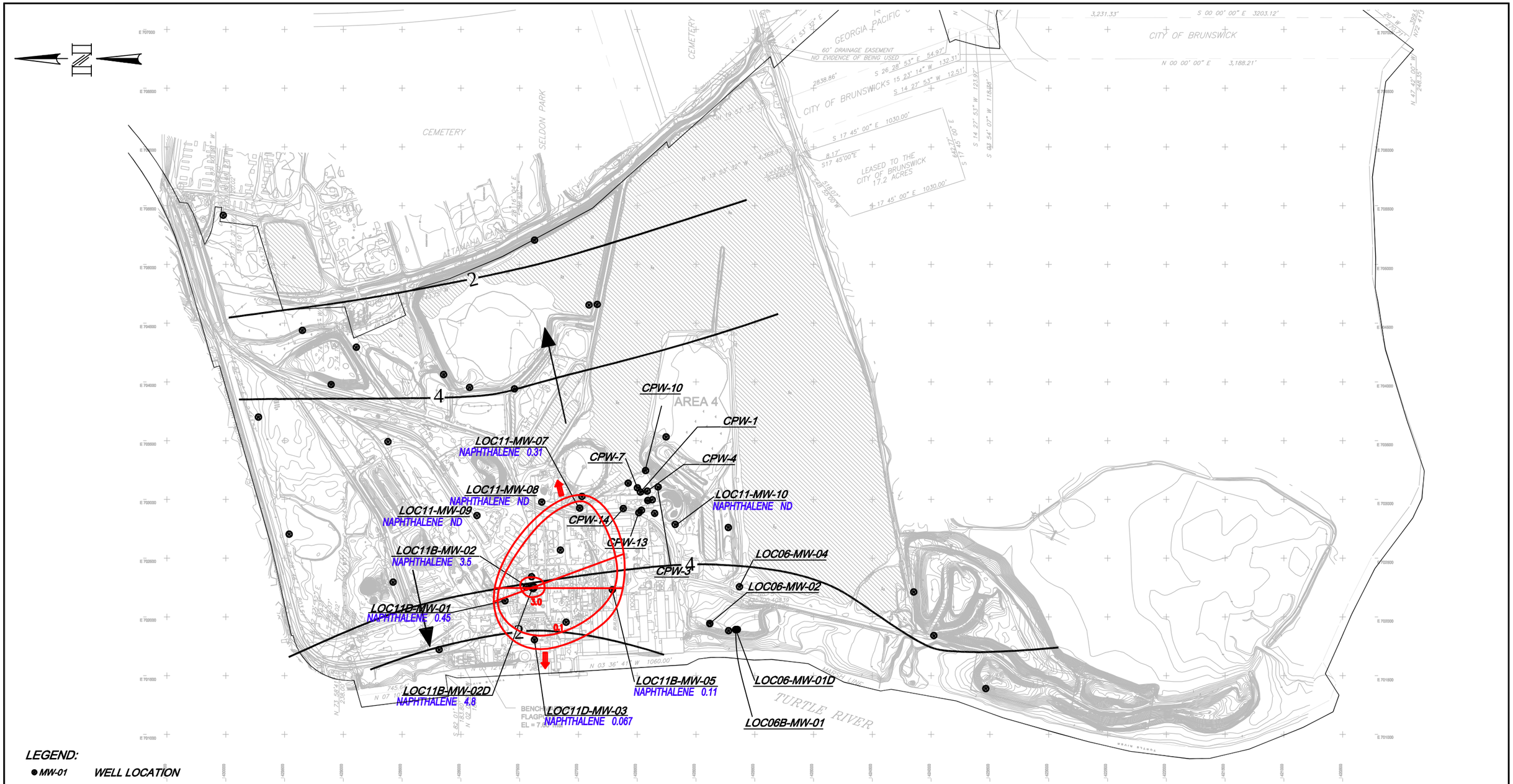
PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

4-METHYLPHENOL IN PROCESS AREA

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-6

FILENAME: 206163 - GW COMPL REV FIG5



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

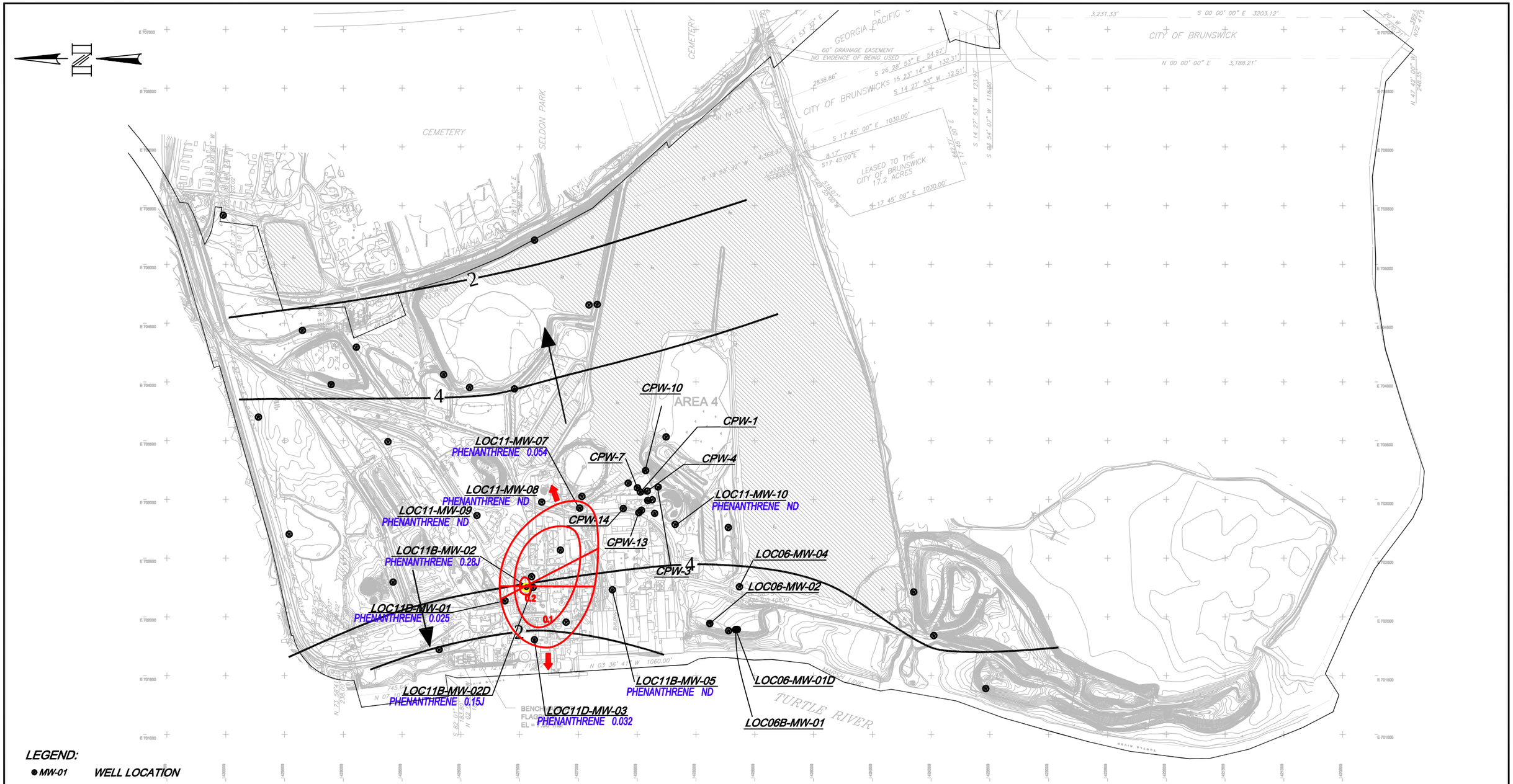
PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

NAPHTHALENE IN PROCESS AREA

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-7

FILENAME: 206163 - GW COMPL REV FIG5



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

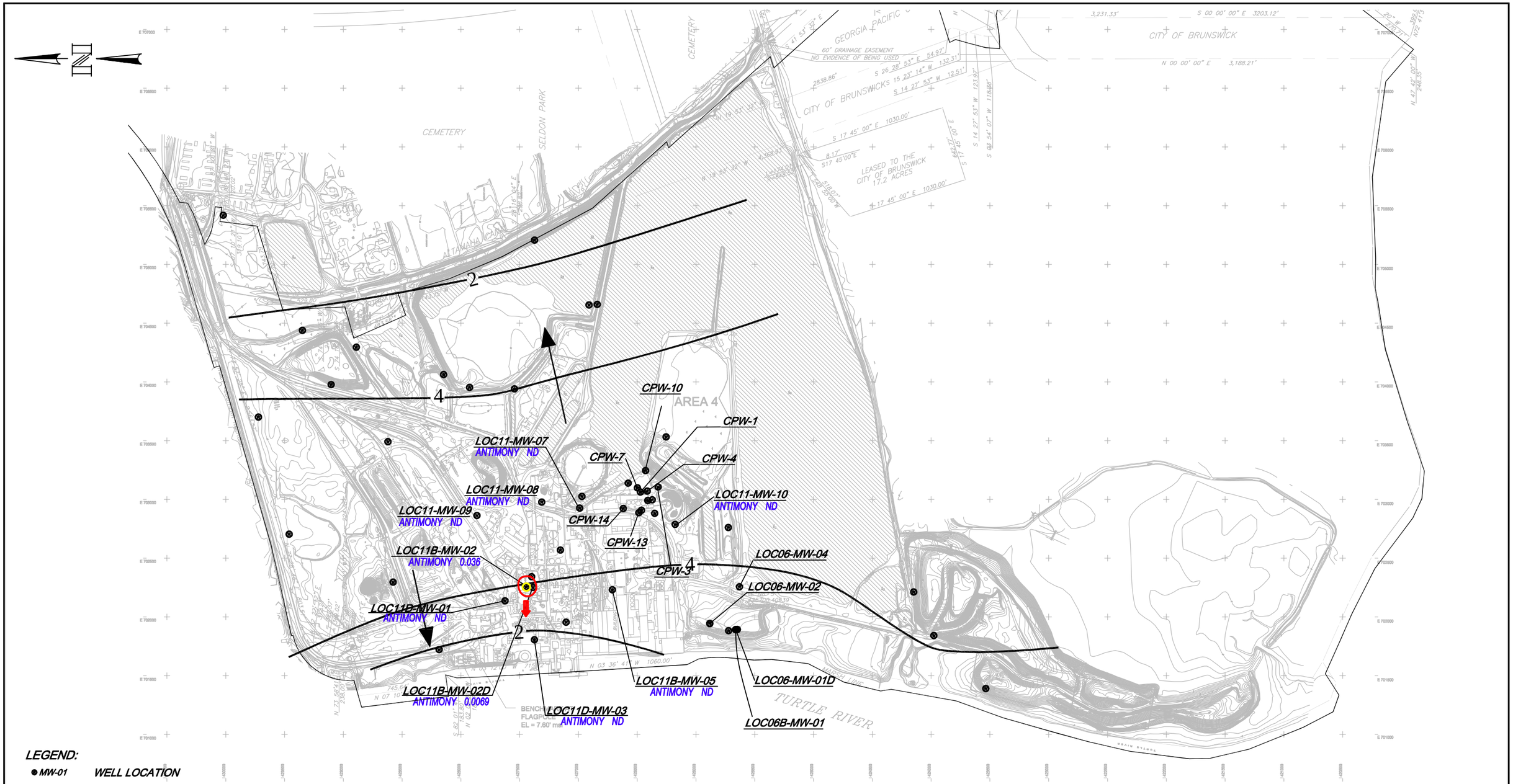
PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

PHENANTHRENE IN PROCESS AREA

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-8

FILENAME: 206163 - GW COMPL REV FIG5



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

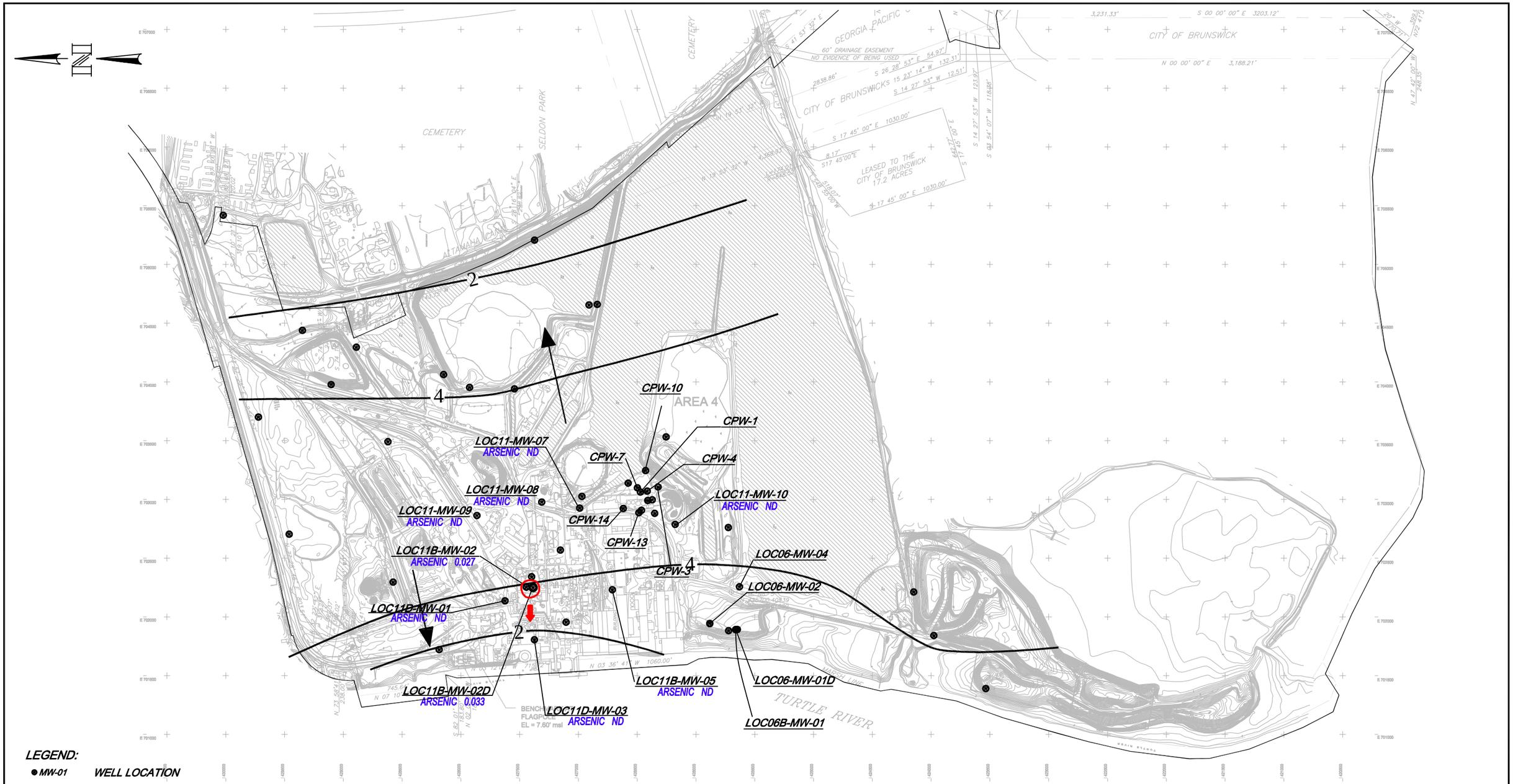
PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

ANTIMONY IN PROCESS AREA

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-9

FILENAME: 206163 - GW COMPL REV FIG5



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

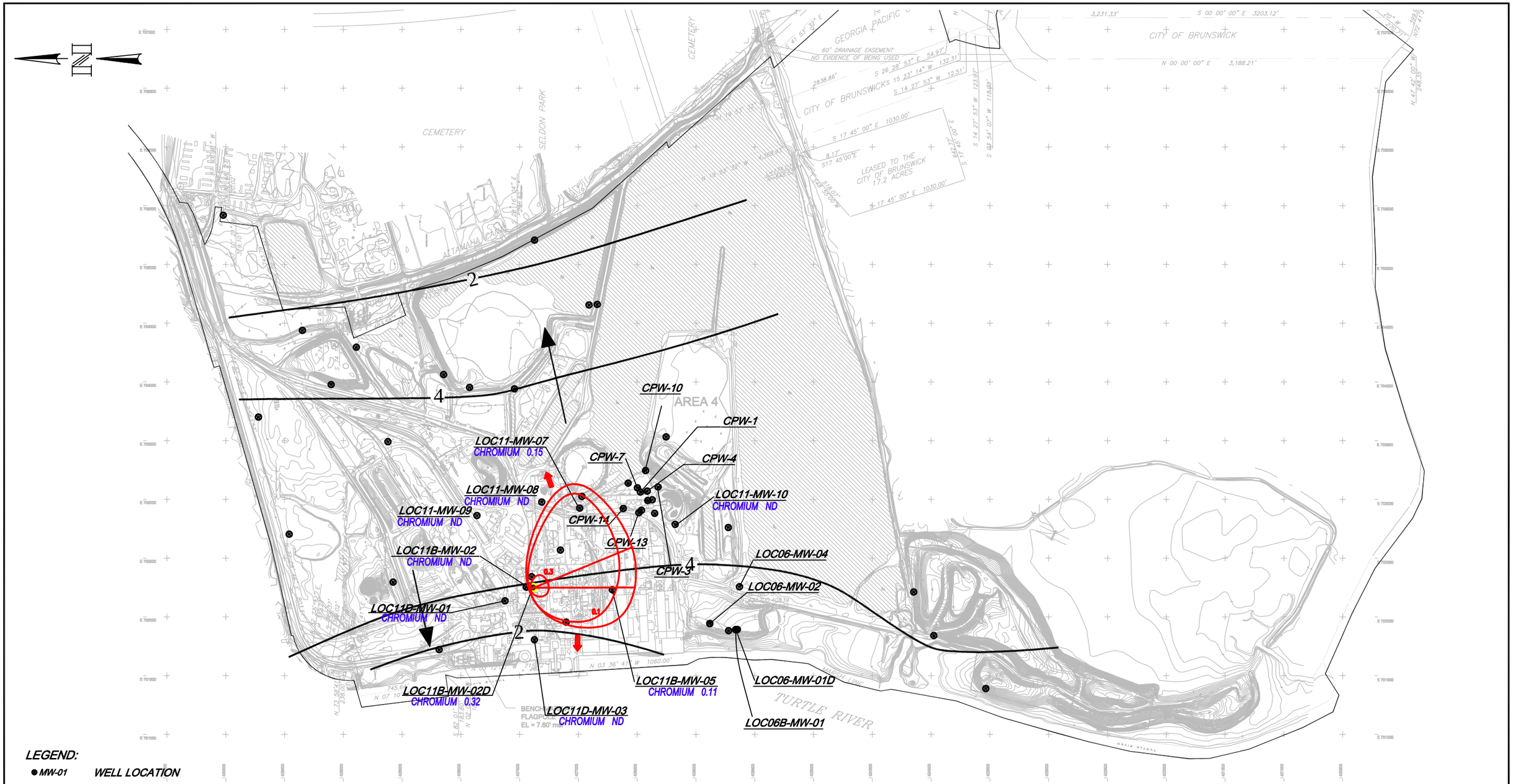
PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

ARESENIC IN PROCESS AREA

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-10

FILENAME: 206163 - GW COMPL REV FIG5



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

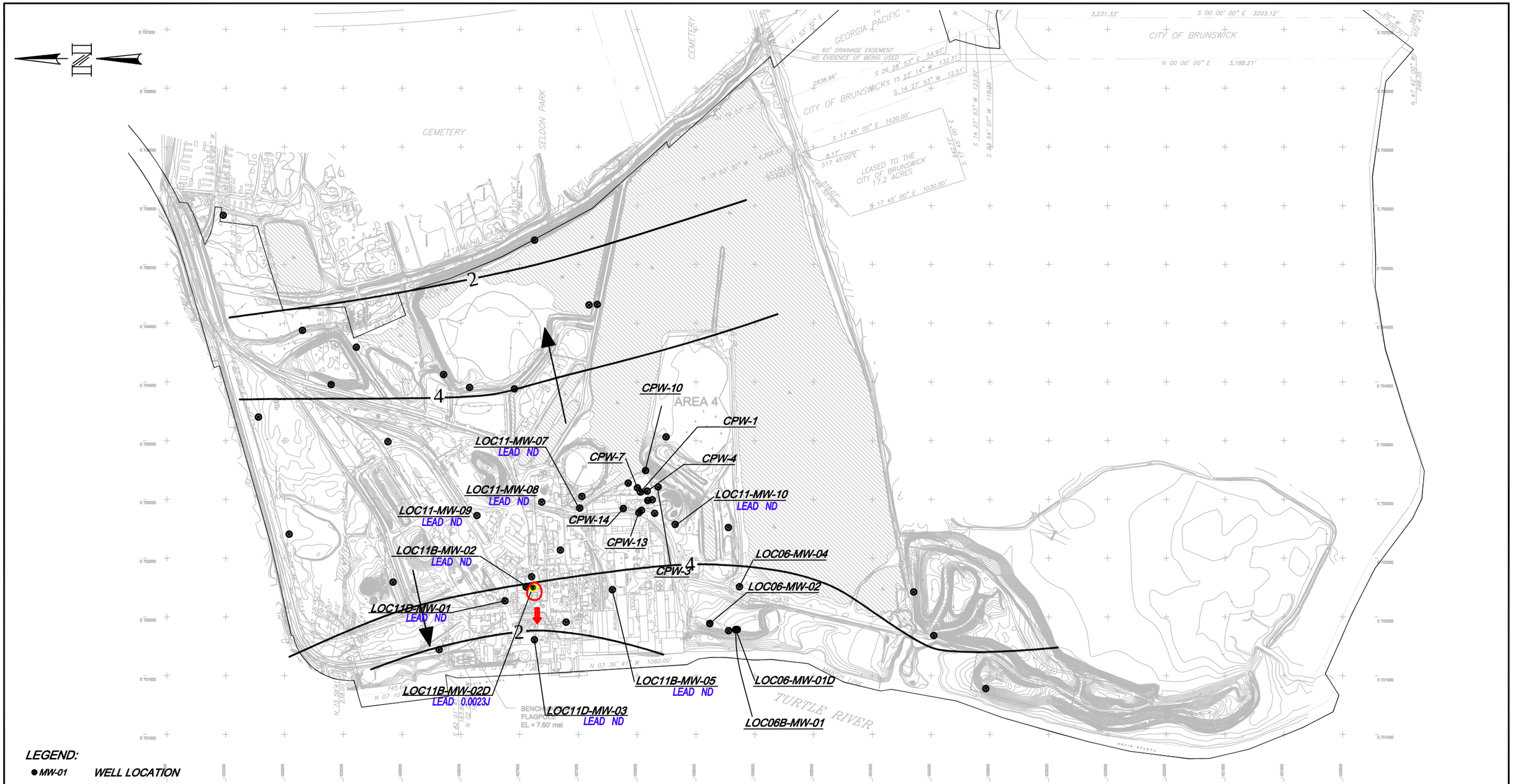
PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

CHROMIUM IN PROCRESS AREA

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-11

FILENAME: 206163 - GW COMPL REV FIG5



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

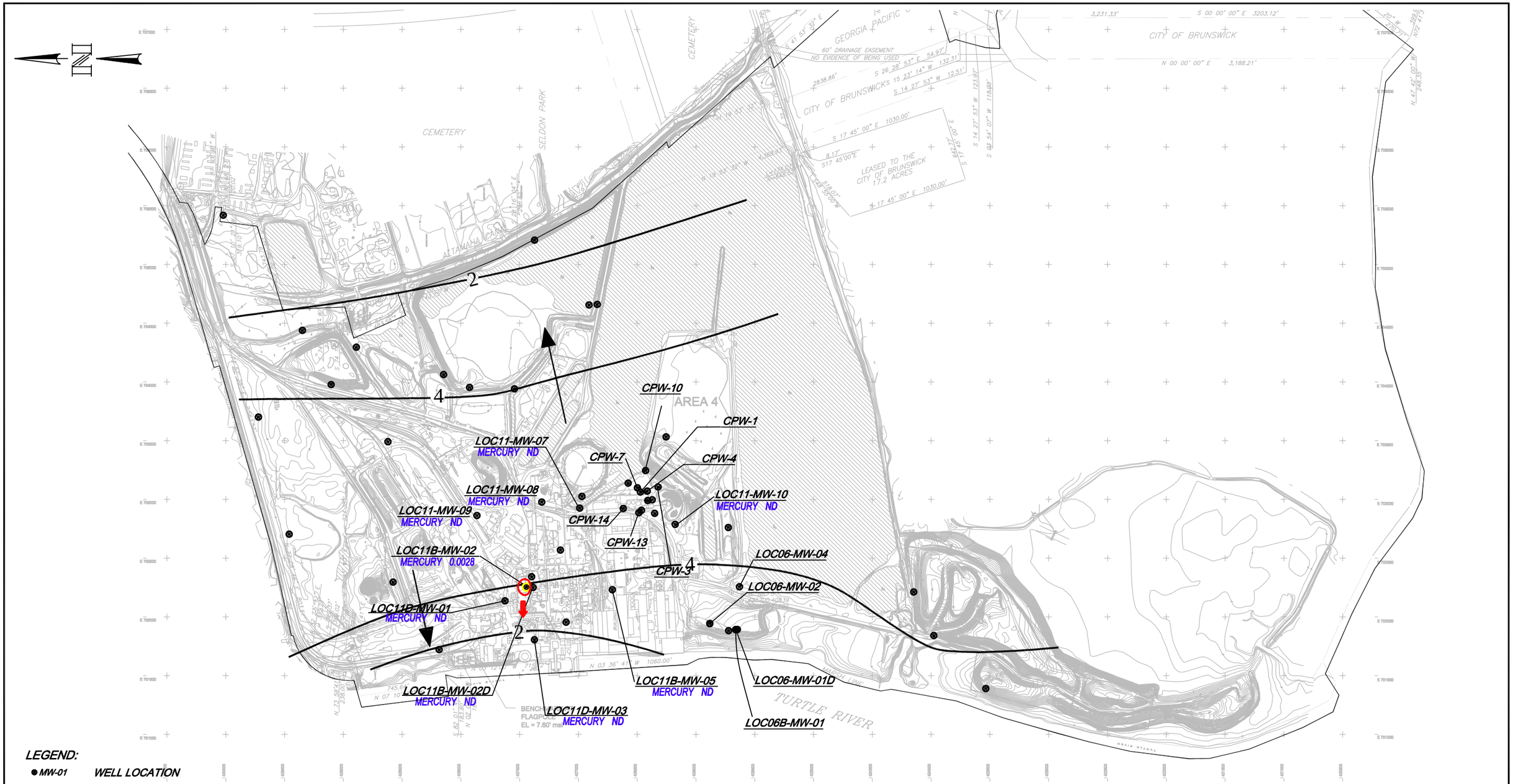
PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

