DNAPL AND GROUNDWATER MONITORING

Southern Wood Piedmont /
North Carolina State Ports Authority Site
Wilmington, North Carolina

Schnabel Reference # 00979007.C0
April 11, 2012

Schnabel
ENGINEERING

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Warren Snyder, PE
Rayonier, Inc.
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PO Box 728
Fernandina Beach, Florida 32035

Subject: **January 2012 DNAPL and Groundwater Monitoring**
SWP, Wilmington, North Carolina (Schnabel No. 00979007.C0)

Dear Mr. Snyder:

SCHNABEL ENGINEERING SOUTH, PC (Schnabel) is pleased to provide the January 2012 Dense Non-Aqueous Phase Liquid (DNAPL) and groundwater monitoring results for the Southern Wood Piedmont (SWP) / North Carolina State Ports Authority (NCPorts) site in Wilmington, North Carolina. DNAPL and groundwater monitoring was last conducted on all wells in 2001 and on select wells in 2003.

Project records indicate there are 71 groundwater monitoring wells and five staff gauges at the site (Table 1). Of the 71 wells, five wells (CW-1 through CW-5) were installed by the City of Wilmington in 1981 and are rusted shut and cannot be sampled. Monitoring wells MW-6 and MW-27 have been damaged since 2003 and could not be monitored during 2012. Both of these wells are located adjacent to the Hess facility at the northern edge of the site. The staff gauge located at the T-head in the Cape Fear River (CFR) and the staff gauges on both sides of the tidal gate at Greenfield Creek (GFC) have been destroyed and could not be used for measurement during the 2012 monitoring event. Monitoring locations are illustrated on Figure 1 for the shallow aquifer, Figure 2 for the intermediate aquifer and Figure 3 for the deep aquifer.

Field Observations and Measurements

Monitoring well condition, depth to water, total well depth and DNAPL thickness measurements were performed on the remaining 64 existing groundwater monitoring wells. Surface water elevation was measured on the two remaining staff gauges in GFC and the drainage ditch (DD). Depth to water measurement was conducted at all wells and staff gauges within an approximate five hour period (12:10 to 17:23 pm) during a rising tide on January 16, 2012. The tide elevation for the nearest staff gauge located less than one mile up the CFR in Wilmington (Station ID 8658120) indicated that the surface water elevation increased from 2.28 feet mean sea level (msl) to 3.49 feet msl during the water level measurement period.

Well Condition

Monitoring well condition observation indicated the following items that should be addressed:

Well	Condition
MW-6	Well has been hit and broken off flush with the top of the concrete pad.
MW-9	Top of well casing broken and lock missing.
MW-11	Lock does not operate.
MW-11A	Lock does not operate.
MW-11B	Lock does not operate.
MW-19	Pad has been hit and broken.
MW-22A	Lock does not operate.
MW-23	Pad has been hit and broken; hinge on protective casing is damaged.
MW-27	Obstruction in well near ground surface, could not be sampled.
MW-31	Lock does not operate.
MW-42	Protective casing hinge is broken.
MW-46A	Lock does not operate.
MW-50A	Lock does not operate.
ORW-1	Lock does not operate.

All wells indicated as “lock does not operate” were locked prior to measurement; however, the locks would not lock closed following measurement.

Groundwater Measurement

Top of riser elevation, depth to groundwater measurement, calculated groundwater elevation, total well depth and DNAPL thickness measurements for 2001, 2003 and 2012 monitoring events are provided on Table 2 for the shallow aquifer, Table 3 for the intermediate aquifer and Table 4 for the deep aquifer. Calculated groundwater elevations from the 2012 monitoring event were used to produce groundwater potentiometric maps for the shallow (Figure 1), intermediate (Figure 2) and deep (Figure 3) aquifers.

The CFR depth is great enough that it intercepts all three aquifers and provides a surface water head that affects groundwater flow within each of the aquifers. Surface water from CFR flows into the aquifers at times in which the surface water elevation exceeds the groundwater elevation in each aquifer. Based on the 2012 monitoring event, in which groundwater data was collected during a rising tide in the CFR, the following groundwater flow conditions were observed in the shallow, intermediate and deep aquifers:

Aquifer	Groundwater Flow Conditions Observed During Rising Tide
Shallow	Groundwater flow is from higher groundwater elevations (greater than 2.5 feet msl) located to the north and east of the site and in the central portion of the site. From the central portion of the site groundwater flow is to the east, south and west with discharges to DD and GFC. Groundwater flow along the CFR during the measurement period was into the shallow aquifer based on a higher surface water elevation relative to groundwater elevation. Shallow groundwater in the

northwest portion of the site discharges to the drainage ditch that separates the Hess facility from the site.

Intermediate — Flow is from higher groundwater and surface water elevations (greater than 2.5 feet msl) located to the north, east and west of the site. Intermediate aquifer groundwater flow on site is to the southeast with discharge to DD and GFC; based on higher groundwater elevations observed in the intermediate aquifer relative to the shallow aquifer along the DD and GFC. Groundwater flow along CFR is into the intermediate aquifer along the southwest portion of the site based on higher surface water elevation relative to groundwater elevation. Based on MW-50A, located on the south side of GFC, a local groundwater flow component to the northwest toward GFC is likely present on the south side of GFC.

Deep — Flow is from higher groundwater and surface water elevations (greater than 2.5 feet msl) located to the east and west of the site. Regionally, deep aquifer groundwater flow is to the west / southwest with discharge to creeks and CFR. Locally, during high tide conditions, surface water flows into the deep aquifer near CFR and migrates toward GFC creating an in-land groundwater low in the deep aquifer adjacent to and along the CFR. Groundwater flow in the deep aquifer is vertically upward to the intermediate aquifer, except along the groundwater low near GFC created during high tide conditions. During high tide conditions, the groundwater flow between the intermediate aquifer and the deep aquifer is neutral based on the identical groundwater elevations observed at MW-35 in the intermediate aquifer and MW-36 in the deep aquifer.

DNAPL Measurement

DNAPL was detected in eight shallow aquifer and three intermediate aquifer monitoring wells during the 2012 event (Tables 2 and 3; Figures 1 and 2). No DNAPL was detected in the deep aquifer. DNAPL was also detected in each of these wells in 2001; no new wells had DNAPL. DNAPL was detected in shallow aquifer wells MW-11, MW-14, MW-22, MW-26, MW-43, MW-44, MW-45 and ORW-1. Shallow aquifer well MW-11 is screened across the top of the aquifer, whereas the other shallow aquifer wells are screened across the base. Wells MW-22, MW-26, MW-43, MW-44 and MW-45 were installed up to one foot into the underlying peat layer. Shallow aquifer wells MW-14 and ORW-1 were set seven feet and 2.5 feet into the underlying peat, respectively. DNAPL was detected in intermediate wells MW-11B, MW-26A and MW-44A. Wells MW-11B and MW-26A are screened on top of the lower clay; whereas MW-44A was screened one foot into the top of the lower clay. Actual DNAPL thickness measured should be compared to well construction details to evaluate potential thickness is each aquifer. Total DNAPL thickness in the shallow and intermediate aquifers is likely to be less than the measured thickness due to well construction extending into the top of the peat and into the top of the lower clay.

Groundwater Analysis

Schnabel collected groundwater samples from all existing wells that did not contain DNAPL between January 17 and 20, 2012. Groundwater analysis was performed by Lancaster Laboratories for the Wilmington site-specific constituent list. Analytical results are provided in Appendix A. A spreadsheet

that compares the detected concentrations to the 15A NCAC 2L groundwater standards is provided in Table 5.

Procedures relating to sample collection techniques, sample containers, sample preservation, equipment decontamination and field measurement generally complied with the most current version of the U.S. Environmental Protection Agency (USEPA) Region IV Science and Ecosystem Support Division (SESD) *Field Branches Quality System and Technical Procedures*. This information is available from the USEPA Region IV SESD at: http://www.epa.gov/region4/sesd/fbqstp/. Well sampling was performed using the low flow micro-purge methodology. Please refer to Appendix A for the well sampling records.

In addition to the standard protocols outlined in the USEPA information referenced above, the following procedures were also observed as required by NCDENR:

1. Field QC samples: (i.) minimum of one duplicate sample, per medium, per container type, per field day; (ii.) equipment rinsate blanks and VOA trip blanks were analyzed.

2. Investigation derived waste (IDW) was generated as part of the monitoring activities. Groundwater recovered during well purging was contained and discharged on site in the area of worst case shallow aquifer impact. The purged groundwater is not subject to RCRA permitting as long as the material: (1) stays on site and remains in the contaminated area, (2) is secured, (3) does not increase the spread of contamination or concentrations in a particular medium, (4) does not cause mobilization of contaminants, and (5) does not introduce contamination to uncontaminated soil (causing an increase in contaminant concentrations). All personal protective equipment (PPE) and disposable sampling supplies (tubing, plastic sheets, nitrile gloves, etc.) that contacted potential impacted media were placed in a labeled drum on site for future disposal. A waste generation record was completed (Appendix C) and submitted to SWP for management of the drummed contents.

3. The analytical methods used were the most recent, USEPA approved update of the following analytical methods:
    a. Volatile Organic Compounds Method 8260B
    b. Semi-volatile Organic Compounds Method 8270D
    c. Metals by USEPA method 6010C capable of achieving method detection limits less than or equal to the applicable 15A NCAC 2L groundwater standard for chromium, copper and arsenic.

4. Laboratory reports include the items listed below:
    a. A statement that the laboratory is certified for applicable parameters under 15A NCAC Subchapter 2H .0800.
    b. A signed statement from the laboratory that the samples were received in good condition, at the required temperature and that analysis of the samples complied with all procedures outlined in USEPA methodology, unless otherwise specified. Any deviation from the methods, additional sample preparation, sample dilution and unrectified analytical problems, are justified in a narrative with the laboratory report.

c. Laboratory sheets for all analytical results, including sample identification, sampling dates, date samples were received by laboratory, extraction dates, analysis dates, analytical methods used, dilution factors and sample quantitation limits.

d. A written explanation for any sample having sample quantitation limits that exceed 10 times the USEPA method detection limits.

e. Laboratory sheets for all laboratory quality control samples, including results for bias and precision and control limits used. The following minimum laboratory quality control sample reporting was required: (a) at least one matrix spike and one matrix spike duplicate per sample delivery group or 14-day period, whichever is more frequent (control limits must be specified); (b) at least one method blank per sample delivery group or 12-hour period, whichever is less; and (c) system monitoring compounds, surrogate recovery required by the method and laboratory control sample analysis (acceptance criteria must be specified). All samples that exceed control limits / acceptance criteria must be flagged in the laboratory report.

f. Data quality was reviewed by both the remediating party and the laboratory. Any quality control concerns, data qualifiers or flags were evaluated.

g. All constituents detected are reported, even if they were not definitively quantified. All estimated concentrations with data qualifiers were also reported.

h. Completed chain-of-custody and associated air bills are attached to the laboratory reports.

i. The laboratory report contains the names of the individuals performing each analysis, the quality assurance officer reviewing the data and the laboratory manager.

Groundwater Quality

Site-related constituents (SRC) in groundwater originate from the former sources in the landfarm, production and covered ditch areas. SRC migration is controlled by the direction of groundwater flow, subsurface stratigraphy, and the dense (heavier than water) nature of the constituents. Maps depicting the extent of SRCs in groundwater have been prepare for the shallow (Figure 4), intermediate (Figure 5) and deep (Figure 6) aquifers. Provided below are SRC extent discussions for each aquifer:

Aquifer	SRCs in Groundwater
Shallow	There are three areas where SRCs are detected above 2L standards in the shallow aquifer: 1. The northernmost SRC's at MW-18 and at MW-40 beneath the landfarm area migrate with groundwater flow to the west. A drainage ditch along the northern property boundary separates the site from the Hess facility. These areas are characterized by inorganic arsenic and chromium that exceed 2L standards. Migration to the west is retarded due to flow into the shallow aquifer from the CFR when tide elevation exceeds groundwater elevation.

2. The central SRC's originate from the production and covered ditch source areas. Free phase DNAPL is present directly beneath the source areas in pools on top of the semi-confining peat layer underlying the shallow aquifer. The dissolved SRC's are characterized by organic and inorganic wood-preserving constituents. The westernmost edge of the dissolved SRC's migrate to the west toward the CFR but are retarded when the surface water elevation exceeds groundwater elevation. The central portion of the dissolved SRC's migrate to the south and east terminating just beyond MW-24R, MW-25 and the DD due to a horizontal stratigraphy change within the shallow aquifer from higher permeability sand to lower permeability peat.

3. The southern edge of the central dissolved SRC's is deflected downward into the intermediate aquifer by the horizontal stratigraphic change. Along GFC the horizontal stratigraphy changes back from peat to sand and a third area of SRC's appears in the shallow aquifer along GFC. This SRC's area is caused by upward migration resulting from a higher groundwater elevation head in the intermediate aquifer relative to the shallow aquifer along GFC. Furthermore, during rising tide conditions in the CFR, the GFC tidal gate closes causing surface water elevation to rise in GFC and DD. When GFC and DD surface water elevation exceeds groundwater elevation, surface water flows into the shallow aquifer through impacted sediment which also contributes SRC's to the shallow aquifer in this area along GFC. The SRC's are contained within a narrow band along GFC due to stratigraphy and the dominant groundwater flow toward GFC from the north and south in the shallow aquifer.

Intermediate

There are two areas of SRC detected above 2L standards in the intermediate aquifer:

1. The northernmost SRC's are beneath the landfarm area. These SRC's likely migrate to the south with groundwater flow. This area is characterized by benzene and naphthalene that exceed 2L standards.

2. The central SRC's originate from the production and covered ditch source areas and migrate downward into the intermediate aquifer. Free phase DNAPL has migrated vertically beneath these source areas through the semi-confining peat layer at the base of the shallow aquifer. The DNAPL migrated into the intermediate aquifer and pooled on top of the lower confining clay at the base of the intermediate aquifer. The dissolved SRC's are characterized by organic wood-preserving constituents; no inorganic constituents exceed 2L standards in the intermediate aquifer. The central portion of the dissolved SRC's migrate primarily along the top of the lower confining clay to the southeast terminating at the DD and along GFC just beyond MW-35. The lower confining clay is present under the intermediate aquifer from the source areas in the central portion of the site to MW-29A

along GFC. Between MW-29A and MW-35 the lower confining clay pinches out and no longer provides a barrier to downward flow into the deep aquifer.

Deep — There is one area of SRC's that exceed 2L standards in the deep aquifer:

1. The deep aquifer SRC's originate from the production and covered ditch source areas. No DNAPL has been observed in the deep aquifer due to the presence of the lower confining clay at the base of the intermediate aquifer. The dissolved SRC's dive downward from the shallow aquifer and migrate horizontally along the top of the lower confining clay within the intermediate aquifer to GFC. West of MW-29A the lower confining clay pinches out and the intermediate aquifer dissolved SRC's dives downward into the deep aquifer to a depth of at least 52 feet below ground surface. It is uncertain if the naphthalene detected above the 2L standard at MW-48B near the elbow bend in GFC is site related or an alternate source. Horizontal migration to the west in the deep aquifer is retarded during rising tide conditions when CFR surface water elevation exceeds deep aquifer groundwater elevation in the southwest portion of the site.

2001 Versus 2012 Groundwater Analytical Results Comparison

Analytical data summary tables for 2001 are provided as Appendix B for the shallow, intermediate, and deep aquifers. Please note that the summary tables in Appendix B utilize 2001 groundwater standards. Provided below is a discussion comparing the 2001 analytical results to the 2012 analytical results for each aquifer.

Aquifer	2001 to 2012 Groundwater Analytical Result Comparison
Shallow	1. The SRC's in the landfarm area were limited to inorganic arsenic and chromium in 2001 and 2012. Since 2001, the downgradient chromium concentration has decreased and arsenic is no longer detected in MW-18. 2. In the central SRC's area, DNAPL was detected in the same wells in 2001 and 2012. The upgradient (north) and sidegradient (west and east) edges of the dissolved SRC's extent remained stationary. The downgradient extent remains stationary to the southwest at MW-19 and MW-24R, to the southeast along the DD, and to the south at MW-25. The third shallow aquifer dissolved SRC's area is located along GFC. This area remained consistent for organic wood-preserving constituents, however, chromium increased at MW-29.
Intermediate	1. Since 2001, benzene and naphthalene has been detected above the 2L standards beneath the landfarm area. 2. In the central area, DNAPL was detected in the same intermediate aquifer wells in 2001 and 2012. The dissolved SRC's north, west and east extents

have remained stationary. The southern downgradient extent along GFC increased in concentration at MW-29A and MW-35.

Deep 1. No DNAPL was observed in the deep aquifer in 2001 or 2012. The dissolved SRC's along GFC maintained similar concentrations at MW-36, but naphthalene increased at MW-48B.

We appreciate the opportunity to submit our summary of findings for these services. Please contact our office if you have any questions with regard to this report.