LEAD IN PROCESS AREA

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-12

FILENAME: 206163 - GW COMPL REV FIG5



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

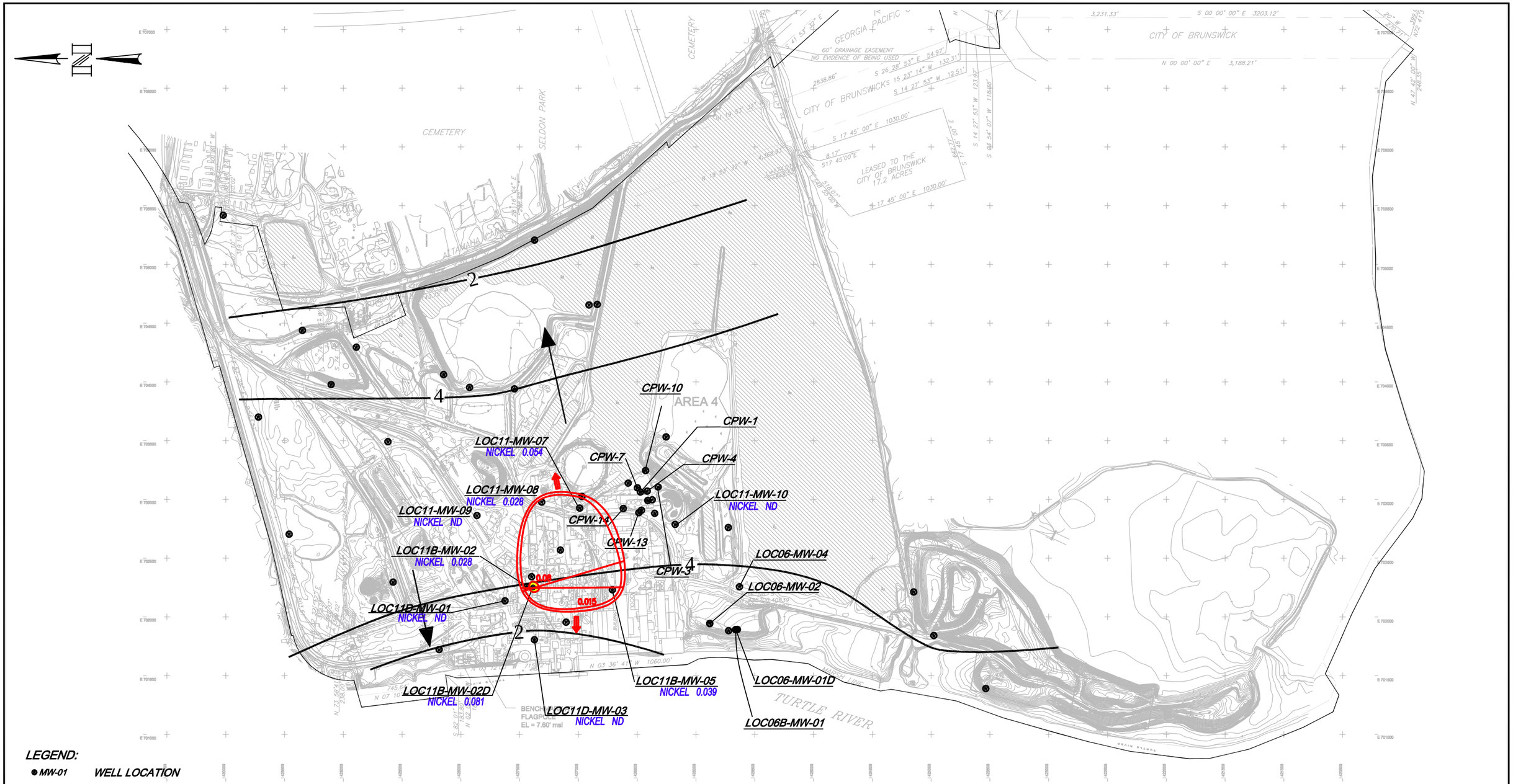
PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

MERCURY IN PROCESS AREA

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-13

FILENAME: 206163 - GW COMPL REV FIG5



LEGEND:

- ● MW-01 — WELL LOCATION
- AREA NOT IN COMPLIANCE WITH APPLICABLE RRS FOR GROUNDWATER
- BENZENE 0.025 — CONSTITUENT CONCENTRATION IN MG/L (MAX CONCENTRATION DETECTED DURING QUARTERLY SAMPLING EVENTS)
- ND — NON DETECT
- 4 — CONTOUR LINES
- GROUNDWATER FLOW DIRECTION
- AERATION STABILIZATION BASIN (ASB)

BASE MAP PROVIDED BY: HOLLEY CONSULTANTS DATED: AUG. 1999

BRUNSWICK CELLULOSE, INC.
BRUNSWICK, GEORGIA

PROJECT NO. 02.20060163

EARTHCON®
EarthCon Consultants, Inc.
1880 WEST OAK PKWY, BLDG 100, STE 106, MARIETTA, GA, 30062

NICKEL IN PROCESS AREA

DRAWN:	CHECKED:	DATE:	FIGURE:
SLS	CN	MARCH 2013	C-14

FILENAME: 206163 - GW COMPL REV FIG5

Stephanie Saia

From: Watson, Brian <brian.watson@tetratech.com>
Sent: Wednesday, March 13, 2013 12:53 PM
To: Stephanie Saia
Subject: RE: Turtle River Flow Rate

Stephanie,
Let me know if you have issues. I sent you the entire watershed flow for the Turtle River, and there is a potential that you may have needed less.

Brian

Brian J. Watson, PE, PH | Director, Water Resources Group
Main: 770.850.0949 | Direct: 770.738.6030 | Fax: 770.850.0950 brian.watson@tetratech.com

Tetra Tech | Complex World, Clear Solutions www.tetratech.com | NASDAQ:TTEK
2110 Powers Ferry Road SE, Suite 202 | Atlanta, GA 30339 PLEASE NOTE: This message, including any attachments, may include privileged, confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

-----Original Message-----
From: Stephanie Saia [mailto:ssaia@earthcon.com]
Sent: Wednesday, March 13, 2013 12:27 PM
To: Watson, Brian
Subject: RE: Turtle River Flow Rate

Brian,
Thank you so much for your help.

Stephanie

-----Original Message-----
From: Watson, Brian [mailto:brian.watson@tetratech.com]
Sent: Wednesday, March 13, 2013 9:54 AM
To: ssaia@earthcon.com
Cc: Elizabeth Booth
Subject: RE: Turtle River Flow Rate

Stephanie,
Per our conversation yesterday, here is a timeseries of Turtle River Flows from January 1, 1998 through December 31, 2007. If you need anything else, please let me know.

Brian

Brian J. Watson, PE, PH | Director, Water Resources Group
Main: 770.850.0949 | Direct: 770.738.6030 | Fax: 770.850.0950 brian.watson@tetratech.com

Tetra Tech | Complex World, Clear Solutions www.tetratech.com | NASDAQ:TTEK
2110 Powers Ferry Road SE, Suite 202 | Atlanta, GA 30339 PLEASE NOTE: This message, including any attachments, may include privileged, confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

-----Original Message-----
From: Elizabeth Booth [mailto:Elizabeth.Booth@dnr.state.ga.us]
Sent: Monday, March 11, 2013 10:12 AM
To: ssaia@earthcon.com; Watson, Brian
Subject: Fwd: Turtle River Flow Rate

Brian, Can you help Stephanie with the information she is requesting?
Thanks Liz

>>> "Stephanie Saia" <ssaia@earthcon.com> 3/8/2013 2:59 PM >>>
Ms. Booth,

I'm working on some modeling along the Turtle River. I was wondering if you may happen to have a flow rate for the Turtle River that you could possible share with me. I was told you had previously worked on a 4D model on the river and might have that information. Thank you so much for your help.

Thanks,

Stephanie Saia, E.I.T.
Staff Engineer
EarthCon Consultants, Inc.

1880 West Oak Parkway

Bldg. 100, Suite 106
Marietta, GA 30062
Office: 770-973-2100 x2892
Fax: <tel:770-874-1820> 770-874-1820

Mobile: 404-955-4650
<mailto:ssaia@earthcon.com> ssaia@earthcon.com

www.earthcon.com

Statement of Confidentiality: This email and any attachments transmitted with it are confidential and intended solely for the use of the individual or entity to which they are addressed. The information contained in this email is highly confidential and may be subject to legally enforceable privileges. If you are not the intended recipient, or a person

responsible for delivering it to the intended recipient, you are hereby notified that any disclosure, reliance, copying, distribution, dissemination or use of any of the information contained in or attached to this transmission is STRICTLY PROHIBITED. If you have received this communication in error, please notify EarthCon immediately by replying to this email. Please delete all copies of this message and any attachments immediately.

Turtle River Flow Time Series

Drainage are	Year	Month	Day	Date	Flow (cfs)
49278.251	1998	1	1	1/1/1998	1.71E+02
	1998	1	2	1/2/1998	1.51E+02
	1998	1	3	1/3/1998	1.34E+02
	1998	1	4	1/4/1998	1.19E+02
	1998	1	5	1/5/1998	1.07E+02
	1998	1	6	1/6/1998	9.76E+01
	1998	1	7	1/7/1998	8.73E+01
	1998	1	8	1/8/1998	4.62E+02
	1998	1	9	1/9/1998	2.01E+02
	1998	1	10	1/10/1998	1.57E+02
	1998	1	11	1/11/1998	1.43E+02
	1998	1	12	1/12/1998	1.31E+02
	1998	1	13	1/13/1998	1.20E+02
	1998	1	14	1/14/1998	1.11E+02
	1998	1	15	1/15/1998	1.02E+02
	1998	1	16	1/16/1998	1.72E+02
	1998	1	17	1/17/1998	1.34E+02
	1998	1	18	1/18/1998	1.07E+02
	1998	1	19	1/19/1998	1.09E+02
	1998	1	20	1/20/1998	1.06E+02
	1998	1	21	1/21/1998	9.47E+01
	1998	1	22	1/22/1998	8.84E+01
	1998	1	23	1/23/1998	1.27E+03
	1998	1	24	1/24/1998	3.00E+02
	1998	1	25	1/25/1998	2.25E+02
	1998	1	26	1/26/1998	2.06E+02
	1998	1	27	1/27/1998	1.23E+03
	1998	1	28	1/28/1998	3.50E+02
	1998	1	29	1/29/1998	2.51E+02
	1998	1	30	1/30/1998	2.25E+02
	1998	1	31	1/31/1998	2.00E+02
	1998	2	1	2/1/1998	1.76E+02
	1998	2	2	2/2/1998	1.61E+02
	1998	2	3	2/3/1998	1.54E+02
	1998	2	4	2/4/1998	1.62E+02
	1998	2	5	2/5/1998	1.44E+02
	1998	2	6	2/6/1998	1.23E+02
	1998	2	7	2/7/1998	1.10E+02
	1998	2	8	2/8/1998	9.61E+01
	1998	2	9	2/9/1998	8.03E+01
	1998	2	10	2/10/1998	6.87E+01
	1998	2	11	2/11/1998	6.44E+01
	1998	2	12	2/12/1998	5.56E+01
	1998	2	13	2/13/1998	4.80E+01
	1998	2	14	2/14/1998	4.31E+01
	1998	2	15	2/15/1998	3.50E+01
	1998	2	16	2/16/1998	6.49E+02
	1998	2	17	2/17/1998	5.60E+03
	1998	2	18	2/18/1998	3.77E+02
	1998	2	19	2/19/1998	3.07E+02
	1998	2	20	2/20/1998	2.78E+02
	1998	2	21	2/21/1998	2.47E+02
	1998	2	22	2/22/1998	2.65E+02
	1998	2	23	2/23/1998	4.83E+02
	1998	2	24	2/24/1998	3.98E+02
	1998	2	25	2/25/1998	3.21E+02

1998	2	26	2/26/1998	2.80E+02
1998	2	27	2/27/1998	2.55E+02
1998	2	28	2/28/1998	2.45E+02
1998	3	1	3/1/1998	2.13E+02
1998	3	2	3/2/1998	1.84E+02
1998	3	3	3/3/1998	1.61E+02
1998	3	4	3/4/1998	1.39E+02
1998	3	5	3/5/1998	1.29E+02
1998	3	6	3/6/1998	1.17E+02
1998	3	7	3/7/1998	1.16E+02
1998	3	8	3/8/1998	1.24E+02
1998	3	9	3/9/1998	2.25E+02
1998	3	10	3/10/1998	2.27E+02
1998	3	11	3/11/1998	1.59E+02
1998	3	12	3/12/1998	1.39E+02
1998	3	13	3/13/1998	1.21E+02
1998	3	14	3/14/1998	1.01E+02
1998	3	15	3/15/1998	8.39E+01
1998	3	16	3/16/1998	7.16E+01
1998	3	17	3/17/1998	7.09E+01
1998	3	18	3/18/1998	6.85E+01
1998	3	19	3/19/1998	2.20E+02
1998	3	20	3/20/1998	9.10E+01
1998	3	21	3/21/1998	7.27E+01
1998	3	22	3/22/1998	6.29E+01
1998	3	23	3/23/1998	5.15E+01
1998	3	24	3/24/1998	5.00E+01
1998	3	25	3/25/1998	4.54E+01
1998	3	26	3/26/1998	3.48E+01
1998	3	27	3/27/1998	2.97E+01
1998	3	28	3/28/1998	2.57E+01
1998	3	29	3/29/1998	2.24E+01
1998	3	30	3/30/1998	1.96E+01
1998	3	31	3/31/1998	1.74E+01
1998	4	1	4/1/1998	1.58E+01
1998	4	2	4/2/1998	1.39E+01
1998	4	3	4/3/1998	1.29E+01
1998	4	4	4/4/1998	1.25E+01
1998	4	5	4/5/1998	9.61E+00
1998	4	6	4/6/1998	7.45E+00
1998	4	7	4/7/1998	5.99E+00
1998	4	8	4/8/1998	9.82E+00
1998	4	9	4/9/1998	2.69E+01
1998	4	10	4/10/1998	2.88E+01
1998	4	11	4/11/1998	2.61E+01
1998	4	12	4/12/1998	2.15E+01
1998	4	13	4/13/1998	1.86E+01
1998	4	14	4/14/1998	1.93E+01
1998	4	15	4/15/1998	2.08E+01
1998	4	16	4/16/1998	1.63E+01
1998	4	17	4/17/1998	1.38E+01
1998	4	18	4/18/1998	1.23E+01
1998	4	19	4/19/1998	1.07E+01
1998	4	20	4/20/1998	9.25E+00
1998	4	21	4/21/1998	7.45E+00
1998	4	22	4/22/1998	7.55E+00
1998	4	23	4/23/1998	8.93E+00
1998	4	24	4/24/1998	8.03E+00

1998	4	25	4/25/1998	6.55E+00
1998	4	26	4/26/1998	5.52E+00
1998	4	27	4/27/1998	4.82E+00
1998	4	28	4/28/1998	4.25E+00
1998	4	29	4/29/1998	4.26E+00
1998	4	30	4/30/1998	4.89E+00
1998	5	1	5/1/1998	1.71E+01
1998	5	2	5/2/1998	1.71E+01
1998	5	3	5/3/1998	1.45E+01
1998	5	4	5/4/1998	1.63E+01
1998	5	5	5/5/1998	1.47E+01
1998	5	6	5/6/1998	1.26E+01
1998	5	7	5/7/1998	1.14E+01
1998	5	8	5/8/1998	1.03E+01
1998	5	9	5/9/1998	8.76E+00
1998	5	10	5/10/1998	7.55E+00
1998	5	11	5/11/1998	6.66E+00
1998	5	12	5/12/1998	5.78E+00
1998	5	13	5/13/1998	5.02E+00
1998	5	14	5/14/1998	4.33E+00
1998	5	15	5/15/1998	3.64E+00
1998	5	16	5/16/1998	3.02E+00
1998	5	17	5/17/1998	2.56E+00
1998	5	18	5/18/1998	2.14E+00
1998	5	19	5/19/1998	1.61E+00
1998	5	20	5/20/1998	1.13E+00
1998	5	21	5/21/1998	8.13E-01
1998	5	22	5/22/1998	6.47E-01
1998	5	23	5/23/1998	5.57E-01
1998	5	24	5/24/1998	5.02E-01
1998	5	25	5/25/1998	4.65E-01
1998	5	26	5/26/1998	4.38E-01
1998	5	27	5/27/1998	7.95E-01
1998	5	28	5/28/1998	1.40E+00
1998	5	29	5/29/1998	1.33E+00
1998	5	30	5/30/1998	1.05E+00
1998	5	31	5/31/1998	7.77E-01
1998	6	1	6/1/1998	5.96E-01
1998	6	2	6/2/1998	4.87E-01
1998	6	3	6/3/1998	4.21E-01
1998	6	4	6/4/1998	3.86E-01
1998	6	5	6/5/1998	3.76E-01
1998	6	6	6/6/1998	4.63E-01
1998	6	7	6/7/1998	5.20E-01
1998	6	8	6/8/1998	4.72E-01
1998	6	9	6/9/1998	4.32E-01
1998	6	10	6/10/1998	4.05E-01
1998	6	11	6/11/1998	4.66E-01
1998	6	12	6/12/1998	5.05E-01
1998	6	13	6/13/1998	4.55E-01
1998	6	14	6/14/1998	4.15E-01
1998	6	15	6/15/1998	3.89E-01
1998	6	16	6/16/1998	3.74E-01
1998	6	17	6/17/1998	3.60E-01
1998	6	18	6/18/1998	3.48E-01
1998	6	19	6/19/1998	1.13E+00
1998	6	20	6/20/1998	2.48E+00
1998	6	21	6/21/1998	2.04E+00

1998	6	22	6/22/1998	1.46E+00
1998	6	23	6/23/1998	1.05E+00
1998	6	24	6/24/1998	7.57E-01
1998	6	25	6/25/1998	5.63E-01
1998	6	26	6/26/1998	4.54E-01
1998	6	27	6/27/1998	3.95E-01
1998	6	28	6/28/1998	3.64E-01
1998	6	29	6/29/1998	3.48E-01
1998	6	30	6/30/1998	3.39E-01
1998	7	1	7/1/1998	3.49E-01
1998	7	2	7/2/1998	6.32E-01
1998	7	3	7/3/1998	9.96E-01
1998	7	4	7/4/1998	1.47E+00
1998	7	5	7/5/1998	2.00E+00
1998	7	6	7/6/1998	2.83E+00
1998	7	7	7/7/1998	3.39E+00
1998	7	8	7/8/1998	2.40E+00
1998	7	9	7/9/1998	1.87E+00
1998	7	10	7/10/1998	1.58E+00
1998	7	11	7/11/1998	1.15E+00
1998	7	12	7/12/1998	4.54E+00
1998	7	13	7/13/1998	9.25E+00
1998	7	14	7/14/1998	1.71E+01
1998	7	15	7/15/1998	2.87E+01
1998	7	16	7/16/1998	1.53E+01
1998	7	17	7/17/1998	9.26E+00
1998	7	18	7/18/1998	1.73E+01
1998	7	19	7/19/1998	4.29E+01
1998	7	20	7/20/1998	1.76E+01
1998	7	21	7/21/1998	1.11E+01
1998	7	22	7/22/1998	9.87E+00
1998	7	23	7/23/1998	1.13E+01
1998	7	24	7/24/1998	1.14E+01
1998	7	25	7/25/1998	9.24E+00
1998	7	26	7/26/1998	1.11E+01
1998	7	27	7/27/1998	1.38E+01
1998	7	28	7/28/1998	1.22E+01
1998	7	29	7/29/1998	1.23E+01
1998	7	30	7/30/1998	9.80E+00
1998	7	31	7/31/1998	8.61E+00
1998	8	1	8/1/1998	8.61E+00
1998	8	2	8/2/1998	7.41E+00
1998	8	3	8/3/1998	6.04E+00
1998	8	4	8/4/1998	5.34E+00
1998	8	5	8/5/1998	4.84E+00
1998	8	6	8/6/1998	4.25E+00
1998	8	7	8/7/1998	8.39E+00
1998	8	8	8/8/1998	8.34E+00
1998	8	9	8/9/1998	8.65E+00
1998	8	10	8/10/1998	2.24E+01
1998	8	11	8/11/1998	2.65E+01
1998	8	12	8/12/1998	1.56E+01
1998	8	13	8/13/1998	1.36E+01
1998	8	14	8/14/1998	1.23E+01
1998	8	15	8/15/1998	1.15E+01
1998	8	16	8/16/1998	1.04E+01
1998	8	17	8/17/1998	9.65E+00
1998	8	18	8/18/1998	9.83E+00

1998	8	19	8/19/1998	9.58E+00
1998	8	20	8/20/1998	7.91E+00
1998	8	21	8/21/1998	9.30E+00
1998	8	22	8/22/1998	1.04E+01
1998	8	23	8/23/1998	8.03E+00
1998	8	24	8/24/1998	6.30E+00
1998	8	25	8/25/1998	5.47E+00
1998	8	26	8/26/1998	4.92E+00
1998	8	27	8/27/1998	4.43E+00
1998	8	28	8/28/1998	3.94E+00
1998	8	29	8/29/1998	3.48E+00
1998	8	30	8/30/1998	3.03E+00
1998	8	31	8/31/1998	2.64E+00
1998	9	1	9/1/1998	2.35E+00
1998	9	2	9/2/1998	2.14E+00
1998	9	3	9/3/1998	3.63E+00
1998	9	4	9/4/1998	4.33E+00
1998	9	5	9/5/1998	3.55E+00
1998	9	6	9/6/1998	2.70E+00
1998	9	7	9/7/1998	2.27E+00
1998	9	8	9/8/1998	2.02E+00
1998	9	9	9/9/1998	1.69E+00
1998	9	10	9/10/1998	1.42E+00
1998	9	11	9/11/1998	1.23E+00
1998	9	12	9/12/1998	1.10E+00
1998	9	13	9/13/1998	9.79E-01
1998	9	14	9/14/1998	8.80E-01
1998	9	15	9/15/1998	7.96E-01
1998	9	16	9/16/1998	7.25E-01
1998	9	17	9/17/1998	7.21E-01
1998	9	18	9/18/1998	3.03E+00
1998	9	19	9/19/1998	1.54E+01
1998	9	20	9/20/1998	2.35E+01
1998	9	21	9/21/1998	1.43E+01
1998	9	22	9/22/1998	1.15E+01
1998	9	23	9/23/1998	9.49E+00
1998	9	24	9/24/1998	8.09E+00
1998	9	25	9/25/1998	6.98E+00
1998	9	26	9/26/1998	6.23E+00
1998	9	27	9/27/1998	5.72E+00
1998	9	28	9/28/1998	5.42E+00
1998	9	29	9/29/1998	5.29E+00
1998	9	30	9/30/1998	3.67E+01
1998	10	1	10/1/1998	4.63E+01
1998	10	2	10/2/1998	3.15E+01
1998	10	3	10/3/1998	1.02E+02
1998	10	4	10/4/1998	1.29E+02
1998	10	5	10/5/1998	5.31E+01
1998	10	6	10/6/1998	4.88E+01
1998	10	7	10/7/1998	4.79E+01
1998	10	8	10/8/1998	4.28E+01
1998	10	9	10/9/1998	3.97E+01
1998	10	10	10/10/1998	3.42E+01
1998	10	11	10/11/1998	3.11E+01
1998	10	12	10/12/1998	2.83E+01
1998	10	13	10/13/1998	2.60E+01
1998	10	14	10/14/1998	2.38E+01
1998	10	15	10/15/1998	2.15E+01

1998	10	16	10/16/1998	1.95E+01
1998	10	17	10/17/1998	1.79E+01
1998	10	18	10/18/1998	1.64E+01
1998	10	19	10/19/1998	1.50E+01
1998	10	20	10/20/1998	1.38E+01
1998	10	21	10/21/1998	1.29E+01
1998	10	22	10/22/1998	1.20E+01
1998	10	23	10/23/1998	1.09E+01
1998	10	24	10/24/1998	1.00E+01
1998	10	25	10/25/1998	9.21E+00
1998	10	26	10/26/1998	8.40E+00
1998	10	27	10/27/1998	7.68E+00
1998	10	28	10/28/1998	7.05E+00
1998	10	29	10/29/1998	6.47E+00
1998	10	30	10/30/1998	5.94E+00
1998	10	31	10/31/1998	5.53E+00
1998	11	1	11/1/1998	5.21E+00
1998	11	2	11/2/1998	4.93E+00
1998	11	3	11/3/1998	4.65E+00
1998	11	4	11/4/1998	4.43E+00
1998	11	5	11/5/1998	4.18E+00
1998	11	6	11/6/1998	3.90E+00
1998	11	7	11/7/1998	3.62E+00
1998	11	8	11/8/1998	3.38E+00
1998	11	9	11/9/1998	3.18E+00
1998	11	10	11/10/1998	3.00E+00
1998	11	11	11/11/1998	2.83E+00
1998	11	12	11/12/1998	2.69E+00
1998	11	13	11/13/1998	2.54E+00
1998	11	14	11/14/1998	2.41E+00
1998	11	15	11/15/1998	2.30E+00
1998	11	16	11/16/1998	2.23E+00
1998	11	17	11/17/1998	2.16E+00
1998	11	18	11/18/1998	2.01E+00
1998	11	19	11/19/1998	1.87E+00
1998	11	20	11/20/1998	1.77E+00
1998	11	21	11/21/1998	1.67E+00
1998	11	22	11/22/1998	1.60E+00
1998	11	23	11/23/1998	1.55E+00
1998	11	24	11/24/1998	2.17E+00
1998	11	25	11/25/1998	2.13E+00
1998	11	26	11/26/1998	1.96E+00
1998	11	27	11/27/1998	1.75E+00
1998	11	28	11/28/1998	1.57E+00
1998	11	29	11/29/1998	1.43E+00
1998	11	30	11/30/1998	1.32E+00
1998	12	1	12/1/1998	1.21E+00
1998	12	2	12/2/1998	1.11E+00
1998	12	3	12/3/1998	1.02E+00
1998	12	4	12/4/1998	9.34E-01
1998	12	5	12/5/1998	8.60E-01
1998	12	6	12/6/1998	8.01E-01
1998	12	7	12/7/1998	7.53E-01
1998	12	8	12/8/1998	7.10E-01
1998	12	9	12/9/1998	6.66E-01
1998	12	10	12/10/1998	6.21E-01
1998	12	11	12/11/1998	5.83E-01
1998	12	12	12/12/1998	6.47E-01

1998	12	13	12/13/1998	8.88E-01
1998	12	14	12/14/1998	9.26E-01
1998	12	15	12/15/1998	1.26E+00
1998	12	16	12/16/1998	1.67E+00
1998	12	17	12/17/1998	1.64E+00
1998	12	18	12/18/1998	1.49E+00
1998	12	19	12/19/1998	1.36E+00
1998	12	20	12/20/1998	1.27E+00
1998	12	21	12/21/1998	1.20E+00
1998	12	22	12/22/1998	1.13E+00
1998	12	23	12/23/1998	1.08E+00
1998	12	24	12/24/1998	1.06E+00
1998	12	25	12/25/1998	1.19E+00
1998	12	26	12/26/1998	3.43E+00
1998	12	27	12/27/1998	4.42E+00
1998	12	28	12/28/1998	4.71E+00
1998	12	29	12/29/1998	5.05E+00
1998	12	30	12/30/1998	5.91E+00
1998	12	31	12/31/1998	5.60E+00
1999	1	1	1/1/1999	5.27E+00
1999	1	2	1/2/1999	5.08E+00
1999	1	3	1/3/1999	6.12E+00
1999	1	4	1/4/1999	5.59E+00
1999	1	5	1/5/1999	5.13E+00
1999	1	6	1/6/1999	4.78E+00
1999	1	7	1/7/1999	4.52E+00
1999	1	8	1/8/1999	4.30E+00
1999	1	9	1/9/1999	5.12E+00
1999	1	10	1/10/1999	7.57E+00
1999	1	11	1/11/1999	7.14E+00
1999	1	12	1/12/1999	6.09E+00
1999	1	13	1/13/1999	5.57E+00
1999	1	14	1/14/1999	5.31E+00
1999	1	15	1/15/1999	5.10E+00
1999	1	16	1/16/1999	4.82E+00
1999	1	17	1/17/1999	4.61E+00
1999	1	18	1/18/1999	4.53E+00
1999	1	19	1/19/1999	4.35E+00
1999	1	20	1/20/1999	4.08E+00
1999	1	21	1/21/1999	3.82E+00
1999	1	22	1/22/1999	3.60E+00
1999	1	23	1/23/1999	7.16E+00
1999	1	24	1/24/1999	7.38E+01
1999	1	25	1/25/1999	4.73E+01
1999	1	26	1/26/1999	3.36E+01
1999	1	27	1/27/1999	3.08E+01
1999	1	28	1/28/1999	2.87E+01
1999	1	29	1/29/1999	2.59E+01
1999	1	30	1/30/1999	2.61E+01
1999	1	31	1/31/1999	3.15E+01
1999	2	1	2/1/1999	7.83E+02
1999	2	2	2/2/1999	4.15E+02
1999	2	3	2/3/1999	1.47E+02
1999	2	4	2/4/1999	1.32E+02
1999	2	5	2/5/1999	1.22E+02
1999	2	6	2/6/1999	1.13E+02
1999	2	7	2/7/1999	1.02E+02
1999	2	8	2/8/1999	9.06E+01

1999	2	9	2/9/1999	8.49E+01
1999	2	10	2/10/1999	8.14E+01
1999	2	11	2/11/1999	7.13E+01
1999	2	12	2/12/1999	6.44E+01
1999	2	13	2/13/1999	5.90E+01
1999	2	14	2/14/1999	5.14E+01
1999	2	15	2/15/1999	4.58E+01
1999	2	16	2/16/1999	4.00E+01
1999	2	17	2/17/1999	3.58E+01
1999	2	18	2/18/1999	3.28E+01
1999	2	19	2/19/1999	2.99E+01
1999	2	20	2/20/1999	2.75E+01
1999	2	21	2/21/1999	2.56E+01
1999	2	22	2/22/1999	2.40E+01
1999	2	23	2/23/1999	2.22E+01
1999	2	24	2/24/1999	2.17E+01
1999	2	25	2/25/1999	1.88E+01
1999	2	26	2/26/1999	1.63E+01
1999	2	27	2/27/1999	1.50E+01
1999	2	28	2/28/1999	1.67E+01
1999	3	1	3/1/1999	1.72E+01
1999	3	2	3/2/1999	1.56E+01
1999	3	3	3/3/1999	1.44E+01
1999	3	4	3/4/1999	1.35E+01
1999	3	5	3/5/1999	1.22E+01
1999	3	6	3/6/1999	1.11E+01
1999	3	7	3/7/1999	9.98E+00
1999	3	8	3/8/1999	9.08E+00
1999	3	9	3/9/1999	9.09E+00
1999	3	10	3/10/1999	8.84E+00
1999	3	11	3/11/1999	7.64E+00
1999	3	12	3/12/1999	6.76E+00
1999	3	13	3/13/1999	6.19E+00
1999	3	14	3/14/1999	9.29E+00
1999	3	15	3/15/1999	1.20E+01
1999	3	16	3/16/1999	1.09E+01
1999	3	17	3/17/1999	9.38E+00
1999	3	18	3/18/1999	8.26E+00
1999	3	19	3/19/1999	7.35E+00
1999	3	20	3/20/1999	6.64E+00
1999	3	21	3/21/1999	6.31E+00
1999	3	22	3/22/1999	5.84E+00
1999	3	23	3/23/1999	5.29E+00
1999	3	24	3/24/1999	4.76E+00
1999	3	25	3/25/1999	4.37E+00
1999	3	26	3/26/1999	4.69E+00
1999	3	27	3/27/1999	4.53E+00
1999	3	28	3/28/1999	4.12E+00
1999	3	29	3/29/1999	3.67E+00
1999	3	30	3/30/1999	3.24E+00
1999	3	31	3/31/1999	2.87E+00
1999	4	1	4/1/1999	4.63E+00
1999	4	2	4/2/1999	6.99E+00
1999	4	3	4/3/1999	5.50E+00
1999	4	4	4/4/1999	4.54E+00
1999	4	5	4/5/1999	3.76E+00
1999	4	6	4/6/1999	3.22E+00
1999	4	7	4/7/1999	3.07E+00

1999	4	8	4/8/1999	3.58E+00
1999	4	9	4/9/1999	3.38E+00
1999	4	10	4/10/1999	3.03E+00
1999	4	11	4/11/1999	2.59E+00
1999	4	12	4/12/1999	2.16E+00
1999	4	13	4/13/1999	1.78E+00
1999	4	14	4/14/1999	1.44E+00
1999	4	15	4/15/1999	1.17E+00
1999	4	16	4/16/1999	9.37E-01
1999	4	17	4/17/1999	1.08E+00
1999	4	18	4/18/1999	1.32E+00
1999	4	19	4/19/1999	1.09E+00
1999	4	20	4/20/1999	8.15E-01
1999	4	21	4/21/1999	6.25E-01
1999	4	22	4/22/1999	5.05E-01
1999	4	23	4/23/1999	4.34E-01
1999	4	24	4/24/1999	3.99E-01
1999	4	25	4/25/1999	7.28E+00
1999	4	26	4/26/1999	1.77E+01
1999	4	27	4/27/1999	1.14E+01
1999	4	28	4/28/1999	1.05E+01
1999	4	29	4/29/1999	1.43E+01
1999	4	30	4/30/1999	1.68E+01
1999	5	1	5/1/1999	1.77E+01
1999	5	2	5/2/1999	1.38E+01
1999	5	3	5/3/1999	1.04E+01
1999	5	4	5/4/1999	8.57E+00
1999	5	5	5/5/1999	8.49E+00
1999	5	6	5/6/1999	1.38E+01
1999	5	7	5/7/1999	2.27E+01
1999	5	8	5/8/1999	2.07E+01
1999	5	9	5/9/1999	1.66E+01
1999	5	10	5/10/1999	1.43E+01
1999	5	11	5/11/1999	1.26E+01
1999	5	12	5/12/1999	1.14E+01
1999	5	13	5/13/1999	1.05E+01
1999	5	14	5/14/1999	1.25E+01
1999	5	15	5/15/1999	1.43E+01
1999	5	16	5/16/1999	1.22E+01
1999	5	17	5/17/1999	1.00E+01
1999	5	18	5/18/1999	8.52E+00
1999	5	19	5/19/1999	9.54E+00
1999	5	20	5/20/1999	1.07E+01
1999	5	21	5/21/1999	8.50E+00
1999	5	22	5/22/1999	7.00E+00
1999	5	23	5/23/1999	6.04E+00
1999	5	24	5/24/1999	5.49E+00
1999	5	25	5/25/1999	5.00E+00
1999	5	26	5/26/1999	4.39E+00
1999	5	27	5/27/1999	3.82E+00
1999	5	28	5/28/1999	3.26E+00
1999	5	29	5/29/1999	2.75E+00
1999	5	30	5/30/1999	2.30E+00
1999	5	31	5/31/1999	1.91E+00
1999	6	1	6/1/1999	1.56E+00
1999	6	2	6/2/1999	1.26E+00
1999	6	3	6/3/1999	1.24E+00
1999	6	4	6/4/1999	1.23E+00

1999	6	5	6/5/1999	9.37E-01
1999	6	6	6/6/1999	7.19E-01
1999	6	7	6/7/1999	5.78E-01
1999	6	8	6/8/1999	4.77E-01
1999	6	9	6/9/1999	4.16E-01
1999	6	10	6/10/1999	1.39E+03
1999	6	11	6/11/1999	4.45E+03
1999	6	12	6/12/1999	2.31E+02
1999	6	13	6/13/1999	1.34E+02
1999	6	14	6/14/1999	1.22E+02
1999	6	15	6/15/1999	1.09E+02
1999	6	16	6/16/1999	9.61E+01
1999	6	17	6/17/1999	9.18E+01
1999	6	18	6/18/1999	8.18E+01
1999	6	19	6/19/1999	6.94E+01
1999	6	20	6/20/1999	6.79E+01
1999	6	21	6/21/1999	6.19E+01
1999	6	22	6/22/1999	4.93E+01
1999	6	23	6/23/1999	4.20E+01
1999	6	24	6/24/1999	3.86E+01
1999	6	25	6/25/1999	4.26E+01
1999	6	26	6/26/1999	9.03E+01
1999	6	27	6/27/1999	9.06E+01
1999	6	28	6/28/1999	8.13E+01
1999	6	29	6/29/1999	1.08E+02
1999	6	30	6/30/1999	2.12E+02
1999	7	1	7/1/1999	1.87E+02
1999	7	2	7/2/1999	1.58E+02
1999	7	3	7/3/1999	1.43E+02
1999	7	4	7/4/1999	1.32E+02
1999	7	5	7/5/1999	1.13E+02
1999	7	6	7/6/1999	1.04E+02
1999	7	7	7/7/1999	9.24E+01
1999	7	8	7/8/1999	7.55E+01
1999	7	9	7/9/1999	6.55E+01
1999	7	10	7/10/1999	6.17E+01
1999	7	11	7/11/1999	6.70E+01
1999	7	12	7/12/1999	6.63E+01
1999	7	13	7/13/1999	1.24E+02
1999	7	14	7/14/1999	1.19E+02
1999	7	15	7/15/1999	1.11E+02
1999	7	16	7/16/1999	3.43E+02
1999	7	17	7/17/1999	4.58E+02
1999	7	18	7/18/1999	3.55E+02
1999	7	19	7/19/1999	2.69E+02
1999	7	20	7/20/1999	2.36E+02
1999	7	21	7/21/1999	2.04E+02
1999	7	22	7/22/1999	1.75E+02
1999	7	23	7/23/1999	1.44E+02
1999	7	24	7/24/1999	1.21E+02
1999	7	25	7/25/1999	1.11E+02
1999	7	26	7/26/1999	1.08E+02
1999	7	27	7/27/1999	9.27E+01
1999	7	28	7/28/1999	8.02E+01
1999	7	29	7/29/1999	6.89E+01
1999	7	30	7/30/1999	5.83E+01
1999	7	31	7/31/1999	4.94E+01
1999	8	1	8/1/1999	4.21E+01

1999	8	2	8/2/1999	3.73E+01
1999	8	3	8/3/1999	3.29E+01
1999	8	4	8/4/1999	2.78E+01
1999	8	5	8/5/1999	2.36E+01
1999	8	6	8/6/1999	1.98E+01
1999	8	7	8/7/1999	1.67E+01
1999	8	8	8/8/1999	1.82E+01
1999	8	9	8/9/1999	2.41E+01
1999	8	10	8/10/1999	1.58E+01
1999	8	11	8/11/1999	1.19E+01
1999	8	12	8/12/1999	9.62E+00
1999	8	13	8/13/1999	7.95E+00
1999	8	14	8/14/1999	6.77E+00
1999	8	15	8/15/1999	5.80E+00
1999	8	16	8/16/1999	5.00E+00
1999	8	17	8/17/1999	4.24E+00
1999	8	18	8/18/1999	3.43E+00
1999	8	19	8/19/1999	2.68E+00
1999	8	20	8/20/1999	2.08E+00
1999	8	21	8/21/1999	1.58E+00
1999	8	22	8/22/1999	1.41E+00
1999	8	23	8/23/1999	1.56E+00
1999	8	24	8/24/1999	1.31E+00
1999	8	25	8/25/1999	2.00E+00
1999	8	26	8/26/1999	1.70E+00
1999	8	27	8/27/1999	1.48E+00
1999	8	28	8/28/1999	1.30E+00
1999	8	29	8/29/1999	9.68E-01
1999	8	30	8/30/1999	7.49E-01
1999	8	31	8/31/1999	6.05E-01
1999	9	1	9/1/1999	5.20E-01
1999	9	2	9/2/1999	4.68E-01
1999	9	3	9/3/1999	4.37E-01
1999	9	4	9/4/1999	4.18E-01
1999	9	5	9/5/1999	4.08E-01
1999	9	6	9/6/1999	4.02E-01
1999	9	7	9/7/1999	3.97E-01
1999	9	8	9/8/1999	3.97E-01
1999	9	9	9/9/1999	6.23E-01
1999	9	10	9/10/1999	1.37E+00
1999	9	11	9/11/1999	1.25E+00
1999	9	12	9/12/1999	9.58E-01
1999	9	13	9/13/1999	7.12E-01
1999	9	14	9/14/1999	6.14E-01
1999	9	15	9/15/1999	2.07E+00
1999	9	16	9/16/1999	7.25E+00
1999	9	17	9/17/1999	9.32E+00
1999	9	18	9/18/1999	7.40E+00
1999	9	19	9/19/1999	1.03E+01
1999	9	20	9/20/1999	1.39E+01
1999	9	21	9/21/1999	3.55E+01
1999	9	22	9/22/1999	2.12E+01
1999	9	23	9/23/1999	1.54E+01
1999	9	24	9/24/1999	1.33E+01
1999	9	25	9/25/1999	1.21E+01
1999	9	26	9/26/1999	1.43E+01
1999	9	27	9/27/1999	5.36E+01
1999	9	28	9/28/1999	5.18E+01

1999	9	29	9/29/1999	4.90E+01
1999	9	30	9/30/1999	6.76E+01
1999	10	1	10/1/1999	5.71E+01
1999	10	2	10/2/1999	5.17E+01
1999	10	3	10/3/1999	4.72E+01
1999	10	4	10/4/1999	5.31E+01
1999	10	5	10/5/1999	5.93E+01
1999	10	6	10/6/1999	4.80E+01
1999	10	7	10/7/1999	3.96E+01
1999	10	8	10/8/1999	3.52E+01
1999	10	9	10/9/1999	3.30E+01
1999	10	10	10/10/1999	3.14E+01
1999	10	11	10/11/1999	2.90E+01
1999	10	12	10/12/1999	3.00E+01
1999	10	13	10/13/1999	3.02E+01
1999	10	14	10/14/1999	2.43E+01
1999	10	15	10/15/1999	2.37E+01
1999	10	16	10/16/1999	3.07E+01
1999	10	17	10/17/1999	9.34E+01
1999	10	18	10/18/1999	8.72E+01
1999	10	19	10/19/1999	7.85E+01
1999	10	20	10/20/1999	8.24E+01
1999	10	21	10/21/1999	8.05E+01
1999	10	22	10/22/1999	7.18E+01
1999	10	23	10/23/1999	6.44E+01
1999	10	24	10/24/1999	5.94E+01
1999	10	25	10/25/1999	5.48E+01
1999	10	26	10/26/1999	4.92E+01
1999	10	27	10/27/1999	4.41E+01
1999	10	28	10/28/1999	3.96E+01
1999	10	29	10/29/1999	3.57E+01
1999	10	30	10/30/1999	3.40E+01
1999	10	31	10/31/1999	3.21E+01
1999	11	1	11/1/1999	2.95E+01
1999	11	2	11/2/1999	2.95E+01
1999	11	3	11/3/1999	2.56E+01
1999	11	4	11/4/1999	2.18E+01
1999	11	5	11/5/1999	1.97E+01
1999	11	6	11/6/1999	1.78E+01
1999	11	7	11/7/1999	1.60E+01
1999	11	8	11/8/1999	1.45E+01
1999	11	9	11/9/1999	1.35E+01
1999	11	10	11/10/1999	1.26E+01
1999	11	11	11/11/1999	1.14E+01
1999	11	12	11/12/1999	1.07E+01
1999	11	13	11/13/1999	1.01E+01
1999	11	14	11/14/1999	9.11E+00
1999	11	15	11/15/1999	8.27E+00
1999	11	16	11/16/1999	7.62E+00
1999	11	17	11/17/1999	7.04E+00
1999	11	18	11/18/1999	6.49E+00
1999	11	19	11/19/1999	6.04E+00
1999	11	20	11/20/1999	5.64E+00
1999	11	21	11/21/1999	5.34E+00
1999	11	22	11/22/1999	5.14E+00
1999	11	23	11/23/1999	5.03E+00
1999	11	24	11/24/1999	5.29E+00
1999	11	25	11/25/1999	8.26E+00

1999	11	26	11/26/1999	8.61E+00
1999	11	27	11/27/1999	7.85E+00
1999	11	28	11/28/1999	7.15E+00
1999	11	29	11/29/1999	6.59E+00
1999	11	30	11/30/1999	6.12E+00
1999	12	1	12/1/1999	5.77E+00
1999	12	2	12/2/1999	5.50E+00
1999	12	3	12/3/1999	5.23E+00
1999	12	4	12/4/1999	4.95E+00
1999	12	5	12/5/1999	4.68E+00
1999	12	6	12/6/1999	5.74E+00
1999	12	7	12/7/1999	7.10E+00
1999	12	8	12/8/1999	6.49E+00
1999	12	9	12/9/1999	5.89E+00
1999	12	10	12/10/1999	5.55E+00
1999	12	11	12/11/1999	5.27E+00
1999	12	12	12/12/1999	5.02E+00
1999	12	13	12/13/1999	4.84E+00
1999	12	14	12/14/1999	8.49E+00
1999	12	15	12/15/1999	8.54E+00
1999	12	16	12/16/1999	8.04E+00
1999	12	17	12/17/1999	7.74E+00
1999	12	18	12/18/1999	7.79E+00
1999	12	19	12/19/1999	8.62E+00
1999	12	20	12/20/1999	7.69E+00
1999	12	21	12/21/1999	6.97E+00
1999	12	22	12/22/1999	7.10E+00
1999	12	23	12/23/1999	6.95E+00
1999	12	24	12/24/1999	6.16E+00
1999	12	25	12/25/1999	5.66E+00
1999	12	26	12/26/1999	5.42E+00
1999	12	27	12/27/1999	5.21E+00
1999	12	28	12/28/1999	4.99E+00
1999	12	29	12/29/1999	4.79E+00
1999	12	30	12/30/1999	4.60E+00
1999	12	31	12/31/1999	4.43E+00
2000	1	1	1/1/2000	4.25E+00
2000	1	2	1/2/2000	4.00E+00
2000	1	3	1/3/2000	3.73E+00
2000	1	4	1/4/2000	3.54E+00
2000	1	5	1/5/2000	3.63E+00
2000	1	6	1/6/2000	3.45E+00
2000	1	7	1/7/2000	3.32E+00
2000	1	8	1/8/2000	3.18E+00
2000	1	9	1/9/2000	3.01E+00
2000	1	10	1/10/2000	3.73E+00
2000	1	11	1/11/2000	4.64E+00
2000	1	12	1/12/2000	4.47E+00
2000	1	13	1/13/2000	4.07E+00
2000	1	14	1/14/2000	3.69E+00
2000	1	15	1/15/2000	3.37E+00
2000	1	16	1/16/2000	3.12E+00
2000	1	17	1/17/2000	2.91E+00
2000	1	18	1/18/2000	2.75E+00
2000	1	19	1/19/2000	2.67E+00
2000	1	20	1/20/2000	2.53E+00
2000	1	21	1/21/2000	2.35E+00
2000	1	22	1/22/2000	2.17E+00

2000	1	23	1/23/2000	2.79E+00
2000	1	24	1/24/2000	1.41E+01
2000	1	25	1/25/2000	2.02E+01
2000	1	26	1/26/2000	1.66E+01
2000	1	27	1/27/2000	1.46E+01
2000	1	28	1/28/2000	1.47E+01
2000	1	29	1/29/2000	1.90E+01
2000	1	30	1/30/2000	2.29E+01
2000	1	31	1/31/2000	2.63E+01
2000	2	1	2/1/2000	2.25E+01
2000	2	2	2/2/2000	1.97E+01
2000	2	3	2/3/2000	1.80E+01
2000	2	4	2/4/2000	1.66E+01
2000	2	5	2/5/2000	1.53E+01
2000	2	6	2/6/2000	1.42E+01
2000	2	7	2/7/2000	1.31E+01
2000	2	8	2/8/2000	1.23E+01
2000	2	9	2/9/2000	1.15E+01
2000	2	10	2/10/2000	1.05E+01
2000	2	11	2/11/2000	9.77E+00
2000	2	12	2/12/2000	9.24E+00
2000	2	13	2/13/2000	8.62E+00
2000	2	14	2/14/2000	1.50E+01
2000	2	15	2/15/2000	2.02E+01
2000	2	16	2/16/2000	1.62E+01
2000	2	17	2/17/2000	1.42E+01
2000	2	18	2/18/2000	1.30E+01
2000	2	19	2/19/2000	1.21E+01
2000	2	20	2/20/2000	1.13E+01
2000	2	21	2/21/2000	1.04E+01
2000	2	22	2/22/2000	9.48E+00
2000	2	23	2/23/2000	8.67E+00
2000	2	24	2/24/2000	7.91E+00
2000	2	25	2/25/2000	7.11E+00
2000	2	26	2/26/2000	6.43E+00
2000	2	27	2/27/2000	7.78E+00
2000	2	28	2/28/2000	1.27E+01
2000	2	29	2/29/2000	1.14E+01
2000	3	1	3/1/2000	9.69E+00
2000	3	2	3/2/2000	8.59E+00
2000	3	3	3/3/2000	7.74E+00
2000	3	4	3/4/2000	7.01E+00
2000	3	5	3/5/2000	6.36E+00
2000	3	6	3/6/2000	5.81E+00
2000	3	7	3/7/2000	5.36E+00
2000	3	8	3/8/2000	4.94E+00
2000	3	9	3/9/2000	4.49E+00
2000	3	10	3/10/2000	4.04E+00
2000	3	11	3/11/2000	3.61E+00
2000	3	12	3/12/2000	3.68E+00
2000	3	13	3/13/2000	3.39E+00
2000	3	14	3/14/2000	3.04E+00
2000	3	15	3/15/2000	2.67E+00
2000	3	16	3/16/2000	2.85E+00
2000	3	17	3/17/2000	4.37E+00
2000	3	18	3/18/2000	4.31E+00
2000	3	19	3/19/2000	3.97E+00
2000	3	20	3/20/2000	1.01E+01

2000	3	21	3/21/2000	9.51E+00
2000	3	22	3/22/2000	7.64E+00
2000	3	23	3/23/2000	6.77E+00
2000	3	24	3/24/2000	6.19E+00
2000	3	25	3/25/2000	5.53E+00
2000	3	26	3/26/2000	8.79E+00
2000	3	27	3/27/2000	2.14E+01
2000	3	28	3/28/2000	1.86E+01
2000	3	29	3/29/2000	1.41E+01
2000	3	30	3/30/2000	6.28E+01
2000	3	31	3/31/2000	8.85E+01
2000	4	1	4/1/2000	5.37E+01
2000	4	2	4/2/2000	4.72E+01
2000	4	3	4/3/2000	4.20E+01
2000	4	4	4/4/2000	3.97E+01
2000	4	5	4/5/2000	3.66E+01
2000	4	6	4/6/2000	3.11E+01
2000	4	7	4/7/2000	2.73E+01
2000	4	8	4/8/2000	2.53E+01
2000	4	9	4/9/2000	2.48E+01
2000	4	10	4/10/2000	2.18E+01
2000	4	11	4/11/2000	1.93E+01
2000	4	12	4/12/2000	1.73E+01
2000	4	13	4/13/2000	1.86E+01
2000	4	14	4/14/2000	3.05E+01
2000	4	15	4/15/2000	4.13E+01
2000	4	16	4/16/2000	3.20E+01
2000	4	17	4/17/2000	2.65E+01
2000	4	18	4/18/2000	2.30E+01
2000	4	19	4/19/2000	2.04E+01
2000	4	20	4/20/2000	1.82E+01
2000	4	21	4/21/2000	1.63E+01
2000	4	22	4/22/2000	1.46E+01
2000	4	23	4/23/2000	1.30E+01
2000	4	24	4/24/2000	1.88E+01
2000	4	25	4/25/2000	2.75E+01
2000	4	26	4/26/2000	1.92E+01
2000	4	27	4/27/2000	1.58E+01
2000	4	28	4/28/2000	2.38E+01
2000	4	29	4/29/2000	2.47E+01
2000	4	30	4/30/2000	1.91E+01
2000	5	1	5/1/2000	1.63E+01
2000	5	2	5/2/2000	1.45E+01
2000	5	3	5/3/2000	1.29E+01
2000	5	4	5/4/2000	1.15E+01
2000	5	5	5/5/2000	1.01E+01
2000	5	6	5/6/2000	8.72E+00
2000	5	7	5/7/2000	7.54E+00
2000	5	8	5/8/2000	6.48E+00
2000	5	9	5/9/2000	5.66E+00
2000	5	10	5/10/2000	5.06E+00
2000	5	11	5/11/2000	4.51E+00
2000	5	12	5/12/2000	3.91E+00
2000	5	13	5/13/2000	3.30E+00
2000	5	14	5/14/2000	3.67E+00
2000	5	15	5/15/2000	8.25E+00
2000	5	16	5/16/2000	6.79E+00
2000	5	17	5/17/2000	4.95E+00

2000	5	18	5/18/2000	3.88E+00
2000	5	19	5/19/2000	3.06E+00
2000	5	20	5/20/2000	2.44E+00
2000	5	21	5/21/2000	1.97E+00
2000	5	22	5/22/2000	1.61E+00
2000	5	23	5/23/2000	1.30E+00
2000	5	24	5/24/2000	1.02E+00
2000	5	25	5/25/2000	7.90E-01
2000	5	26	5/26/2000	1.07E+00
2000	5	27	5/27/2000	2.05E+00
2000	5	28	5/28/2000	1.71E+00
2000	5	29	5/29/2000	1.20E+00
2000	5	30	5/30/2000	8.10E-01
2000	5	31	5/31/2000	6.02E-01
2000	6	1	6/1/2000	4.91E-01
2000	6	2	6/2/2000	4.28E-01
2000	6	3	6/3/2000	3.94E-01
2000	6	4	6/4/2000	6.25E-01
2000	6	5	6/5/2000	1.72E+00
2000	6	6	6/6/2000	1.80E+00
2000	6	7	6/7/2000	1.34E+00
2000	6	8	6/8/2000	9.10E-01
2000	6	9	6/9/2000	6.49E-01
2000	6	10	6/10/2000	5.04E-01
2000	6	11	6/11/2000	4.25E-01
2000	6	12	6/12/2000	3.85E-01
2000	6	13	6/13/2000	3.68E-01
2000	6	14	6/14/2000	3.61E-01
2000	6	15	6/15/2000	3.61E-01
2000	6	16	6/16/2000	3.60E-01
2000	6	17	6/17/2000	3.52E-01
2000	6	18	6/18/2000	1.37E+00
2000	6	19	6/19/2000	2.56E+00
2000	6	20	6/20/2000	3.65E+00
2000	6	21	6/21/2000	6.49E+00
2000	6	22	6/22/2000	4.47E+00
2000	6	23	6/23/2000	2.78E+00
2000	6	24	6/24/2000	1.64E+00
2000	6	25	6/25/2000	1.00E+00
2000	6	26	6/26/2000	6.99E-01
2000	6	27	6/27/2000	5.81E-01
2000	6	28	6/28/2000	7.49E-01
2000	6	29	6/29/2000	1.04E+00
2000	6	30	6/30/2000	8.47E-01
2000	7	1	7/1/2000	6.54E-01
2000	7	2	7/2/2000	5.14E-01
2000	7	3	7/3/2000	4.29E-01
2000	7	4	7/4/2000	3.82E-01
2000	7	5	7/5/2000	3.60E-01
2000	7	6	7/6/2000	3.54E-01
2000	7	7	7/7/2000	3.55E-01
2000	7	8	7/8/2000	3.57E-01
2000	7	9	7/9/2000	3.53E-01
2000	7	10	7/10/2000	3.46E-01
2000	7	11	7/11/2000	3.46E-01
2000	7	12	7/12/2000	6.73E-01
2000	7	13	7/13/2000	1.08E+00
2000	7	14	7/14/2000	5.06E+00