Sincerely,

SCHNABEL ENGINEERING SOUTH, PC

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GK:RW

cc: Cynthia Lilly, Rayonier, Inc., 3888 NW Randall Way #204, Silverdale, WA 98383-7847

Enclosures:
Table 1 – Well and Staff Gauge Database
Table 2 – Shallow Aquifer Groundwater and DNAPL Measurements
Table 3 – Intermediate Aquifer Groundwater and DNAPL Measurements
Table 4 – Deep Aquifer Groundwater and DNAPL Measurements
Table 5 – Groundwater Analytical Results
Figure 1 – Shallow Aquifer Groundwater Potentiometric Surface
Figure 2 – Intermediate Aquifer Groundwater Potentiometric Surface
Figure 3 – Deep Aquifer Groundwater Potentiometric Surface
Figure 4 – Shallow Aquifer Groundwater Standard Exceedance
Figure 5 – Intermediate Aquifer Groundwater Standard Exceedance
Figure 6 – Deep Aquifer Groundwater Standard Exceedance
Appendix A – Field and Laboratory Reports
Appendix B – 2001 Groundwater Summary Tables
Appendix C – Waste Generation Record

TABLE 1
WELL AND STAFF GAUGE DATABASE

TABLE 1 - WELL AND STAFF GUAGE DATABASE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

WELL	INSTALL DATE	BORING TERM BLS	LAND SURFACE ELEV	TOC RISER ELEV	WELL BOTTOM ELEV	WELL DEPTH BLS	TOC RISER DEPTH	SCREEN INTERVAL ELEV	COORDINATES	
									NORTHING	EASTING
CW-1	11/03/81	44.8	2.90	5.52	-12.20	15.10	17.72	-12.20 to -7.20	170683.300	2317738.950
CW-2	11/04/81	48.9	4.70	7.61	-8.00	12.70	15.61	-8.00 to -3.00	170945.310	2317363.890
CW-3	11/03/81	50.0	4.20	7.12	-3.10	7.30	10.22	-3.10 to 1.90	170899.840	2316990.550
CW-4	11/04/81	49.0	4.10	6.75	-14.00	18.10	20.75	-14.00 to -9.00	171308.680	2316913.610
CW-5	11/04/81	44.0	4.20	6.57	-11.00	15.20	17.57	-11.00 to -6.00	171615.030	2318061.360
MW-6	09/05/85	20.0	3.40	5.96	-16.38	19.78	21.45	-16.38 to -6.38	171759.04	2317555.49
MW-7	09/06/85	19.8	3.87	6.63	-15.65	19.52	21.68	-15.65 to -5.65	171516.87	2317057.66
MW-8	09/09/85	19.2	4.16	7.00	-14.86	19.02	21.66	-14.86 to -4.86	171308.46	2317048.69
MW-8A	10/01/92	51.0	4.12	6.43	-26.63	30.75	33.06	-26.63 to -6.63	171307.81	2317034.99
MW-9	09/10/85	19.4	4.26	7.00	-14.96	19.22	21.39	-14.96 to -4.96	171324.83	2317300.56
MW-10	02/18/92	13.0	3.63	7.41	-6.87	10.50	14.28	-6.87 to 3.13	171060.33	2317416.43
MW-11	02/18/92	13.0	4.31	8.02	-6.19	10.50	14.21	-6.19 to 3.81	170769.34	2317497.46
MW-11A	10/01/92	50.0	4.10	6.38	-29.79	33.89	36.17	-29.79 to -24.79	170771.95	2317484.42
MW-11B	10/31/93	46.0	4.13	6.26	-38.06	42.19	44.32	-38.06 to -33.06	170762.69	2317489.76
MW-12	02/18/92	12.0	4.60	8.22	-5.90	10.50	14.12	-5.90 to 4.10	170782.73	2317389.15
MW-13	02/18/92	12.0	3.31	6.97	-7.19	10.50	14.16	-7.19 to 2.81	170721.30	2317066.52
MW-14	02/19/92	22.0	2.62	6.30	-13.38	16.00	19.68	-13.38 to -3.38	170565.41	2317675.19
MW-14A	11/02/93	42.0	2.76	5.05	-28.39	31.15	33.44	-28.39 to -23.39	170564.17	2317685.19
MW-15	02/19/92	13.0	3.26	7.07	-7.24	10.50	14.31	-7.24 to 2.76	170641.86	2317249.76
MW-16	02/19/92	13.0	3.88	7.69	-6.62	10.50	14.31	-6.62 to 3.38	170875.45	2317059.82
MW-17	02/19/92	15.0	3.86	7.65	-6.64	10.50	14.29	-6.64 to 3.36	170899.08	2317118.35
MW-18	10/07/92	14.0	4.26	6.61	-6.87	11.13	13.48	-6.87 to 3.13	171744.30	2317083.05
MW-19	10/06/92	14.0	3.19	5.44	-9.68	12.87	15.12	-9.68 to -4.68	170439.85	2317232.30
MW-19A	10/02/92	43.2	3.15	5.25	-28.02	31.17	33.27	-28.02 to -23.02	170443.47	2317244.14
MW-20	10/07/92	14.0	3.17	5.44	-9.13	12.30	14.57	-9.13 to -4.13	170921.86	2317799.93
MW-20A	11/08/93	42.0	3.10	5.23	-27.88	30.98	33.11	-27.88 to -22.88	170913.19	2317797.41
MW-21	10/07/92	10.0	3.17	5.34	-3.62	6.79	8.96	-3.62 to 1.38	171260.09	2317881.59
MW-22	10/07/92	14.0	3.02	5.26	-8.09	11.11	13.35	-8.09 to -3.09	170728.25	2316945.44
MW-22A	11/02/93	42.0	3.07	5.32	-28.79	31.86	34.11	-28.79 to 23.79	170726.23	2316955.36
MW-22B	5/6/2003	64.5	3.34	5.88	-60.91	64.25	66.79	-60.91 to -55.91	170791.194	2316996.868
MW-23	10/08/92	12.0	2.67	4.96	-6.39	9.06	11.35	-6.39 to -1.39	170355.68	2316972.19
MW-24	Abandoned	Abandoned	Abandoned	Abandoned	Abandoned	Abandoned	Abandoned	Abandoned	Abandoned	Abandoned
MW-24R	11/12/93	14.0	3.77	5.98	-9.63	13.40	15.61	-9.63 to -4.63	170242.09	2317324.15
MW-24A	11/01/93	42.0	3.64	5.81	-30.64	34.28	36.45	-30.64 to -25.64	170240.18	2317313.97
MW-24B	4/30/2003	64.0	3.81	6.48	-59.92	63.73	66.40	-59.92 to -44.92	170249.604	2317317.249
MW-25	10/08/92	13.0	1.78	4.96	-10.27	12.05	15.23	-10.27 to -5.27	170374.77	2317662.47
MW-26	10/05/92	18.0	2.48	4.91	-15.14	17.62	20.05	-15.14 to -10.14	170529.26	2317951.33
MW-26A	11/20/2000	42.0	2.5	5.11	-39.5	41.0	44.61	-33.5 to -38.5	170528.490	2317961.785
MW-27	11/13/93	9.0	3.22	5.41	-1.90	5.12	7.31	-1.90 to 3.10	171848.14	2317846.63
MW-28	11/10/93	14.0	2.97	5.18	-8.10	11.07	13.28	-8.10 to -3.10	170473.09	2318157.25
MW-28A	11/10/93	40.0	3.26	5.47	-22.42	25.68	27.89	-22.42 to -17.42	170465.44	2318161.94
MW-29	11/12/93	7.0	3.19	5.32	-4.04	7.23	9.36	-4.04 to 0.96	169681.45	2317783.77
MW-29A	11/09/93	40.0	3.15	5.14	-35.83	38.98	40.97	-35.83 to -30.83	169673.28	2317782.13
MW-30	11/12/93	10.0	4.07	6.26	-4.95	9.02	11.21	-4.95 to 0.05	169874.49	2317618.08
MW-31	11/23/1996	17.0	4.25	6.63	-10.69	14.94	17.32	-10.69 to -0.69	169951.980	2316779.110
MW-32	11/24/1996	44.2	3.90	6.22	-39.17	43.07	45.39	-39.17 to -34.17	169953.810	2316792.200
MW-33	12/03/96	55.0	3.65	5.92	-49.35	53.00	55.27	-49.35 to -44.35	169955.360	2316804.700
MW-34	12/03/96	15.0	5.69	8.13	-8.11	14.00	16.24	-8.11 to 1.89	169570.980	2317481.370
MW-35	12/05/96	37.0	5.27	7.71	-31.23	36.50	38.94	-31.23 to -26.23	169556.770	2317481.230
MW-36	12/08/96	52.0	5.63	7.93	-43.09	48.72	51.02	-43.09 to -38.09	169547.970	2317468.740
MW-37	12/10/1996	17.0	3.40	5.97	-10.70	14.10	16.67	-10.70 to -0.70	169975.460	2318325.830
MW-38	12/10/1996	27.5	3.31	5.91	-20.73	24.04	26.64	-20.73 to -15.73	169989.830	2318326.130
MW-39	12/11/1996	52.0	3.28	5.75	-46.72	50.00	52.47	-46.72 to -41.72	170005.120	2318326.320
MW-40	11/20/1996	16.0	5.89	8.20	-8.08	13.97	16.28	-8.08 to 1.92	171548.400	2317308.180
MW-41	11/20/1996	39.5	5.48	7.66	-32.52	38.00	40.18	-32.52 to -27.52	1715477.420	2317321.990
MW-42	12/11/1996	66.5	5.35	7.68	-59.22	64.57	66.90	-59.22 to -54.22	171546.360	2317337.170
MW-43	11/14/2000	20.0	3.30	5.86	-16.7	19.0	22.56	-5.7 to -15.7	170746.810	2317090.980
MW-44	11/14/2000	16.0	1.50	3.98	-14.5	13.0	18.48	-1.5 to -11.5	170523.840	2317586.250
MW-44A	11/21/2000	41.0	1.80	4.34	-39.2	40.0	43.54	-33.2 to -38.5	170524.330	2317576.210
MW-45	11/14/2000	16.0	4.70	7.25	-11.3	16.0	18.55	-1.3 to 11.3	170774.990	2317440.490
MW-46A	4/25/2003	42.0	3.77	6.28	-38.38	42.15	44.66	-38.38 to -33.33	170909.886	2317485.503
MW-46B	4/25/2003	65.5	3.62	6.20	-61.95	65.57	68.15	-61.95 to -56.95	170908.749	2317495.564
MW-47A	4/23/2003	40.5	2.70	5.52	-38.35	41.05	43.87	-38.35 to -33.35	170114.255	2317765.767
MW-47B	4/16/2003	62.5	2.71	5.68	-59.07	61.78	64.75	-59.07 to -54.07	170104.221	2317765.289
MW-48	4/22/2003	12.5	4.47	5.03	-10.28	14.75	15.31	-10.28 to -0.28	169420.920	2306909.101
MW-48A	4/22/2003	44.5	4.47	7.19	-40.38	44.85	47.57	-40.38 to -35.38	169415.192	2316917.475
MW-48B	4/25/2003	64.5	4.39	7.17	-59.18	63.57	66.35	-59.18 to -54.18	169408.440	2316926.602
MW-49	4/2/2003	7.5	4.65	4.61	-2.76	7.41	7.37	-2.76 to 2.24	170285.748	2318726.836
MW-49A	4/30/2003	25.5	4.61	4.55	-20.97	25.58	25.52	-20.97 to -15.97	170278.601	2318733.666
MW-50	4/2/2003	7.5	1.56	4.39	-6.01	7.57	10.40	-6.01 to -1.01	169347.790	2317619.928
MW-50A	5/2/2003	33.5	1.78	4.69	-31.66	33.44	36.35	-31.66 to -26.66	169351.314	2317610.310
ORW-1	11/16/2000	18.0	4.6	7.18	-13.4	18.0	20.58	-3.4 to -13.4	170773.810	2317447.090
SG-DD	11/21/2000	-	-	2.08	-1.24	-	-	-	170523.100	2318025.060
SG-CFR T-HEAD	11/21/2000	-	-	3.48	-3.16	-	-	-	171167.800	2316465.360
SG-CFR GATE	11/21/2000	-	-	4.05	-2.59	-	-	-	169800.660	2316402.110
SG-GFC GATE	11/21/2000	-	-	2.31	-1.01	-	-	-	169787.590	2316426.100
SG-GFC	11/21/2000	-	-	2.24	-1.08	-	-	-	169517.230	2317470.630

Note: ELEV = Elevation; TOC = Top of Casing; Top of Staff Gauge; BLS = Below Land Surface; GW = Groundwater; - = Not Measured

All depths and elevations area in feet.

TABLE 2
SHALLOW AQUIFER GROUNDWATER AND DNAPL MEASUREMENTS

TABLE 2 - SHALLOW AQUIFER GROUNDWATER AND DNAPL MEASUREMENTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

WELL	DATE	RISER ELEV	DEPTH TO GW	GW ELEV	DEPTH TO DNAPL	TOC WELL DEPTH	DNAPL THICKNESS	COMMENTS
MW-6	2/20/2001	5.96	3.72	2.24		22.16		
	5/20/2003		3.44	2.52		NM		
	1/16/2012		DAMAGED	DAMAGED		DAMAGED		Well hit and broken off at pad
MW-7	2/20/2001	6.63	5.09	1.54		22.15		
	5/20/2003		4.26	2.37		NM		
	1/16/2012		4.74	1.89		22.24		
MW-8	2/20/2001	7.00	5.11	1.89		21.81		
	5/20/2003		4.43	2.57		NM		
	1/16/2012		4.93	2.07		21.86		
MW-9	2/20/2001	7.00	5.05	1.95		21.99		
	5/20/2003		4.58	2.42		NM		
	1/16/2012		4.75	2.25		22.05		Well casing broken, lock missing
MW-10	2/20/2001	7.41	5.12	2.29		14.14		
	5/20/2003		5.61	1.80		NM		
	1/16/2012		4.67	2.74		14.22		
MW-11	2/20/2001	8.02	5.69	2.33		NM	0.01	
	5/20/2003		6.36	1.66		NM		
	1/16/2012		5.51	2.51	13.85	13.89	0.04	Lock damaged, needs replacement
MW-12	2/20/2001	8.22	5.91	2.31		13.85		
	5/20/2003		6.24	1.98		NM		
	1/16/2012		5.60	2.62		12.91		
MW-13	2/20/2001	6.97	5.02	1.95		13.94		
	5/20/2003		4.55	2.42		NM		
	1/16/2012		4.78	2.19		14.06		
MW-14	2/20/2001	6.30	4.65	1.65		NM	1.05	
	5/20/2003		4.32	1.98		NM		
	1/16/2012		4.62	1.68	15.46	19.76	4.30	
MW-15	2/20/2001	7.07	4.98	2.09		13.80		
	5/20/2003		5.18	1.89		NM		
	1/16/2012		4.69	2.38		13.88		
MW-16	2/20/2001	7.69	5.83	1.86		14.10		
	5/20/2003		5.38	2.31		NM		
	1/16/2012		5.43	2.26		14.20		
MW-17	2/20/2001	7.65	5.61	2.04		14.50		
	5/20/2003		5.42	2.23		NM		
	1/16/2012		5.28	2.37		14.50		
MW-18	2/20/2001	6.61	4.80	1.81		13.43		
	5/20/2003		4.15	2.46		13.57		
	1/16/2012		4.66	1.95		13.56		
MW-19	2/20/2001	5.44	3.34	2.10		15.06		
	5/20/2003		3.42	2.02		NM		
	1/16/2012		3.43	2.01		15.11		Pad broken
MW-20	2/20/2001	5.44	3.33	2.11		14.49		
	5/20/2003		4.25	1.19		NM		
	1/16/2012		3.28	2.16		14.56		
MW-21	2/20/2001	5.34	3.56	1.78		9.81		
	5/20/2003		4.20	1.14		NM		
	1/16/2012		3.18	2.16		9.85		
MW-22	2/20/2001	5.26	3.39	1.87		NM	0.20	
	5/20/2003		2.99	2.27		NM		
	1/16/2012		3.34	1.92	13.32	13.75	0.43	
MW-23	2/20/2001	4.96	3.00	1.96		11.64		
	5/20/2003		2.95	2.01		NM		
	1/16/2012		2.93	2.03		11.71		Pad broken, hinge needs replaced
MW-24R	2/20/2001	5.98	3.84	2.14		15.32		
	5/20/2003		3.94	2.04		NM		
	1/16/2012		3.85	2.13		15.39		
MW-25	2/20/2001	4.96	2.22	2.74		15.05		
	5/20/2003		2.37	2.59		NM		
	1/16/2012		2.13	2.83		15.21		
MW-26	2/20/2001	4.91	4.71	0.20		NM	3.85	
	5/20/2003		4.67	0.24		NM		
	1/16/2012		4.50	0.41	15.27	20.79	5.52	

TABLE 2 - SHALLOW AQUIFER GROUNDWATER AND DNAPL MEASUREMENTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

WELL	DATE	RISER ELEV	DEPTH TO GW	GW ELEV	DEPTH TO DNAPL	TOC WELL DEPTH	DNAPL THICKNESS	COMMENTS
MW-27	2/20/2001	5.41	2.18	3.23		7.18		
	5/20/2003		2.67	2.74		NM		
	1/16/2012		DAMAGED	DAMAGED		DAMAGED		Obstruction in well near ground surface
MW-28	2/20/2001	5.18	4.45	0.73		15.06		
	5/20/2003		4.80	0.38		15.21		
	1/16/2012		4.32	0.86		15.15		
MW-29	2/20/2001	5.32	4.00	1.32		9.18		
	5/20/2003		4.75	0.57		NM		
	1/16/2012		4.31	1.01		9.21		
MW-30	2/20/2001	6.26	4.46	1.80		11.00		
	5/20/2003		4.80	1.46		NM		
	1/16/2012		4.91	1.35		11.17		
MW-31	2/20/2001	6.63	5.04	1.59		16.09		
	5/20/2003		4.62	2.01		NM		
	1/16/2012		5.04	1.59		16.23		Lock damaged, needs replacement
MW-34	2/20/2001	8.13	7.88	0.25		16.59		
	5/20/2003		7.61	0.52		NM		
	1/16/2012		7.97	0.16		16.75		
MW-37	2/20/2001	5.97	4.98	0.99		17.10		
	5/20/2003		4.74	1.23		17.25		
	1/16/2012		4.61	1.36		17.19		
MW-40	2/20/2001	8.20	6.36	1.84		16.60		
	5/20/2003		5.79	2.41		16.75		
	1/16/2012		5.93	2.27		16.67		
MW-43	2/20/2001	5.86	3.96	1.90		NM	4.88	
	5/20/2003		3.74	2.12		NM		
	1/16/2012		3.65	2.21	16.73	20.89	4.16	
MW-44	2/20/2001	3.98	2.49	1.49		NM	6.92	
	5/20/2003		3.10	0.88		NM		
	1/16/2012		2.42	1.56	9.50	14.92	5.42	
MW-45	2/20/2001	7.25	4.98	2.27		NM	3.66	
	5/20/2003		5.28	1.97		NM		
	1/16/2012		4.70	2.55	12.87	17.45	4.58	
MW-48	2/20/2001		DNE	DNE		DNE		
	5/20/2003	7.30	7.04	0.26		15.31		
	1/16/2012		7.41	-0.11		15.20		
MW-49	2/20/2001		DNE	DNE		DNE		
	5/20/2003	4.61	2.12	2.49		7.37		
	1/16/2012		1.46	3.15		7.32		
MW-50	2/20/2001		DNE	DNE		DNE		
	5/20/2003	4.39	4.50	-0.11		10.40		
	1/16/2012		3.71	0.68		10.33		
ORW-1	2/20/2001	7.18	4.92	2.26		NM	5.48	
	5/20/2003		5.20	1.98		NM		
	1/16/2012		4.62	2.56	14.93	20.13	5.20	Lock damaged, needs replacement
SG*-CFR T-head	2/20/2001	-3.16	5.76	2.60		NA		
	5/20/2003		DESTROYED	DESTROYED		NA		
	1/16/2012		DESTROYED	DESTROYED		NA		
SG*-CFR Tidal Gate	2/20/2001	-2.59	5.19	2.60		NA		
	5/20/2003		5.29	2.70		NA		
	1/16/2012		DESTROYED	DESTROYED		NA		
SG*-GFC Tidal Gate	2/20/2001	-1.01	0.07	-0.94		NA		
	5/20/2003		0.88	-0.13		NA		
	1/16/2012		DESTROYED	DESTROYED		NA		
SC*-GFC	2/20/2001	-1.08	0.18	-0.90		NA		
	5/20/2003		0.90	-0.18		NA		
	1/16/2012		1.16	0.08		NA		
SC*-DD	2/20/2001	-1.24	DRY	DRY		NA		
	5/20/2003		CORRODED	CORRODED		NA		
	1/16/2012		1.79	0.55		NA		

Note:
GW = Groundwater; ELEV = Elevation; DNAPL = Dense Non-Aqueous Phase Liquid; DNE = Did Not Exist; NA = Not Applicable; NM = Not Measured
SG = Staff Gauge; CFR = Cape Fear River; GFC = Greenfield Creek; DD = Drainage Ditch
All measurements are in feet.