2000	7	15	7/15/2000	3.98E+00
2000	7	16	7/16/2000	2.41E+00
2000	7	17	7/17/2000	1.38E+00
2000	7	18	7/18/2000	8.23E-01
2000	7	19	7/19/2000	5.73E-01
2000	7	20	7/20/2000	4.50E-01
2000	7	21	7/21/2000	3.91E-01
2000	7	22	7/22/2000	3.67E-01
2000	7	23	7/23/2000	6.13E-01
2000	7	24	7/24/2000	8.63E-01
2000	7	25	7/25/2000	8.94E-01
2000	7	26	7/26/2000	7.63E-01
2000	7	27	7/27/2000	9.21E-01
2000	7	28	7/28/2000	1.73E+00
2000	7	29	7/29/2000	1.39E+00
2000	7	30	7/30/2000	9.71E-01
2000	7	31	7/31/2000	6.78E-01
2000	8	1	8/1/2000	5.21E-01
2000	8	2	8/2/2000	4.38E-01
2000	8	3	8/3/2000	3.98E-01
2000	8	4	8/4/2000	1.23E+01
2000	8	5	8/5/2000	3.09E+01
2000	8	6	8/6/2000	1.14E+01
2000	8	7	8/7/2000	5.29E+00
2000	8	8	8/8/2000	1.17E+01
2000	8	9	8/9/2000	1.87E+01
2000	8	10	8/10/2000	8.79E+00
2000	8	11	8/11/2000	2.00E+01
2000	8	12	8/12/2000	5.60E+01
2000	8	13	8/13/2000	1.98E+01
2000	8	14	8/14/2000	1.17E+01
2000	8	15	8/15/2000	9.28E+00
2000	8	16	8/16/2000	7.95E+00
2000	8	17	8/17/2000	6.81E+00
2000	8	18	8/18/2000	5.88E+00
2000	8	19	8/19/2000	5.62E+00
2000	8	20	8/20/2000	8.94E+00
2000	8	21	8/21/2000	6.51E+00
2000	8	22	8/22/2000	6.18E+00
2000	8	23	8/23/2000	7.77E+00
2000	8	24	8/24/2000	5.60E+00
2000	8	25	8/25/2000	7.00E+00
2000	8	26	8/26/2000	8.20E+00
2000	8	27	8/27/2000	5.64E+00
2000	8	28	8/28/2000	4.60E+00
2000	8	29	8/29/2000	4.40E+00
2000	8	30	8/30/2000	3.71E+00
2000	8	31	8/31/2000	3.15E+00
2000	9	1	9/1/2000	4.17E+00
2000	9	2	9/2/2000	8.17E+00
2000	9	3	9/3/2000	1.05E+01
2000	9	4	9/4/2000	1.39E+01
2000	9	5	9/5/2000	1.70E+01
2000	9	6	9/6/2000	4.01E+01
2000	9	7	9/7/2000	5.86E+01
2000	9	8	9/8/2000	6.93E+01
2000	9	9	9/9/2000	7.66E+01
2000	9	10	9/10/2000	5.68E+01

2000	9	11	9/11/2000	5.08E+01
2000	9	12	9/12/2000	5.24E+01
2000	9	13	9/13/2000	5.73E+01
2000	9	14	9/14/2000	4.78E+01
2000	9	15	9/15/2000	4.28E+01
2000	9	16	9/16/2000	3.95E+01
2000	9	17	9/17/2000	4.96E+01
2000	9	18	9/18/2000	6.76E+01
2000	9	19	9/19/2000	5.60E+01
2000	9	20	9/20/2000	5.22E+01
2000	9	21	9/21/2000	5.30E+01
2000	9	22	9/22/2000	5.63E+01
2000	9	23	9/23/2000	6.14E+01
2000	9	24	9/24/2000	5.06E+01
2000	9	25	9/25/2000	4.23E+01
2000	9	26	9/26/2000	4.16E+01
2000	9	27	9/27/2000	3.88E+01
2000	9	28	9/28/2000	3.52E+01
2000	9	29	9/29/2000	3.33E+01
2000	9	30	9/30/2000	4.72E+01
2000	10	1	10/1/2000	4.31E+01
2000	10	2	10/2/2000	3.42E+01
2000	10	3	10/3/2000	3.05E+01
2000	10	4	10/4/2000	3.26E+01
2000	10	5	10/5/2000	3.42E+01
2000	10	6	10/6/2000	3.16E+01
2000	10	7	10/7/2000	3.58E+01
2000	10	8	10/8/2000	3.50E+01
2000	10	9	10/9/2000	3.30E+01
2000	10	10	10/10/2000	2.80E+01
2000	10	11	10/11/2000	2.50E+01
2000	10	12	10/12/2000	2.22E+01
2000	10	13	10/13/2000	2.01E+01
2000	10	14	10/14/2000	1.83E+01
2000	10	15	10/15/2000	1.68E+01
2000	10	16	10/16/2000	1.54E+01
2000	10	17	10/17/2000	1.41E+01
2000	10	18	10/18/2000	1.29E+01
2000	10	19	10/19/2000	1.18E+01
2000	10	20	10/20/2000	1.10E+01
2000	10	21	10/21/2000	1.02E+01
2000	10	22	10/22/2000	9.19E+00
2000	10	23	10/23/2000	8.29E+00
2000	10	24	10/24/2000	7.52E+00
2000	10	25	10/25/2000	6.83E+00
2000	10	26	10/26/2000	6.21E+00
2000	10	27	10/27/2000	5.67E+00
2000	10	28	10/28/2000	5.26E+00
2000	10	29	10/29/2000	4.93E+00
2000	10	30	10/30/2000	4.59E+00
2000	10	31	10/31/2000	4.21E+00
2000	11	1	11/1/2000	3.83E+00
2000	11	2	11/2/2000	3.48E+00
2000	11	3	11/3/2000	3.16E+00
2000	11	4	11/4/2000	2.87E+00
2000	11	5	11/5/2000	2.62E+00
2000	11	6	11/6/2000	2.40E+00
2000	11	7	11/7/2000	2.18E+00

2000	11	8	11/8/2000	1.95E+00
2000	11	9	11/9/2000	1.73E+00
2000	11	10	11/10/2000	1.54E+00
2000	11	11	11/11/2000	1.35E+00
2000	11	12	11/12/2000	1.19E+00
2000	11	13	11/13/2000	1.05E+00
2000	11	14	11/14/2000	2.40E+00
2000	11	15	11/15/2000	3.15E+00
2000	11	16	11/16/2000	2.97E+00
2000	11	17	11/17/2000	2.87E+00
2000	11	18	11/18/2000	2.70E+00
2000	11	19	11/19/2000	2.84E+00
2000	11	20	11/20/2000	3.79E+00
2000	11	21	11/21/2000	3.77E+00
2000	11	22	11/22/2000	3.51E+00
2000	11	23	11/23/2000	3.25E+00
2000	11	24	11/24/2000	3.06E+00
2000	11	25	11/25/2000	1.05E+01
2000	11	26	11/26/2000	1.06E+01
2000	11	27	11/27/2000	8.68E+00
2000	11	28	11/28/2000	7.60E+00
2000	11	29	11/29/2000	7.13E+00
2000	11	30	11/30/2000	6.81E+00
2000	12	1	12/1/2000	6.34E+00
2000	12	2	12/2/2000	5.97E+00
2000	12	3	12/3/2000	6.04E+00
2000	12	4	12/4/2000	6.17E+00
2000	12	5	12/5/2000	5.67E+00
2000	12	6	12/6/2000	5.28E+00
2000	12	7	12/7/2000	4.96E+00
2000	12	8	12/8/2000	4.68E+00
2000	12	9	12/9/2000	4.60E+00
2000	12	10	12/10/2000	5.41E+00
2000	12	11	12/11/2000	5.42E+00
2000	12	12	12/12/2000	5.25E+00
2000	12	13	12/13/2000	4.97E+00
2000	12	14	12/14/2000	4.81E+00
2000	12	15	12/15/2000	5.09E+00
2000	12	16	12/16/2000	4.98E+00
2000	12	17	12/17/2000	7.11E+00
2000	12	18	12/18/2000	6.73E+00
2000	12	19	12/19/2000	6.71E+00
2000	12	20	12/20/2000	6.97E+00
2000	12	21	12/21/2000	6.12E+00
2000	12	22	12/22/2000	5.63E+00
2000	12	23	12/23/2000	5.38E+00
2000	12	24	12/24/2000	5.19E+00
2000	12	25	12/25/2000	5.01E+00
2000	12	26	12/26/2000	4.84E+00
2000	12	27	12/27/2000	4.69E+00
2000	12	28	12/28/2000	1.31E+01
2000	12	29	12/29/2000	3.33E+01
2000	12	30	12/30/2000	2.75E+01
2000	12	31	12/31/2000	2.43E+01
2001	1	1	1/1/2001	2.16E+01
2001	1	2	1/2/2001	1.86E+01
2001	1	3	1/3/2001	1.71E+01
2001	1	4	1/4/2001	1.59E+01

2001	1	5	1/5/2001	1.47E+01
2001	1	6	1/6/2001	1.35E+01
2001	1	7	1/7/2001	1.27E+01
2001	1	8	1/8/2001	1.28E+01
2001	1	9	1/9/2001	1.24E+01
2001	1	10	1/10/2001	1.14E+01
2001	1	11	1/11/2001	1.07E+01
2001	1	12	1/12/2001	1.13E+01
2001	1	13	1/13/2001	1.09E+01
2001	1	14	1/14/2001	9.71E+00
2001	1	15	1/15/2001	9.06E+00
2001	1	16	1/16/2001	8.46E+00
2001	1	17	1/17/2001	8.03E+00
2001	1	18	1/18/2001	7.64E+00
2001	1	19	1/19/2001	7.12E+00
2001	1	20	1/20/2001	7.57E+00
2001	1	21	1/21/2001	7.46E+00
2001	1	22	1/22/2001	6.98E+00
2001	1	23	1/23/2001	1.21E+01
2001	1	24	1/24/2001	1.36E+01
2001	1	25	1/25/2001	1.25E+01
2001	1	26	1/26/2001	1.15E+01
2001	1	27	1/27/2001	1.07E+01
2001	1	28	1/28/2001	1.00E+01
2001	1	29	1/29/2001	9.34E+00
2001	1	30	1/30/2001	9.42E+00
2001	1	31	1/31/2001	1.01E+01
2001	2	1	2/1/2001	2.08E+01
2001	2	2	2/2/2001	2.10E+01
2001	2	3	2/3/2001	1.96E+01
2001	2	4	2/4/2001	2.69E+01
2001	2	5	2/5/2001	3.14E+01
2001	2	6	2/6/2001	2.56E+01
2001	2	7	2/7/2001	2.28E+01
2001	2	8	2/8/2001	2.08E+01
2001	2	9	2/9/2001	1.91E+01
2001	2	10	2/10/2001	1.90E+01
2001	2	11	2/11/2001	1.96E+01
2001	2	12	2/12/2001	1.79E+01
2001	2	13	2/13/2001	1.72E+01
2001	2	14	2/14/2001	1.54E+01
2001	2	15	2/15/2001	1.33E+01
2001	2	16	2/16/2001	1.19E+01
2001	2	17	2/17/2001	1.16E+01
2001	2	18	2/18/2001	1.10E+01
2001	2	19	2/19/2001	1.01E+01
2001	2	20	2/20/2001	9.25E+00
2001	2	21	2/21/2001	8.68E+00
2001	2	22	2/22/2001	8.05E+00
2001	2	23	2/23/2001	7.94E+00
2001	2	24	2/24/2001	7.95E+00
2001	2	25	2/25/2001	7.36E+00
2001	2	26	2/26/2001	6.43E+00
2001	2	27	2/27/2001	5.79E+00
2001	2	28	2/28/2001	5.38E+00
2001	3	1	3/1/2001	5.03E+00
2001	3	2	3/2/2001	4.67E+00
2001	3	3	3/3/2001	4.36E+00

2001	3	4	3/4/2001	1.04E+01
2001	3	5	3/5/2001	1.29E+01
2001	3	6	3/6/2001	1.11E+01
2001	3	7	3/7/2001	9.72E+00
2001	3	8	3/8/2001	8.76E+00
2001	3	9	3/9/2001	8.44E+00
2001	3	10	3/10/2001	9.56E+00
2001	3	11	3/11/2001	8.68E+00
2001	3	12	3/12/2001	8.02E+00
2001	3	13	3/13/2001	2.97E+01
2001	3	14	3/14/2001	2.73E+01
2001	3	15	3/15/2001	2.70E+01
2001	3	16	3/16/2001	2.97E+01
2001	3	17	3/17/2001	2.66E+01
2001	3	18	3/18/2001	4.63E+01
2001	3	19	3/19/2001	6.78E+01
2001	3	20	3/20/2001	1.22E+02
2001	3	21	3/21/2001	1.29E+02
2001	3	22	3/22/2001	1.06E+02
2001	3	23	3/23/2001	8.71E+01
2001	3	24	3/24/2001	7.70E+01
2001	3	25	3/25/2001	7.76E+01
2001	3	26	3/26/2001	7.30E+01
2001	3	27	3/27/2001	6.07E+01
2001	3	28	3/28/2001	5.85E+01
2001	3	29	3/29/2001	6.26E+01
2001	3	30	3/30/2001	7.10E+01
2001	3	31	3/31/2001	6.06E+01
2001	4	1	4/1/2001	4.81E+01
2001	4	2	4/2/2001	4.15E+01
2001	4	3	4/3/2001	4.06E+01
2001	4	4	4/4/2001	4.60E+01
2001	4	5	4/5/2001	4.78E+01
2001	4	6	4/6/2001	4.28E+01
2001	4	7	4/7/2001	3.10E+01
2001	4	8	4/8/2001	2.68E+01
2001	4	9	4/9/2001	2.37E+01
2001	4	10	4/10/2001	2.06E+01
2001	4	11	4/11/2001	1.83E+01
2001	4	12	4/12/2001	1.64E+01
2001	4	13	4/13/2001	1.46E+01
2001	4	14	4/14/2001	1.28E+01
2001	4	15	4/15/2001	1.21E+01
2001	4	16	4/16/2001	1.46E+01
2001	4	17	4/17/2001	1.29E+01
2001	4	18	4/18/2001	1.11E+01
2001	4	19	4/19/2001	9.69E+00
2001	4	20	4/20/2001	8.32E+00
2001	4	21	4/21/2001	7.01E+00
2001	4	22	4/22/2001	5.93E+00
2001	4	23	4/23/2001	5.20E+00
2001	4	24	4/24/2001	4.64E+00
2001	4	25	4/25/2001	5.34E+00
2001	4	26	4/26/2001	6.65E+00
2001	4	27	4/27/2001	5.66E+00
2001	4	28	4/28/2001	4.82E+00
2001	4	29	4/29/2001	4.13E+00
2001	4	30	4/30/2001	3.61E+00

2001	5	1	5/1/2001	3.08E+00
2001	5	2	5/2/2001	2.56E+00
2001	5	3	5/3/2001	2.09E+00
2001	5	4	5/4/2001	1.67E+00
2001	5	5	5/5/2001	1.26E+00
2001	5	6	5/6/2001	9.05E-01
2001	5	7	5/7/2001	6.90E-01
2001	5	8	5/8/2001	5.62E-01
2001	5	9	5/9/2001	4.69E-01
2001	5	10	5/10/2001	4.16E-01
2001	5	11	5/11/2001	3.88E-01
2001	5	12	5/12/2001	9.95E-01
2001	5	13	5/13/2001	1.93E+00
2001	5	14	5/14/2001	1.69E+00
2001	5	15	5/15/2001	1.20E+00
2001	5	16	5/16/2001	7.94E-01
2001	5	17	5/17/2001	5.75E-01
2001	5	18	5/18/2001	4.60E-01
2001	5	19	5/19/2001	4.00E-01
2001	5	20	5/20/2001	3.78E-01
2001	5	21	5/21/2001	3.69E-01
2001	5	22	5/22/2001	3.60E-01
2001	5	23	5/23/2001	3.54E-01
2001	5	24	5/24/2001	3.49E-01
2001	5	25	5/25/2001	3.48E-01
2001	5	26	5/26/2001	3.48E-01
2001	5	27	5/27/2001	7.84E-01
2001	5	28	5/28/2001	1.20E+00
2001	5	29	5/29/2001	1.79E+00
2001	5	30	5/30/2001	2.61E+00
2001	5	31	5/31/2001	2.04E+00
2001	6	1	6/1/2001	1.42E+00
2001	6	2	6/2/2001	1.01E+00
2001	6	3	6/3/2001	8.22E-01
2001	6	4	6/4/2001	3.08E+00
2001	6	5	6/5/2001	2.55E+00
2001	6	6	6/6/2001	1.74E+00
2001	6	7	6/7/2001	2.27E+00
2001	6	8	6/8/2001	7.83E+00
2001	6	9	6/9/2001	5.56E+00
2001	6	10	6/10/2001	6.72E+00
2001	6	11	6/11/2001	7.60E+00
2001	6	12	6/12/2001	1.62E+02
2001	6	13	6/13/2001	7.98E+01
2001	6	14	6/14/2001	4.45E+01
2001	6	15	6/15/2001	3.88E+01
2001	6	16	6/16/2001	3.48E+01
2001	6	17	6/17/2001	4.72E+01
2001	6	18	6/18/2001	5.38E+01
2001	6	19	6/19/2001	3.73E+01
2001	6	20	6/20/2001	3.34E+01
2001	6	21	6/21/2001	3.12E+01
2001	6	22	6/22/2001	2.91E+01
2001	6	23	6/23/2001	2.66E+01
2001	6	24	6/24/2001	2.44E+01
2001	6	25	6/25/2001	2.26E+01
2001	6	26	6/26/2001	1.94E+01
2001	6	27	6/27/2001	1.81E+01

2001	6	28	6/28/2001	1.75E+01
2001	6	29	6/29/2001	1.85E+01
2001	6	30	6/30/2001	1.57E+01
2001	7	1	7/1/2001	1.33E+01
2001	7	2	7/2/2001	1.26E+01
2001	7	3	7/3/2001	1.17E+01
2001	7	4	7/4/2001	1.62E+01
2001	7	5	7/5/2001	2.18E+01
2001	7	6	7/6/2001	1.57E+01
2001	7	7	7/7/2001	1.29E+01
2001	7	8	7/8/2001	1.14E+01
2001	7	9	7/9/2001	1.01E+01
2001	7	10	7/10/2001	8.92E+00
2001	7	11	7/11/2001	7.73E+00
2001	7	12	7/12/2001	6.79E+00
2001	7	13	7/13/2001	6.37E+00
2001	7	14	7/14/2001	6.32E+00
2001	7	15	7/15/2001	5.39E+00
2001	7	16	7/16/2001	4.81E+00
2001	7	17	7/17/2001	4.22E+00
2001	7	18	7/18/2001	3.67E+00
2001	7	19	7/19/2001	3.18E+00
2001	7	20	7/20/2001	3.90E+00
2001	7	21	7/21/2001	7.41E+00
2001	7	22	7/22/2001	1.31E+01
2001	7	23	7/23/2001	1.27E+01
2001	7	24	7/24/2001	1.06E+01
2001	7	25	7/25/2001	8.14E+00
2001	7	26	7/26/2001	6.43E+00
2001	7	27	7/27/2001	5.60E+00
2001	7	28	7/28/2001	5.07E+00
2001	7	29	7/29/2001	4.54E+00
2001	7	30	7/30/2001	4.23E+00
2001	7	31	7/31/2001	4.30E+00
2001	8	1	8/1/2001	7.70E+00
2001	8	2	8/2/2001	1.99E+01
2001	8	3	8/3/2001	1.48E+01
2001	8	4	8/4/2001	1.07E+01
2001	8	5	8/5/2001	8.94E+00
2001	8	6	8/6/2001	8.32E+00
2001	8	7	8/7/2001	7.03E+00
2001	8	8	8/8/2001	5.92E+00
2001	8	9	8/9/2001	5.22E+00
2001	8	10	8/10/2001	6.20E+00
2001	8	11	8/11/2001	1.45E+01
2001	8	12	8/12/2001	9.13E+00
2001	8	13	8/13/2001	6.10E+00
2001	8	14	8/14/2001	8.42E+00
2001	8	15	8/15/2001	1.66E+01
2001	8	16	8/16/2001	1.13E+01
2001	8	17	8/17/2001	7.94E+00
2001	8	18	8/18/2001	7.07E+00
2001	8	19	8/19/2001	1.20E+01
2001	8	20	8/20/2001	9.62E+00
2001	8	21	8/21/2001	7.67E+00
2001	8	22	8/22/2001	6.60E+00
2001	8	23	8/23/2001	5.82E+00
2001	8	24	8/24/2001	5.23E+00

2001	8	25	8/25/2001	5.59E+00
2001	8	26	8/26/2001	4.89E+00
2001	8	27	8/27/2001	4.26E+00
2001	8	28	8/28/2001	3.69E+00
2001	8	29	8/29/2001	3.19E+00
2001	8	30	8/30/2001	2.76E+00
2001	8	31	8/31/2001	2.39E+00
2001	9	1	9/1/2001	4.31E+00
2001	9	2	9/2/2001	9.69E+00
2001	9	3	9/3/2001	8.93E+00
2001	9	4	9/4/2001	9.80E+00
2001	9	5	9/5/2001	7.25E+00
2001	9	6	9/6/2001	5.66E+00
2001	9	7	9/7/2001	7.06E+00
2001	9	8	9/8/2001	7.58E+00
2001	9	9	9/9/2001	6.23E+00
2001	9	10	9/10/2001	5.61E+00
2001	9	11	9/11/2001	5.19E+00
2001	9	12	9/12/2001	1.52E+02
2001	9	13	9/13/2001	1.80E+02
2001	9	14	9/14/2001	8.47E+01
2001	9	15	9/15/2001	7.96E+01
2001	9	16	9/16/2001	6.83E+01
2001	9	17	9/17/2001	6.02E+01
2001	9	18	9/18/2001	5.49E+01
2001	9	19	9/19/2001	4.97E+01
2001	9	20	9/20/2001	4.45E+01
2001	9	21	9/21/2001	3.99E+01
2001	9	22	9/22/2001	3.63E+01
2001	9	23	9/23/2001	7.92E+01
2001	9	24	9/24/2001	9.21E+01
2001	9	25	9/25/2001	6.89E+01
2001	9	26	9/26/2001	6.57E+01
2001	9	27	9/27/2001	6.37E+01
2001	9	28	9/28/2001	5.64E+01
2001	9	29	9/29/2001	5.11E+01
2001	9	30	9/30/2001	4.72E+01
2001	10	1	10/1/2001	4.11E+01
2001	10	2	10/2/2001	3.69E+01
2001	10	3	10/3/2001	3.32E+01
2001	10	4	10/4/2001	3.00E+01
2001	10	5	10/5/2001	2.71E+01
2001	10	6	10/6/2001	2.52E+01
2001	10	7	10/7/2001	2.35E+01
2001	10	8	10/8/2001	2.11E+01
2001	10	9	10/9/2001	1.95E+01
2001	10	10	10/10/2001	1.86E+01
2001	10	11	10/11/2001	1.77E+01
2001	10	12	10/12/2001	1.64E+01
2001	10	13	10/13/2001	1.48E+01
2001	10	14	10/14/2001	1.40E+01
2001	10	15	10/15/2001	1.34E+01
2001	10	16	10/16/2001	1.18E+01
2001	10	17	10/17/2001	1.08E+01
2001	10	18	10/18/2001	1.00E+01
2001	10	19	10/19/2001	9.22E+00
2001	10	20	10/20/2001	8.35E+00
2001	10	21	10/21/2001	7.57E+00

2001	10	22	10/22/2001	6.90E+00
2001	10	23	10/23/2001	6.89E+00
2001	10	24	10/24/2001	6.90E+00
2001	10	25	10/25/2001	6.36E+00
2001	10	26	10/26/2001	5.60E+00
2001	10	27	10/27/2001	5.20E+00
2001	10	28	10/28/2001	4.88E+00
2001	10	29	10/29/2001	4.57E+00
2001	10	30	10/30/2001	4.25E+00
2001	10	31	10/31/2001	3.91E+00
2001	11	1	11/1/2001	3.57E+00
2001	11	2	11/2/2001	3.64E+00
2001	11	3	11/3/2001	3.39E+00
2001	11	4	11/4/2001	3.04E+00
2001	11	5	11/5/2001	2.75E+00
2001	11	6	11/6/2001	2.52E+00
2001	11	7	11/7/2001	2.30E+00
2001	11	8	11/8/2001	2.09E+00
2001	11	9	11/9/2001	1.90E+00
2001	11	10	11/10/2001	1.71E+00
2001	11	11	11/11/2001	1.55E+00
2001	11	12	11/12/2001	1.40E+00
2001	11	13	11/13/2001	1.72E+00
2001	11	14	11/14/2001	2.11E+00
2001	11	15	11/15/2001	2.20E+00
2001	11	16	11/16/2001	2.01E+00
2001	11	17	11/17/2001	1.79E+00
2001	11	18	11/18/2001	1.59E+00
2001	11	19	11/19/2001	1.43E+00
2001	11	20	11/20/2001	1.29E+00
2001	11	21	11/21/2001	1.16E+00
2001	11	22	11/22/2001	1.05E+00
2001	11	23	11/23/2001	9.61E-01
2001	11	24	11/24/2001	9.15E-01
2001	11	25	11/25/2001	8.14E-01
2001	11	26	11/26/2001	7.24E-01
2001	11	27	11/27/2001	6.41E-01
2001	11	28	11/28/2001	5.69E-01
2001	11	29	11/29/2001	5.34E-01
2001	11	30	11/30/2001	4.97E-01
2001	12	1	12/1/2001	4.69E-01
2001	12	2	12/2/2001	4.53E-01
2001	12	3	12/3/2001	4.45E-01
2001	12	4	12/4/2001	4.40E-01
2001	12	5	12/5/2001	4.36E-01
2001	12	6	12/6/2001	4.35E-01
2001	12	7	12/7/2001	4.35E-01
2001	12	8	12/8/2001	1.04E+00
2001	12	9	12/9/2001	2.53E+00
2001	12	10	12/10/2001	2.63E+00
2001	12	11	12/11/2001	2.34E+00
2001	12	12	12/12/2001	2.02E+00
2001	12	13	12/13/2001	1.78E+00
2001	12	14	12/14/2001	1.63E+00
2001	12	15	12/15/2001	1.53E+00
2001	12	16	12/16/2001	1.42E+00
2001	12	17	12/17/2001	1.32E+00
2001	12	18	12/18/2001	1.69E+00

2001	12	19	12/19/2001	1.61E+00
2001	12	20	12/20/2001	1.48E+00
2001	12	21	12/21/2001	1.36E+00
2001	12	22	12/22/2001	1.26E+00
2001	12	23	12/23/2001	1.18E+00
2001	12	24	12/24/2001	3.44E+00
2001	12	25	12/25/2001	3.93E+00
2001	12	26	12/26/2001	3.67E+00
2001	12	27	12/27/2001	3.22E+00
2001	12	28	12/28/2001	2.86E+00
2001	12	29	12/29/2001	2.64E+00
2001	12	30	12/30/2001	2.49E+00
2001	12	31	12/31/2001	2.39E+00
2002	1	1	1/1/2002	2.32E+00
2002	1	2	1/2/2002	4.04E+00
2002	1	3	1/3/2002	5.77E+00
2002	1	4	1/4/2002	5.59E+00
2002	1	5	1/5/2002	5.05E+00
2002	1	6	1/6/2002	5.06E+00
2002	1	7	1/7/2002	5.04E+00
2002	1	8	1/8/2002	4.77E+00
2002	1	9	1/9/2002	4.47E+00
2002	1	10	1/10/2002	4.18E+00
2002	1	11	1/11/2002	3.91E+00
2002	1	12	1/12/2002	3.72E+00
2002	1	13	1/13/2002	6.50E+00
2002	1	14	1/14/2002	1.11E+01
2002	1	15	1/15/2002	2.17E+01
2002	1	16	1/16/2002	1.72E+01
2002	1	17	1/17/2002	1.48E+01
2002	1	18	1/18/2002	1.35E+01
2002	1	19	1/19/2002	1.24E+01
2002	1	20	1/20/2002	1.15E+01
2002	1	21	1/21/2002	1.78E+01
2002	1	22	1/22/2002	2.39E+01
2002	1	23	1/23/2002	1.90E+01
2002	1	24	1/24/2002	1.67E+01
2002	1	25	1/25/2002	1.69E+01
2002	1	26	1/26/2002	1.85E+01
2002	1	27	1/27/2002	1.70E+01
2002	1	28	1/28/2002	1.51E+01
2002	1	29	1/29/2002	1.36E+01
2002	1	30	1/30/2002	1.26E+01
2002	1	31	1/31/2002	1.18E+01
2002	2	1	2/1/2002	1.08E+01
2002	2	2	2/2/2002	9.92E+00
2002	2	3	2/3/2002	9.31E+00
2002	2	4	2/4/2002	8.73E+00
2002	2	5	2/5/2002	8.28E+00
2002	2	6	2/6/2002	8.09E+00
2002	2	7	2/7/2002	1.15E+01
2002	2	8	2/8/2002	1.41E+01
2002	2	9	2/9/2002	1.18E+01
2002	2	10	2/10/2002	1.05E+01
2002	2	11	2/11/2002	9.71E+00
2002	2	12	2/12/2002	8.88E+00
2002	2	13	2/13/2002	8.59E+00
2002	2	14	2/14/2002	8.36E+00

2002	2	15	2/15/2002	7.50E+00
2002	2	16	2/16/2002	6.89E+00
2002	2	17	2/17/2002	6.26E+00
2002	2	18	2/18/2002	5.72E+00
2002	2	19	2/19/2002	5.35E+00
2002	2	20	2/20/2002	5.07E+00
2002	2	21	2/21/2002	4.89E+00
2002	2	22	2/22/2002	4.64E+00
2002	2	23	2/23/2002	8.28E+00
2002	2	24	2/24/2002	1.18E+01
2002	2	25	2/25/2002	9.85E+00
2002	2	26	2/26/2002	8.36E+00
2002	2	27	2/27/2002	7.50E+00
2002	2	28	2/28/2002	6.92E+00
2002	3	1	3/1/2002	6.40E+00
2002	3	2	3/2/2002	2.45E+01
2002	3	3	3/3/2002	1.23E+03
2002	3	4	3/4/2002	3.14E+02
2002	3	5	3/5/2002	1.96E+02
2002	3	6	3/6/2002	1.77E+02
2002	3	7	3/7/2002	1.58E+02
2002	3	8	3/8/2002	1.41E+02
2002	3	9	3/9/2002	1.23E+02
2002	3	10	3/10/2002	1.06E+02
2002	3	11	3/11/2002	9.51E+01
2002	3	12	3/12/2002	9.08E+01
2002	3	13	3/13/2002	8.31E+01
2002	3	14	3/14/2002	6.93E+01
2002	3	15	3/15/2002	5.95E+01
2002	3	16	3/16/2002	5.26E+01
2002	3	17	3/17/2002	4.69E+01
2002	3	18	3/18/2002	4.16E+01
2002	3	19	3/19/2002	3.68E+01
2002	3	20	3/20/2002	3.27E+01
2002	3	21	3/21/2002	4.68E+01
2002	3	22	3/22/2002	4.71E+01
2002	3	23	3/23/2002	3.50E+01
2002	3	24	3/24/2002	3.03E+01
2002	3	25	3/25/2002	2.68E+01
2002	3	26	3/26/2002	2.63E+01
2002	3	27	3/27/2002	3.03E+01
2002	3	28	3/28/2002	2.63E+01
2002	3	29	3/29/2002	2.32E+01
2002	3	30	3/30/2002	2.07E+01
2002	3	31	3/31/2002	1.90E+01
2002	4	1	4/1/2002	1.74E+01
2002	4	2	4/2/2002	1.55E+01
2002	4	3	4/3/2002	1.40E+01
2002	4	4	4/4/2002	1.27E+01
2002	4	5	4/5/2002	1.14E+01
2002	4	6	4/6/2002	1.02E+01
2002	4	7	4/7/2002	9.02E+00
2002	4	8	4/8/2002	7.85E+00
2002	4	9	4/9/2002	6.76E+00
2002	4	10	4/10/2002	6.45E+00
2002	4	11	4/11/2002	8.82E+00
2002	4	12	4/12/2002	8.49E+00
2002	4	13	4/13/2002	7.35E+00

2002	4	14	4/14/2002	6.24E+00
2002	4	15	4/15/2002	5.38E+00
2002	4	16	4/16/2002	4.71E+00
2002	4	17	4/17/2002	4.11E+00
2002	4	18	4/18/2002	3.57E+00
2002	4	19	4/19/2002	3.05E+00
2002	4	20	4/20/2002	2.57E+00
2002	4	21	4/21/2002	2.12E+00
2002	4	22	4/22/2002	1.70E+00
2002	4	23	4/23/2002	1.32E+00
2002	4	24	4/24/2002	9.79E-01
2002	4	25	4/25/2002	7.28E-01
2002	4	26	4/26/2002	5.86E-01
2002	4	27	4/27/2002	5.10E-01
2002	4	28	4/28/2002	4.64E-01
2002	4	29	4/29/2002	4.33E-01
2002	4	30	4/30/2002	4.16E-01
2002	5	1	5/1/2002	4.03E-01
2002	5	2	5/2/2002	3.91E-01
2002	5	3	5/3/2002	3.80E-01
2002	5	4	5/4/2002	3.75E-01
2002	5	5	5/5/2002	3.85E-01
2002	5	6	5/6/2002	3.89E-01
2002	5	7	5/7/2002	3.81E-01
2002	5	8	5/8/2002	3.72E-01
2002	5	9	5/9/2002	3.66E-01
2002	5	10	5/10/2002	3.63E-01
2002	5	11	5/11/2002	3.60E-01
2002	5	12	5/12/2002	3.58E-01
2002	5	13	5/13/2002	3.60E-01
2002	5	14	5/14/2002	2.02E+00
2002	5	15	5/15/2002	1.91E+00
2002	5	16	5/16/2002	1.44E+00
2002	5	17	5/17/2002	1.96E+00
2002	5	18	5/18/2002	4.26E+00
2002	5	19	5/19/2002	1.18E+01
2002	5	20	5/20/2002	7.27E+00
2002	5	21	5/21/2002	4.71E+00
2002	5	22	5/22/2002	3.42E+00
2002	5	23	5/23/2002	2.58E+00
2002	5	24	5/24/2002	2.02E+00
2002	5	25	5/25/2002	1.61E+00
2002	5	26	5/26/2002	1.28E+00
2002	5	27	5/27/2002	1.02E+00
2002	5	28	5/28/2002	8.17E-01
2002	5	29	5/29/2002	7.12E-01
2002	5	30	5/30/2002	6.28E-01
2002	5	31	5/31/2002	5.59E-01
2002	6	1	6/1/2002	5.00E-01
2002	6	2	6/2/2002	4.45E-01
2002	6	3	6/3/2002	4.06E-01
2002	6	4	6/4/2002	3.93E-01
2002	6	5	6/5/2002	3.93E-01
2002	6	6	6/6/2002	3.87E-01
2002	6	7	6/7/2002	8.67E-01
2002	6	8	6/8/2002	9.69E+00
2002	6	9	6/9/2002	8.25E+00
2002	6	10	6/10/2002	6.78E+00

2002	6	11	6/11/2002	6.46E+00
2002	6	12	6/12/2002	4.54E+00
2002	6	13	6/13/2002	3.20E+00
2002	6	14	6/14/2002	2.38E+00
2002	6	15	6/15/2002	2.48E+00
2002	6	16	6/16/2002	1.95E+00
2002	6	17	6/17/2002	1.52E+00
2002	6	18	6/18/2002	1.72E+00
2002	6	19	6/19/2002	2.90E+00
2002	6	20	6/20/2002	2.63E+00
2002	6	21	6/21/2002	1.75E+01
2002	6	22	6/22/2002	3.60E+01
2002	6	23	6/23/2002	2.24E+01
2002	6	24	6/24/2002	1.67E+01
2002	6	25	6/25/2002	1.33E+01
2002	6	26	6/26/2002	1.38E+01
2002	6	27	6/27/2002	1.38E+01
2002	6	28	6/28/2002	1.12E+01
2002	6	29	6/29/2002	9.76E+00
2002	6	30	6/30/2002	8.74E+00
2002	7	1	7/1/2002	7.52E+00
2002	7	2	7/2/2002	6.43E+00
2002	7	3	7/3/2002	5.69E+00
2002	7	4	7/4/2002	5.14E+00
2002	7	5	7/5/2002	4.60E+00
2002	7	6	7/6/2002	4.15E+00
2002	7	7	7/7/2002	3.74E+00
2002	7	8	7/8/2002	3.32E+00
2002	7	9	7/9/2002	2.82E+00
2002	7	10	7/10/2002	2.36E+00
2002	7	11	7/11/2002	1.97E+00
2002	7	12	7/12/2002	1.68E+00
2002	7	13	7/13/2002	1.50E+00
2002	7	14	7/14/2002	1.49E+00
2002	7	15	7/15/2002	1.80E+00
2002	7	16	7/16/2002	1.48E+00
2002	7	17	7/17/2002	1.20E+00
2002	7	18	7/18/2002	9.89E-01
2002	7	19	7/19/2002	8.41E-01
2002	7	20	7/20/2002	3.96E+00
2002	7	21	7/21/2002	1.19E+01
2002	7	22	7/22/2002	6.33E+00
2002	7	23	7/23/2002	1.12E+01
2002	7	24	7/24/2002	3.32E+01
2002	7	25	7/25/2002	2.18E+01
2002	7	26	7/26/2002	1.34E+01
2002	7	27	7/27/2002	1.39E+01
2002	7	28	7/28/2002	1.09E+01
2002	7	29	7/29/2002	8.69E+00
2002	7	30	7/30/2002	7.38E+00
2002	7	31	7/31/2002	6.39E+00
2002	8	1	8/1/2002	5.91E+00
2002	8	2	8/2/2002	5.31E+00
2002	8	3	8/3/2002	5.05E+00
2002	8	4	8/4/2002	5.01E+00
2002	8	5	8/5/2002	5.30E+00
2002	8	6	8/6/2002	4.42E+00
2002	8	7	8/7/2002	4.77E+00

2002	8	8	8/8/2002	4.36E+00
2002	8	9	8/9/2002	3.52E+00
2002	8	10	8/10/2002	2.84E+00
2002	8	11	8/11/2002	2.49E+00
2002	8	12	8/12/2002	2.17E+00
2002	8	13	8/13/2002	4.06E+00
2002	8	14	8/14/2002	1.09E+01
2002	8	15	8/15/2002	6.51E+00
2002	8	16	8/16/2002	4.26E+00
2002	8	17	8/17/2002	3.06E+00
2002	8	18	8/18/2002	2.33E+00
2002	8	19	8/19/2002	1.99E+00
2002	8	20	8/20/2002	2.07E+00
2002	8	21	8/21/2002	1.79E+00
2002	8	22	8/22/2002	1.51E+00
2002	8	23	8/23/2002	1.28E+00
2002	8	24	8/24/2002	1.12E+00
2002	8	25	8/25/2002	1.66E+00
2002	8	26	8/26/2002	4.73E+00
2002	8	27	8/27/2002	8.84E+00
2002	8	28	8/28/2002	2.38E+01
2002	8	29	8/29/2002	1.76E+01
2002	8	30	8/30/2002	1.33E+01
2002	8	31	8/31/2002	2.19E+01
2002	9	1	9/1/2002	2.32E+01
2002	9	2	9/2/2002	1.86E+01
2002	9	3	9/3/2002	1.64E+01
2002	9	4	9/4/2002	1.44E+01
2002	9	5	9/5/2002	1.32E+01
2002	9	6	9/6/2002	1.17E+01
2002	9	7	9/7/2002	1.07E+01
2002	9	8	9/8/2002	1.06E+01
2002	9	9	9/9/2002	9.53E+00
2002	9	10	9/10/2002	8.09E+00
2002	9	11	9/11/2002	6.97E+00
2002	9	12	9/12/2002	6.13E+00
2002	9	13	9/13/2002	1.28E+01
2002	9	14	9/14/2002	2.63E+01
2002	9	15	9/15/2002	2.66E+01
2002	9	16	9/16/2002	2.80E+01
2002	9	17	9/17/2002	2.26E+01
2002	9	18	9/18/2002	1.99E+01
2002	9	19	9/19/2002	2.17E+01
2002	9	20	9/20/2002	2.28E+01
2002	9	21	9/21/2002	1.87E+01
2002	9	22	9/22/2002	1.66E+01
2002	9	23	9/23/2002	1.52E+01
2002	9	24	9/24/2002	1.98E+01
2002	9	25	9/25/2002	5.38E+01
2002	9	26	9/26/2002	6.40E+01
2002	9	27	9/27/2002	5.48E+01
2002	9	28	9/28/2002	4.95E+01
2002	9	29	9/29/2002	4.65E+01
2002	9	30	9/30/2002	4.19E+01
2002	10	1	10/1/2002	3.90E+01
2002	10	2	10/2/2002	3.62E+01
2002	10	3	10/3/2002	3.36E+01
2002	10	4	10/4/2002	3.05E+01

2002	10	5	10/5/2002	2.73E+01
2002	10	6	10/6/2002	2.38E+01
2002	10	7	10/7/2002	2.28E+01
2002	10	8	10/8/2002	3.45E+01
2002	10	9	10/9/2002	6.27E+01
2002	10	10	10/10/2002	6.72E+01
2002	10	11	10/11/2002	8.94E+01
2002	10	12	10/12/2002	7.80E+01
2002	10	13	10/13/2002	7.14E+01
2002	10	14	10/14/2002	6.68E+01
2002	10	15	10/15/2002	7.44E+01
2002	10	16	10/16/2002	7.37E+01
2002	10	17	10/17/2002	6.26E+01
2002	10	18	10/18/2002	5.35E+01
2002	10	19	10/19/2002	4.91E+01
2002	10	20	10/20/2002	4.50E+01
2002	10	21	10/21/2002	4.26E+01
2002	10	22	10/22/2002	4.82E+01
2002	10	23	10/23/2002	4.64E+01
2002	10	24	10/24/2002	4.46E+01
2002	10	25	10/25/2002	4.89E+01
2002	10	26	10/26/2002	5.02E+01
2002	10	27	10/27/2002	4.43E+01
2002	10	28	10/28/2002	3.71E+01
2002	10	29	10/29/2002	3.22E+01
2002	10	30	10/30/2002	3.01E+01
2002	10	31	10/31/2002	2.70E+01
2002	11	1	11/1/2002	2.48E+01
2002	11	2	11/2/2002	2.29E+01
2002	11	3	11/3/2002	2.14E+01
2002	11	4	11/4/2002	2.14E+01
2002	11	5	11/5/2002	2.07E+01
2002	11	6	11/6/2002	1.89E+01
2002	11	7	11/7/2002	1.74E+01
2002	11	8	11/8/2002	1.57E+01
2002	11	9	11/9/2002	1.45E+01
2002	11	10	11/10/2002	1.35E+01
2002	11	11	11/11/2002	1.24E+01
2002	11	12	11/12/2002	2.77E+01
2002	11	13	11/13/2002	5.07E+01
2002	11	14	11/14/2002	4.86E+01
2002	11	15	11/15/2002	4.65E+01
2002	11	16	11/16/2002	1.24E+02
2002	11	17	11/17/2002	1.75E+02
2002	11	18	11/18/2002	1.19E+02
2002	11	19	11/19/2002	1.07E+02
2002	11	20	11/20/2002	1.00E+02
2002	11	21	11/21/2002	9.94E+01
2002	11	22	11/22/2002	9.33E+01
2002	11	23	11/23/2002	8.43E+01
2002	11	24	11/24/2002	7.80E+01
2002	11	25	11/25/2002	7.09E+01
2002	11	26	11/26/2002	6.53E+01
2002	11	27	11/27/2002	5.99E+01
2002	11	28	11/28/2002	5.49E+01
2002	11	29	11/29/2002	5.05E+01
2002	11	30	11/30/2002	4.70E+01
2002	12	1	12/1/2002	4.32E+01

2002	12	2	12/2/2002	3.85E+01
2002	12	3	12/3/2002	3.52E+01
2002	12	4	12/4/2002	3.39E+01
2002	12	5	12/5/2002	3.45E+01
2002	12	6	12/6/2002	3.33E+01
2002	12	7	12/7/2002	2.94E+01
2002	12	8	12/8/2002	2.49E+01
2002	12	9	12/9/2002	2.47E+01
2002	12	10	12/10/2002	2.49E+01
2002	12	11	12/11/2002	2.34E+01
2002	12	12	12/12/2002	2.14E+01
2002	12	13	12/13/2002	1.96E+01
2002	12	14	12/14/2002	1.79E+01
2002	12	15	12/15/2002	1.59E+01
2002	12	16	12/16/2002	1.47E+01
2002	12	17	12/17/2002	1.42E+01
2002	12	18	12/18/2002	1.50E+01
2002	12	19	12/19/2002	1.32E+01
2002	12	20	12/20/2002	1.36E+01
2002	12	21	12/21/2002	1.44E+01
2002	12	22	12/22/2002	1.40E+01
2002	12	23	12/23/2002	1.33E+01
2002	12	24	12/24/2002	2.68E+01
2002	12	25	12/25/2002	5.23E+01
2002	12	26	12/26/2002	4.12E+01
2002	12	27	12/27/2002	3.78E+01
2002	12	28	12/28/2002	3.51E+01
2002	12	29	12/29/2002	3.30E+01
2002	12	30	12/30/2002	3.13E+01
2002	12	31	12/31/2002	3.54E+01
2003	1	1	1/1/2003	1.01E+02
2003	1	2	1/2/2003	7.20E+01
2003	1	3	1/3/2003	6.52E+01
2003	1	4	1/4/2003	6.04E+01
2003	1	5	1/5/2003	5.46E+01
2003	1	6	1/6/2003	4.99E+01
2003	1	7	1/7/2003	4.58E+01
2003	1	8	1/8/2003	4.20E+01
2003	1	9	1/9/2003	3.76E+01
2003	1	10	1/10/2003	3.50E+01
2003	1	11	1/11/2003	3.35E+01
2003	1	12	1/12/2003	3.15E+01
2003	1	13	1/13/2003	3.29E+01
2003	1	14	1/14/2003	3.01E+01
2003	1	15	1/15/2003	2.49E+01
2003	1	16	1/16/2003	2.22E+01
2003	1	17	1/17/2003	2.05E+01
2003	1	18	1/18/2003	1.93E+01
2003	1	19	1/19/2003	1.78E+01
2003	1	20	1/20/2003	1.62E+01
2003	1	21	1/21/2003	1.48E+01
2003	1	22	1/22/2003	1.65E+01
2003	1	23	1/23/2003	2.02E+01
2003	1	24	1/24/2003	1.77E+01
2003	1	25	1/25/2003	1.63E+01
2003	1	26	1/26/2003	1.52E+01
2003	1	27	1/27/2003	1.39E+01
2003	1	28	1/28/2003	1.27E+01

2003	1	29	1/29/2003	1.16E+01
2003	1	30	1/30/2003	1.07E+01
2003	1	31	1/31/2003	1.03E+01
2003	2	1	2/1/2003	1.01E+01
2003	2	2	2/2/2003	8.91E+00
2003	2	3	2/3/2003	8.04E+00
2003	2	4	2/4/2003	7.82E+00
2003	2	5	2/5/2003	7.41E+00
2003	2	6	2/6/2003	7.00E+00
2003	2	7	2/7/2003	2.57E+01
2003	2	8	2/8/2003	2.74E+01
2003	2	9	2/9/2003	2.55E+01
2003	2	10	2/10/2003	5.45E+01
2003	2	11	2/11/2003	4.41E+01
2003	2	12	2/12/2003	3.71E+01
2003	2	13	2/13/2003	3.35E+01
2003	2	14	2/14/2003	3.12E+01
2003	2	15	2/15/2003	2.87E+01
2003	2	16	2/16/2003	5.07E+01
2003	2	17	2/17/2003	9.83E+01
2003	2	18	2/18/2003	7.65E+01
2003	2	19	2/19/2003	6.43E+01
2003	2	20	2/20/2003	5.86E+01
2003	2	21	2/21/2003	5.80E+01
2003	2	22	2/22/2003	7.36E+01
2003	2	23	2/23/2003	9.59E+01
2003	2	24	2/24/2003	7.21E+01
2003	2	25	2/25/2003	6.60E+01
2003	2	26	2/26/2003	6.67E+01
2003	2	27	2/27/2003	3.75E+02
2003	2	28	2/28/2003	2.30E+02
2003	3	1	3/1/2003	5.09E+02
2003	3	2	3/2/2003	4.77E+02
2003	3	3	3/3/2003	3.53E+02
2003	3	4	3/4/2003	5.32E+02
2003	3	5	3/5/2003	5.05E+02
2003	3	6	3/6/2003	4.41E+02
2003	3	7	3/7/2003	8.51E+02
2003	3	8	3/8/2003	5.58E+02
2003	3	9	3/9/2003	8.01E+02
2003	3	10	3/10/2003	5.97E+02
2003	3	11	3/11/2003	5.11E+02
2003	3	12	3/12/2003	4.41E+02
2003	3	13	3/13/2003	3.87E+02
2003	3	14	3/14/2003	3.39E+02
2003	3	15	3/15/2003	3.09E+02
2003	3	16	3/16/2003	2.77E+02
2003	3	17	3/17/2003	3.92E+02
2003	3	18	3/18/2003	5.30E+02
2003	3	19	3/19/2003	2.78E+02
2003	3	20	3/20/2003	2.39E+02
2003	3	21	3/21/2003	2.01E+02
2003	3	22	3/22/2003	1.69E+02
2003	3	23	3/23/2003	1.53E+02
2003	3	24	3/24/2003	1.28E+02
2003	3	25	3/25/2003	1.03E+02
2003	3	26	3/26/2003	8.74E+01
2003	3	27	3/27/2003	8.05E+01

2003	3	28	3/28/2003	7.08E+01
2003	3	29	3/29/2003	5.71E+01
2003	3	30	3/30/2003	5.67E+01
2003	3	31	3/31/2003	5.58E+01
2003	4	1	4/1/2003	4.30E+01
2003	4	2	4/2/2003	3.60E+01
2003	4	3	4/3/2003	3.08E+01
2003	4	4	4/4/2003	2.66E+01
2003	4	5	4/5/2003	2.28E+01
2003	4	6	4/6/2003	1.94E+01
2003	4	7	4/7/2003	1.74E+01
2003	4	8	4/8/2003	5.55E+01
2003	4	9	4/9/2003	1.35E+02
2003	4	10	4/10/2003	1.68E+02
2003	4	11	4/11/2003	1.25E+02
2003	4	12	4/12/2003	1.01E+02
2003	4	13	4/13/2003	8.50E+01
2003	4	14	4/14/2003	7.35E+01
2003	4	15	4/15/2003	6.35E+01
2003	4	16	4/16/2003	5.53E+01
2003	4	17	4/17/2003	4.78E+01
2003	4	18	4/18/2003	4.10E+01
2003	4	19	4/19/2003	3.56E+01
2003	4	20	4/20/2003	3.12E+01
2003	4	21	4/21/2003	2.72E+01
2003	4	22	4/22/2003	2.31E+01
2003	4	23	4/23/2003	1.95E+01
2003	4	24	4/24/2003	1.69E+01
2003	4	25	4/25/2003	1.86E+01
2003	4	26	4/26/2003	2.46E+01
2003	4	27	4/27/2003	2.03E+01
2003	4	28	4/28/2003	1.67E+01
2003	4	29	4/29/2003	1.42E+01
2003	4	30	4/30/2003	1.20E+01
2003	5	1	5/1/2003	1.05E+01
2003	5	2	5/2/2003	9.54E+00
2003	5	3	5/3/2003	1.17E+01
2003	5	4	5/4/2003	1.14E+01
2003	5	5	5/5/2003	9.82E+00
2003	5	6	5/6/2003	8.28E+00
2003	5	7	5/7/2003	6.93E+00
2003	5	8	5/8/2003	5.80E+00
2003	5	9	5/9/2003	4.98E+00
2003	5	10	5/10/2003	4.17E+00
2003	5	11	5/11/2003	3.34E+00
2003	5	12	5/12/2003	2.56E+00
2003	5	13	5/13/2003	1.85E+00
2003	5	14	5/14/2003	1.32E+00
2003	5	15	5/15/2003	1.02E+00
2003	5	16	5/16/2003	8.48E-01
2003	5	17	5/17/2003	7.19E-01
2003	5	18	5/18/2003	1.97E+00
2003	5	19	5/19/2003	9.61E+00
2003	5	20	5/20/2003	1.48E+01
2003	5	21	5/21/2003	1.11E+01
2003	5	22	5/22/2003	9.39E+00
2003	5	23	5/23/2003	1.42E+01
2003	5	24	5/24/2003	1.28E+01

2003	5	25	5/25/2003	1.08E+01
2003	5	26	5/26/2003	9.29E+00
2003	5	27	5/27/2003	8.02E+00
2003	5	28	5/28/2003	6.83E+00
2003	5	29	5/29/2003	5.83E+00
2003	5	30	5/30/2003	5.12E+00
2003	5	31	5/31/2003	4.48E+00
2003	6	1	6/1/2003	3.80E+00
2003	6	2	6/2/2003	3.14E+00
2003	6	3	6/3/2003	3.52E+00
2003	6	4	6/4/2003	9.35E+00
2003	6	5	6/5/2003	9.39E+00
2003	6	6	6/6/2003	7.81E+00
2003	6	7	6/7/2003	9.23E+00
2003	6	8	6/8/2003	1.76E+01
2003	6	9	6/9/2003	1.37E+01
2003	6	10	6/10/2003	1.01E+01
2003	6	11	6/11/2003	8.25E+00
2003	6	12	6/12/2003	7.09E+00
2003	6	13	6/13/2003	6.51E+00
2003	6	14	6/14/2003	6.63E+00
2003	6	15	6/15/2003	5.51E+00
2003	6	16	6/16/2003	4.78E+00
2003	6	17	6/17/2003	1.14E+01
2003	6	18	6/18/2003	2.50E+01
2003	6	19	6/19/2003	3.90E+01
2003	6	20	6/20/2003	2.16E+01
2003	6	21	6/21/2003	1.74E+01
2003	6	22	6/22/2003	1.52E+01
2003	6	23	6/23/2003	1.35E+01
2003	6	24	6/24/2003	1.20E+01
2003	6	25	6/25/2003	1.05E+01
2003	6	26	6/26/2003	9.25E+00
2003	6	27	6/27/2003	8.06E+00
2003	6	28	6/28/2003	7.36E+00
2003	6	29	6/29/2003	7.11E+00
2003	6	30	6/30/2003	6.27E+00
2003	7	1	7/1/2003	5.57E+00
2003	7	2	7/2/2003	5.09E+00
2003	7	3	7/3/2003	4.83E+00
2003	7	4	7/4/2003	4.51E+00
2003	7	5	7/5/2003	3.97E+00
2003	7	6	7/6/2003	3.46E+00
2003	7	7	7/7/2003	2.88E+00
2003	7	8	7/8/2003	2.38E+00
2003	7	9	7/9/2003	1.92E+00
2003	7	10	7/10/2003	1.53E+00
2003	7	11	7/11/2003	1.20E+00
2003	7	12	7/12/2003	9.31E-01
2003	7	13	7/13/2003	1.27E+00
2003	7	14	7/14/2003	9.37E+00
2003	7	15	7/15/2003	1.67E+01
2003	7	16	7/16/2003	8.37E+00
2003	7	17	7/17/2003	5.08E+00
2003	7	18	7/18/2003	5.63E+00
2003	7	19	7/19/2003	7.33E+00
2003	7	20	7/20/2003	5.43E+00
2003	7	21	7/21/2003	4.40E+00