TABLE 3
INTERMEDIATE AQUIFER GROUNDWATER AND DNAPL MEASUREMENTS

TABLE 3 - INTERMEDIATE AQUIFER GROUNDWATER AND DNAPL MEASUREMENTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

WELL	DATE	RISER ELEV	DEPTH TO GW	GW ELEV	DEPTH TO DNAPL	TOC WELL DEPTH	DNAPL THICKNESS	COMMENTS
MW-8A	2/20/2001	6.43	3.95	2.48		30.75		
	5/20/2003		3.58	2.85		NM		
	1/16/2012		3.81	2.62		32.71		
MW-11A	2/20/2001	6.38	4.24	2.14		33.89		
	5/20/2003		4.00	2.38		NM		
	1/16/2012		4.15	2.23		36.10		Lock damaged, needs replacement
MW-11B	2/20/2001	6.26	4.13	2.13		NM	0.59	
	5/20/2003		3.89	2.37		NM		
	1/16/2012		3.94	2.32	43.02	44.15	1.13	
MW-14A	2/20/2001	5.05	3.20	1.85		31.15		
	5/20/2003		3.02	2.03		NM		
	1/16/2012		3.05	2.00		33.10		
MW-19A	2/20/2001	5.25	3.21	2.04		31.17		
	5/20/2003		2.96	2.29		NM		
	1/16/2012		3.43	1.82		33.30		
MW-20A	2/20/2001	5.23	3.02	2.21		30.98		
	5/20/2003		2.81	2.42		NM		
	1/16/2012		2.91	2.32		32.86		
MW-22A	2/20/2001	5.32	3.17	2.15		31.86		
	5/20/2003		2.86	2.46		NM		
	1/16/2012		2.97	2.35		33.74		Lock damaged, needs replacement
MW-24A	2/20/2001	5.81	3.86	1.95		34.28		
	5/20/2003		3.62	2.19		NM		
	1/16/2012		3.79	2.02		36.01		
MW-26A	2/20/2001	5.11	3.68	1.43		NM	3.67	
	5/20/2003		3.48	1.63		NM		
	1/16/2012		3.41	1.70	39.24	39.67	0.43	
MW-28A	2/20/2001	5.47	4.15	1.32		25.68		
	5/20/2003		4.04	1.43		27.61		
	1/16/2012		4.03	1.44		27.55		
MW-29A	2/20/2001	5.14	3.56	1.58		38.98		
	5/20/2003		3.42	1.72		NM		
	1/16/2012		3.50	1.64		40.40		
MW-32	2/20/2001	6.22	4.16	2.06		45.39		
	5/20/2003		3.82	2.40		NM		
	1/16/2012		4.14	2.08		46.50		
MW-35	2/20/2001	7.71	5.86	1.85		38.94		
	5/20/2003		5.67	2.04		NM		
	1/16/2012		5.75	1.96		38.82		
MW-38	2/20/2001	5.91	4.57	1.34		26.64		
	5/20/2003		4.61	1.30		27.12		
	1/16/2012		4.55	1.36		27.08		
MW-41	2/20/2001	7.66	4.83	2.83		40.18		
	5/20/2003		4.64	3.02		40.37		
	1/16/2012		4.84	2.82		40.30		
MW-44A	2/20/2001	4.34	2.64	1.70		NM	2.96	
	5/20/2003		2.45	1.89		NM		
	1/16/2012		2.41	1.93	39.77	42.96	3.19	
MW-46A	2/20/2001	6.28	DNE	DNE		DNE		
	5/20/2003		3.89	2.39		44.66		
	1/16/2012		3.95	2.33		44.57		Lock damaged, needs replacement
MW-47A	2/20/2001	5.52	DNE	DNE		DNE		
	5/20/2003		4.08	1.44		43.87		
	1/16/2012		4.07	1.45		43.59		
MW-48A	2/20/2001	7.19	DNE	DNE		DNE		
	5/20/2003		5.14	2.05		47.57		
	1/16/2012		5.42	1.77		47.48		
MW-49A	2/20/2001	4.55	DNE	DNE		DNE		
	5/20/2003		1.22	3.33		25.52		
	1/16/2012		1.28	3.27		25.51		
MW-50A	2/20/2001	4.69	DNE	DNE		DNE		
	5/20/2003		3.04	1.65		36.35		
	1/16/2012		2.92	1.77		36.27		Lock damaged, needs replacement

Note:
GW = Groundwater; ELEV = Elevation; DNAPL = Dense Non-Aqueous Phase Liquid
DNE = Did Not Exist; NA = Not Applicable; NM = Not Measured
All measurements are in feet.

TABLE 4
DEEP AQUIFER GROUNDWATER AND DNAPL MEASUREMENTS

TABLE 4 - DEEP AQUIFER GROUNDWATER AND DNAPL MEASUREMENTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

WELL	DATE	RISER ELEV	DEPTH TO GW	GW ELEV	DEPTH TO DNAPL	TOC WELL DEPTH	DNAPL THICKNESS	COMMENTS
MW-22B	2/20/2001	5.88	DNE	DNE		DNE		
	5/20/2003		2.88	3.00		66.79		
	1/16/2012		3.13	2.75		66.70		
MW-24B	2/20/2001	6.48	DNE	DNE		DNE		
	5/20/2003		3.23	3.25		66.40		
	1/16/2012		3.36	3.12		66.52		
MW-33	2/20/2001	5.92	3.55	2.37		55.88		
	5/20/2003		3.25	2.67		NM		
	1/16/2012		3.59	2.33		55.97		
MW-36	2/20/2001	7.93	6.07	1.86		59.21		
	5/20/2003		5.89	2.04		NM		
	1/16/2012		5.97	1.96		59.36		
MW-39	2/20/2001	5.75	1.35	4.40		52.45		
	5/20/2003		0.92	4.83		52.60		
	1/16/2012		0.46	5.29		52.51		
MW-42	2/20/2001	7.68	4.43	3.25		67.13		Broken hinge
	5/20/2003		4.35	3.33		67.43		
	1/16/2012		4.59	3.09		67.23		
MW-46B	2/20/2001	6.20	DNE	DNE		DNE		
	5/20/2003		2.48	3.72		68.15		
	1/16/2012		2.93	3.27		68.14		
MW-47B	2/20/2001	5.68	DNE	DNE		DNE		
	5/20/2003		2.00	3.68		64.75		
	1/16/2012		1.76	3.92		64.66		
MW-48B	2/20/2001	7.17	DNE	DNE		DNE		
	5/20/2003		4.41	2.76		66.35		
	1/16/2012		4.69	2.48		66.25		

Note:
GW = Groundwater; ELEV = Elevation; DNAPL = Dense Non-Aqueous Phase Liquid
DNE = Did Not Exist; NA = Not Applicable; NM = Not Measured
All measurements are in feet.

TABLE 5
GROUNDWATER ANALYTICAL RESULTS

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Name/Sample ID	Method	Units	[1]2L	[2]IMAC	MW-07(01-17-2012)			MW-08(01-17-2012)			MW-08A(01-17-2012)			MW-09(01-19-2012)			MW-10(01-19-2012)		
					Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0	81	3.0	5.0	ND	3.0	5.0
Benzene	SW-846 8260B	ug/L	1		ND	0.1	0.5	ND	0.1	0.5	0.5 J	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0
Chloroform	SW-846 8260B	ug/L	70		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Ethylbenzene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Toluene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Xylene (Total)	SW-846 8260B	ug/L	500		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		0.000082	0.000010	0.000052	ND	0.000010	0.000052	0.000014 J	0.000010	0.000051	0.000038 J	0.000010	0.000052	0.0047	0.000010	0.000052
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		0.000022 J	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	0.000027 J	0.000010	0.000052
Anthracene	SW-846 8270D SIM	mg/L	2		0.00069	0.000010	0.000052	0.000096	0.000010	0.000052	ND	0.000010	0.000051	0.00016	0.000010	0.000052	0.00027	0.000010	0.000052
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		0.000017 J	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	0.000012 J	0.000010	0.000052
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	ND	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.0000052	0.000052	ND	0.0000052	0.000052
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		0.000011 J	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000052
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000052
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000052
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	ND	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.0000052	0.000052	ND	0.0000052	0.000052
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		0.000078	0.000010	0.000052	0.000015 J	0.000010	0.000052	ND	0.000010	0.000051	0.000012 J	0.000010	0.000052	0.000069	0.000010	0.000052
Fluorene	SW-846 8270D SIM	mg/L	0.300		0.000019 J	0.000010	0.000052	0.000015 J	0.000010	0.000052	0.000011 J	0.000010	0.000051	0.000015 J	0.000010	0.000052	0.000046 J	0.000010	0.000052
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000052
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000052
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		ND	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000010	0.000051	0.000019 J	0.000010	0.000052	0.000012 J	0.000010	0.000052
Naphthalene	SW-846 8270D SIM	mg/L	0.006		ND	0.000031	0.000052	ND	0.000031	0.000052	ND	0.000031	0.000051	ND	0.000031	0.000052	0.000043 J	0.000031	0.000052
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		ND	0.000031	0.000052	ND	0.000031	0.000052	ND	0.000031	0.000051	ND	0.000031	0.000052	0.00034	0.000031	0.000052
Pyrene	SW-846 8270D SIM	mg/L	0.200		0.000063	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	0.00022	0.000010	0.000052
Arsenic	SW-846 6010C	mg/L	0.010		ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	0.0339 J	0.0051	0.0400	0.0061 J	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		0.0030 J	0.0011	0.0300	0.0025 J	0.0011	0.0300	0.0014 J	0.0011	0.0300	ND	0.0011	0.0300	0.0013 J	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		ND	0.00094	0.0200	0.0012 J	0.00094	0.0200	0.0013 J	0.00094	0.0200	ND	0.00094	0.0200	0.0013 J	0.00094	0.0200

Units used match units provided in laboratory report
[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010
[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202
No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.
ug/L = micrograms per liter; mg/L = milligrams per liter
MDL = Method Detection Limit; LOQ = Limit of Quantitation
ND = not detected; NA = not applicable
DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank
3-Methylphenol and 4-methylphenol totaled by laboratory.
Result compared to lower 4-methylphenol standard.

Shaded cells exceed goal

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Name/Sample ID	Method	Units	[1]2L	[2]IMAC	MW-11A(01-19-2012)			MW-12(01-20-2012)			MW-13(01-20-2012)			MW-14A(01-19-2012)			MW-15(01-20-2012)		
					Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		ND	6.0	10	ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0	11	3.0	5.0
Benzene	SW-846 8260B	ug/L	1		1.7	0.2	1.0	0.1 J	0.1	0.5	2.3	0.1	0.5	4.3	0.1	0.5	ND	0.1	0.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.2	1.0	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	2.0	10	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0
Chloroform	SW-846 8260B	ug/L	70		ND	0.2	1.0	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.2	1.0	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Ethylbenzene	SW-846 8260B	ug/L	600		3.8	0.2	1.0	ND	0.1	0.5	11	0.1	0.5	0.4 J	0.1	0.5	ND	0.1	0.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	0.4	1.0	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.2	1.0	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Toluene	SW-846 8260B	ug/L	600		0.3 J	0.2	1.0	ND	0.1	0.5	0.6	0.1	0.5	0.4 J	0.1	0.5	ND	0.1	0.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.2	1.0	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Xylene (Total)	SW-846 8260B	ug/L	500		5.5	0.2	1.0	ND	0.1	0.5	8.0	0.1	0.5	3.7	0.1	0.5	ND	0.1	0.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	0.045	0.0005	0.001	0.001	0.0005	0.001	0.027	0.0005	0.001	0.015	0.0005	0.001	ND	0.0005	0.001
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	0.0002 J	0.0001	0.0005	ND	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	0.027	0.0005	0.001	0.005	0.0005	0.001	0.062	0.0005	0.001	0.022	0.0005	0.001	ND	0.0005	0.001
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	0.003	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		0.088	0.00021	0.0010	0.0063	0.000010	0.000052	0.32	0.0021	0.010	0.17	0.00021	0.0010	0.0060	0.000010	0.000051
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		0.00037	0.000010	0.000052	0.00017	0.000010	0.000052	0.0016	0.000010	0.000052	0.00044	0.000010	0.000051	0.000052	0.000010	0.000051
Anthracene	SW-846 8270D SIM	mg/L	2		0.0037	0.000010	0.000052	0.00040	0.000010	0.000052	0.0072	0.000010	0.000052	0.0078	0.000010	0.000051	0.00017	0.000010	0.000051
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		0.000085	0.000010	0.000052	0.00010	0.000010	0.000052	0.00013	0.000010	0.000052	0.00026	0.000010	0.000051	ND	0.000010	0.000051
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	0.000063	0.0000052	0.000052	0.000031 J	0.0000052	0.000052	0.000022 J	0.0000051	0.000051	ND	0.0000051	0.000051
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	0.000094	0.000010	0.000052	0.000062	0.000010	0.000052	0.000040 J	0.000010	0.000051	ND	0.000010	0.000051
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000052	0.000065	0.000010	0.000052	0.000044 J	0.000010	0.000052	0.000013 J	0.000010	0.000051	ND	0.000010	0.000051
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000052	0.000034 J	0.000010	0.000052	0.000021 J	0.000010	0.000052	0.000017 J	0.000010	0.000051	ND	0.000010	0.000051
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	0.000017 J	0.0000052	0.000052	0.0000060 J	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		0.0028	0.000010	0.000052	0.0016	0.000010	0.000052	0.012	0.00010	0.00052	0.010	0.000010	0.000051	0.000034 J	0.000010	0.000051
Fluorene	SW-846 8270D SIM	mg/L	0.300		0.043	0.00021	0.0010	0.0045	0.000010	0.000052	0.025	0.00010	0.00052	0.082	0.00021	0.0010	0.000030 J	0.000010	0.000051
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	0.000073	0.000010	0.000052	0.000035 J	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		0.13	0.00021	0.0010	0.00068	0.000010	0.000052	0.0010	0.000010	0.000052	0.14	0.00021	0.0010	0.000013 J	0.000010	0.000051
Naphthalene	SW-846 8270D SIM	mg/L	0.006		0.29	0.0031	0.0052	0.0012	0.000031	0.000052	0.066	0.00031	0.00052	0.0059	0.000031	0.000051	0.000033 J	0.000031	0.000051
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		0.024	0.00062	0.0010	0.0022	0.000031	0.000052	0.024	0.00031	0.00052	0.095	0.00062	0.0010	ND	0.000031	0.000051
Pyrene	SW-846 8270D SIM	mg/L	0.200		0.0013	0.000010	0.000052	0.00069	0.000010	0.000052	0.0039	0.000010	0.000052	0.0054	0.000010	0.000051	0.000020 J	0.000010	0.000051
Arsenic	SW-846 6010C	mg/L	0.010		ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	0.0269 J	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		ND	0.0011	0.0300	0.0014 J	0.0011	0.0300	0.0196 J	0.0011	0.0300	ND	0.0011	0.0300	0.0057 J	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		ND	0.00094	0.0200	0.0020 J	0.00094	0.0200	0.0016 J	0.00094	0.0200	ND	0.00094	0.0200	0.0031 J	0.00094	0.0200

Units used match units provided in laboratory report
[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010
[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202
No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.
ug/L = micrograms per liter; mg/L = milligrams per liter
MDL = Method Detection Limit; LOQ = Limit of Quantitation
ND = not detected; NA = not applicable
DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank
3-Methylphenol and 4-methylphenol totaled by laboratory.
Result compared to lower 4-methylphenol standard.

Shaded cells exceed goal

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Name/Sample ID	Method	Units	[1]2L	[2]IMAC	MW-16(01-17-2012)			DUP-01(01-17-2012); MW-16			MW-17(01-18-2012)			DUP-02(01-18-2012); MW-17			MW-18(01-20-2012)		
					Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		13	3.0	5.0	13	3.0	5.0	50	3.0	5.0	50	3.0	5.0	270	30	50
Benzene	SW-846 8260B	ug/L	1		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0
Chloroform	SW-846 8260B	ug/L	70		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Ethylbenzene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Toluene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Xylene (Total)	SW-846 8260B	ug/L	500		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0005	0.001	0.0006 J	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		0.000032 J	0.000010	0.000051	0.000040 J	0.000010	0.000051	0.00098	0.000010	0.000051	0.0011	0.000010	0.000051	0.00049	0.000010	0.000051
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		0.000023 J	0.000010	0.000051	0.000019 J	0.000010	0.000051	0.00011	0.000010	0.000051	0.00013	0.000010	0.000051	ND	0.000010	0.000051
Anthracene	SW-846 8270D SIM	mg/L	2		0.00061	0.000010	0.000051	0.00062	0.000010	0.000051	0.00067	0.000010	0.000051	0.00068	0.000010	0.000051	0.000034 J	0.000010	0.000051
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		0.000022 J	0.000010	0.000051	0.000013 J	0.000010	0.000051	0.000022 J	0.000010	0.000051	0.000018 J	0.000010	0.000051	ND	0.000010	0.000051
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		0.000010 J	0.0000051	0.000051	ND	0.0000051	0.000051	0.0000060 J	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		0.000027 J	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		0.000012 J	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		0.000053	0.000010	0.000051	0.000023 J	0.000010	0.000051	0.00013	0.000010	0.000051	0.00014	0.000010	0.000051	ND	0.000010	0.000051
Fluorene	SW-846 8270D SIM	mg/L	0.300		ND	0.000010	0.000051	ND	0.000010	0.000051	0.00018	0.000010	0.000051	0.00019	0.000010	0.000051	ND	0.000010	0.000051
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Naphthalene	SW-846 8270D SIM	mg/L	0.006		ND	0.000031	0.000051	ND	0.000031	0.000051	0.000036 J	0.000030	0.000051	0.000038 J	0.000030	0.000051	ND	0.000030	0.000051
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		ND	0.000031	0.000051	ND	0.000031	0.000051	ND	0.000030	0.000051	ND	0.000030	0.000051	ND	0.000030	0.000051
Pyrene	SW-846 8270D SIM	mg/L	0.200		0.000062	0.000010	0.000051	0.000048 J	0.000010	0.000051	0.000066	0.000010	0.000051	0.000070	0.000010	0.000051	ND	0.000010	0.000051
Arsenic	SW-846 6010C	mg/L	0.010		ND	0.0051	0.0400	ND	0.0051	0.0400	0.0099 J	0.0051	0.0400	0.0071 J	0.0051	0.0400	ND	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		0.0161 J	0.0011	0.0300	0.0124 J	0.0011	0.0300	0.0064 J	0.0011	0.0300	0.0057 J	0.0011	0.0300	0.215	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		0.0024 J	0.00094	0.0200	0.0023 J	0.00094	0.0200	0.0085 J	0.00094	0.0200	0.0074 J	0.00094	0.0200	0.0043 J	0.00094	0.0200

Units used match units provided in laboratory report
[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010
[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202
No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.
ug/L = micrograms per liter; mg/L = milligrams per liter
MDL = Method Detection Limit; LOQ = Limit of Quantitation
ND = not detected; NA = not applicable
DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank
3-Methylphenol and 4-methylphenol totaled by laboratory.
Result compared to lower 4-methylphenol standard.

Shaded cells exceed goal

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Name/Sample ID	Method	Units	[1]2L	[2]IMAC	MW-19(01-19-2012)			MW-19A(01-18-2012)			MW-20(01-19-2012)			MW-20A(01-17-2012)			MW-21(01-17-2012)		
					Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		4.1 J	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0
Benzene	SW-846 8260B	ug/L	1		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0
Chloroform	SW-846 8260B	ug/L	70		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Ethylbenzene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Toluene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	0.1 J	0.1	0.5	ND	0.1	0.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Xylene (Total)	SW-846 8260B	ug/L	500		0.4 J	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	0.2 J	0.1	0.5	ND	0.1	0.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		0.0001 J	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	0.024	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		0.11	0.00021	0.0010	0.0028	0.000010	0.000051	0.027	0.00010	0.00052	0.000087	0.000010	0.000051	0.00055	0.000010	0.000051
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		0.0012	0.000010	0.000052	ND	0.000010	0.000051	0.000084	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Anthracene	SW-846 8270D SIM	mg/L	2		0.0067	0.000010	0.000052	0.000024 J	0.000010	0.000051	0.00019	0.000010	0.000052	ND	0.000010	0.000051	0.00019	0.000010	0.000051
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		0.00013	0.000010	0.000052	ND	0.000010	0.000051	0.000017 J	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		0.000012 J	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		0.0080	0.000010	0.000052	0.000020 J	0.000010	0.000051	0.000050 J	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Fluorene	SW-846 8270D SIM	mg/L	0.300		0.051	0.00021	0.0010	0.000039 J	0.000010	0.000051	0.000085	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		0.000053	0.000010	0.000052	ND	0.000010	0.000051	0.000013 J	0.000010	0.000052	0.00029	0.000010	0.000051	ND	0.000010	0.000051
Naphthalene	SW-846 8270D SIM	mg/L	0.006		0.00058	0.000031	0.000052	ND	0.000030	0.000051	0.000037 J	0.000031	0.000052	0.000044 J	0.000031	0.000051	ND	0.000031	0.000051
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		0.036	0.00062	0.0010	ND	0.000030	0.000051	0.000034 J	0.000031	0.000052	ND	0.000031	0.000051	ND	0.000031	0.000051
Pyrene	SW-846 8270D SIM	mg/L	0.200		0.0036	0.000010	0.000052	0.000012 J	0.000010	0.000051	0.000096	0.000010	0.000052	0.000012 J	0.000010	0.000051	0.000057	0.000010	0.000051
Arsenic	SW-846 6010C	mg/L	0.010		0.0067 J	0.0051	0.0400	ND	0.0051	0.0400	0.0068 J	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		0.0012 J	0.0011	0.0300	ND	0.0011	0.0300	ND	0.0011	0.0300	0.0012 J	0.0011	0.0300	0.0016 J	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		ND	0.00094	0.0200	0.0016 J	0.00094	0.0200	ND	0.00094	0.0200	0.00094 J	0.00094	0.0200	ND	0.00094	0.0200

Units used match units provided in laboratory report

[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010

[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202

No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.

ug/L = micrograms per liter; mg/L = milligrams per liter

MDL = Method Detection Limit; LOQ = Limit of Quantitation

ND = not detected; NA = not applicable

DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank

3-Methylphenol and 4-methylphenol totaled by laboratory.

Result compared to lower 4-methylphenol standard.

Shaded cells exceed goal

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Name/Sample ID	Method	Units	[1]2L	[2]IMAC	MW-22A(01-18-2012)			MW-22B(01-19-2012)			MW-23(01-18-2012)			MW-24R(01-19-2012)			MW-24A(01-18-2012)		
					Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		ND	3.0	5.0	ND	3.0	5.0	ND	15	25	ND	3.0	5.0	ND	3.0	5.0
Benzene	SW-846 8260B	ug/L	1		ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5	0.5 J	0.1	0.5	ND	0.1	0.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	1.0	5.0	ND	1.0	5.0	ND	5.0	25	ND	1.0	5.0	ND	1.0	5.0
Chloroform	SW-846 8260B	ug/L	70		ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5
Ethylbenzene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5	11	0.1	0.5	ND	0.1	0.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	0.2	0.5	ND	0.2	0.5	ND	1.0	2.5	ND	0.2	0.5	ND	0.2	0.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5
Toluene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5	0.3 J	0.1	0.5	ND	0.1	0.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5
Xylene (Total)	SW-846 8260B	ug/L	500		0.3 J	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5	4.6	0.1	0.5	0.5 J	0.1	0.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	0.059	0.0005	0.001	ND	0.0005	0.001
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	0.16	0.001	0.002	ND	0.0005	0.001
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		0.0017	0.000010	0.000051	0.00021	0.000011	0.000053	0.00091	0.000010	0.000051	0.42	0.00051	0.0025	0.000027 J	0.000010	0.000051
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000051	ND	0.000011	0.000053	0.000015 J	0.000010	0.000051	0.0012	0.000051	0.00025	ND	0.000010	0.000051
Anthracene	SW-846 8270D SIM	mg/L	2		0.000017 J	0.000010	0.000051	ND	0.000011	0.000053	0.00082	0.000010	0.000051	0.0041	0.000051	0.00025	0.000017 J	0.000010	0.000051
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.000011	0.000053	0.000019 J	0.000010	0.000051	0.000059 J	0.000051	0.00025	ND	0.000010	0.000051
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000051	0.000051	ND	0.0000053	0.000053	ND	0.0000051	0.000051	ND	0.000025	0.00025	ND	0.0000051	0.000051
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000051	0.00025	ND	0.000010	0.000051
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000051	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000051	0.00025	ND	0.000010	0.000051
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000051	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000051	0.00025	ND	0.000010	0.000051
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000051	0.000051	ND	0.0000053	0.000053	ND	0.0000051	0.000051	ND	0.000025	0.00025	ND	0.0000051	0.000051
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		0.000030 J	0.000010	0.000051	0.000015 J	0.000011	0.000053	0.000028 J	0.000010	0.000051	0.00073	0.000051	0.00025	0.000014 J	0.000010	0.000051
Fluorene	SW-846 8270D SIM	mg/L	0.300		0.00012	0.000010	0.000051	0.000025 J	0.000011	0.000053	0.000013 J	0.000010	0.000051	0.16	0.00051	0.0025	0.000013 J	0.000010	0.000051
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000051	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000051	0.00025	ND	0.000010	0.000051
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000051	0.00025	ND	0.000010	0.000051
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		ND	0.000010	0.000051	0.000026 J	0.000011	0.000053	ND	0.000010	0.000051	0.020	0.000051	0.00025	ND	0.000010	0.000051
Naphthalene	SW-846 8270D SIM	mg/L	0.006		ND	0.000030	0.000051	0.000069	0.000032	0.000053	ND	0.000030	0.000051	0.061	0.0015	0.0025	ND	0.000030	0.000051
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		0.000043 J	0.000030	0.000051	ND	0.000032	0.000053	0.000031 J	0.000030	0.000051	0.076	0.0015	0.0025	0.000045 J	0.000030	0.000051
Pyrene	SW-846 8270D SIM	mg/L	0.200		0.000016 J	0.000010	0.000051	ND	0.000011	0.000053	0.000038 J	0.000010	0.000051	0.00044	0.000051	0.00025	ND	0.000010	0.000051
Arsenic	SW-846 6010C	mg/L	0.010		ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	0.0109 J	0.0051	0.0400	ND	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		ND	0.0011	0.0300	ND	0.0011	0.0300	0.0046 J	0.0011	0.0300	0.0031 J	0.0011	0.0300	ND	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		0.0022 J	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200	0.0014 J	0.00094	0.0200	ND	0.00094	0.0200

Units used match units provided in laboratory report
[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010
[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202
No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.
ug/L = micrograms per liter; mg/L = milligrams per liter
MDL = Method Detection Limit; LOQ = Limit of Quantitation
ND = not detected; NA = not applicable
DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank
3-Methylphenol and 4-methylphenol totaled by laboratory.
Result compared to lower 4-methylphenol standard.
Shaded cells exceed goal

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Name/Sample ID	Method	Units	[1]2L	[2]IMAC	MW-24B(01-18-2012)			MW-25(01-20-2012)			MW-28(01-18-2012)			MW-28A(01-18-2012)			MW-29(01-19-2012)		
					Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		ND	3.0	5.0	5.6	3.0	5.0	ND	3.0	5.0	14	3.0	5.0	ND	15	25
Benzene	SW-846 8260B	ug/L	1		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	5.0	25
Chloroform	SW-846 8260B	ug/L	70		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5
Ethylbenzene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	1.0	2.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5
Toluene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5
Xylene (Total)	SW-846 8260B	ug/L	500		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.5	2.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	0.001	0.0001	0.0006	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	ND	0.0005	0.001	ND	0.0001	0.0006	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	0.0006 J	0.0001	0.0006	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	0.001	0.0001	0.0006	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		ND	0.0001	0.0005	0.0004 J	0.0001	0.0006	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	ND	0.0005	0.001	0.0007	0.0001	0.0006	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	ND	0.0001	0.0006	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	0.0003 J	0.0001	0.0006	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.002	0.006	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0006	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.0005	0.001	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0006	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	0.001	0.0001	0.0006	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		ND	0.000010	0.000051	ND	0.0001	0.0006	0.011	0.00010	0.00051	0.016	0.00010	0.00051	0.00031	0.000010	0.000052
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000051	0.0006 J	0.0006	0.001	0.000069	0.000010	0.000051	0.000058	0.000010	0.000051	ND	0.000010	0.000052
Anthracene	SW-846 8270D SIM	mg/L	2		ND	0.000010	0.000051	ND	0.0006	0.001	0.00051	0.000010	0.000051	0.000048 J	0.000010	0.000051	0.000028 J	0.000010	0.000052
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.002	0.006	0.000032 J	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000052
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000051	0.000051	0.006	0.0001	0.0006	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000052	0.000052
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	0.001	0.0001	0.0006	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000052
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000051	ND	0.0001	0.0006	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000052
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000051	0.0001 J	0.0001	0.0006	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000052
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000051	0.000051	ND	0.0001	0.0006	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000052	0.000052
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		ND	0.000010	0.000051	ND	0.0006	0.001	0.0026	0.000010	0.000051	0.00089	0.000010	0.000051	0.000035 J	0.000010	0.000052
Fluorene	SW-846 8270D SIM	mg/L	0.300		ND	0.000010	0.000051	ND	0.0006	0.001	0.0094	0.000010	0.000051	0.000073	0.000010	0.000051	0.000056	0.000010	0.000052
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000051	0.0003 J	0.0001	0.0006	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000052
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.001	0.006	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000052
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		ND	0.000010	0.000051	0.0008	0.0001	0.0006	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000052
Naphthalene	SW-846 8270D SIM	mg/L	0.006		ND	0.000030	0.000051	ND	0.0006	0.001	ND	0.000030	0.000051	0.00022	0.000030	0.000051	ND	0.000031	0.000052
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		ND	0.000030	0.000051	0.004	0.0001	0.0006	0.0069	0.000030	0.000051	ND	0.000030	0.000051	ND	0.000031	0.000052
Pyrene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000051	ND	0.0006	0.001	0.00098	0.000010	0.000051	0.00094	0.000010	0.000051	0.000019 J	0.000010	0.000052
Arsenic	SW-846 6010C	mg/L	0.010		ND	0.0051	0.0400	ND	0.0051	0.0400	0.0065 J	0.0051	0.0400	ND	0.0051	0.0400	0.0082 J	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		0.0016 J	0.0011	0.0300	0.0017 J	0.0011	0.0300	ND	0.0011	0.0300	ND	0.0011	0.0300	0.239	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		0.0011 J	0.00094	0.0200	0.0015 J	0.00094	0.0200	ND	0.00094	0.0200	0.0016 J	0.00094	0.0200	0.0030 J	0.00094	0.0200

Units used match units provided in laboratory report
[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010
[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202
No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.
ug/L = micrograms per liter; mg/L = milligrams per liter
MDL = Method Detection Limit; LOQ = Limit of Quantitation
ND = not detected; NA = not applicable
DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank
3-Methylphenol and 4-methylphenol totaled by laboratory.
Result compared to lower 4-methylphenol standard.
Shaded cells exceed goal

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

					MW-29A(01-19-2012)			DUP-03(01-19-2012); MW-29A			MW-30(01-18-2012)			MW-31(01-17-2012)			MW-32(01-17-2012)		
Name/Sample ID	Method	Units	[1]2L	[2]IMAC	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		ND	3.0	5.0	ND	3.0	5.0	39	3.0	5.0	ND	30	50	ND	3.0	5.0
Benzene	SW-846 8260B	ug/L	1		1.7	0.1	0.5	1.8	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	10	50	ND	1.0	5.0
Chloroform	SW-846 8260B	ug/L	70		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
Ethylbenzene	SW-846 8260B	ug/L	600		0.3 J	0.1	0.5	0.3 J	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	2.0	5.0	ND	0.2	0.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
Toluene	SW-846 8260B	ug/L	600		0.1 J	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
Xylene (Total)	SW-846 8260B	ug/L	500		7.3	0.1	0.5	7.4	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	1.7	0.1	0.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	0.0005 J	0.0005	0.001	0.0006 J	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	0.076	0.0005	0.001	0.076	0.0005	0.001	0.001	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0005	0.001	0.002	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		0.22	0.00051	0.0026	0.21	0.00051	0.0025	0.022	0.00010	0.00051	0.00019	0.000010	0.000051	0.056	0.00020	0.0010
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		0.00084	0.000010	0.000051	0.0010	0.000010	0.000051	0.000050 J	0.000010	0.000051	ND	0.000010	0.000051	0.00016	0.000010	0.000051
Anthracene	SW-846 8270D SIM	mg/L	2		0.0062	0.000010	0.000051	0.0063	0.000010	0.000051	0.00032	0.000010	0.000051	0.000033 J	0.000010	0.000051	0.00010	0.000010	0.000051
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.000010	0.000051	0.000033 J	0.000010	0.000051	0.000016 J	0.000010	0.000051	ND	0.000010	0.000051
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		0.0034	0.000010	0.000051	0.0035	0.000010	0.000051	0.0011	0.000010	0.000051	0.000011 J	0.000010	0.000051	ND	0.000010	0.000051
Fluorene	SW-846 8270D SIM	mg/L	0.300		0.086	0.00051	0.0026	0.083	0.00051	0.0025	0.0039	0.000010	0.000051	ND	0.000010	0.000051	0.00011	0.000010	0.000051
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		0.00011	0.000010	0.000051	0.00010	0.000010	0.000051	0.000013 J	0.000010	0.000051	0.000014 J	0.000010	0.000051	0.00020	0.000010	0.000051
Naphthalene	SW-846 8270D SIM	mg/L	0.006		0.0013	0.000031	0.000051	0.0012	0.000031	0.000051	ND	0.000030	0.000051	0.000033 J	0.000031	0.000051	0.00025	0.000031	0.000051
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		0.088	0.0015	0.0026	0.074	0.0015	0.0025	0.00071	0.000030	0.000051	ND	0.000031	0.000051	0.00076	0.000031	0.000051
Pyrene	SW-846 8270D SIM	mg/L	0.200		0.0019	0.000010	0.000051	0.0019	0.000010	0.000051	0.00070	0.000010	0.000051	0.000091	0.000010	0.000051	ND	0.000010	0.000051
Arsenic	SW-846 6010C	mg/L	0.010		ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		ND	0.0011	0.0300	ND	0.0011	0.0300	0.0014 J	0.0011	0.0300	0.0063 J	0.0011	0.0300	0.0015 J	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		ND	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200

Units used match units provided in laboratory report
[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010
[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202
No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.
ug/L = micrograms per liter; mg/L = milligrams per liter
MDL = Method Detection Limit; LOQ = Limit of Quantitation
ND = not detected; NA = not applicable
DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank
3-Methylphenol and 4-methylphenol totaled by laboratory.
Result compared to lower 4-methylphenol standard.

Shaded cells exceed goal

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

					MW-33(01-19-2012)			MW-34(01-19-2012)			MW-35(01-19-2012)			MW-36(01-20-2012)			DUP-04(01-20-2012); MW-36		
Name/Sample ID	Method	Units	[1]2L	[2]IMAC	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		ND	3.0	5.0	7.0	3.0	5.0	ND	3.0	5.0	ND	30	50	ND	3.0	5.0
Benzene	SW-846 8260B	ug/L	1		0.1 J	0.1	0.5	ND	0.1	0.5	0.9	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	10	50	ND	1.0	5.0
Chloroform	SW-846 8260B	ug/L	70		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
Ethylbenzene	SW-846 8260B	ug/L	600		0.1 J	0.1	0.5	ND	0.1	0.5	12	0.1	0.5	5.5	1.0	5.0	7.2	0.1	0.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	2.0	5.0	ND	0.2	0.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
Toluene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	0.4 J	0.1	0.5	ND	1.0	5.0	0.7	0.1	0.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0	ND	0.1	0.5
Xylene (Total)	SW-846 8260B	ug/L	500		2.1	0.1	0.5	ND	0.1	0.5	11	0.1	0.5	11	1.0	5.0	14	0.1	0.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	ND	0.0005	0.001	ND	0.0005	0.001	0.063	0.0005	0.001	0.16	0.003	0.005	0.15	0.003	0.005
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		ND	0.0001	0.0005	0.001	0.0001	0.0005	0.0002 J	0.0001	0.0005	0.0004 J	0.0001	0.0005	0.0003 J	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	ND	0.0005	0.001	0.004	0.0005	0.001	0.28	0.003	0.005	0.34	0.003	0.005	0.32	0.003	0.005
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.0005	0.001	0.0005 J	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		0.058	0.00021	0.0010	0.089	0.00020	0.0010	0.45	0.0021	0.010	0.57	0.0051	0.025	0.46	0.0051	0.026
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		0.00022	0.000010	0.000052	0.00025	0.000010	0.000051	0.0024	0.00021	0.0010	0.0026	0.00010	0.00051	0.0024	0.00010	0.00051
Anthracene	SW-846 8270D SIM	mg/L	2		0.00021	0.000010	0.000052	0.0019	0.000010	0.000051	0.013	0.00021	0.0010	0.020	0.00010	0.00051	0.018	0.00010	0.00051
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	0.00049	0.000010	0.000051	0.00028 J	0.00021	0.0010	0.00051	0.00010	0.00051	0.00043 J	0.00010	0.00051
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	0.000093	0.0000051	0.000051	ND	0.00010	0.0010	0.000067 J	0.000051	0.00051	0.000062 J	0.000051	0.00051
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	0.00020	0.000010	0.000051	ND	0.00021	0.0010	ND	0.00010	0.00051	ND	0.00010	0.00051
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000052	0.000017 J	0.000010	0.000051	ND	0.00021	0.0010	ND	0.00010	0.00051	ND	0.00010	0.00051
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000052	0.000070	0.000010	0.000051	ND	0.00021	0.0010	ND	0.00010	0.00051	ND	0.00010	0.00051
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.00010	0.0010	ND	0.000051	0.00051	ND	0.000051	0.00051
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		0.000011 J	0.000010	0.000052	0.0046	0.000010	0.000051	0.013	0.00021	0.0010	0.026	0.00010	0.00051	0.024	0.00010	0.00051
Fluorene	SW-846 8270D SIM	mg/L	0.300		0.00039	0.000010	0.000052	0.016	0.00020	0.0010	0.20	0.00021	0.0010	0.33	0.0051	0.025	0.28	0.0051	0.026
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.00021	0.0010	ND	0.00010	0.00051	ND	0.00010	0.00051
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	0.000017 J	0.000010	0.000051	ND	0.00021	0.0010	ND	0.00010	0.00051	ND	0.00010	0.00051
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		0.00036	0.000010	0.000052	0.00050	0.000010	0.000051	0.24	0.0021	0.010	1.0	0.0051	0.025	0.83	0.0051	0.026
Naphthalene	SW-846 8270D SIM	mg/L	0.006		0.00094	0.000031	0.000052	0.00020	0.000030	0.000051	0.44	0.0062	0.010	4.2	0.015	0.025	3.4	0.015	0.026
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		0.0035	0.000031	0.000052	0.013	0.00061	0.0010	0.15	0.00062	0.0010	0.31	0.015	0.025	0.26	0.015	0.026
Pyrene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000052	0.0030	0.000010	0.000051	0.0064	0.00021	0.0010	0.013	0.00010	0.00051	0.012	0.00010	0.00051
Arsenic	SW-846 6010C	mg/L	0.010		ND	0.0051	0.0400	0.0062 J	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		ND	0.0011	0.0300	0.0012 J	0.0011	0.0300	ND	0.0011	0.0300	ND	0.0011	0.0300	ND	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		ND	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200

Units used match units provided in laboratory report
[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010
[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202
No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.
ug/L = micrograms per liter; mg/L = milligrams per liter
MDL = Method Detection Limit; LOQ = Limit of Quantitation
ND = not detected; NA = not applicable
DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank
3-Methylphenol and 4-methylphenol totaled by laboratory.
Result compared to lower 4-methylphenol standard.