2003	7	22	7/22/2003	6.32E+00
2003	7	23	7/23/2003	1.05E+01
2003	7	24	7/24/2003	7.68E+00
2003	7	25	7/25/2003	7.81E+00
2003	7	26	7/26/2003	8.19E+00
2003	7	27	7/27/2003	6.13E+00
2003	7	28	7/28/2003	5.26E+00
2003	7	29	7/29/2003	4.72E+00
2003	7	30	7/30/2003	4.13E+00
2003	7	31	7/31/2003	3.78E+00
2003	8	1	8/1/2003	5.54E+00
2003	8	2	8/2/2003	1.12E+01
2003	8	3	8/3/2003	7.70E+00
2003	8	4	8/4/2003	6.79E+00
2003	8	5	8/5/2003	6.84E+00
2003	8	6	8/6/2003	5.65E+00
2003	8	7	8/7/2003	1.47E+01
2003	8	8	8/8/2003	2.47E+01
2003	8	9	8/9/2003	1.48E+01
2003	8	10	8/10/2003	1.39E+01
2003	8	11	8/11/2003	1.25E+01
2003	8	12	8/12/2003	1.34E+01
2003	8	13	8/13/2003	1.27E+01
2003	8	14	8/14/2003	1.17E+01
2003	8	15	8/15/2003	1.08E+01
2003	8	16	8/16/2003	9.44E+00
2003	8	17	8/17/2003	1.15E+01
2003	8	18	8/18/2003	1.06E+01
2003	8	19	8/19/2003	1.31E+01
2003	8	20	8/20/2003	1.09E+01
2003	8	21	8/21/2003	9.49E+00
2003	8	22	8/22/2003	9.74E+00
2003	8	23	8/23/2003	8.52E+00
2003	8	24	8/24/2003	7.26E+00
2003	8	25	8/25/2003	6.29E+00
2003	8	26	8/26/2003	5.66E+00
2003	8	27	8/27/2003	5.16E+00
2003	8	28	8/28/2003	4.66E+00
2003	8	29	8/29/2003	4.22E+00
2003	8	30	8/30/2003	3.81E+00
2003	8	31	8/31/2003	3.39E+00
2003	9	1	9/1/2003	3.41E+00
2003	9	2	9/2/2003	3.19E+00
2003	9	3	9/3/2003	2.75E+00
2003	9	4	9/4/2003	2.61E+00
2003	9	5	9/5/2003	2.65E+00
2003	9	6	9/6/2003	4.75E+01
2003	9	7	9/7/2003	4.94E+01
2003	9	8	9/8/2003	2.07E+01
2003	9	9	9/9/2003	1.52E+01
2003	9	10	9/10/2003	1.32E+01
2003	9	11	9/11/2003	1.20E+01
2003	9	12	9/12/2003	1.10E+01
2003	9	13	9/13/2003	1.00E+01
2003	9	14	9/14/2003	1.17E+01
2003	9	15	9/15/2003	1.36E+01
2003	9	16	9/16/2003	1.11E+01
2003	9	17	9/17/2003	9.35E+00

2003	9	18	9/18/2003	8.23E+00
2003	9	19	9/19/2003	7.34E+00
2003	9	20	9/20/2003	6.58E+00
2003	9	21	9/21/2003	6.26E+00
2003	9	22	9/22/2003	5.92E+00
2003	9	23	9/23/2003	7.43E+00
2003	9	24	9/24/2003	1.04E+01
2003	9	25	9/25/2003	8.13E+00
2003	9	26	9/26/2003	8.98E+00
2003	9	27	9/27/2003	1.19E+01
2003	9	28	9/28/2003	9.51E+00
2003	9	29	9/29/2003	7.79E+00
2003	9	30	9/30/2003	6.89E+00
2003	10	1	10/1/2003	6.31E+00
2003	10	2	10/2/2003	5.80E+00
2003	10	3	10/3/2003	5.37E+00
2003	10	4	10/4/2003	5.00E+00
2003	10	5	10/5/2003	4.58E+00
2003	10	6	10/6/2003	4.16E+00
2003	10	7	10/7/2003	7.67E+00
2003	10	8	10/8/2003	4.88E+01
2003	10	9	10/9/2003	8.75E+01
2003	10	10	10/10/2003	3.05E+01
2003	10	11	10/11/2003	2.58E+01
2003	10	12	10/12/2003	2.92E+01
2003	10	13	10/13/2003	2.95E+01
2003	10	14	10/14/2003	2.76E+01
2003	10	15	10/15/2003	2.36E+01
2003	10	16	10/16/2003	2.13E+01
2003	10	17	10/17/2003	2.03E+01
2003	10	18	10/18/2003	1.93E+01
2003	10	19	10/19/2003	1.74E+01
2003	10	20	10/20/2003	1.58E+01
2003	10	21	10/21/2003	1.44E+01
2003	10	22	10/22/2003	1.32E+01
2003	10	23	10/23/2003	1.20E+01
2003	10	24	10/24/2003	1.11E+01
2003	10	25	10/25/2003	1.06E+01
2003	10	26	10/26/2003	1.11E+01
2003	10	27	10/27/2003	1.08E+01
2003	10	28	10/28/2003	1.52E+01
2003	10	29	10/29/2003	7.50E+01
2003	10	30	10/30/2003	3.75E+01
2003	10	31	10/31/2003	2.85E+01
2003	11	1	11/1/2003	2.62E+01
2003	11	2	11/2/2003	2.41E+01
2003	11	3	11/3/2003	2.31E+01
2003	11	4	11/4/2003	2.19E+01
2003	11	5	11/5/2003	1.94E+01
2003	11	6	11/6/2003	1.79E+01
2003	11	7	11/7/2003	1.67E+01
2003	11	8	11/8/2003	1.58E+01
2003	11	9	11/9/2003	1.58E+01
2003	11	10	11/10/2003	1.52E+01
2003	11	11	11/11/2003	1.33E+01
2003	11	12	11/12/2003	1.20E+01
2003	11	13	11/13/2003	1.09E+01
2003	11	14	11/14/2003	1.02E+01

2003	11	15	11/15/2003	9.55E+00
2003	11	16	11/16/2003	8.90E+00
2003	11	17	11/17/2003	8.27E+00
2003	11	18	11/18/2003	7.67E+00
2003	11	19	11/19/2003	9.98E+00
2003	11	20	11/20/2003	1.17E+01
2003	11	21	11/21/2003	1.03E+01
2003	11	22	11/22/2003	9.30E+00
2003	11	23	11/23/2003	8.61E+00
2003	11	24	11/24/2003	8.23E+00
2003	11	25	11/25/2003	8.33E+00
2003	11	26	11/26/2003	7.70E+00
2003	11	27	11/27/2003	7.23E+00
2003	11	28	11/28/2003	7.56E+00
2003	11	29	11/29/2003	8.57E+00
2003	11	30	11/30/2003	7.79E+00
2003	12	1	12/1/2003	7.15E+00
2003	12	2	12/2/2003	6.70E+00
2003	12	3	12/3/2003	6.41E+00
2003	12	4	12/4/2003	1.57E+01
2003	12	5	12/5/2003	1.81E+01
2003	12	6	12/6/2003	1.70E+01
2003	12	7	12/7/2003	1.43E+01
2003	12	8	12/8/2003	1.29E+01
2003	12	9	12/9/2003	1.21E+01
2003	12	10	12/10/2003	1.32E+01
2003	12	11	12/11/2003	1.61E+01
2003	12	12	12/12/2003	1.45E+01
2003	12	13	12/13/2003	1.36E+01
2003	12	14	12/14/2003	2.57E+01
2003	12	15	12/15/2003	2.90E+01
2003	12	16	12/16/2003	2.22E+01
2003	12	17	12/17/2003	2.06E+01
2003	12	18	12/18/2003	1.94E+01
2003	12	19	12/19/2003	1.78E+01
2003	12	20	12/20/2003	1.68E+01
2003	12	21	12/21/2003	1.61E+01
2003	12	22	12/22/2003	1.55E+01
2003	12	23	12/23/2003	1.46E+01
2003	12	24	12/24/2003	1.47E+01
2003	12	25	12/25/2003	1.48E+01
2003	12	26	12/26/2003	1.42E+01
2003	12	27	12/27/2003	1.31E+01
2003	12	28	12/28/2003	1.23E+01
2003	12	29	12/29/2003	1.18E+01
2003	12	30	12/30/2003	1.16E+01
2003	12	31	12/31/2003	1.13E+01
2004	1	1	1/1/2004	1.03E+01
2004	1	2	1/2/2004	8.99E+00
2004	1	3	1/3/2004	8.25E+00
2004	1	4	1/4/2004	7.68E+00
2004	1	5	1/5/2004	7.20E+00
2004	1	6	1/6/2004	6.94E+00
2004	1	7	1/7/2004	6.75E+00
2004	1	8	1/8/2004	6.37E+00
2004	1	9	1/9/2004	7.07E+00
2004	1	10	1/10/2004	1.13E+01
2004	1	11	1/11/2004	1.15E+01

2004	1	12	1/12/2004	9.74E+00
2004	1	13	1/13/2004	8.69E+00
2004	1	14	1/14/2004	8.09E+00
2004	1	15	1/15/2004	7.56E+00
2004	1	16	1/16/2004	7.13E+00
2004	1	17	1/17/2004	6.97E+00
2004	1	18	1/18/2004	7.16E+00
2004	1	19	1/19/2004	6.90E+00
2004	1	20	1/20/2004	6.58E+00
2004	1	21	1/21/2004	5.94E+00
2004	1	22	1/22/2004	5.54E+00
2004	1	23	1/23/2004	5.25E+00
2004	1	24	1/24/2004	4.97E+00
2004	1	25	1/25/2004	4.73E+00
2004	1	26	1/26/2004	5.46E+00
2004	1	27	1/27/2004	1.02E+01
2004	1	28	1/28/2004	9.68E+00
2004	1	29	1/29/2004	8.33E+00
2004	1	30	1/30/2004	7.57E+00
2004	1	31	1/31/2004	7.06E+00
2004	2	1	2/1/2004	1.13E+01
2004	2	2	2/2/2004	1.52E+01
2004	2	3	2/3/2004	1.68E+01
2004	2	4	2/4/2004	1.45E+01
2004	2	5	2/5/2004	1.31E+01
2004	2	6	2/6/2004	1.77E+01
2004	2	7	2/7/2004	7.00E+01
2004	2	8	2/8/2004	3.49E+01
2004	2	9	2/9/2004	2.77E+01
2004	2	10	2/10/2004	2.79E+01
2004	2	11	2/11/2004	2.90E+01
2004	2	12	2/12/2004	3.59E+01
2004	2	13	2/13/2004	3.90E+01
2004	2	14	2/14/2004	5.75E+01
2004	2	15	2/15/2004	7.71E+01
2004	2	16	2/16/2004	7.45E+01
2004	2	17	2/17/2004	7.61E+01
2004	2	18	2/18/2004	6.51E+01
2004	2	19	2/19/2004	5.24E+01
2004	2	20	2/20/2004	4.64E+01
2004	2	21	2/21/2004	4.23E+01
2004	2	22	2/22/2004	3.87E+01
2004	2	23	2/23/2004	3.64E+01
2004	2	24	2/24/2004	5.86E+01
2004	2	25	2/25/2004	1.01E+02
2004	2	26	2/26/2004	5.81E+02
2004	2	27	2/27/2004	1.86E+02
2004	2	28	2/28/2004	1.47E+02
2004	2	29	2/29/2004	1.31E+02
2004	3	1	3/1/2004	1.24E+02
2004	3	2	3/2/2004	1.09E+02
2004	3	3	3/3/2004	9.33E+01
2004	3	4	3/4/2004	8.22E+01
2004	3	5	3/5/2004	7.31E+01
2004	3	6	3/6/2004	6.76E+01
2004	3	7	3/7/2004	5.99E+01
2004	3	8	3/8/2004	5.06E+01
2004	3	9	3/9/2004	4.51E+01

2004	3	10	3/10/2004	4.82E+01
2004	3	11	3/11/2004	4.49E+01
2004	3	12	3/12/2004	3.73E+01
2004	3	13	3/13/2004	3.30E+01
2004	3	14	3/14/2004	2.98E+01
2004	3	15	3/15/2004	2.66E+01
2004	3	16	3/16/2004	6.50E+01
2004	3	17	3/17/2004	6.06E+01
2004	3	18	3/18/2004	4.72E+01
2004	3	19	3/19/2004	4.16E+01
2004	3	20	3/20/2004	3.74E+01
2004	3	21	3/21/2004	3.37E+01
2004	3	22	3/22/2004	3.02E+01
2004	3	23	3/23/2004	2.71E+01
2004	3	24	3/24/2004	2.42E+01
2004	3	25	3/25/2004	2.16E+01
2004	3	26	3/26/2004	1.93E+01
2004	3	27	3/27/2004	1.71E+01
2004	3	28	3/28/2004	1.52E+01
2004	3	29	3/29/2004	1.35E+01
2004	3	30	3/30/2004	1.22E+01
2004	3	31	3/31/2004	1.11E+01
2004	4	1	4/1/2004	9.66E+00
2004	4	2	4/2/2004	8.36E+00
2004	4	3	4/3/2004	7.18E+00
2004	4	4	4/4/2004	6.10E+00
2004	4	5	4/5/2004	5.37E+00
2004	4	6	4/6/2004	4.77E+00
2004	4	7	4/7/2004	4.19E+00
2004	4	8	4/8/2004	6.50E+00
2004	4	9	4/9/2004	1.19E+01
2004	4	10	4/10/2004	9.69E+00
2004	4	11	4/11/2004	7.77E+00
2004	4	12	4/12/2004	6.77E+00
2004	4	13	4/13/2004	6.60E+00
2004	4	14	4/14/2004	5.93E+00
2004	4	15	4/15/2004	5.33E+00
2004	4	16	4/16/2004	4.71E+00
2004	4	17	4/17/2004	4.08E+00
2004	4	18	4/18/2004	3.49E+00
2004	4	19	4/19/2004	2.94E+00
2004	4	20	4/20/2004	2.46E+00
2004	4	21	4/21/2004	2.04E+00
2004	4	22	4/22/2004	1.63E+00
2004	4	23	4/23/2004	1.24E+00
2004	4	24	4/24/2004	9.00E-01
2004	4	25	4/25/2004	6.73E-01
2004	4	26	4/26/2004	7.05E-01
2004	4	27	4/27/2004	1.20E+00
2004	4	28	4/28/2004	1.17E+00
2004	4	29	4/29/2004	9.66E-01
2004	4	30	4/30/2004	4.73E+00
2004	5	1	5/1/2004	1.37E+01
2004	5	2	5/2/2004	1.40E+01
2004	5	3	5/3/2004	2.54E+01
2004	5	4	5/4/2004	1.95E+01
2004	5	5	5/5/2004	1.45E+01
2004	5	6	5/6/2004	1.20E+01

2004	5	7	5/7/2004	1.03E+01
2004	5	8	5/8/2004	8.97E+00
2004	5	9	5/9/2004	7.77E+00
2004	5	10	5/10/2004	6.72E+00
2004	5	11	5/11/2004	6.05E+00
2004	5	12	5/12/2004	5.51E+00
2004	5	13	5/13/2004	4.92E+00
2004	5	14	5/14/2004	4.31E+00
2004	5	15	5/15/2004	3.68E+00
2004	5	16	5/16/2004	3.10E+00
2004	5	17	5/17/2004	2.60E+00
2004	5	18	5/18/2004	9.71E+00
2004	5	19	5/19/2004	1.04E+01
2004	5	20	5/20/2004	5.37E+00
2004	5	21	5/21/2004	3.56E+00
2004	5	22	5/22/2004	2.48E+00
2004	5	23	5/23/2004	1.87E+00
2004	5	24	5/24/2004	1.47E+00
2004	5	25	5/25/2004	1.17E+00
2004	5	26	5/26/2004	9.27E-01
2004	5	27	5/27/2004	7.36E-01
2004	5	28	5/28/2004	6.16E-01
2004	5	29	5/29/2004	5.38E-01
2004	5	30	5/30/2004	4.88E-01
2004	5	31	5/31/2004	4.64E-01
2004	6	1	6/1/2004	4.52E-01
2004	6	2	6/2/2004	4.40E-01
2004	6	3	6/3/2004	6.67E-01
2004	6	4	6/4/2004	1.28E+00
2004	6	5	6/5/2004	1.22E+00
2004	6	6	6/6/2004	1.03E+00
2004	6	7	6/7/2004	7.50E-01
2004	6	8	6/8/2004	5.82E-01
2004	6	9	6/9/2004	6.59E-01
2004	6	10	6/10/2004	7.53E-01
2004	6	11	6/11/2004	1.51E+00
2004	6	12	6/12/2004	2.25E+00
2004	6	13	6/13/2004	3.90E+00
2004	6	14	6/14/2004	3.70E+00
2004	6	15	6/15/2004	2.74E+00
2004	6	16	6/16/2004	1.77E+00
2004	6	17	6/17/2004	1.14E+00
2004	6	18	6/18/2004	7.79E-01
2004	6	19	6/19/2004	7.21E+00
2004	6	20	6/20/2004	6.58E+00
2004	6	21	6/21/2004	4.57E+00
2004	6	22	6/22/2004	3.95E+00
2004	6	23	6/23/2004	2.87E+00
2004	6	24	6/24/2004	2.00E+00
2004	6	25	6/25/2004	1.55E+00
2004	6	26	6/26/2004	3.34E+00
2004	6	27	6/27/2004	8.87E+00
2004	6	28	6/28/2004	6.29E+00
2004	6	29	6/29/2004	4.12E+00
2004	6	30	6/30/2004	3.90E+00
2004	7	1	7/1/2004	4.32E+00
2004	7	2	7/2/2004	6.05E+00
2004	7	3	7/3/2004	1.49E+01

2004	7	4	7/4/2004	8.22E+00
2004	7	5	7/5/2004	4.88E+00
2004	7	6	7/6/2004	3.68E+00
2004	7	7	7/7/2004	3.01E+00
2004	7	8	7/8/2004	2.87E+00
2004	7	9	7/9/2004	2.43E+00
2004	7	10	7/10/2004	2.02E+00
2004	7	11	7/11/2004	6.46E+00
2004	7	12	7/12/2004	1.77E+01
2004	7	13	7/13/2004	8.95E+00
2004	7	14	7/14/2004	5.12E+00
2004	7	15	7/15/2004	4.24E+01
2004	7	16	7/16/2004	1.15E+02
2004	7	17	7/17/2004	2.72E+01
2004	7	18	7/18/2004	1.74E+01
2004	7	19	7/19/2004	1.61E+01
2004	7	20	7/20/2004	1.49E+01
2004	7	21	7/21/2004	1.26E+01
2004	7	22	7/22/2004	1.11E+01
2004	7	23	7/23/2004	1.00E+01
2004	7	24	7/24/2004	9.08E+00
2004	7	25	7/25/2004	1.25E+01
2004	7	26	7/26/2004	1.43E+01
2004	7	27	7/27/2004	1.07E+01
2004	7	28	7/28/2004	8.59E+00
2004	7	29	7/29/2004	7.86E+00
2004	7	30	7/30/2004	7.09E+00
2004	7	31	7/31/2004	1.37E+01
2004	8	1	8/1/2004	1.84E+01
2004	8	2	8/2/2004	1.25E+01
2004	8	3	8/3/2004	1.11E+01
2004	8	4	8/4/2004	9.59E+00
2004	8	5	8/5/2004	7.73E+00
2004	8	6	8/6/2004	6.94E+00
2004	8	7	8/7/2004	6.27E+00
2004	8	8	8/8/2004	6.50E+00
2004	8	9	8/9/2004	6.40E+00
2004	8	10	8/10/2004	5.38E+00
2004	8	11	8/11/2004	5.09E+00
2004	8	12	8/12/2004	7.28E+00
2004	8	13	8/13/2004	1.25E+01
2004	8	14	8/14/2004	1.32E+01
2004	8	15	8/15/2004	1.26E+01
2004	8	16	8/16/2004	1.85E+01
2004	8	17	8/17/2004	1.55E+01
2004	8	18	8/18/2004	1.39E+01
2004	8	19	8/19/2004	1.12E+01
2004	8	20	8/20/2004	9.49E+00
2004	8	21	8/21/2004	1.08E+01
2004	8	22	8/22/2004	1.19E+01
2004	8	23	8/23/2004	1.60E+01
2004	8	24	8/24/2004	2.80E+01
2004	8	25	8/25/2004	2.32E+01
2004	8	26	8/26/2004	2.46E+01
2004	8	27	8/27/2004	3.35E+01
2004	8	28	8/28/2004	2.95E+01
2004	8	29	8/29/2004	4.82E+01
2004	8	30	8/30/2004	5.87E+01

2004	8	31	8/31/2004	6.12E+01
2004	9	1	9/1/2004	5.31E+01
2004	9	2	9/2/2004	4.79E+01
2004	9	3	9/3/2004	4.49E+01
2004	9	4	9/4/2004	4.14E+01
2004	9	5	9/5/2004	5.07E+01
2004	9	6	9/6/2004	3.24E+02
2004	9	7	9/7/2004	3.56E+02
2004	9	8	9/8/2004	2.81E+02
2004	9	9	9/9/2004	2.53E+02
2004	9	10	9/10/2004	7.57E+02
2004	9	11	9/11/2004	8.35E+02
2004	9	12	9/12/2004	3.39E+02
2004	9	13	9/13/2004	4.53E+02
2004	9	14	9/14/2004	3.78E+02
2004	9	15	9/15/2004	3.27E+02
2004	9	16	9/16/2004	2.98E+02
2004	9	17	9/17/2004	2.57E+02
2004	9	18	9/18/2004	2.18E+02
2004	9	19	9/19/2004	1.98E+02
2004	9	20	9/20/2004	1.85E+02
2004	9	21	9/21/2004	1.66E+02
2004	9	22	9/22/2004	1.32E+02
2004	9	23	9/23/2004	1.04E+02
2004	9	24	9/24/2004	9.66E+01
2004	9	25	9/25/2004	9.03E+01
2004	9	26	9/26/2004	9.24E+01
2004	9	27	9/27/2004	1.28E+02
2004	9	28	9/28/2004	1.13E+02
2004	9	29	9/29/2004	9.38E+01
2004	9	30	9/30/2004	8.21E+01
2004	10	1	10/1/2004	7.02E+01
2004	10	2	10/2/2004	6.10E+01
2004	10	3	10/3/2004	5.82E+01
2004	10	4	10/4/2004	5.89E+01
2004	10	5	10/5/2004	4.99E+01
2004	10	6	10/6/2004	4.41E+01
2004	10	7	10/7/2004	3.89E+01
2004	10	8	10/8/2004	3.44E+01
2004	10	9	10/9/2004	3.06E+01
2004	10	10	10/10/2004	2.84E+01
2004	10	11	10/11/2004	5.48E+02
2004	10	12	10/12/2004	1.24E+02
2004	10	13	10/13/2004	7.46E+01
2004	10	14	10/14/2004	6.76E+01
2004	10	15	10/15/2004	1.01E+02
2004	10	16	10/16/2004	1.07E+02
2004	10	17	10/17/2004	9.03E+01
2004	10	18	10/18/2004	8.44E+01
2004	10	19	10/19/2004	7.71E+01
2004	10	20	10/20/2004	6.59E+01
2004	10	21	10/21/2004	5.89E+01
2004	10	22	10/22/2004	5.34E+01
2004	10	23	10/23/2004	4.58E+01
2004	10	24	10/24/2004	4.27E+01
2004	10	25	10/25/2004	3.95E+01
2004	10	26	10/26/2004	3.30E+01
2004	10	27	10/27/2004	2.88E+01

2004	10	28	10/28/2004	2.60E+01
2004	10	29	10/29/2004	2.37E+01
2004	10	30	10/30/2004	2.11E+01
2004	10	31	10/31/2004	1.83E+01
2004	11	1	11/1/2004	1.63E+01
2004	11	2	11/2/2004	1.46E+01
2004	11	3	11/3/2004	1.30E+01
2004	11	4	11/4/2004	1.17E+01
2004	11	5	11/5/2004	1.07E+01
2004	11	6	11/6/2004	9.53E+00
2004	11	7	11/7/2004	8.50E+00
2004	11	8	11/8/2004	7.55E+00
2004	11	9	11/9/2004	6.73E+00
2004	11	10	11/10/2004	6.17E+00
2004	11	11	11/11/2004	6.30E+00
2004	11	12	11/12/2004	5.70E+00
2004	11	13	11/13/2004	5.43E+00
2004	11	14	11/14/2004	5.16E+00
2004	11	15	11/15/2004	4.82E+00
2004	11	16	11/16/2004	4.39E+00
2004	11	17	11/17/2004	3.95E+00
2004	11	18	11/18/2004	3.55E+00
2004	11	19	11/19/2004	3.17E+00
2004	11	20	11/20/2004	2.86E+00
2004	11	21	11/21/2004	2.55E+00
2004	11	22	11/22/2004	2.28E+00
2004	11	23	11/23/2004	2.03E+00
2004	11	24	11/24/2004	4.14E+00
2004	11	25	11/25/2004	2.86E+01
2004	11	26	11/26/2004	2.42E+01
2004	11	27	11/27/2004	3.34E+01
2004	11	28	11/28/2004	1.09E+02
2004	11	29	11/29/2004	4.82E+01
2004	11	30	11/30/2004	3.76E+01
2004	12	1	12/1/2004	3.60E+01
2004	12	2	12/2/2004	3.45E+01
2004	12	3	12/3/2004	3.11E+01
2004	12	4	12/4/2004	2.99E+01
2004	12	5	12/5/2004	2.85E+01
2004	12	6	12/6/2004	2.49E+01
2004	12	7	12/7/2004	2.22E+01
2004	12	8	12/8/2004	2.11E+01
2004	12	9	12/9/2004	2.02E+01
2004	12	10	12/10/2004	1.94E+01
2004	12	11	12/11/2004	1.96E+01
2004	12	12	12/12/2004	1.87E+01
2004	12	13	12/13/2004	1.74E+01
2004	12	14	12/14/2004	1.63E+01
2004	12	15	12/15/2004	1.52E+01
2004	12	16	12/16/2004	1.44E+01
2004	12	17	12/17/2004	1.37E+01
2004	12	18	12/18/2004	1.25E+01
2004	12	19	12/19/2004	1.15E+01
2004	12	20	12/20/2004	1.08E+01
2004	12	21	12/21/2004	1.02E+01
2004	12	22	12/22/2004	9.65E+00
2004	12	23	12/23/2004	9.10E+00
2004	12	24	12/24/2004	9.39E+00