Shaded cells exceed goal

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

					MW-37(01-20-2012)			MW-38(01-17-2012)			MW-39(01-17-2012)			MW-40(01-19-2012)			MW-41(01-19-2012)		
Name/Sample ID	Method	Units	[1]2L	[2]IMAC	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0	7.9	3.0	5.0	ND	30	50
Benzene	SW-846 8260B	ug/L	1		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	720	10	50
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0
2-Butanone	SW-846 8260B	ug/L	4000		ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	10	50
Chloroform	SW-846 8260B	ug/L	70		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0
Ethylbenzene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0
Methylene Chloride	SW-846 8260B	ug/L	5		ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	2.0	5.0
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0
Toluene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	3.8 J	1.0	5.0
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	1.0	5.0
Xylene (Total)	SW-846 8260B	ug/L	500		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	8.4	1.0	5.0
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		0.0059	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	0.0014	0.000010	0.000052	0.000029 J	0.000010	0.000052
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		0.000019 J	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	0.000050 J	0.000010	0.000052	ND	0.000010	0.000052
Anthracene	SW-846 8270D SIM	mg/L	2		0.000034 J	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	0.00098	0.000010	0.000052	0.000016 J	0.000010	0.000052
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	0.000023 J	0.000010	0.000052	ND	0.000010	0.000052
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000052	0.000052	ND	0.0000052	0.000052
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	0.000012 J	0.000010	0.000052	ND	0.000010	0.000052
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000052
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000052
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000052	0.000052	ND	0.0000052	0.000052
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		0.000075	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	0.000038 J	0.000010	0.000052	ND	0.000010	0.000052
Fluorene	SW-846 8270D SIM	mg/L	0.300		0.000014 J	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	0.000022 J	0.000010	0.000052	0.000014 J	0.000010	0.000052
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000052
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000052
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		ND	0.000010	0.000052	ND	0.000010	0.000051	0.000018 J	0.000010	0.000051	ND	0.000010	0.000052	0.00042	0.000010	0.000052
Naphthalene	SW-846 8270D SIM	mg/L	0.006		ND	0.000031	0.000052	ND	0.000031	0.000051	ND	0.000031	0.000051	ND	0.000031	0.000052	0.0066	0.000031	0.000052
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		ND	0.000031	0.000052	ND	0.000031	0.000051	ND	0.000031	0.000051	ND	0.000031	0.000052	ND	0.000031	0.000052
Pyrene	SW-846 8270D SIM	mg/L	0.200		0.000012 J	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051	0.000038 J	0.000010	0.000052	0.000023 J	0.000010	0.000052
Arsenic	SW-846 6010C	mg/L	0.010		ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	0.0869	0.0051	0.0400	ND	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		0.0017 J	0.0011	0.0300	0.0013 J	0.0011	0.0300	0.0014 J	0.0011	0.0300	0.0013 J	0.0011	0.0300	ND	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		ND	0.00094	0.0200	0.0013 J	0.00094	0.0200	ND	0.00094	0.0200	0.0023 J	0.00094	0.0200	ND	0.00094	0.0200

Units used match units provided in laboratory report
[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010
[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202
No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.
ug/L = micrograms per liter; mg/L = milligrams per liter
MDL = Method Detection Limit; LOQ = Limit of Quantitation
ND = not detected; NA = not applicable
DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank
3-Methylphenol and 4-methylphenol totaled by laboratory.
Result compared to lower 4-methylphenol standard.

Shaded cells exceed goal

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

					MW-42(01-19-2012)			MW-46A(01-18-2012)			MW-46B(01-19-2012)			MW-47A(01-20-2012)			MW-47B(01-18-2012)		
Name/Sample ID	Method	Units	[1]2L	[2]IMAC	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0	3.8 J	3.0	5.0	ND	3.0	5.0
Benzene	SW-846 8260B	ug/L	1		ND	0.1	0.5	0.5 J	0.1	0.5	ND	0.1	0.5	0.5	0.1	0.5	ND	0.1	0.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0
Chloroform	SW-846 8260B	ug/L	70		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Ethylbenzene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	2.8	0.1	0.5	ND	0.1	0.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Toluene	SW-846 8260B	ug/L	600		ND	0.1	0.5	0.4 J	0.1	0.5	ND	0.1	0.5	0.2 J	0.1	0.5	ND	0.1	0.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Xylene (Total)	SW-846 8260B	ug/L	500		ND	0.1	0.5	1.8	0.1	0.5	ND	0.1	0.5	2.7	0.1	0.5	ND	0.1	0.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	0.007	0.0005	0.001	ND	0.0005	0.001
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	0.19	0.001	0.002	ND	0.0005	0.001
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		ND	0.000010	0.000052	0.0020	0.000010	0.000051	ND	0.000010	0.000052	0.39	0.0021	0.010	ND	0.000010	0.000051
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000052	0.000012 J	0.000010	0.000051	ND	0.000010	0.000052	0.0014	0.000010	0.000051	ND	0.000010	0.000051
Anthracene	SW-846 8270D SIM	mg/L	2		ND	0.000010	0.000052	0.00074	0.000010	0.000051	ND	0.000010	0.000052	0.013	0.00010	0.00051	ND	0.000010	0.000051
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	0.000019 J	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000053	0.000052	ND	0.0000051	0.000051	ND	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000053	0.000052	ND	0.0000051	0.000051	ND	0.0000052	0.000052	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		ND	0.000010	0.000052	0.00092	0.000010	0.000051	0.000018 J	0.000010	0.000052	0.017	0.00010	0.00051	ND	0.000010	0.000051
Fluorene	SW-846 8270D SIM	mg/L	0.300		ND	0.000010	0.000052	0.00016	0.000010	0.000051	ND	0.000010	0.000052	0.21	0.0021	0.010	ND	0.000010	0.000051
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000052	ND	0.000010	0.000051	ND	0.000010	0.000051
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		0.000023 J	0.000010	0.000052	0.00064	0.000010	0.000051	0.000016 J	0.000010	0.000052	0.013	0.00010	0.00051	ND	0.000010	0.000051
Naphthalene	SW-846 8270D SIM	mg/L	0.006		0.000038 J	0.000031	0.000052	0.0020	0.000030	0.000051	0.000040 J	0.000031	0.000052	0.0022	0.000031	0.000051	ND	0.000030	0.000051
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		ND	0.000031	0.000052	0.000041 J	0.000030	0.000051	ND	0.000031	0.000052	0.19	0.0062	0.010	ND	0.000030	0.000051
Pyrene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000052	0.00043	0.000010	0.000051	0.000011 J	0.000010	0.000052	0.0069	0.000010	0.000051	ND	0.000010	0.000051
Arsenic	SW-846 6010C	mg/L	0.010		ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	0.0063 J	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		ND	0.0011	0.0300	ND	0.0011	0.0300	ND	0.0011	0.0300	ND	0.0011	0.0300	ND	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		ND	0.00094	0.0200	0.00094 J	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200

Units used match units provided in laboratory report
[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010
[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202
No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.
ug/L = micrograms per liter; mg/L = milligrams per liter
MDL = Method Detection Limit; LOQ = Limit of Quantitation
ND = not detected; NA = not applicable
DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank
3-Methylphenol and 4-methylphenol totaled by laboratory.
Result compared to lower 4-methylphenol standard.

Shaded cells exceed goal

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Name/Sample ID	Method	Units	[1]2L	[2]IMAC	MW-48(01-19-2012)			MW-48A(01-19-2012)			MW-48B(01-19-2012)			MW-49(01-17-2012)			MW-49A(01-17-2012)		
					Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		ND	15	25	ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0
Benzene	SW-846 8260B	ug/L	1		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	5.0	25	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0
Chloroform	SW-846 8260B	ug/L	70		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Ethylbenzene	SW-846 8260B	ug/L	600		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	1.0	2.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Toluene	SW-846 8260B	ug/L	600		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Xylene (Total)	SW-846 8260B	ug/L	500		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	ND	0.0005	0.001	ND	0.0005	0.001	0.0007 J	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		0.0026	0.000010	0.000052	0.000077	0.000010	0.000052	0.0034	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000052	ND	0.000010	0.000052	0.00011	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Anthracene	SW-846 8270D SIM	mg/L	2		0.000039 J	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		0.000011 J	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	ND	0.0000053	0.000052	ND	0.0000053	0.000053	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	0.000015 J	0.000010	0.000052	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000052	0.000052	ND	0.0000053	0.000052	ND	0.0000053	0.000053	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		0.000030 J	0.000010	0.000052	ND	0.000010	0.000052	0.000011 J	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Fluorene	SW-846 8270D SIM	mg/L	0.300		0.00037	0.000010	0.000052	0.000014 J	0.000010	0.000052	0.00018	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		ND	0.000010	0.000052	0.000018 J	0.000010	0.000052	0.0051	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Naphthalene	SW-846 8270D SIM	mg/L	0.006		ND	0.000031	0.000052	0.000054	0.000031	0.000052	0.031	0.00032	0.00053	ND	0.000031	0.000051	ND	0.000031	0.000051
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		0.00018	0.000031	0.000052	ND	0.000031	0.000052	ND	0.000032	0.000053	ND	0.000031	0.000051	ND	0.000031	0.000051
Pyrene	SW-846 8270D SIM	mg/L	0.200		0.00014	0.000010	0.000052	ND	0.000010	0.000052	ND	0.000011	0.000053	ND	0.000010	0.000051	ND	0.000010	0.000051
Arsenic	SW-846 6010C	mg/L	0.010		0.0067 J	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		0.0036 J	0.0011	0.0300	ND	0.0011	0.0300	ND	0.0011	0.0300	0.0025 J	0.0011	0.0300	0.0012 J	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		ND	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200	0.0042 J	0.00094	0.0200

Units used match units provided in laboratory report

[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010

[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202

No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.

ug/L = micrograms per liter; mg/L = milligrams per liter

MDL = Method Detection Limit; LOQ = Limit of Quantitation

ND = not detected; NA = not applicable

DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank

3-Methylphenol and 4-methylphenol totaled by laboratory.

Result compared to lower 4-methylphenol standard.

Shaded cells exceed goal

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

					MW-50(01-18-2012)			MW-50A(01-18-2012)			EB-01(01-17-2012)			EB-02(01-19-2012)			EB-03(01-20-2012)		
Name/Sample ID	Method	Units	[1]2L	[2]IMAC	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		ND	15	25	ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0
Benzene	SW-846 8260B	ug/L	1		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	5.0	25	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0
Chloroform	SW-846 8260B	ug/L	70		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Ethylbenzene	SW-846 8260B	ug/L	600		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	1.0	2.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	0.2 J	0.2	0.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Toluene	SW-846 8260B	ug/L	600		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Xylene (Total)	SW-846 8260B	ug/L	500		ND	0.5	2.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
Carbazole	SW-846 8270D	mg/L		0.002	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2-Chloronaphthalene	SW-846 8270D	mg/L			ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001	ND	0.0004	0.001
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Chrysene	SW-846 8270D	mg/L	0.005		ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005	ND	0.0001	0.0005
Dibenzofuran	SW-846 8270D	mg/L		0.028	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005	ND	0.002	0.005
2-Methylphenol	SW-846 8270D	mg/L		0.400	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005	ND	0.001	0.005
Phenol	SW-846 8270D	mg/L	0.030		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001	ND	0.0005	0.001
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		0.0015	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	0.000054	0.000010	0.000051	ND	0.000010	0.000051
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Anthracene	SW-846 8270D SIM	mg/L	2		0.000039 J	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051	ND	0.0000051	0.000051
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		0.00012	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Fluorene	SW-846 8270D SIM	mg/L	0.300		0.00064	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	0.000022 J	0.000010	0.000051	ND	0.000010	0.000051
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	0.000022 J	0.000010	0.000051
Naphthalene	SW-846 8270D SIM	mg/L	0.006		ND	0.000030	0.000051	ND	0.000030	0.000051	ND	0.000031	0.000051	ND	0.000031	0.000051	0.000073	0.000031	0.000051
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		ND	0.000030	0.000051	ND	0.000030	0.000051	ND	0.000031	0.000051	ND	0.000031	0.000051	ND	0.000031	0.000051
Pyrene	SW-846 8270D SIM	mg/L	0.200		0.00013	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051	ND	0.000010	0.000051
Arsenic	SW-846 6010C	mg/L	0.010		ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400	ND	0.0051	0.0400
Chromium	SW-846 6010C	mg/L	0.010		0.0037 J	0.0011	0.0300	ND	0.0011	0.0300	ND	0.0011	0.0300	ND	0.0011	0.0300	ND	0.0011	0.0300
Copper	SW-846 6010C	mg/L	1		ND	0.00094	0.0200	0.0014 J	0.00094	0.0200	ND	0.00094	0.0200	ND	0.00094	0.0200	0.0010 J	0.00094	0.0200

Units used match units provided in laboratory report
[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010
[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202
No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.
ug/L = micrograms per liter; mg/L = milligrams per liter
MDL = Method Detection Limit; LOQ = Limit of Quantitation
ND = not detected; NA = not applicable
DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank
3-Methylphenol and 4-methylphenol totaled by laboratory.
Result compared to lower 4-methylphenol standard.

Shaded cells exceed goal

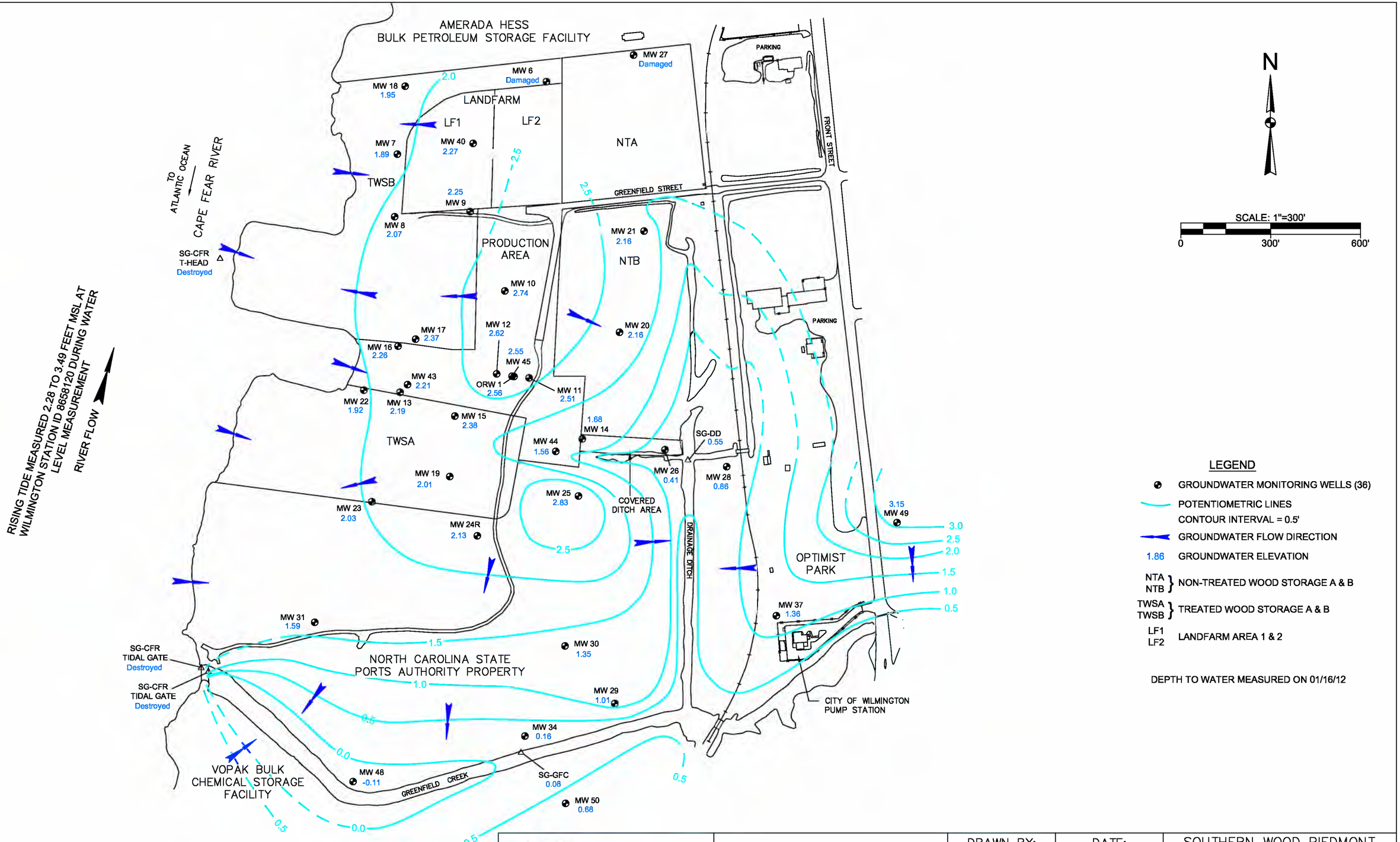
TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

					TB-01(01-17-2012)			TB-01(01-18-2012)			TB-01(01-19-2012)			TB-01(01-20-2012)		
Name/Sample ID	Method	Units	[1]2L	[2]IMAC	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ	Result	MDL	LOQ
Acetone	SW-846 8260B	ug/L	6000		ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0	ND	3.0	5.0
Benzene	SW-846 8260B	ug/L	1		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Bromodichloromethane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
2-Butanone	SW-846 8260B	ug/L	4000		ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0	ND	1.0	5.0
Chloroform	SW-846 8260B	ug/L	70		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,2-Dichloropropane	SW-846 8260B	ug/L	0.6		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Ethylbenzene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Methylene Chloride	SW-846 8260B	ug/L	5		ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5	ND	0.2	0.5
1,1,2,2-Tetrachloroethane	SW-846 8260B	ug/L	0.2		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Toluene	SW-846 8260B	ug/L	600		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
1,1,2-Trichloroethane	SW-846 8260B	ug/L		0.6	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Xylene (Total)	SW-846 8260B	ug/L	500		ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5	ND	0.1	0.5
Di-n-butylphthalate	SW-846 8270D	mg/L	0.700		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	SW-846 8270D	mg/L		0.002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	SW-846 8270D	mg/L			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorophenol	SW-846 8270D	mg/L	0.0004		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	SW-846 8270D	mg/L	0.005		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	SW-846 8270D	mg/L		0.028	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol	SW-846 8270D	mg/L	0.100		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	SW-846 8270D	mg/L	0.003		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol	SW-846 8270D	mg/L		0.400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methylphenol, 4-Methylphenol	SW-846 8270D	mg/L	0.040		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	SW-846 8270D	mg/L	0.0003		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	SW-846 8270D	mg/L	0.030		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol	SW-846 8270D	mg/L	0.200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	SW-846 8270D SIM	mg/L	0.080		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	SW-846 8270D SIM	mg/L	0.200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	SW-846 8270D SIM	mg/L	2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	SW-846 8270D SIM	mg/L	0.00005		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	SW-846 8270D SIM	mg/L	0.000005		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	SW-846 8270D SIM	mg/L	0.00005		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	SW-846 8270D SIM	mg/L	0.200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	SW-846 8270D SIM	mg/L	0.0005		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	SW-846 8270D SIM	mg/L	0.000005		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	SW-846 8270D SIM	mg/L	0.300		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	SW-846 8270D SIM	mg/L	0.300		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	SW-846 8270D SIM	mg/L	0.00002		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	SW-846 8270D SIM	mg/L	0.00005		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	SW-846 8270D SIM	mg/L	0.030		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	SW-846 8270D SIM	mg/L	0.006		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	SW-846 8270D SIM	mg/L	0.200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	SW-846 8270D SIM	mg/L	0.200		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	SW-846 6010C	mg/L	0.010		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	SW-846 6010C	mg/L	0.010		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	SW-846 6010C	mg/L	1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Units used match units provided in laboratory report
[1]2L = 15A NCAC 2L .0202 Groundwater Standard effective January 1, 2010
[2]IMAC = Interim Maximum Allowable Concentrations under 15A NCAC 2L .0202
No 2L or IMAC exists for 2-chloronaphthalene. Results compared to LOQ.
ug/L = micrograms per liter; mg/L = milligrams per liter
MDL = Method Detection Limit; LOQ = Limit of Quantitation
ND = not detected; NA = not applicable
DUP = Duplicate Sample; EB = Equipment Blank; TB = Trip Blank
3-Methylphenol and 4-methylphenol totaled by laboratory.
Result compared to lower 4-methylphenol standard.