2004	12	25	12/25/2004	1.36E+01
2004	12	26	12/26/2004	6.01E+01
2004	12	27	12/27/2004	8.17E+01
2004	12	28	12/28/2004	7.17E+01
2004	12	29	12/29/2004	6.64E+01
2004	12	30	12/30/2004	6.19E+01
2004	12	31	12/31/2004	5.80E+01
2005	1	1	1/1/2005	5.24E+01
2005	1	2	1/2/2005	4.47E+01
2005	1	3	1/3/2005	3.91E+01
2005	1	4	1/4/2005	3.59E+01
2005	1	5	1/5/2005	3.33E+01
2005	1	6	1/6/2005	3.04E+01
2005	1	7	1/7/2005	2.76E+01
2005	1	8	1/8/2005	2.54E+01
2005	1	9	1/9/2005	2.36E+01
2005	1	10	1/10/2005	2.27E+01
2005	1	11	1/11/2005	2.09E+01
2005	1	12	1/12/2005	1.87E+01
2005	1	13	1/13/2005	1.73E+01
2005	1	14	1/14/2005	4.14E+01
2005	1	15	1/15/2005	4.63E+01
2005	1	16	1/16/2005	3.89E+01
2005	1	17	1/17/2005	3.34E+01
2005	1	18	1/18/2005	2.97E+01
2005	1	19	1/19/2005	2.73E+01
2005	1	20	1/20/2005	2.48E+01
2005	1	21	1/21/2005	2.23E+01
2005	1	22	1/22/2005	2.11E+01
2005	1	23	1/23/2005	2.04E+01
2005	1	24	1/24/2005	1.82E+01
2005	1	25	1/25/2005	1.66E+01
2005	1	26	1/26/2005	1.52E+01
2005	1	27	1/27/2005	1.41E+01
2005	1	28	1/28/2005	1.40E+01
2005	1	29	1/29/2005	1.72E+01
2005	1	30	1/30/2005	3.67E+01
2005	1	31	1/31/2005	3.69E+01
2005	2	1	2/1/2005	3.41E+01
2005	2	2	2/2/2005	4.03E+01
2005	2	3	2/3/2005	5.63E+01
2005	2	4	2/4/2005	6.20E+01
2005	2	5	2/5/2005	5.25E+01
2005	2	6	2/6/2005	4.62E+01
2005	2	7	2/7/2005	4.18E+01
2005	2	8	2/8/2005	3.77E+01
2005	2	9	2/9/2005	3.48E+01
2005	2	10	2/10/2005	3.20E+01
2005	2	11	2/11/2005	2.81E+01
2005	2	12	2/12/2005	2.56E+01
2005	2	13	2/13/2005	2.34E+01
2005	2	14	2/14/2005	2.30E+01
2005	2	15	2/15/2005	2.27E+01
2005	2	16	2/16/2005	2.02E+01
2005	2	17	2/17/2005	1.82E+01
2005	2	18	2/18/2005	1.62E+01
2005	2	19	2/19/2005	1.49E+01
2005	2	20	2/20/2005	1.37E+01

2005	2	21	2/21/2005	1.26E+01
2005	2	22	2/22/2005	1.18E+01
2005	2	23	2/23/2005	1.13E+01
2005	2	24	2/24/2005	1.54E+01
2005	2	25	2/25/2005	2.65E+01
2005	2	26	2/26/2005	3.03E+01
2005	2	27	2/27/2005	9.64E+02
2005	2	28	2/28/2005	1.09E+03
2005	3	1	3/1/2005	1.91E+02
2005	3	2	3/2/2005	1.67E+02
2005	3	3	3/3/2005	1.61E+02
2005	3	4	3/4/2005	1.41E+02
2005	3	5	3/5/2005	1.19E+02
2005	3	6	3/6/2005	1.04E+02
2005	3	7	3/7/2005	9.17E+01
2005	3	8	3/8/2005	1.78E+02
2005	3	9	3/9/2005	1.31E+02
2005	3	10	3/10/2005	1.10E+02
2005	3	11	3/11/2005	9.23E+01
2005	3	12	3/12/2005	7.99E+01
2005	3	13	3/13/2005	6.77E+01
2005	3	14	3/14/2005	6.40E+01
2005	3	15	3/15/2005	7.81E+01
2005	3	16	3/16/2005	1.27E+02
2005	3	17	3/17/2005	1.69E+02
2005	3	18	3/18/2005	1.51E+02
2005	3	19	3/19/2005	1.25E+02
2005	3	20	3/20/2005	1.04E+02
2005	3	21	3/21/2005	9.61E+01
2005	3	22	3/22/2005	9.82E+01
2005	3	23	3/23/2005	1.13E+02
2005	3	24	3/24/2005	9.24E+01
2005	3	25	3/25/2005	9.15E+01
2005	3	26	3/26/2005	9.26E+01
2005	3	27	3/27/2005	6.07E+02
2005	3	28	3/28/2005	4.24E+02
2005	3	29	3/29/2005	1.92E+02
2005	3	30	3/30/2005	1.69E+02
2005	3	31	3/31/2005	1.66E+02
2005	4	1	4/1/2005	3.39E+02
2005	4	2	4/2/2005	9.34E+02
2005	4	3	4/3/2005	3.34E+02
2005	4	4	4/4/2005	2.75E+02
2005	4	5	4/5/2005	2.38E+02
2005	4	6	4/6/2005	2.04E+02
2005	4	7	4/7/2005	4.93E+02
2005	4	8	4/8/2005	3.94E+02
2005	4	9	4/9/2005	2.58E+02
2005	4	10	4/10/2005	2.19E+02
2005	4	11	4/11/2005	1.85E+02
2005	4	12	4/12/2005	1.67E+02
2005	4	13	4/13/2005	1.64E+02
2005	4	14	4/14/2005	1.50E+02
2005	4	15	4/15/2005	1.24E+02
2005	4	16	4/16/2005	9.81E+01
2005	4	17	4/17/2005	8.39E+01
2005	4	18	4/18/2005	7.16E+01
2005	4	19	4/19/2005	6.13E+01

2005	4	20	4/20/2005	5.28E+01
2005	4	21	4/21/2005	4.53E+01
2005	4	22	4/22/2005	4.13E+01
2005	4	23	4/23/2005	5.87E+01
2005	4	24	4/24/2005	4.46E+01
2005	4	25	4/25/2005	3.68E+01
2005	4	26	4/26/2005	3.47E+01
2005	4	27	4/27/2005	3.65E+01
2005	4	28	4/28/2005	3.04E+01
2005	4	29	4/29/2005	2.60E+01
2005	4	30	4/30/2005	2.45E+01
2005	5	1	5/1/2005	3.38E+01
2005	5	2	5/2/2005	3.55E+01
2005	5	3	5/3/2005	2.75E+01
2005	5	4	5/4/2005	2.36E+01
2005	5	5	5/5/2005	7.60E+01
2005	5	6	5/6/2005	8.11E+01
2005	5	7	5/7/2005	5.17E+01
2005	5	8	5/8/2005	4.16E+01
2005	5	9	5/9/2005	3.57E+01
2005	5	10	5/10/2005	3.13E+01
2005	5	11	5/11/2005	3.21E+01
2005	5	12	5/12/2005	2.89E+01
2005	5	13	5/13/2005	2.52E+01
2005	5	14	5/14/2005	2.19E+01
2005	5	15	5/15/2005	1.88E+01
2005	5	16	5/16/2005	1.63E+01
2005	5	17	5/17/2005	1.47E+01
2005	5	18	5/18/2005	1.62E+01
2005	5	19	5/19/2005	1.47E+01
2005	5	20	5/20/2005	1.68E+01
2005	5	21	5/21/2005	1.46E+02
2005	5	22	5/22/2005	6.33E+01
2005	5	23	5/23/2005	4.28E+01
2005	5	24	5/24/2005	3.79E+01
2005	5	25	5/25/2005	3.34E+01
2005	5	26	5/26/2005	2.95E+01
2005	5	27	5/27/2005	2.57E+01
2005	5	28	5/28/2005	2.22E+01
2005	5	29	5/29/2005	1.92E+01
2005	5	30	5/30/2005	1.72E+01
2005	5	31	5/31/2005	1.92E+01
2005	6	1	6/1/2005	2.17E+01
2005	6	2	6/2/2005	1.83E+01
2005	6	3	6/3/2005	1.95E+01
2005	6	4	6/4/2005	1.76E+01
2005	6	5	6/5/2005	1.50E+01
2005	6	6	6/6/2005	1.29E+01
2005	6	7	6/7/2005	1.10E+01
2005	6	8	6/8/2005	9.35E+00
2005	6	9	6/9/2005	7.93E+00
2005	6	10	6/10/2005	6.88E+00
2005	6	11	6/11/2005	6.22E+00
2005	6	12	6/12/2005	7.26E+00
2005	6	13	6/13/2005	6.77E+00
2005	6	14	6/14/2005	5.96E+00
2005	6	15	6/15/2005	5.33E+00
2005	6	16	6/16/2005	4.43E+00

2005	6	17	6/17/2005	3.58E+00
2005	6	18	6/18/2005	3.05E+00
2005	6	19	6/19/2005	3.18E+00
2005	6	20	6/20/2005	2.56E+00
2005	6	21	6/21/2005	1.97E+00
2005	6	22	6/22/2005	1.42E+00
2005	6	23	6/23/2005	1.07E+00
2005	6	24	6/24/2005	8.83E-01
2005	6	25	6/25/2005	7.03E+00
2005	6	26	6/26/2005	9.30E+00
2005	6	27	6/27/2005	6.45E+00
2005	6	28	6/28/2005	2.03E+01
2005	6	29	6/29/2005	1.17E+02
2005	6	30	6/30/2005	8.32E+02
2005	7	1	7/1/2005	1.04E+03
2005	7	2	7/2/2005	1.05E+03
2005	7	3	7/3/2005	2.62E+02
2005	7	4	7/4/2005	2.65E+02
2005	7	5	7/5/2005	2.08E+02
2005	7	6	7/6/2005	1.80E+02
2005	7	7	7/7/2005	1.57E+02
2005	7	8	7/8/2005	1.36E+02
2005	7	9	7/9/2005	1.24E+02
2005	7	10	7/10/2005	1.24E+02
2005	7	11	7/11/2005	1.06E+02
2005	7	12	7/12/2005	8.28E+01
2005	7	13	7/13/2005	6.79E+01
2005	7	14	7/14/2005	5.95E+01
2005	7	15	7/15/2005	5.25E+01
2005	7	16	7/16/2005	4.57E+01
2005	7	17	7/17/2005	3.91E+01
2005	7	18	7/18/2005	3.35E+01
2005	7	19	7/19/2005	2.88E+01
2005	7	20	7/20/2005	2.49E+01
2005	7	21	7/21/2005	2.13E+01
2005	7	22	7/22/2005	1.82E+01
2005	7	23	7/23/2005	1.75E+01
2005	7	24	7/24/2005	1.73E+01
2005	7	25	7/25/2005	1.40E+01
2005	7	26	7/26/2005	1.17E+01
2005	7	27	7/27/2005	9.90E+00
2005	7	28	7/28/2005	8.30E+00
2005	7	29	7/29/2005	6.89E+00
2005	7	30	7/30/2005	5.81E+00
2005	7	31	7/31/2005	1.34E+01
2005	8	1	8/1/2005	1.77E+01
2005	8	2	8/2/2005	1.53E+01
2005	8	3	8/3/2005	1.28E+01
2005	8	4	8/4/2005	1.04E+01
2005	8	5	8/5/2005	1.16E+01
2005	8	6	8/6/2005	1.18E+01
2005	8	7	8/7/2005	1.33E+01
2005	8	8	8/8/2005	1.55E+01
2005	8	9	8/9/2005	1.22E+01
2005	8	10	8/10/2005	1.01E+01
2005	8	11	8/11/2005	8.65E+00
2005	8	12	8/12/2005	7.97E+00
2005	8	13	8/13/2005	6.82E+00

2005	8	14	8/14/2005	5.90E+00
2005	8	15	8/15/2005	5.26E+00
2005	8	16	8/16/2005	4.70E+00
2005	8	17	8/17/2005	4.07E+00
2005	8	18	8/18/2005	3.64E+01
2005	8	19	8/19/2005	1.69E+02
2005	8	20	8/20/2005	4.50E+01
2005	8	21	8/21/2005	2.99E+01
2005	8	22	8/22/2005	2.67E+01
2005	8	23	8/23/2005	2.45E+01
2005	8	24	8/24/2005	2.21E+01
2005	8	25	8/25/2005	2.37E+01
2005	8	26	8/26/2005	8.53E+02
2005	8	27	8/27/2005	4.36E+02
2005	8	28	8/28/2005	1.48E+02
2005	8	29	8/29/2005	1.29E+02
2005	8	30	8/30/2005	1.24E+02
2005	8	31	8/31/2005	1.13E+02
2005	9	1	9/1/2005	9.75E+01
2005	9	2	9/2/2005	8.65E+01
2005	9	3	9/3/2005	7.73E+01
2005	9	4	9/4/2005	7.10E+01
2005	9	5	9/5/2005	6.70E+01
2005	9	6	9/6/2005	7.91E+01
2005	9	7	9/7/2005	1.05E+02
2005	9	8	9/8/2005	9.59E+01
2005	9	9	9/9/2005	8.47E+01
2005	9	10	9/10/2005	7.38E+01
2005	9	11	9/11/2005	6.47E+01
2005	9	12	9/12/2005	5.80E+01
2005	9	13	9/13/2005	5.10E+01
2005	9	14	9/14/2005	4.48E+01
2005	9	15	9/15/2005	3.97E+01
2005	9	16	9/16/2005	3.56E+01
2005	9	17	9/17/2005	3.24E+01
2005	9	18	9/18/2005	2.92E+01
2005	9	19	9/19/2005	2.55E+01
2005	9	20	9/20/2005	2.24E+01
2005	9	21	9/21/2005	3.63E+01
2005	9	22	9/22/2005	5.32E+01
2005	9	23	9/23/2005	3.87E+01
2005	9	24	9/24/2005	3.31E+01
2005	9	25	9/25/2005	3.01E+01
2005	9	26	9/26/2005	2.74E+01
2005	9	27	9/27/2005	2.48E+01
2005	9	28	9/28/2005	2.29E+01
2005	9	29	9/29/2005	2.08E+01
2005	9	30	9/30/2005	1.86E+01
2005	10	1	10/1/2005	2.03E+01
2005	10	2	10/2/2005	4.35E+01
2005	10	3	10/3/2005	1.98E+02
2005	10	4	10/4/2005	2.17E+03
2005	10	5	10/5/2005	5.35E+03
2005	10	6	10/6/2005	3.36E+03
2005	10	7	10/7/2005	6.75E+03
2005	10	8	10/8/2005	1.38E+03
2005	10	9	10/9/2005	1.04E+03
2005	10	10	10/10/2005	8.98E+02

2005	10	11	10/11/2005	7.70E+02
2005	10	12	10/12/2005	6.60E+02
2005	10	13	10/13/2005	5.64E+02
2005	10	14	10/14/2005	4.67E+02
2005	10	15	10/15/2005	3.90E+02
2005	10	16	10/16/2005	3.30E+02
2005	10	17	10/17/2005	2.79E+02
2005	10	18	10/18/2005	2.34E+02
2005	10	19	10/19/2005	1.96E+02
2005	10	20	10/20/2005	1.64E+02
2005	10	21	10/21/2005	1.43E+02
2005	10	22	10/22/2005	1.35E+02
2005	10	23	10/23/2005	1.27E+02
2005	10	24	10/24/2005	3.60E+02
2005	10	25	10/25/2005	2.02E+02
2005	10	26	10/26/2005	1.72E+02
2005	10	27	10/27/2005	1.54E+02
2005	10	28	10/28/2005	1.35E+02
2005	10	29	10/29/2005	1.14E+02
2005	10	30	10/30/2005	9.67E+01
2005	10	31	10/31/2005	8.17E+01
2005	11	1	11/1/2005	6.98E+01
2005	11	2	11/2/2005	6.00E+01
2005	11	3	11/3/2005	5.06E+01
2005	11	4	11/4/2005	4.38E+01
2005	11	5	11/5/2005	3.85E+01
2005	11	6	11/6/2005	3.33E+01
2005	11	7	11/7/2005	2.89E+01
2005	11	8	11/8/2005	2.51E+01
2005	11	9	11/9/2005	2.12E+01
2005	11	10	11/10/2005	1.84E+01
2005	11	11	11/11/2005	1.62E+01
2005	11	12	11/12/2005	1.42E+01
2005	11	13	11/13/2005	1.24E+01
2005	11	14	11/14/2005	1.07E+01
2005	11	15	11/15/2005	9.13E+00
2005	11	16	11/16/2005	7.76E+00
2005	11	17	11/17/2005	6.65E+00
2005	11	18	11/18/2005	5.80E+00
2005	11	19	11/19/2005	5.30E+00
2005	11	20	11/20/2005	4.93E+00
2005	11	21	11/21/2005	1.38E+01
2005	11	22	11/22/2005	1.87E+01
2005	11	23	11/23/2005	1.73E+01
2005	11	24	11/24/2005	1.54E+01
2005	11	25	11/25/2005	1.36E+01
2005	11	26	11/26/2005	1.23E+01
2005	11	27	11/27/2005	1.13E+01
2005	11	28	11/28/2005	1.18E+01
2005	11	29	11/29/2005	1.70E+01
2005	11	30	11/30/2005	1.88E+01
2005	12	1	12/1/2005	1.75E+01
2005	12	2	12/2/2005	1.60E+01
2005	12	3	12/3/2005	1.47E+01
2005	12	4	12/4/2005	1.35E+01
2005	12	5	12/5/2005	1.32E+01
2005	12	6	12/6/2005	1.61E+01
2005	12	7	12/7/2005	1.67E+01

2005	12	8	12/8/2005	3.81E+01
2005	12	9	12/9/2005	2.85E+02
2005	12	10	12/10/2005	1.66E+02
2005	12	11	12/11/2005	1.48E+02
2005	12	12	12/12/2005	1.36E+02
2005	12	13	12/13/2005	1.23E+02
2005	12	14	12/14/2005	1.12E+02
2005	12	15	12/15/2005	1.05E+02
2005	12	16	12/16/2005	9.79E+01
2005	12	17	12/17/2005	1.32E+02
2005	12	18	12/18/2005	4.56E+02
2005	12	19	12/19/2005	2.51E+02
2005	12	20	12/20/2005	2.24E+02
2005	12	21	12/21/2005	2.03E+02
2005	12	22	12/22/2005	1.84E+02
2005	12	23	12/23/2005	1.66E+02
2005	12	24	12/24/2005	1.50E+02
2005	12	25	12/25/2005	1.51E+02
2005	12	26	12/26/2005	1.49E+02
2005	12	27	12/27/2005	1.34E+02
2005	12	28	12/28/2005	1.20E+02
2005	12	29	12/29/2005	1.08E+02
2005	12	30	12/30/2005	9.76E+01
2005	12	31	12/31/2005	8.87E+01
2006	1	1	1/1/2006	8.05E+01
2006	1	2	1/2/2006	5.37E+02
2006	1	3	1/3/2006	4.21E+02
2006	1	4	1/4/2006	1.98E+02
2006	1	5	1/5/2006	1.80E+02
2006	1	6	1/6/2006	1.64E+02
2006	1	7	1/7/2006	1.48E+02
2006	1	8	1/8/2006	1.31E+02
2006	1	9	1/9/2006	1.15E+02
2006	1	10	1/10/2006	1.03E+02
2006	1	11	1/11/2006	9.18E+01
2006	1	12	1/12/2006	8.06E+01
2006	1	13	1/13/2006	9.08E+01
2006	1	14	1/14/2006	1.42E+02
2006	1	15	1/15/2006	1.06E+02
2006	1	16	1/16/2006	9.36E+01
2006	1	17	1/17/2006	8.38E+01
2006	1	18	1/18/2006	7.44E+01
2006	1	19	1/19/2006	6.46E+01
2006	1	20	1/20/2006	5.74E+01
2006	1	21	1/21/2006	5.06E+01
2006	1	22	1/22/2006	4.72E+01
2006	1	23	1/23/2006	4.29E+01
2006	1	24	1/24/2006	3.60E+01
2006	1	25	1/25/2006	3.15E+01
2006	1	26	1/26/2006	2.74E+01
2006	1	27	1/27/2006	2.44E+01
2006	1	28	1/28/2006	2.18E+01
2006	1	29	1/29/2006	2.10E+01
2006	1	30	1/30/2006	2.18E+01
2006	1	31	1/31/2006	2.32E+01
2006	2	1	2/1/2006	2.16E+01
2006	2	2	2/2/2006	2.05E+02
2006	2	3	2/3/2006	1.29E+03

2006	2	4	2/4/2006	1.25E+03
2006	2	5	2/5/2006	2.56E+02
2006	2	6	2/6/2006	2.20E+02
2006	2	7	2/7/2006	2.08E+02
2006	2	8	2/8/2006	1.84E+02
2006	2	9	2/9/2006	1.60E+02
2006	2	10	2/10/2006	1.42E+02
2006	2	11	2/11/2006	1.37E+02
2006	2	12	2/12/2006	1.32E+02
2006	2	13	2/13/2006	1.14E+02
2006	2	14	2/14/2006	9.88E+01
2006	2	15	2/15/2006	8.51E+01
2006	2	16	2/16/2006	7.26E+01
2006	2	17	2/17/2006	6.26E+01
2006	2	18	2/18/2006	5.57E+01
2006	2	19	2/19/2006	5.73E+01
2006	2	20	2/20/2006	5.68E+01
2006	2	21	2/21/2006	5.05E+01
2006	2	22	2/22/2006	4.14E+01
2006	2	23	2/23/2006	3.88E+01
2006	2	24	2/24/2006	3.76E+01
2006	2	25	2/25/2006	3.74E+01
2006	2	26	2/26/2006	7.18E+01
2006	2	27	2/27/2006	6.62E+01
2006	2	28	2/28/2006	5.50E+01
2006	3	1	3/1/2006	4.77E+01
2006	3	2	3/2/2006	4.19E+01
2006	3	3	3/3/2006	3.70E+01
2006	3	4	3/4/2006	3.29E+01
2006	3	5	3/5/2006	2.95E+01
2006	3	6	3/6/2006	2.63E+01
2006	3	7	3/7/2006	2.33E+01
2006	3	8	3/8/2006	2.07E+01
2006	3	9	3/9/2006	1.84E+01
2006	3	10	3/10/2006	1.66E+01
2006	3	11	3/11/2006	1.51E+01
2006	3	12	3/12/2006	1.33E+01
2006	3	13	3/13/2006	1.15E+01
2006	3	14	3/14/2006	1.03E+01
2006	3	15	3/15/2006	9.15E+00
2006	3	16	3/16/2006	8.00E+00
2006	3	17	3/17/2006	6.98E+00
2006	3	18	3/18/2006	6.06E+00
2006	3	19	3/19/2006	5.51E+00
2006	3	20	3/20/2006	5.11E+00
2006	3	21	3/21/2006	4.89E+00
2006	3	22	3/22/2006	4.72E+00
2006	3	23	3/23/2006	4.89E+00
2006	3	24	3/24/2006	7.40E+00
2006	3	25	3/25/2006	7.59E+00
2006	3	26	3/26/2006	6.78E+00
2006	3	27	3/27/2006	5.94E+00
2006	3	28	3/28/2006	5.33E+00
2006	3	29	3/29/2006	4.78E+00
2006	3	30	3/30/2006	4.22E+00
2006	3	31	3/31/2006	3.62E+00
2006	4	1	4/1/2006	2.98E+00
2006	4	2	4/2/2006	2.41E+00

2006	4	3	4/3/2006	1.89E+00
2006	4	4	4/4/2006	1.41E+00
2006	4	5	4/5/2006	1.01E+00
2006	4	6	4/6/2006	7.29E-01
2006	4	7	4/7/2006	5.77E-01
2006	4	8	4/8/2006	1.88E+00
2006	4	9	4/9/2006	8.39E+00
2006	4	10	4/10/2006	6.68E+00
2006	4	11	4/11/2006	5.03E+00
2006	4	12	4/12/2006	4.08E+00
2006	4	13	4/13/2006	3.40E+00
2006	4	14	4/14/2006	2.86E+00
2006	4	15	4/15/2006	2.37E+00
2006	4	16	4/16/2006	1.91E+00
2006	4	17	4/17/2006	1.50E+00
2006	4	18	4/18/2006	1.16E+00
2006	4	19	4/19/2006	1.01E+00
2006	4	20	4/20/2006	1.10E+00
2006	4	21	4/21/2006	9.51E-01
2006	4	22	4/22/2006	8.02E-01
2006	4	23	4/23/2006	6.98E-01
2006	4	24	4/24/2006	5.84E-01
2006	4	25	4/25/2006	5.05E-01
2006	4	26	4/26/2006	7.75E-01
2006	4	27	4/27/2006	1.24E+00
2006	4	28	4/28/2006	1.19E+00
2006	4	29	4/29/2006	9.54E-01
2006	4	30	4/30/2006	7.28E-01
2006	5	1	5/1/2006	5.83E-01
2006	5	2	5/2/2006	4.88E-01
2006	5	3	5/3/2006	4.32E-01
2006	5	4	5/4/2006	4.00E-01
2006	5	5	5/5/2006	7.45E-01
2006	5	6	5/6/2006	1.65E+00
2006	5	7	5/7/2006	1.68E+00
2006	5	8	5/8/2006	1.85E+00
2006	5	9	5/9/2006	2.38E+00
2006	5	10	5/10/2006	2.65E+00
2006	5	11	5/11/2006	6.50E+00
2006	5	12	5/12/2006	5.12E+00
2006	5	13	5/13/2006	3.71E+00
2006	5	14	5/14/2006	2.66E+00
2006	5	15	5/15/2006	2.05E+00
2006	5	16	5/16/2006	1.69E+00
2006	5	17	5/17/2006	1.34E+00
2006	5	18	5/18/2006	1.04E+00
2006	5	19	5/19/2006	7.85E-01
2006	5	20	5/20/2006	6.09E-01
2006	5	21	5/21/2006	4.94E-01
2006	5	22	5/22/2006	4.28E-01
2006	5	23	5/23/2006	3.95E-01
2006	5	24	5/24/2006	3.80E-01
2006	5	25	5/25/2006	4.50E-01
2006	5	26	5/26/2006	4.28E-01
2006	5	27	5/27/2006	3.99E-01
2006	5	28	5/28/2006	3.83E-01
2006	5	29	5/29/2006	3.72E-01
2006	5	30	5/30/2006	3.59E-01

2006	5	31	5/31/2006	3.54E-01
2006	6	1	6/1/2006	3.55E-01
2006	6	2	6/2/2006	2.02E+00
2006	6	3	6/3/2006	3.09E+00
2006	6	4	6/4/2006	2.91E+00
2006	6	5	6/5/2006	1.98E+00
2006	6	6	6/6/2006	1.22E+00
2006	6	7	6/7/2006	7.68E-01
2006	6	8	6/8/2006	5.51E-01
2006	6	9	6/9/2006	4.44E-01
2006	6	10	6/10/2006	3.90E-01
2006	6	11	6/11/2006	4.10E-01
2006	6	12	6/12/2006	5.45E-01
2006	6	13	6/13/2006	1.73E+01
2006	6	14	6/14/2006	1.47E+01
2006	6	15	6/15/2006	6.50E+00
2006	6	16	6/16/2006	4.16E+00
2006	6	17	6/17/2006	2.91E+00
2006	6	18	6/18/2006	2.14E+00
2006	6	19	6/19/2006	1.70E+00
2006	6	20	6/20/2006	1.38E+00
2006	6	21	6/21/2006	1.13E+00
2006	6	22	6/22/2006	9.47E-01
2006	6	23	6/23/2006	8.16E-01
2006	6	24	6/24/2006	7.21E-01
2006	6	25	6/25/2006	2.99E+00
2006	6	26	6/26/2006	4.26E+00
2006	6	27	6/27/2006	4.98E+00
2006	6	28	6/28/2006	6.87E+00
2006	6	29	6/29/2006	6.62E+00
2006	6	30	6/30/2006	5.54E+00
2006	7	1	7/1/2006	3.92E+00
2006	7	2	7/2/2006	2.75E+00
2006	7	3	7/3/2006	2.00E+00
2006	7	4	7/4/2006	1.50E+00
2006	7	5	7/5/2006	1.18E+00
2006	7	6	7/6/2006	1.67E+00
2006	7	7	7/7/2006	4.19E+00
2006	7	8	7/8/2006	3.78E+00
2006	7	9	7/9/2006	2.77E+00
2006	7	10	7/10/2006	1.99E+00
2006	7	11	7/11/2006	1.47E+00
2006	7	12	7/12/2006	1.17E+00
2006	7	13	7/13/2006	9.65E-01
2006	7	14	7/14/2006	8.20E-01
2006	7	15	7/15/2006	7.19E-01
2006	7	16	7/16/2006	6.54E-01
2006	7	17	7/17/2006	6.05E-01
2006	7	18	7/18/2006	5.52E-01
2006	7	19	7/19/2006	4.97E-01
2006	7	20	7/20/2006	4.50E-01
2006	7	21	7/21/2006	4.12E-01
2006	7	22	7/22/2006	3.85E-01
2006	7	23	7/23/2006	4.85E-01
2006	7	24	7/24/2006	5.89E-01
2006	7	25	7/25/2006	5.26E-01
2006	7	26	7/26/2006	4.89E-01
2006	7	27	7/27/2006	4.34E-01