Shaded cells exceed goal

FIGURE 1
SHALLOW AQUIFER GROUNDWATER POTENTIOMETRIC SURFACE



Schnabel ENGINEERING	SHALLOW AQUIFER POTENTIOMETRIC SURFACE MAP	DRAWN BY: CAB	DATE: 02/22/2012	SOUTHERN WOOD PIEDMONT WILMINGTON, NC FACILITY
		CHECKED BY: GBK	SCALE: 1" = 300'	PROJECT NO. 979007.C0 FIGURE 1

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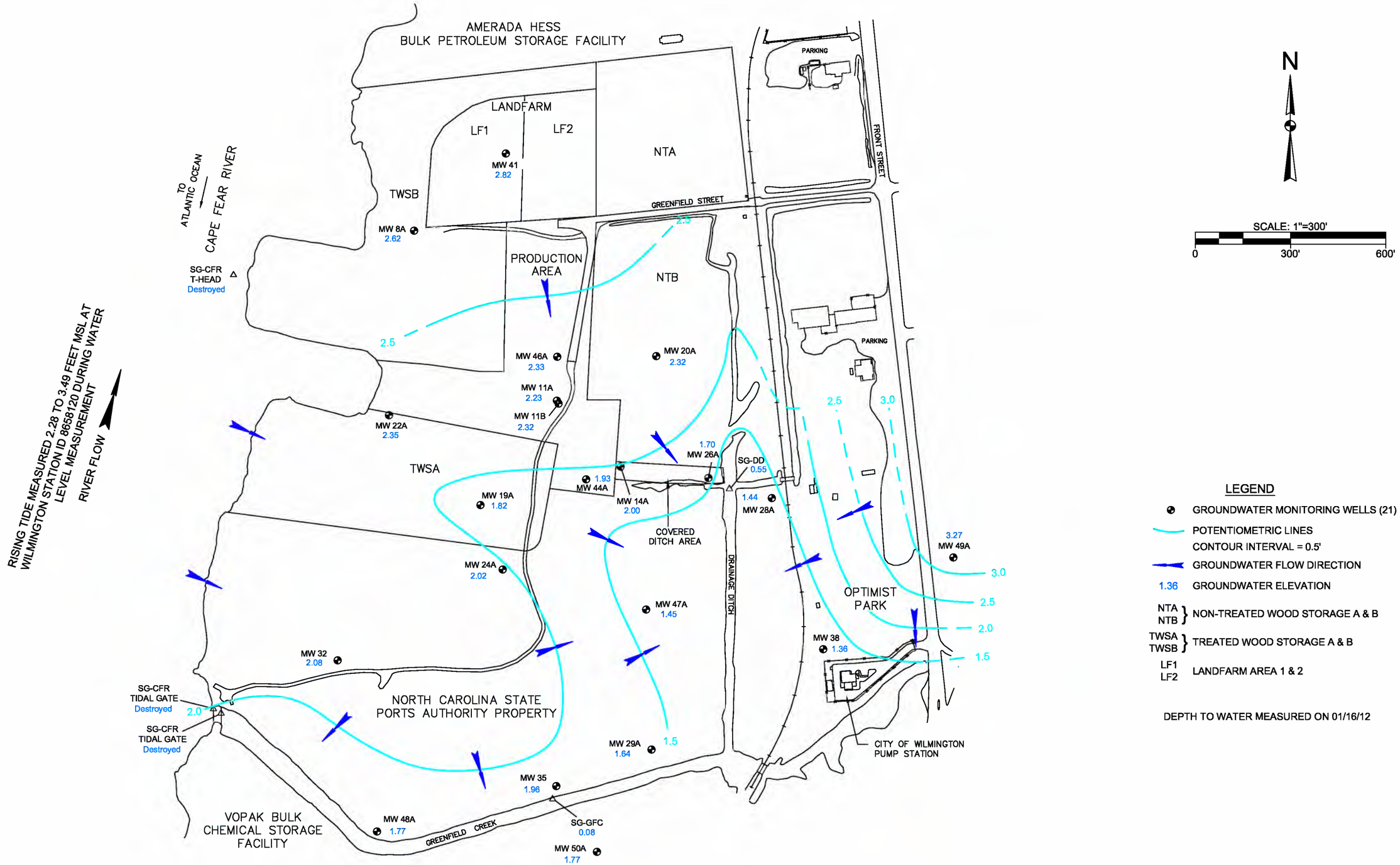
02/22/12 G:\SWP\979007 – Wilmington\1-2012 Groundwater Sampling\Groundwater PRG Maps\2012 AQUIFER POT FIGURES 1 – 3.dwg

FIGURE 2
INTERMEDIATE AQUIFER GROUNDWATER POTENTIOMETRIC SURFACE



Schnabel ENGINEERING	INTERMEDIATE AQUIFER POTENTIOMETRIC SURFACE MAP	DRAWN BY: CAB	DATE: 02/22/2012	SOUTHERN WOOD PIEDMONT WILMINGTON, NC FACILITY
		CHECKED BY: GBK	SCALE: 1" = 300'	PROJECT NO. 979007.C0 FIGURE 2

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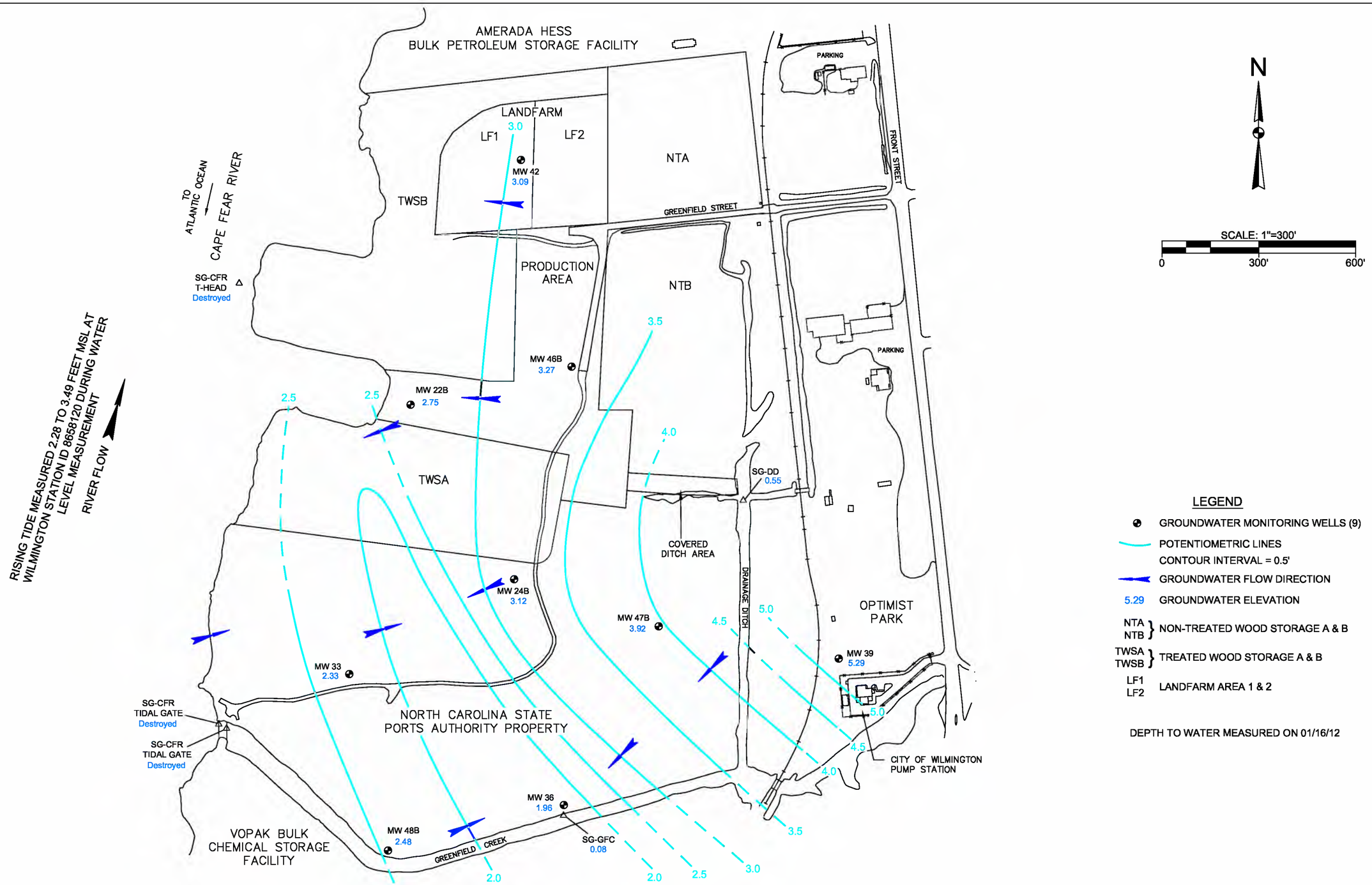
FIGURE 3
DEEP AQUIFER GROUNDWATER POTENTIOMETRIC SURFACE



Schnabel ENGINEERING	DEEP AQUIFER POTENTIOMETRIC SURFACE MAP	DRAWN BY: CAB	DATE: 02/22/2012	SOUTHERN WOOD PIEDMONT WILMINGTON, NC FACILITY
		CHECKED BY: GBK	SCALE: 1" = 300'	PROJECT NO. 979007.C0 FIGURE 3

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02/22/12 G:\SWP\979007 – Wilmington\1–2012 Groundwater Sampling\Groundwater PRG Maps\2012 AQUIFER POT FIGURES 1 – 3.dwg

FIGURE 4
SHALLOW AQUIFER GROUNDWATER STANDARD EXCEEDANCE

NOTE: ONLY CONSTITUENTS THAT EXCEED 15A NCAC 2L .0202 GROUNDWATER STANDARDS ARE SHOWN ON MAP.

N

SCALE: 1"=300'

0 300' 600'

LEGEND

- MONITORING WELLS (36)
- 0.42 CONCENTRATION (mg/L)
- 2L DELINEATION LINE
- FP FREE PRODUCT (FT)

GROUNDWATER SAMPLES COLLECTED JANUARY 2012

Schnabel ENGINEERING	SHALLOW AQUIFER GROUNDWATER STANDARD EXCEEDANCE	DRAWN BY: CAB	DATE: 04/19/2012	SOUTHERN WOOD PIEDMONT WILMINGTON, NC FACILITY
		CHECKED BY: GBK	SCALE: 1" = 300'	PROJECT NO. 979007.C0 FIGURE 4

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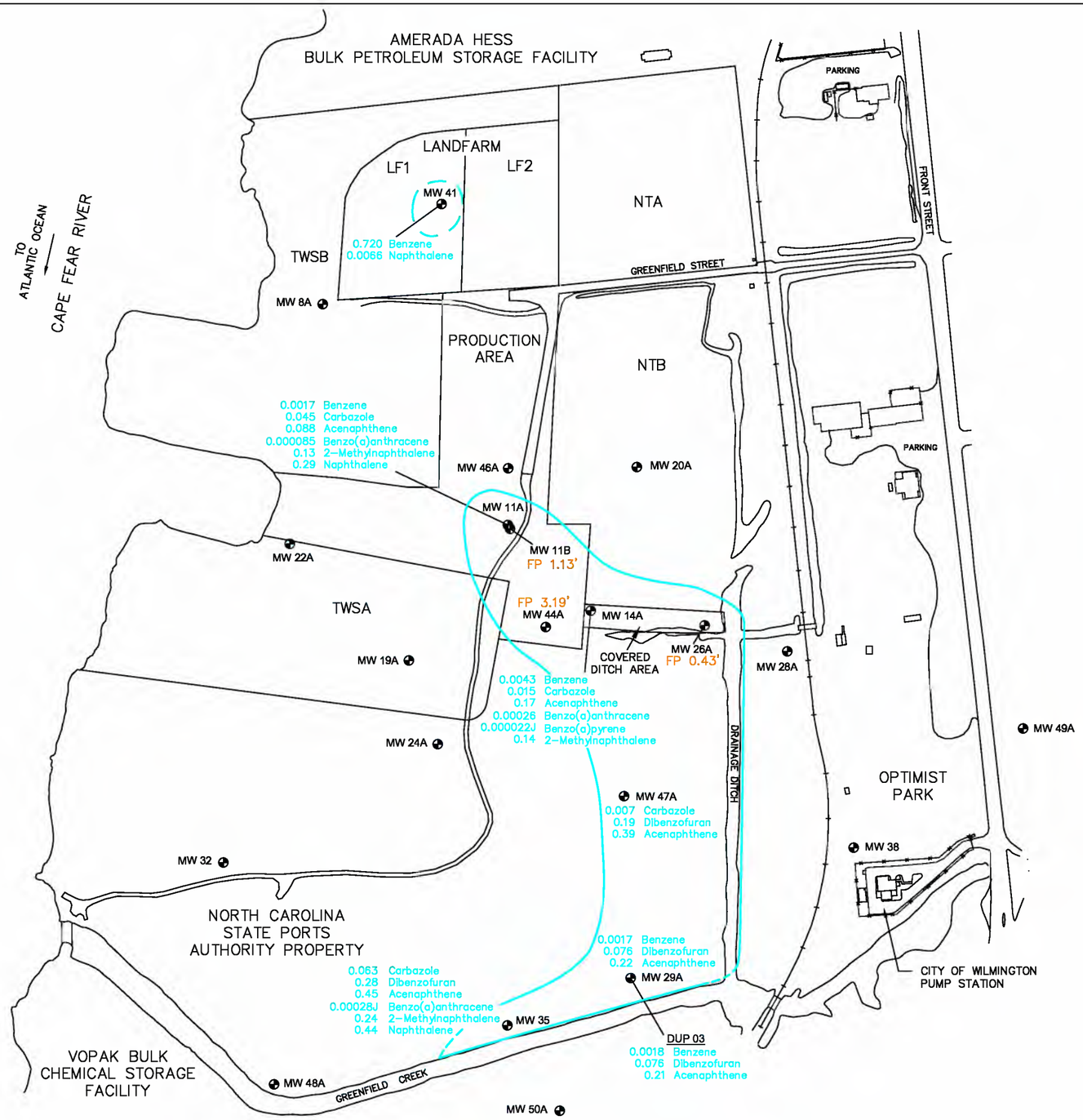
04/09/12 G:\SWP\979007 - Wilmington\1-2012 Groundwater Sampling\Groundwater PRG Maps\2012 AQUIFER PRG FIGURES 4 - 6.dwg

FIGURE 5
INTERMEDIATE AQUIFER GROUNDWATER STANDARD EXCEEDANCE



NOTE: ONLY CONSTITUENTS THAT EXCEED 15A NCAC 2L .0202 GROUNDWATER STANDARDS ARE SHOWN ON MAP.

N

SCALE: 1"=300'

0 300' 600'

LEGEND

- MONITORING WELLS (21)
- 0.19 CONCENTRATION (mg/L)
- 2L DELINEATION LINE
- FP FREE PRODUCT (FT)

GROUNDWATER SAMPLES COLLECTED JANUARY 2012

Schnabel ENGINEERING	INTERMEDIATE AQUIFER GROUNDWATER STANDARD EXCEEDANCE	DRAWN BY: CAB	DATE: 04/19/2012	SOUTHERN WOOD PIEDMONT WILMINGTON, NC FACILITY
		CHECKED BY: GBK	SCALE: 1" = 300'	PROJECT NO. 979007.C0 FIGURE 5

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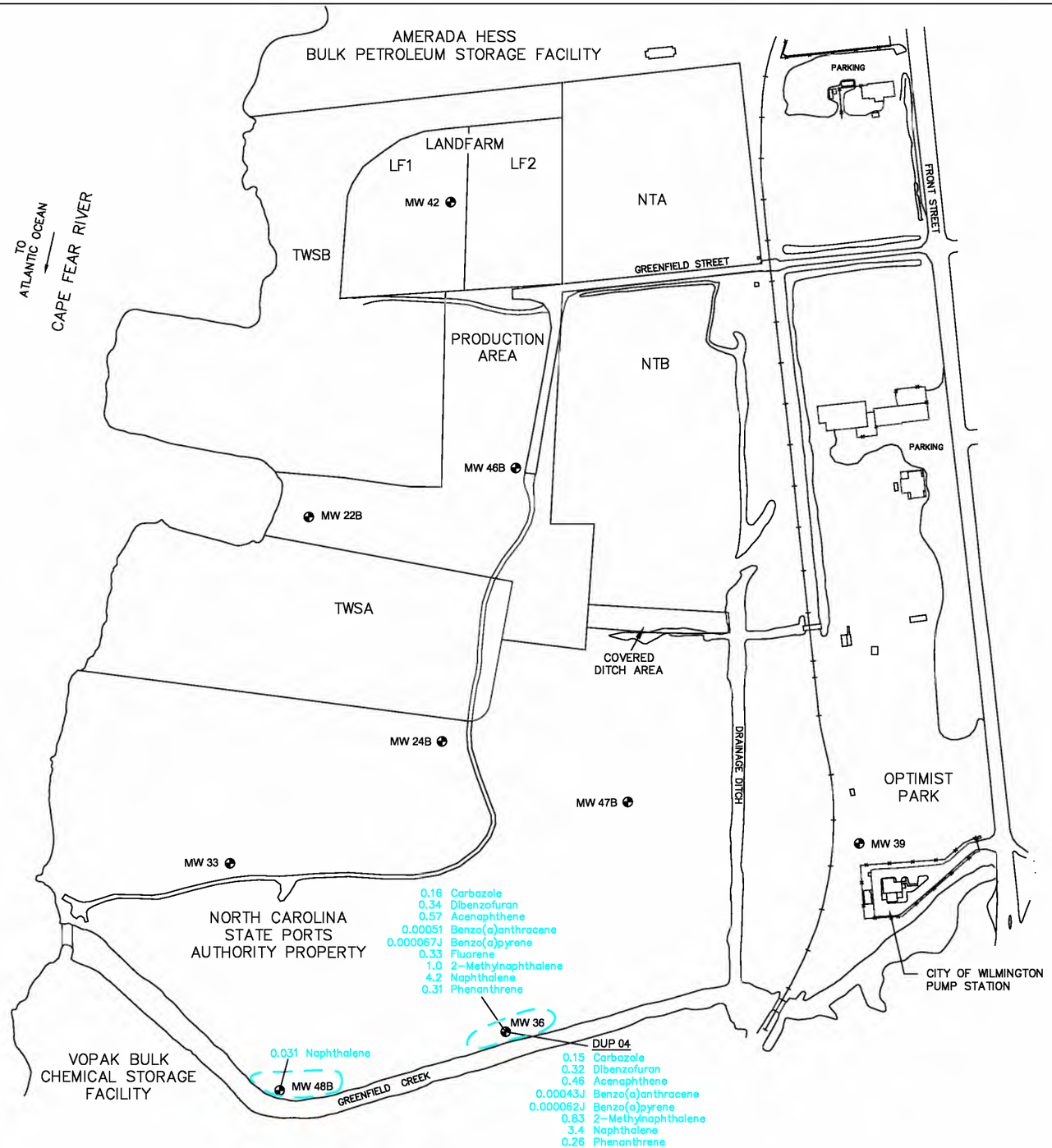
04/19/12 G:\SWP\979007 - Wilmington\1-2012 Groundwater Sampling\Groundwater PRG Maps\2012 AQUIFER PRG FIGURES 4 - 6.dwg

FIGURE 6
DEEP AQUIFER GROUNDWATER STANDARD EXCEEDANCE



NOTE: ONLY CONSTITUENTS THAT EXCEED 15A NCAC 2L .0202 GROUNDWATER STANDARDS ARE SHOWN ON MAP.

N

SCALE: 1"=300'

0 300' 600'

LEGEND

- MONITORING WELLS (9)
- 0.15 CONCENTRATION (mg/L)
- 2L DELINEATION LINE

GROUNDWATER SAMPLES COLLECTED JANUARY 2012

Schnabel ENGINEERING	DEEP AQUIFER GROUNDWATER STANDARD EXCEEDANCE	DRAWN BY: CAB	DATE: 04/19/2012	SOUTHERN WOOD PIEDMONT WILMINGTON, NC FACILITY
		CHECKED BY: GBK	SCALE: 1" = 300'	PROJECT NO. 979007.C0 FIGURE 6

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04/19/12 G:\SWP\979007 – Wilmington\1-2012 Groundwater Sampling\Groundwater PRG Maps\2012 AQUIFER PRG FIGURES 4 – 6.dwg

APPENDIX A
FIELD AND LABORATORY REPORTS

Schnabel ENGINEERING

Field Measurements Data Sheet

Client/Facility: SWP - Wilmington, NC Project Number: 00979007.C0

Collector: DANNY RAWL & LAUREN WARGO

DATE	WELL ID	TIME	WATER LEVEL (0.01 ft)	*ESTIMATED INSTALLATION TOC DEPTH (0.01 ft)	WELL DEPTH MEASUREMENT (0.01 ft)	**OIL MEASUREMENT (T, NO, OD, MV)	INITIALS	COMMENTS
1-16-12	MW-6	1550	NM	19.78	NM	NM	LW	WELL HAS BEEN HIT, CASING DAMAGED, WELL BROKEN OFF @ PAD
1-16-12	MW-7	1506	4.74	19.52	22.24	NO	LW	HARD BOTTOM
1-16-12	MW-8	1505	4.93	19.02	21.86	NO	LW	HARD BOTTOM
1-16-12	MW-8A	1504	3.81	30.75	32.71	NO	LW	SILTY BOTTOM
1-16-12	MW-9	1451	4.75	19.22	22.05	NO	LW	TOP OF WELL CASING BROKEN, LOCK MISSING, SILTY BOTTOM
1-16-12	MW-10	1409	4.67	10.5	14.22	NO	LW	SILTY BOTTOM
1-16-12	• MW-11	1703	5.51	10.5	13.89	0.04T	LW	DNAPL LOCK CUT NEEDS REPLACEMENT
1-16-12	MW-11A	1352	4.15	33.89	36.10	NO	LW	LOCK BROKEN, NEEDS REPLACEMENT, HARD BOTTOM
1-16-12	• MW-11B	1655	3.94	42.19	44.15	1.13	LW	DNAPL NEEDS REPLACEMENT LOCK
1-16-12	MW-12	1412	5.60	10.5	12.91	NO	LW	SILTY BOTTOM
1-16-12	MW-13	1544	4.78	10.5	14.06	NO	LW	HARD BOTTOM
1-16-12	• MW-14	1633	4.62	16	19.76	4.30	LW	DNAPL
1-16-12	MW-14A	1253	3.05	31.15	33.10	NO	LW	SILTY BOTTOM
1-16-12	MW-15	1427	4.69	10.5	13.88	NO	LW	SILTY BOTTOM
1-16-12	MW-16	1532	5.43	10.5	14.20	NO	LW	HARD BOTTOM
1-16-12	MW-17	1530	5.28	10.5	14.50	NO	LW	SILTY BOTTOM
1-16-12	MW-18	1510	4.66	11.13	13.56	NO	LW	SILTY BOTTOM
1-16-12	MW-19	1417	3.43	12.87	15.11	NO	LW	WELL HAS BEEN HIT, BROKEN PAD, HARD BOTTOM
1-16-12	MW-19A	1415	3.09	31.17	33.30	NO	LW	SILTY BOTTOM
1-16-12	MW-20	1251	3.28	12.3	14.56	NO	LW	HARD BOTTOM
1-16-12	MW-20A	1249	2.91	30.98	32.86	NO	LW	HARD BOTTOM
1-16-12	MW-21	1245	3.18	6.79	9.85	NO	LW	HARD BOTTOM
1-16-12	• MW-22	1729	3.34	11.11	13.75	0.43	LW	DNAPL
1-16-12	MW-22A	1542	2.97	31.86	33.74	NO	LW	LOCK CUT, NEEDS REPLACEMENT, HARD BOTTOM
1-16-12	MW-22B	1535	3.13	64.25	66.70	NO	LW	SILTY BOTTOM
1-16-12	MW-23	1424	2.93	9.06	11.71	NO	LW	WELL PAD BROKEN, CASING NEEDS HINGE REPLACED, HARD BOTTOM
–	MW-24	–	–	Abandoned	–	–	–	
1-16-12	MW-24R	1345	3.85	13.4	15.39	NO	LW	HARD BOTTOM
1-16-12	MW-24A	1343	3.79	34.28	36.01	NO	LW	HARD BOTTOM
1-16-12	MW-24B	1342	3.36	63.73	66.52	NO	LW	SILTY BOTTOM
1-16-12	MW-25	1614	2.13	12.05	15.21	NO	LW	SILTY BOTTOM
1-16-12	• MW-26	1621	4.50	17.62	20.79	5.52	LW	DNAPL
1-16-12	• MW-26A	1619	3.41	41.0	39.67	0.43	LW	DNAPL
1-16-12	MW-27	1519	NM	5.12	NM	NM	LW	~~WELL HAS BEEN HIT, CASING DAMAGED, WELL BROKEN OFF @ PAD~~
1-16-12	MW-28	1235	4.32	11.07	15.15	NO	LW	HARD BOTTOM
1-16-12	MW-28A	1230	4.03	25.68	27.55	NO	LW	HARD BOTTOM
1-16-12	MW-29	1313	4.31	7.23	9.21	NO	LW	SILTY BOTTOM
1-16-12	MW-29A	1311	LW ~~5.~~ 3.50	38.98	40.40	NO	LW	SILTY BOTTOM

CREOSOTE ON PROBE, DURING WATER LEVEL MEASUREMENT @ MW-26 & MEASURING TAPE

CREOSOTE VISIBLE INSIDE PROTECTIVE WELL CASING, PICTURES TAKEN OF BAILER

NM = NOT MEASURED

• DNAPL (HISTORICALLY)

MW-27: OBSTRUCTION IN WELL @ APPX. GROUND SURFACE

Schnabel ENGINEERING

Field Measurements Data Sheet

Client/Facility: SWP - Wilmington, NC Project Number: 00979007.00

Collector: DANNY RAWL & LAUREN WARGO

DATE	WELL ID	TIME	WATER LEVEL (0.01 ft)	*ESTIMATED INSTALLATION TOC DEPTH (0.01 ft)	WELL DEPTH MEASUREMENT (0.01 ft)	**OIL MEASUREMENT (T, NO, OD, MV)	INITIALS	COMMENTS
1-16-12	MW-30	1257	4.91	9.02	11.17	NO	LW	SILTY BOTTOM
1-16-12	MW-31	1334	5.04	14.94	16.23	NO	LW	SILTY BOTTOM LOCK BROKEN
1-16-12	MW-32	1332	4.14	43.07	46.50	NO	LW	HARD BOTTOM
1-16-12	MW-33	1330	3.59	53.00	55.97	NO	LW	HARD BOTTOM
1-16-12	MW-34	1320	7.97	14.00	16.75	NO	LW	SILTY BOTTOM
1-16-12	MW-35	1319	5.75	36.50	38.82	NO	LW	SILTY BOTTOM
1-16-12	MW-36	1317	5.97	48.72	51.36	NO	LW	SILTY BOTTOM
1-16-12	MW-37	1210	4.61	14.10	17.19	NO	LW	HARD BOTTOM
1-16-12	MW-38	1208	4.55	24.04	27.08	NO	LW	HARD BOTTOM
1-16-12	MW-39	1205	0.46	50.00	52.51	NO	LW	HARD BOTTOM
1-16-12	MW-40	1500	5.93	13.97	16.67	NO	LW	SILTY BOTTOM
1-16-12	MW-41	1458	4.84	38.00	40.30	NO	LW	HARD BOTTOM
1-16-12	MW-42	1456	4.59	64.57	67.23	NO	LW	HARD BOTTOM BROKEN HINGE
1-16-12	• MW-43	1725	3.65	19.0	20.89	4.16	LW	DNAPL
1-16-12	• MW-44	1650	2.42	13.0	14.92	5.42	LW	DNAPL
1-16-12	• MW-44A	1642	2.41	40.0	42.96	3.19	LW	DNAPL
1-16-12	• MW-45	1719	4.70	16.0	17.45	4.58	LW	DNAPL
1-16-12	MW-46A	1406	3.95	42.15	44.57	NO	LW	HARD BOTTOM LOCK BROKEN
1-16-12	MW-46B	1404	2.93	65.57	68.14	NO	LW	SILTY BOTTOM
1-16-12	MW-47A	1303	4.07	41.05	43.59	NO	LW	SILTY BOTTOM
1-16-12	MW-47B	1305	1.76	61.78	64.66	NO	LW	SILTY BOTTOM
1-16-12	MW-48	1326	7.41	14.75	15.20	NO	LW	SILTY BOTTOM
1-16-12	MW-48A	1325	5.42	44.85	47.48	NO	LW	HARD BOTTOM
1-16-12	MW-48B	1323	4.69	63.57	66.25	NO	LW	SILTY BOTTOM
1-16-12	MW-49	1220	1.46	7.41	7.32	NO	LW	FLUSH W/
1-16-12	MW-49A	1225	1.28	25.58	25.51	NO	LW	GROUND SURFACE
1-18-12	MW-50	1410	3.71	7.57	10.33	NO	LW	HARD BOTTOM
1-18-12	MW-50A	1410	2.92	33.44	36.27	NO	LW	HARD BOTTOM NEEDS LOCK
1-16-12	• ORW-1	1712	4.62	18.0	20.13	5.20	LW	DNAPL LOCK BROKEN, 6-IN WELL DIAMETER

• DNAPL (HISTORICALLY)

1-16-12 STAFF #3 1.16 LW SG-GFC

1-16-12 STAFF #4 1.54 LW SG-DO

*Measurements from Top of Casing

Total Depth to be Measured in all Wells at each Sampling Event.

If Dedicated Sampling or Water Pump present, Remove and Measure Oil/Depths.

** Oil Measurement Designation:

T - Trace: Heavy oil encountered after measuring to the bottom of the well, but oil was not mea

NO - No oil observed after measuring to the bottom of the well.

NOTE: STAFF GAGES #1 (SG-CFRGak), #2 (SG-GFCGak) & #5 (SG-CFR T-Head) WERE NOT PRESENT @ DESIGNATED LOCATIONS

- NOT ACCESSIBLE ON 1-16-2012 DUE TO MLK HOLIDAY
- SAMPLED ON SAME DAY AS WATER LEVEL & TOTAL DEPTH MEASUREMENTS DUE TO ACCESSIBILITY TO PORT AUTHORITY PROPERTY

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.00	
Monitoring Well I.D.: MW-07	Date: 1-17-2012	Time Started: 1440 PUMP START: 1455	
Weather Conditions: OVERCAST, 54°F		Time Ended: 1535	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 4.81	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 22.24	Well Volume (gal): 2.8
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	OK		Repair Required:
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:	–		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 13.9 | Well Screen Interval Depth (ft) 8.9 - 18.9

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'')
(only fill out if applicable) 0.14 = 0 + (0.0006 x 16.9) + 0.13

One well volume (gal): 2.8 | Purge Rate (gpm): 480 mL/min 0.13 gpm

Time	1503	1506	1509	1512		
Cumulative Volume Purged (gal)	1.04	1.43	1.82	2.21		
Drawdown (ft)	12.75	12.75	12.75	12.75		
Temperature (C)	16.58	16.79	16.93	17.02		
pH (s.u.)	5.70	5.71	5.71	5.73		
Conductivity (µS/cm)	1689	1759	1881	1947		
Diss. Oxygen (mg/L)	2.09	1.95	1.90	1.80		
Redox (ORP)	-43.6	-42.7	-45.5	-50.9		
Turbidity (NTU)	* →					
Odor	NONE →					
Sheen/Color	NONE/LIGHT BROWN, PARTICLES OF ALGAE →					

Comments: * TURBIDITY METER MALFUNCTION

Sampling Information

Date: 1-17-2012	Time Sampled: 1515		Field Personnel: LAUREN WARGO					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.13	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-07 (01-17-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP-WILMINGTON, NC		Project Number: 00979007.00	
Monitoring Well I.D.: MW-08	Date: 1-17-2012	Time Started: 1340 PUMP START: 1352	
Weather Conditions: OVERCAST, 54°F		Time Ended: 1430	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 5.39	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 21.86	Well Volume (gal): 2.6
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:	OK		Repair Required:			
Cap Condition:	OK		Repair Required:			
Paint Condition:	OK		Repair Required:			
Lock Condition:	OK		Repair Required:			
Inner Casing Condition:	OK		Repair Required:			
Concrete Pad Condition:	OK		Repair Required:			
Other:	✓		Repair Required:			

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 14	Well Screen Interval Depth (ft) 9-19

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''')
(only fill out if applicable) 0.14 = 0 + (0.006 x 17) + 0.13

One well volume (gal): 2.6 Purge Rate (gpm): 480 mL/min 0.13 gpm

Time	LW+J 1405	1408	1412			
Cumulative Volume Purged (gal)	1.69	2.08	2.60			
Drawdown (ft)	9.62	9.62	9.62			
Temperature (C)	17.66	17.75	17.80			
pH (s.u.)	5.70	5.67	5.66			
Conductivity (µS/cm)	735	748	755			
Diss. Oxygen (mg/L)	2.13	2.03	1.99			
Redox (ORP)	-38.4	-39.5	-39.0			
Turbidity (NTU)	12.0	14.2	15.0			
Odor	NONE →	→	→			
Sheen/Color	NONE/LIGHT BROWN WITH PARTICLES OF ALGAE					

Comments:

Sampling Information

Date: 1-17-2012	Time Sampled: 1415			Field Personnel: LAUREN WARGO				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes	(No)	Sampling Flow Rate (gpm): 0.13 0		
Field Filtered:	Yes	(No)	Field Decontamination:	(Yes)	No

Comments: MW-08 (01-17-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-08A	Date: 1-17-2012	Time Started: 1255 PUMP START: 1307	
Weather Conditions: PARTLY CLOUDY, 54°F		Time Ended: 1335	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 4.18	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 32.71	Well Volume (gal): 4.6
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	OK		Repair Required:
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:	-		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 27.5	Well Screen Interval Depth (ft) 25-30

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''')
(only fill out if applicable) 0.15 = 0 + (0.0006 x 30.5) + 0.13

One well volume (gal): 4.6 Purge Rate (gpm): 420 ml/min 0.11 gpm

Time	1312	1315	1318			
Cumulative Volume Purged (gal)	0.55	0.88	1.21			
Drawdown (ft)	4.21	4.21	4.22			
Temperature (C)	18.55	18.58	18.61			
pH (s.u.)	6.40	6.43	6.24			
Conductivity (µS/cm)	295	294	302			
Diss. Oxygen (mg/L)	2.14	2.09	2.08			
Redox (ORP)	-23.7	-23.5	-34.6			
Turbidity (NTU)	1.66	0.50	0.62			
Odor	NONE →					
Sheen/Color	NONE/LIGHT BROWN WITH PARTICLES OF ALGAE					

Comments:

Sampling Information

Date: 1-17-2012	Time Sampled: 1320	Field Personnel: LAUREN WARGO

Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.11	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-08A (01-17-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-09	Date: 1-19-2012	Time Started: 0935 PUMP START: 0944	
Weather Conditions: PARTLY CLOUDY, 42 °F		Time Ended: 1015	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 4.80	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 22.05	Well Volume (gal): 2.8
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:		X	Repair Required: TOP OF WELL CASING IS BROKEN
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:		X	Repair Required: LOCK MISSING, REPLACEMENT NEEDED
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:	-		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 13.8	Well Screen Interval Depth (ft) 8.8 - 18.8

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) 0.14 = 0 + (0.0006 x 14.8) + 0.13

One well volume (gal): 2.8 Purge Rate (gpm): 460 mL/min 0.12 gpm

Time	0950	0953	0956			
Cumulative Volume Purged (gal)	0.72	1.08	1.44			
Drawdown (ft)	9.08	9.08	9.09			
Temperature (C)	14.22	14.38	14.48			
pH (s.u.)	5.41	5.38	5.35			
Conductivity (µS/cm)	652	667	679			
Diss. Oxygen (mg/L)	0.94	0.86	0.71			
Redox (ORP)	-25.0	-26.1	-27.5			
Turbidity (NTU)	10.89	10.65	9.04			
Odor	NONE →	→	→			
Sheen/Color	NONE / PARTICLES OF ALGAE PRESENT					

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1000	Field Personnel: LAUREN WARGO

Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

BATCH METALS QC

~~Duplicate~~ Taken:	Yes (circled) No	Sampling Flow Rate (gpm): 0.12	
Field Filtered:	Yes No (circled)	Field Decontamination:	Yes (circled) No