2006	7	28	7/28/2006	3.93E-01
2006	7	29	7/29/2006	3.75E-01
2006	7	30	7/30/2006	4.39E-01
2006	7	31	7/31/2006	7.24E-01
2006	8	1	8/1/2006	8.44E-01
2006	8	2	8/2/2006	9.60E-01
2006	8	3	8/3/2006	7.39E-01
2006	8	4	8/4/2006	6.96E-01
2006	8	5	8/5/2006	9.40E-01
2006	8	6	8/6/2006	7.28E-01
2006	8	7	8/7/2006	5.76E-01
2006	8	8	8/8/2006	4.73E-01
2006	8	9	8/9/2006	4.11E-01
2006	8	10	8/10/2006	3.76E-01
2006	8	11	8/11/2006	1.23E+00
2006	8	12	8/12/2006	2.74E+00
2006	8	13	8/13/2006	3.96E+00
2006	8	14	8/14/2006	4.09E+00
2006	8	15	8/15/2006	3.16E+00
2006	8	16	8/16/2006	2.06E+00
2006	8	17	8/17/2006	1.33E+00
2006	8	18	8/18/2006	9.22E-01
2006	8	19	8/19/2006	2.56E+00
2006	8	20	8/20/2006	3.64E+00
2006	8	21	8/21/2006	2.74E+00
2006	8	22	8/22/2006	1.78E+00
2006	8	23	8/23/2006	5.18E+00
2006	8	24	8/24/2006	3.47E+01
2006	8	25	8/25/2006	4.35E+01
2006	8	26	8/26/2006	1.99E+01
2006	8	27	8/27/2006	1.20E+01
2006	8	28	8/28/2006	9.49E+00
2006	8	29	8/29/2006	8.14E+00
2006	8	30	8/30/2006	7.27E+00
2006	8	31	8/31/2006	1.57E+01
2006	9	1	9/1/2006	2.36E+01
2006	9	2	9/2/2006	1.52E+01
2006	9	3	9/3/2006	1.15E+01
2006	9	4	9/4/2006	9.45E+00
2006	9	5	9/5/2006	8.19E+00
2006	9	6	9/6/2006	7.71E+00
2006	9	7	9/7/2006	9.31E+00
2006	9	8	9/8/2006	1.12E+01
2006	9	9	9/9/2006	8.68E+00
2006	9	10	9/10/2006	6.78E+00
2006	9	11	9/11/2006	5.82E+00
2006	9	12	9/12/2006	1.24E+01
2006	9	13	9/13/2006	1.43E+01
2006	9	14	9/14/2006	9.51E+00
2006	9	15	9/15/2006	6.95E+00
2006	9	16	9/16/2006	5.99E+00
2006	9	17	9/17/2006	5.54E+00
2006	9	18	9/18/2006	5.09E+00
2006	9	19	9/19/2006	1.45E+01
2006	9	20	9/20/2006	2.53E+01
2006	9	21	9/21/2006	1.30E+01
2006	9	22	9/22/2006	8.69E+00
2006	9	23	9/23/2006	7.20E+00

2006	9	24	9/24/2006	6.35E+00
2006	9	25	9/25/2006	5.80E+00
2006	9	26	9/26/2006	5.45E+00
2006	9	27	9/27/2006	5.07E+00
2006	9	28	9/28/2006	4.60E+00
2006	9	29	9/29/2006	4.14E+00
2006	9	30	9/30/2006	3.70E+00
2006	10	1	10/1/2006	3.27E+00
2006	10	2	10/2/2006	2.88E+00
2006	10	3	10/3/2006	2.56E+00
2006	10	4	10/4/2006	2.30E+00
2006	10	5	10/5/2006	2.06E+00
2006	10	6	10/6/2006	1.86E+00
2006	10	7	10/7/2006	1.71E+00
2006	10	8	10/8/2006	1.60E+00
2006	10	9	10/9/2006	1.51E+00
2006	10	10	10/10/2006	1.44E+00
2006	10	11	10/11/2006	1.34E+00
2006	10	12	10/12/2006	1.24E+00
2006	10	13	10/13/2006	1.14E+00
2006	10	14	10/14/2006	1.07E+00
2006	10	15	10/15/2006	9.96E-01
2006	10	16	10/16/2006	9.41E-01
2006	10	17	10/17/2006	9.03E-01
2006	10	18	10/18/2006	2.29E+00
2006	10	19	10/19/2006	2.95E+00
2006	10	20	10/20/2006	2.61E+00
2006	10	21	10/21/2006	2.07E+00
2006	10	22	10/22/2006	1.60E+00
2006	10	23	10/23/2006	1.29E+00
2006	10	24	10/24/2006	1.09E+00
2006	10	25	10/25/2006	9.74E-01
2006	10	26	10/26/2006	8.98E-01
2006	10	27	10/27/2006	1.57E+00
2006	10	28	10/28/2006	1.33E+01
2006	10	29	10/29/2006	8.68E+00
2006	10	30	10/30/2006	5.20E+00
2006	10	31	10/31/2006	3.95E+00
2006	11	1	11/1/2006	3.13E+00
2006	11	2	11/2/2006	2.64E+00
2006	11	3	11/3/2006	2.32E+00
2006	11	4	11/4/2006	2.07E+00
2006	11	5	11/5/2006	1.88E+00
2006	11	6	11/6/2006	1.88E+00
2006	11	7	11/7/2006	1.79E+00
2006	11	8	11/8/2006	1.76E+00
2006	11	9	11/9/2006	1.59E+00
2006	11	10	11/10/2006	1.42E+00
2006	11	11	11/11/2006	1.27E+00
2006	11	12	11/12/2006	1.15E+00
2006	11	13	11/13/2006	1.07E+00
2006	11	14	11/14/2006	1.01E+00
2006	11	15	11/15/2006	9.63E-01
2006	11	16	11/16/2006	4.63E+00
2006	11	17	11/17/2006	4.66E+00
2006	11	18	11/18/2006	3.73E+00
2006	11	19	11/19/2006	2.86E+00
2006	11	20	11/20/2006	2.31E+00

2006	11	21	11/21/2006	2.15E+00
2006	11	22	11/22/2006	2.62E+00
2006	11	23	11/23/2006	2.46E+00
2006	11	24	11/24/2006	2.19E+00
2006	11	25	11/25/2006	1.95E+00
2006	11	26	11/26/2006	1.75E+00
2006	11	27	11/27/2006	1.63E+00
2006	11	28	11/28/2006	1.52E+00
2006	11	29	11/29/2006	1.39E+00
2006	11	30	11/30/2006	2.21E+00
2006	12	1	12/1/2006	2.66E+00
2006	12	2	12/2/2006	2.63E+00
2006	12	3	12/3/2006	2.63E+00
2006	12	4	12/4/2006	2.46E+00
2006	12	5	12/5/2006	2.19E+00
2006	12	6	12/6/2006	1.96E+00
2006	12	7	12/7/2006	1.80E+00
2006	12	8	12/8/2006	1.68E+00
2006	12	9	12/9/2006	1.57E+00
2006	12	10	12/10/2006	1.46E+00
2006	12	11	12/11/2006	1.36E+00
2006	12	12	12/12/2006	1.26E+00
2006	12	13	12/13/2006	1.32E+00
2006	12	14	12/14/2006	1.45E+00
2006	12	15	12/15/2006	1.39E+00
2006	12	16	12/16/2006	1.28E+00
2006	12	17	12/17/2006	1.17E+00
2006	12	18	12/18/2006	1.12E+00
2006	12	19	12/19/2006	1.07E+00
2006	12	20	12/20/2006	1.62E+00
2006	12	21	12/21/2006	1.02E+01
2006	12	22	12/22/2006	1.25E+01
2006	12	23	12/23/2006	1.95E+01
2006	12	24	12/24/2006	1.51E+01
2006	12	25	12/25/2006	2.23E+01
2006	12	26	12/26/2006	2.42E+01
2006	12	27	12/27/2006	2.07E+01
2006	12	28	12/28/2006	1.91E+01
2006	12	29	12/29/2006	1.79E+01
2006	12	30	12/30/2006	1.79E+01
2006	12	31	12/31/2006	1.83E+01
2007	1	1	1/1/2007	2.81E+01
2007	1	2	1/2/2007	2.81E+01
2007	1	3	1/3/2007	2.45E+01
2007	1	4	1/4/2007	2.28E+01
2007	1	5	1/5/2007	2.65E+01
2007	1	6	1/6/2007	6.29E+01
2007	1	7	1/7/2007	3.43E+01
2007	1	8	1/8/2007	2.90E+01
2007	1	9	1/9/2007	2.84E+01
2007	1	10	1/10/2007	2.64E+01
2007	1	11	1/11/2007	2.50E+01
2007	1	12	1/12/2007	2.35E+01
2007	1	13	1/13/2007	2.19E+01
2007	1	14	1/14/2007	2.03E+01
2007	1	15	1/15/2007	1.88E+01
2007	1	16	1/16/2007	1.75E+01
2007	1	17	1/17/2007	1.75E+01

2007	1	18	1/18/2007	1.86E+01
2007	1	19	1/19/2007	1.74E+01
2007	1	20	1/20/2007	1.53E+01
2007	1	21	1/21/2007	1.32E+01
2007	1	22	1/22/2007	1.61E+01
2007	1	23	1/23/2007	2.06E+01
2007	1	24	1/24/2007	1.88E+01
2007	1	25	1/25/2007	1.70E+01
2007	1	26	1/26/2007	1.46E+01
2007	1	27	1/27/2007	1.29E+01
2007	1	28	1/28/2007	4.07E+01
2007	1	29	1/29/2007	3.88E+01
2007	1	30	1/30/2007	3.20E+01
2007	1	31	1/31/2007	2.96E+01
2007	2	1	2/1/2007	3.77E+01
2007	2	2	2/2/2007	1.04E+02
2007	2	3	2/3/2007	6.40E+01
2007	2	4	2/4/2007	5.79E+01
2007	2	5	2/5/2007	5.35E+01
2007	2	6	2/6/2007	4.70E+01
2007	2	7	2/7/2007	4.14E+01
2007	2	8	2/8/2007	3.72E+01
2007	2	9	2/9/2007	3.44E+01
2007	2	10	2/10/2007	3.22E+01
2007	2	11	2/11/2007	2.92E+01
2007	2	12	2/12/2007	2.64E+01
2007	2	13	2/13/2007	2.74E+01
2007	2	14	2/14/2007	4.20E+01
2007	2	15	2/15/2007	3.40E+01
2007	2	16	2/16/2007	2.94E+01
2007	2	17	2/17/2007	2.60E+01
2007	2	18	2/18/2007	2.36E+01
2007	2	19	2/19/2007	2.16E+01
2007	2	20	2/20/2007	1.99E+01
2007	2	21	2/21/2007	1.96E+01
2007	2	22	2/22/2007	2.18E+01
2007	2	23	2/23/2007	1.93E+01
2007	2	24	2/24/2007	1.76E+01
2007	2	25	2/25/2007	1.64E+01
2007	2	26	2/26/2007	1.55E+01
2007	2	27	2/27/2007	1.38E+01
2007	2	28	2/28/2007	1.24E+01
2007	3	1	3/1/2007	2.24E+01
2007	3	2	3/2/2007	4.00E+01
2007	3	3	3/3/2007	3.32E+01
2007	3	4	3/4/2007	2.82E+01
2007	3	5	3/5/2007	2.52E+01
2007	3	6	3/6/2007	2.30E+01
2007	3	7	3/7/2007	2.09E+01
2007	3	8	3/8/2007	1.90E+01
2007	3	9	3/9/2007	1.77E+01
2007	3	10	3/10/2007	1.64E+01
2007	3	11	3/11/2007	1.47E+01
2007	3	12	3/12/2007	1.31E+01
2007	3	13	3/13/2007	1.18E+01
2007	3	14	3/14/2007	1.07E+01
2007	3	15	3/15/2007	9.79E+00
2007	3	16	3/16/2007	1.58E+01

2007	3	17	3/17/2007	1.44E+01
2007	3	18	3/18/2007	1.23E+01
2007	3	19	3/19/2007	1.09E+01
2007	3	20	3/20/2007	9.78E+00
2007	3	21	3/21/2007	8.86E+00
2007	3	22	3/22/2007	7.99E+00
2007	3	23	3/23/2007	7.10E+00
2007	3	24	3/24/2007	6.25E+00
2007	3	25	3/25/2007	5.59E+00
2007	3	26	3/26/2007	5.11E+00
2007	3	27	3/27/2007	4.66E+00
2007	3	28	3/28/2007	4.13E+00
2007	3	29	3/29/2007	3.58E+00
2007	3	30	3/30/2007	3.11E+00
2007	3	31	3/31/2007	2.73E+00
2007	4	1	4/1/2007	2.38E+00
2007	4	2	4/2/2007	2.02E+00
2007	4	3	4/3/2007	1.68E+00
2007	4	4	4/4/2007	1.36E+00
2007	4	5	4/5/2007	1.07E+00
2007	4	6	4/6/2007	8.21E-01
2007	4	7	4/7/2007	6.56E-01
2007	4	8	4/8/2007	5.53E-01
2007	4	9	4/9/2007	5.00E-01
2007	4	10	4/10/2007	4.73E-01
2007	4	11	4/11/2007	4.47E-01
2007	4	12	4/12/2007	4.18E-01
2007	4	13	4/13/2007	3.96E-01
2007	4	14	4/14/2007	4.16E-01
2007	4	15	4/15/2007	2.51E+00
2007	4	16	4/16/2007	3.46E+00
2007	4	17	4/17/2007	2.83E+00
2007	4	18	4/18/2007	2.03E+00
2007	4	19	4/19/2007	1.43E+00
2007	4	20	4/20/2007	1.00E+00
2007	4	21	4/21/2007	7.38E-01
2007	4	22	4/22/2007	5.79E-01
2007	4	23	4/23/2007	4.82E-01
2007	4	24	4/24/2007	4.27E-01
2007	4	25	4/25/2007	3.98E-01
2007	4	26	4/26/2007	3.82E-01
2007	4	27	4/27/2007	3.91E-01
2007	4	28	4/28/2007	3.95E-01
2007	4	29	4/29/2007	3.82E-01
2007	4	30	4/30/2007	3.69E-01
2007	5	1	5/1/2007	3.61E-01
2007	5	2	5/2/2007	3.60E-01
2007	5	3	5/3/2007	3.63E-01
2007	5	4	5/4/2007	3.63E-01
2007	5	5	5/5/2007	3.67E-01
2007	5	6	5/6/2007	3.80E-01
2007	5	7	5/7/2007	3.82E-01
2007	5	8	5/8/2007	3.75E-01
2007	5	9	5/9/2007	7.98E-01
2007	5	10	5/10/2007	1.73E+00
2007	5	11	5/11/2007	1.53E+00
2007	5	12	5/12/2007	1.13E+00
2007	5	13	5/13/2007	7.93E-01

2007	5	14	5/14/2007	5.97E-01
2007	5	15	5/15/2007	5.06E-01
2007	5	16	5/16/2007	4.32E-01
2007	5	17	5/17/2007	4.53E-01
2007	5	18	5/18/2007	9.77E-01
2007	5	19	5/19/2007	8.45E-01
2007	5	20	5/20/2007	6.80E-01
2007	5	21	5/21/2007	5.43E-01
2007	5	22	5/22/2007	4.55E-01
2007	5	23	5/23/2007	4.77E-01
2007	5	24	5/24/2007	4.97E-01
2007	5	25	5/25/2007	1.01E+00
2007	5	26	5/26/2007	9.15E-01
2007	5	27	5/27/2007	7.24E-01
2007	5	28	5/28/2007	5.74E-01
2007	5	29	5/29/2007	4.73E-01
2007	5	30	5/30/2007	4.10E-01
2007	5	31	5/31/2007	3.79E-01
2007	6	1	6/1/2007	3.71E-01
2007	6	2	6/2/2007	2.05E+01
2007	6	3	6/3/2007	2.40E+01
2007	6	4	6/4/2007	9.75E+00
2007	6	5	6/5/2007	5.45E+00
2007	6	6	6/6/2007	4.16E+00
2007	6	7	6/7/2007	3.42E+00
2007	6	8	6/8/2007	2.75E+00
2007	6	9	6/9/2007	2.24E+00
2007	6	10	6/10/2007	1.83E+00
2007	6	11	6/11/2007	1.52E+00
2007	6	12	6/12/2007	3.45E+00
2007	6	13	6/13/2007	4.56E+00
2007	6	14	6/14/2007	3.58E+00
2007	6	15	6/15/2007	2.52E+00
2007	6	16	6/16/2007	1.80E+00
2007	6	17	6/17/2007	1.37E+00
2007	6	18	6/18/2007	1.12E+00
2007	6	19	6/19/2007	9.76E-01
2007	6	20	6/20/2007	9.45E-01
2007	6	21	6/21/2007	2.42E+00
2007	6	22	6/22/2007	2.69E+00
2007	6	23	6/23/2007	2.02E+00
2007	6	24	6/24/2007	1.40E+00
2007	6	25	6/25/2007	9.96E-01
2007	6	26	6/26/2007	7.75E-01
2007	6	27	6/27/2007	6.83E-01
2007	6	28	6/28/2007	6.03E-01
2007	6	29	6/29/2007	5.29E-01
2007	6	30	6/30/2007	4.67E-01
2007	7	1	7/1/2007	8.17E-01
2007	7	2	7/2/2007	7.10E+00
2007	7	3	7/3/2007	1.38E+01
2007	7	4	7/4/2007	6.49E+00
2007	7	5	7/5/2007	3.87E+00
2007	7	6	7/6/2007	2.60E+00
2007	7	7	7/7/2007	1.95E+00
2007	7	8	7/8/2007	1.45E+00
2007	7	9	7/9/2007	1.01E+00
2007	7	10	7/10/2007	7.64E-01

2007	7	11	7/11/2007	6.32E-01
2007	7	12	7/12/2007	5.42E-01
2007	7	13	7/13/2007	8.63E-01
2007	7	14	7/14/2007	1.39E+00
2007	7	15	7/15/2007	1.40E+00
2007	7	16	7/16/2007	1.10E+00
2007	7	17	7/17/2007	8.69E-01
2007	7	18	7/18/2007	6.39E-01
2007	7	19	7/19/2007	5.07E-01
2007	7	20	7/20/2007	7.07E-01
2007	7	21	7/21/2007	1.53E+00
2007	7	22	7/22/2007	1.26E+00
2007	7	23	7/23/2007	9.03E-01
2007	7	24	7/24/2007	6.86E-01
2007	7	25	7/25/2007	2.96E+00
2007	7	26	7/26/2007	2.87E+00
2007	7	27	7/27/2007	2.67E+00
2007	7	28	7/28/2007	2.31E+00
2007	7	29	7/29/2007	4.91E+00
2007	7	30	7/30/2007	1.19E+01
2007	7	31	7/31/2007	1.68E+01
2007	8	1	8/1/2007	7.66E+00
2007	8	2	8/2/2007	6.31E+00
2007	8	3	8/3/2007	3.37E+01
2007	8	4	8/4/2007	3.52E+01
2007	8	5	8/5/2007	1.89E+01
2007	8	6	8/6/2007	1.46E+01
2007	8	7	8/7/2007	1.28E+01
2007	8	8	8/8/2007	1.13E+01
2007	8	9	8/9/2007	1.01E+01
2007	8	10	8/10/2007	9.03E+00
2007	8	11	8/11/2007	8.96E+00
2007	8	12	8/12/2007	1.15E+01
2007	8	13	8/13/2007	8.62E+00
2007	8	14	8/14/2007	6.62E+00
2007	8	15	8/15/2007	5.61E+00
2007	8	16	8/16/2007	4.96E+00
2007	8	17	8/17/2007	4.43E+00
2007	8	18	8/18/2007	3.92E+00
2007	8	19	8/19/2007	3.36E+00
2007	8	20	8/20/2007	2.83E+00
2007	8	21	8/21/2007	2.38E+00
2007	8	22	8/22/2007	2.04E+00
2007	8	23	8/23/2007	1.77E+00
2007	8	24	8/24/2007	1.55E+00
2007	8	25	8/25/2007	2.42E+00
2007	8	26	8/26/2007	3.22E+00
2007	8	27	8/27/2007	2.68E+00
2007	8	28	8/28/2007	2.56E+00
2007	8	29	8/29/2007	2.50E+00
2007	8	30	8/30/2007	1.94E+00
2007	8	31	8/31/2007	7.71E+00
2007	9	1	9/1/2007	1.81E+01
2007	9	2	9/2/2007	1.21E+01
2007	9	3	9/3/2007	6.87E+00
2007	9	4	9/4/2007	5.10E+00
2007	9	5	9/5/2007	4.30E+00
2007	9	6	9/6/2007	3.70E+00

2007	9	7	9/7/2007	3.20E+00
2007	9	8	9/8/2007	2.77E+00
2007	9	9	9/9/2007	2.37E+00
2007	9	10	9/10/2007	2.03E+00
2007	9	11	9/11/2007	1.76E+00
2007	9	12	9/12/2007	1.62E+00
2007	9	13	9/13/2007	1.64E+00
2007	9	14	9/14/2007	4.58E+00
2007	9	15	9/15/2007	4.48E+00
2007	9	16	9/16/2007	3.49E+00
2007	9	17	9/17/2007	2.67E+00
2007	9	18	9/18/2007	2.09E+00
2007	9	19	9/19/2007	1.75E+00
2007	9	20	9/20/2007	9.39E+00
2007	9	21	9/21/2007	1.71E+01
2007	9	22	9/22/2007	1.38E+01
2007	9	23	9/23/2007	8.79E+00
2007	9	24	9/24/2007	6.56E+00
2007	9	25	9/25/2007	5.68E+00
2007	9	26	9/26/2007	5.30E+00
2007	9	27	9/27/2007	4.81E+00
2007	9	28	9/28/2007	4.27E+00
2007	9	29	9/29/2007	3.76E+00
2007	9	30	9/30/2007	3.30E+00
2007	10	1	10/1/2007	2.93E+00
2007	10	2	10/2/2007	3.22E+00
2007	10	3	10/3/2007	5.25E+00
2007	10	4	10/4/2007	7.05E+00
2007	10	5	10/5/2007	7.42E+00
2007	10	6	10/6/2007	6.67E+00
2007	10	7	10/7/2007	5.58E+00
2007	10	8	10/8/2007	5.09E+00
2007	10	9	10/9/2007	4.54E+00
2007	10	10	10/10/2007	4.05E+00
2007	10	11	10/11/2007	3.59E+00
2007	10	12	10/12/2007	3.15E+00
2007	10	13	10/13/2007	2.77E+00
2007	10	14	10/14/2007	2.44E+00
2007	10	15	10/15/2007	2.17E+00
2007	10	16	10/16/2007	1.97E+00
2007	10	17	10/17/2007	1.79E+00
2007	10	18	10/18/2007	1.65E+00
2007	10	19	10/19/2007	3.83E+00
2007	10	20	10/20/2007	4.55E+00
2007	10	21	10/21/2007	4.03E+00
2007	10	22	10/22/2007	3.47E+00
2007	10	23	10/23/2007	2.95E+00
2007	10	24	10/24/2007	4.64E+00
2007	10	25	10/25/2007	6.42E+00
2007	10	26	10/26/2007	1.06E+01
2007	10	27	10/27/2007	9.98E+00
2007	10	28	10/28/2007	7.93E+00
2007	10	29	10/29/2007	6.97E+00
2007	10	30	10/30/2007	6.31E+00
2007	10	31	10/31/2007	5.61E+00
2007	11	1	11/1/2007	5.15E+00
2007	11	2	11/2/2007	4.71E+00
2007	11	3	11/3/2007	4.34E+00

2007	11	4	11/4/2007	3.95E+00
2007	11	5	11/5/2007	3.58E+00
2007	11	6	11/6/2007	3.24E+00
2007	11	7	11/7/2007	2.94E+00
2007	11	8	11/8/2007	2.68E+00
2007	11	9	11/9/2007	2.46E+00
2007	11	10	11/10/2007	2.25E+00
2007	11	11	11/11/2007	2.07E+00
2007	11	12	11/12/2007	1.89E+00
2007	11	13	11/13/2007	1.74E+00
2007	11	14	11/14/2007	1.60E+00
2007	11	15	11/15/2007	1.50E+00
2007	11	16	11/16/2007	1.42E+00
2007	11	17	11/17/2007	1.35E+00
2007	11	18	11/18/2007	1.28E+00
2007	11	19	11/19/2007	1.22E+00
2007	11	20	11/20/2007	1.16E+00
2007	11	21	11/21/2007	1.10E+00
2007	11	22	11/22/2007	1.19E+00
2007	11	23	11/23/2007	1.22E+00
2007	11	24	11/24/2007	1.13E+00
2007	11	25	11/25/2007	1.06E+00
2007	11	26	11/26/2007	1.02E+00
2007	11	27	11/27/2007	9.59E-01
2007	11	28	11/28/2007	9.05E-01
2007	11	29	11/29/2007	8.70E-01
2007	11	30	11/30/2007	8.42E-01
2007	12	1	12/1/2007	8.09E-01
2007	12	2	12/2/2007	7.77E-01
2007	12	3	12/3/2007	8.08E-01
2007	12	4	12/4/2007	8.16E-01
2007	12	5	12/5/2007	7.71E-01
2007	12	6	12/6/2007	7.31E-01
2007	12	7	12/7/2007	7.03E-01
2007	12	8	12/8/2007	7.00E-01
2007	12	9	12/9/2007	6.81E-01
2007	12	10	12/10/2007	6.54E-01
2007	12	11	12/11/2007	6.28E-01
2007	12	12	12/12/2007	6.23E-01
2007	12	13	12/13/2007	6.07E-01
2007	12	14	12/14/2007	5.83E-01
2007	12	15	12/15/2007	6.16E-01
2007	12	16	12/16/2007	6.42E+00
2007	12	17	12/17/2007	6.60E+00
2007	12	18	12/18/2007	4.87E+00
2007	12	19	12/19/2007	3.79E+00
2007	12	20	12/20/2007	3.08E+00
2007	12	21	12/21/2007	7.92E+00
2007	12	22	12/22/2007	8.26E+00
2007	12	23	12/23/2007	6.48E+00
2007	12	24	12/24/2007	5.50E+00
2007	12	25	12/25/2007	5.59E+00
2007	12	26	12/26/2007	5.99E+00
2007	12	27	12/27/2007	5.55E+00
2007	12	28	12/28/2007	5.18E+00
2007	12	29	12/29/2007	4.84E+00
2007	12	30	12/30/2007	4.61E+00
2007	12	31	12/31/2007	9.19E+00