Comments: MW-09 (01-19-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP-WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-10	Date: 1-19-2012	Time Started: 1020 PUMP START: 1024	
Weather Conditions: PARTLY CLOUDY, 49°F		Time Ended: 1100	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 4.70	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 14.22	Well Volume (gal): 1.5
Notes:	

Well Condition

Well Riser Type (place an X in one box)			Stainless Steel		Carbon Steel	X PVC
Protective Casing Condition:	OK		Repair Required:			
Cap Condition:	OK		Repair Required:			
Paint Condition:	OK		Repair Required:			
Lock Condition:	OK		Repair Required:			
Inner Casing Condition:	OK		Repair Required:			
Concrete Pad Condition:	OK		Repair Required:			
Other:	/		Repair Required:			

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 9 | Well Screen Interval Depth (ft) 4-14

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'")
(only fill out if applicable) 0.14 = 0 + (12 x 0.0006) + 0.13

One well volume (gal): 1.5 | Purge Rate (gpm): 460 mL/min 0.12 gpm

Time	1030	1033	1036			
Cumulative Volume Purged (gal)	0.72	1.08	1.44			
Drawdown (ft)	4.95	4.95	4.95			
Temperature (C)	12.47	12.58	12.49			
pH (s.u.)	6.09	6.12	6.16			
Conductivity (µS/cm)	791	780	771			
Diss. Oxygen (mg/L)	1.14	0.93	0.96			
Redox (ORP)	-31.7	-38.5	-43.4			
Turbidity (NTU)	23.6	25.5	21.2			
Odor	SLIGHT →	→	→			
Sheen/Color	NONE / PARTICLES OF ALGAE PRESENT					

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1040			Field Personnel: LAUREN WARGO				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes (No) | Sampling Flow Rate (gpm): 0.12

Field Filtered: Yes (No) | Field Decontamination: (Yes) No

Comments: MW-10 (01-19-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.00	
Monitoring Well I.D.: MW-11A	Date: 1-19-2012	Time Started: 1530 PUMP START: 1533	
Weather Conditions: SUNNY, 49 °F		Time Ended: 1615	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 4.12	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 36.10	Well Volume (gal): 5.1
Notes:	

Well Condition

Well Riser Type (place an X in one box)			Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:	OK		Repair Required:				
Cap Condition:	OK		Repair Required:				
Paint Condition:	OK		Repair Required:				
Lock Condition:		X	Repair Required: LOCK NEEDS REPLACEMENT				
Inner Casing Condition:	OK		Repair Required:				
Concrete Pad Condition:	OK		Repair Required:				
Other:	/		Repair Required:				

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 31	Well Screen Interval Depth (ft) 28.5-33.5

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''')
(only fill out if applicable) 0.15 = 0 + (0.0006 x 34) + 0.13

One well volume (gal): 5.1 Purge Rate (gpm): 460 mL/min 0.12

Time	1538	1541	1544			
Cumulative Volume Purged (gal)						
Drawdown (ft)	4.21	4.21	4.21			
Temperature (C)	17.71	17.77	17.85			
pH (s.u.)	5.89	5.83	5.87			
Conductivity (µS/cm)	245	246	255			
Diss. Oxygen (mg/L)	0.78	0.70	0.63			
Redox (ORP)	-16.9	-19.9	-27.2			
Turbidity (NTU)	3.37	2.12	2.09			
Odor	NONE →					
Sheen/Color	NONE / CLEAR →					

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1550		Field Personnel: LAUREN WARGO				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.12	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-11A (01-19-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-WILMINGTON		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-12	Date: 1-20-2012	Time Started: 0955 PUMP START: 1001	
Weather Conditions: SUNNY, 40°F		Time Ended: 1050	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 5.89	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 12.91	Well Volume (gal): 1.1
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:	OK	Repair Required:				
Cap Condition:	OK	Repair Required:				
Paint Condition:	OK	Repair Required:				
Lock Condition:	OK	Repair Required:				
Inner Casing Condition:	OK	Repair Required:				
Concrete Pad Condition:	OK	Repair Required:				
Other:	—	Repair Required:				

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump	Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump	Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 9.3 | Well Screen Interval Depth (ft) 4.3-14.3

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) 0.14 = 0 + (0.0006 x 12.3) + 0.13

One well volume (gal): 1.1 | Purge Rate (gpm): 460 mL/min 0.12 gpm

Time	1007	1010	1013	1016		
Cumulative Volume Purged (gal)	0.72	1.08	1.44	1.80		
Drawdown (ft)	6.11	6.11	6.11	6.11		
Temperature (C)	14.19	14.03	13.90	13.80		
pH (s.u.)	6.03	5.83	5.68	5.58		
Conductivity (µS/cm)	119	81	69	65		
Diss. Oxygen (mg/L)	1.17	1.03	1.05	0.95		
Redox (ORP)	-2.4	-4.4	-7.6	-14.6		
Turbidity (NTU)	19.0	21.8	18.3	18.7		
Odor	SLIGHT →					
Sheen/Color	NONE / LIGHT BROWN →					

Comments:

Sampling Information

Date: 1-20-2012	Time Sampled: 1020		Field Personnel: LAUREN WARGO				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump	Teflon Bailer
BATCH METALS QC		Polyethylene Bailer		Bladder Pump		DC Pump	Other
6 ~~Duplicate~~ Taken:	Yes	No	Sampling Flow Rate (gpm): 0.12				
Field Filtered:	Yes	No	Field Decontamination:		Yes	No	

Comments: MW-12 (01-20-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-20-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-13	Date: 1-20-2012	Time Started: 0825 PUMP START: 0830	
Weather Conditions: SUNNY, 40°F		Time Ended: 0910	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 4.84	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 14.06	Well Volume (gal): 1.5
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	OK		Repair Required:
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:	/		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 9 | Well Screen Interval Depth (ft) 3.85-13.85

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''')
(only fill out if applicable) 0.14 = 0 + (0.0006 x 12) + 0.13

One well volume (gal): 1.5 | Purge Rate (gpm): 440 mL/min 0.12 gpm

Time	0837	0840	0843			
Cumulative Volume Purged (gal)	0.84	1.20	1.56			
Drawdown (ft)	6.06	6.06	6.06			
Temperature (C)	12.36	12.59	12.69			
pH (s.u.)	6.19	6.22	6.14			
Conductivity (µS/cm)	7664	7705	7679			
Diss. Oxygen (mg/L)	1.30	1.16	1.06			
Redox (ORP)	-27.4	-33.9	-39.2			
Turbidity (NTU)	10.01	7.37	5.91			
Odor	SLIGHT →	→	→			
Sheen/Color	NONE/LIGHT BROWN →	→	→			

Comments:

Sampling Information

Date: 1-20-2012	Time Sampled: 0845			Field Personnel: LAUREN WARGO				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes	(No)	Sampling Flow Rate (gpm): 0.12		
Field Filtered:	Yes	(No)	Field Decontamination:	(Yes)	No

Comments: MW-13 (01-20-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-20-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - Wilmington		Project Number: 979007.00-01	
Monitoring Well I.D.: MW-14A	Date: 1-19-2012	Time Started: 1455	
Weather Conditions: Clear 55		Time Ended: 1525	
Field Personnel:			

Initial Readings

Measured Water Level (TOC-ft): 2.98	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 33.10	Well Volume (gal): 4.91
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	OK		Repair Required:				
Cap Condition:	OK		Repair Required:				
Paint Condition:	OK		Repair Required:				
Lock Condition:	OK		Repair Required:				
Inner Casing Condition:	OK		Repair Required:				
Concrete Pad Condition:	OK		Repair Required:				
Other:	✓		Repair Required:				

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 30.60	Well Screen Interval Depth (ft) 33.10 / 28.10

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume")
(only fill out if applicable) = 0 + (.0006 X 33.6) + .13 = .15

One well volume (gal): 4.91	Purge Rate (gpm): 480 ML/M 0.13 GPM

Time	1505	1508	1511			
Cumulative Volume Purged (gal)	1.30	1.69	2.08			
Drawdown (ft)	3.03	3.03	3.03			
Temperature (C)	17.9	18.0	18.0			
pH (s.u.)	6.42	6.42	6.40			
Conductivity (µS/cm)	326	326	324			
Diss. Oxygen (mg/L)	0.92	0.82	0.59			
Redox (ORP)	-63.5	-64.9	-65.5			
Turbidity (NTU)	1.7	1.7	1.8			
Odor	Slight	Slight	Slight			
Sheen/Color	None Clear	None Clear	None Clear			

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1515		Field Personnel: Danny Rawl				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm):	0.13
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-19-12

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - WILMINGTON, NC	Project Number: 00979007.C0
Monitoring Well I.D.: MW-15 Date: 1-20-2012	Time Started: 0740 PUMP START: 0745
Weather Conditions: SUNNY, 40 °F	Time Ended: 0820
Field Personnel: LAUREN WARGO	

Initial Readings

Measured Water Level (TOC-ft): 4.60	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 13.88	Well Volume (gal): 1.5
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:	OK		Repair Required:			
Cap Condition:	OK		Repair Required:			
Paint Condition:	OK		Repair Required:			
Lock Condition:	OK		Repair Required:			
Inner Casing Condition:	OK		Repair Required:			
Concrete Pad Condition:	OK		Repair Required:			
Other:	/		Repair Required:			

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 8.3 | Well Screen Interval Depth (ft) 3.3 - 13.3

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) 0.14 = 0 + (0.0006 x 12) + 0.13

One well volume (gal): 1.5 | Purge Rate (gpm): 460 mL/min 0.12 gpm

Time	0751	0754	0757			
Cumulative Volume Purged (gal)	0.72	1.08	1.44			
Drawdown (ft)	6.11	6.11	6.11			
Temperature (C)	12.24	12.40	12.35			
pH (s.u.)	6.38	6.36	6.20			
Conductivity (µS/cm)	5330	5432	5657			
Diss. Oxygen (mg/L)	1.90	1.51	1.26			
Redox (ORP)	-20.7	-22.4	-27.6			
Turbidity (NTU)	26.3	24.7	25.1			
Odor	SLIGHT →	→	→			
Sheen/Color	NONE/LIGHT	BROWN, CLOUDY →	→			

Comments:

Sampling Information

Date: 1-20-2012	Time Sampled: 0800	Field Personnel: LAUREN WARGO

Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

BATCH METALS QC

~~Duplicate~~ Taken: (Yes) No | Sampling Flow Rate (gpm): 0.12

Field Filtered: Yes (No) | Field Decontamination: (Yes) No

Comments: MW-15 (01-20-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-20-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-Wilmington		Project Number: 979007.C0-01	
Monitoring Well I.D.: MW-16	Date: 1-17-2012	Time Started: 1438	
Weather Conditions: P. Cloudy, Windy 60		Time Ended: 1527	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 5.50	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 14.20	Well Volume (gal): 1.42
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	OK	Repair Required:					
Cap Condition:	OK	Repair Required:					
Paint Condition:	OK	Repair Required:					
Lock Condition:	OK	Repair Required:					
Inner Casing Condition:	OK	Repair Required:					
Concrete Pad Condition:	OK	Repair Required:					
Other:		Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 11.70	Well Screen Interval Depth (ft) 4.20 / 9.20

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"")
(only fill out if applicable) .0006 x 15.7 = .14

One well volume (gal): 1.42	Purge Rate (gpm): 440 ml/m = 0.12 GPM

Time	1448	1451	1454	1457	1500	
Cumulative Volume Purged (gal)	1.20	1.56	1.92	2.28	2.64	
Drawdown (ft)	6.51	6.51	6.51	6.51	6.50	
Temperature (C)	16.4	16.4	16.4	16.4	16.4	
pH (s.u.)	6.58	6.56	6.56	6.55	6.52	
Conductivity (µS/cm)	9740	9668	9561	9444	9469	
Diss. Oxygen (mg/L)	1.80	1.51	1.28	1.10	0.89	
Redox (ORP)	-116.0	-133.1	-138.0	-142.2	-145.9	
Turbidity (NTU)	10.5	8.6	7.6	6.2	3.9	
Odor	None	None	None	None	None	
Sheen/Color	None / S. Stain	None / S. Stain	None / Clear	None / Clear	None / Clear	

Comments:

Sampling Information

Date: 1-17-2012	Time Sampled: ~~1405~~ 1505			Field Personnel: Danny Rawl			
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (circled)	No	Sampling Flow Rate (gpm): 0.12
Field Filtered:	Yes	No	Field Decontamination: Yes (circled) No

Comments: Dup. 01 (01-17-2012) taken

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP-Wilmington		Project Number: 979007.Co-01	
Monitoring Well I.D.: MW-17	Date: 1-18-2012	Time Started: 1100	
Weather Conditions: Cloudy 50 Windy		Time Ended: 1134	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft):	5.09	Riser Pipe Diameter (in):	2
Measured Well Depth (TOC-ft):	14.50	Well Volume (gal):	1.53
Notes:			

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	ok	Repair Required:					
Cap Condition:	ok	Repair Required:					
Paint Condition:	ok	Repair Required:					
Lock Condition:	ok	Repair Required:					
Inner Casing Condition:	ok	Repair Required:					
Concrete Pad Condition:	ok	Repair Required:					
Other:		Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 9.0' | Well Screen Interval Depth (ft) 14.50/4.50

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''
(only fill out if applicable) .0006 x 12.0 + .13 = 0.14

One well volume (gal): 1.53 | Purge Rate (gpm): 440 ml/m = 0.12

Time	1109	1112	1115	1118		
Cumulative Volume Purged (gal)	1.08	1.44	1.80	2.16		
Drawdown (ft)	5.29	5.30	5.30	5.30		
Temperature (C)	13.6	13.3	13.4	13.4		
pH (s.u.)	6.67	6.70	6.70	6.69		
Conductivity (µS/cm)	11294	11095	11076	11034		
Diss. Oxygen (mg/L)	1.40	1.26	1.27	1.22		
Redox (ORP)	-80.5	-94.7	-102.0	-119.2		
Turbidity (NTU)	5.7	3.6	4.0	3.7		
Odor	None	None	None	None		
Sheen/Color	None Clear	None Clear	None Clear	None Clear		

Comments:

Sampling Information

Date: 1-18-2012	Time Sampled: 1120			Field Personnel: Danny Rawl			
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (circled) No	Sampling Flow Rate (gpm):	0.12
Field Filtered:	Yes No (circled)	Field Decontamination:	Yes (circled) No

Comments: Dup. 02 (01-18-2011) taken

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-18-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.00	
Monitoring Well I.D.: MW-18	Date: 01-20-2012	Time Started: 0915 PUMP START: 0918	
Weather Conditions: SUNNY, 40°F		Time Ended: 0950	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 4.45	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 13.56	Well Volume (gal): 1.5
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	OK		Repair Required:
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:	✓		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 10.5	Well Screen Interval Depth (ft) 10-11

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''
(only fill out if applicable) 0.14 = 0 + (0.0006 x 13.5) + 0.13

One well volume (gal): 1.5 Purge Rate (gpm): 460 mL/min 0.12 gpm

Time	0925	0928	0931			
Cumulative Volume Purged (gal)	0.84	1.20	1.56			
Drawdown (ft)	4.70	4.70	4.70			
Temperature (C)	14.42	14.59	14.60			
pH (s.u.)	6.24	6.18	6.15			
Conductivity (µS/cm)	9748	9885	9935			
Diss. Oxygen (mg/L)	2.15	1.02	0.90			
Redox (ORP)	-50.3	-49.5	-50.4			
Turbidity (NTU)	15.6	8.43	6.59			
Odor	SLIGHT →					
Sheen/Color	NONE	LIGHT BROWN WITH PARTICLES OF ALGAE				

Comments:

Sampling Information

Date: 1-20-2012	Time Sampled: 0935	Field Personnel: LAUREN WARGO

Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
BATCH METALS QC		Polyethylene Bailer		Bladder Pump		DC Pump		Other

~~Duplicate~~ Taken: Yes (circled)	No	Sampling Flow Rate (gpm): 0.12	
Field Filtered: Yes	No (circled)	Field Decontamination: Yes (circled)	No

Comments: MW-18 (01-20-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-20-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-19	Date: 1-19-2012	Time Started: 1450 PUMP START: 1455	
Weather Conditions: SUNNY, 49°F		Time Ended: 1525	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 3.55	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 15.11	Well Volume (gal): 1.8
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:		X	Repair Required: WELL CASING HAS BEEN HIT
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	OK		Repair Required:
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:		X	Repair Required: WELL PAD IS BROKEN
Other:	✓		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 10 | Well Screen Interval Depth (ft) 7.5 - 12.5

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''')
(only fill out if applicable) 0.14 = 0 + (0.0006 x 13) + 0.13

One well volume (gal): 1.8 | Purge Rate (gpm): 460 mL/min 0.12 gpm

Time	1500	1503	1506			
Cumulative Volume Purged (gal)	0.60	0.96	1.32			
Drawdown (ft)	3.76	3.74	3.76			
Temperature (C)	16.13	16.20	16.20			
pH (s.u.)	6.10	6.10	6.12			
Conductivity (µS/cm)	2852	2914	3000			
Diss. Oxygen (mg/L)	1.07	0.96	0.79			
Redox (ORP)	-47.1	-46.5	-45.4			
Turbidity (NTU)	12.0	13.8	12.0			
Odor	NONE →	→	→			
Sheen/Color	NONE / LIGHT	BROWN, CLOUDY →	→			

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1510	Field Personnel: LAUREN WARGO

Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.12	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-19 (01-19-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.00	
Monitoring Well I.D.: MW-19A	Date: 1-18-2012	Time Started: 0915 PUMP START: 0955	
Weather Conditions: OVERCAST, LIGHT RAIN 59°F		Time Ended: 1030	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 2.85	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 33.30	Well Volume (gal): 4.9
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:	OK		Repair Required:			
Cap Condition:	OK		Repair Required:			
Paint Condition:	OK		Repair Required:			
Lock Condition:	OK		Repair Required:			
Inner Casing Condition:	OK		Repair Required:			
Concrete Pad Condition:	OK		Repair Required:			
Other:	-		Repair Required:			

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 28.5 | Well Screen Interval Depth (ft) 26-31

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) 0.15 = 0 + (0.0006 x 31.5) + 0.13

One well volume (gal): 4.9 | Purge Rate (gpm): 500 ml/min 0.13 gpm

Time	1000	1003	1006			
Cumulative Volume Purged (gal)	0.65	1.04	1.43			
Drawdown (ft)	2.97	2.97	2.97			
Temperature (C)	17.35	17.39	17.40			
pH (s.u.)	5.80	5.70	5.63			
Conductivity (µS/cm)	301	290	286			
Diss. Oxygen (mg/L)	2.18	1.85	1.66			
Redox (ORP)	-25.5	-28.5	-31.4			
Turbidity (NTU)	5.83	5.20	5.10			
Odor	SLIGHT →					
Sheen/Color	NONE / LIGHT BROWN →					

Comments:

Sampling Information

Date: 1-18-2012	Time Sampled: 1010		Field Personnel: LAUREN WARGO					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.13	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-19A (01-18-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-18-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.00	
Monitoring Well I.D.: MW-20	Date: 1-19-2012	Time Started: 1125 PUMP START: 1130	
Weather Conditions: PARTLY CLOUDY, 49 °F		Time Ended: 1205	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 3.13	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 14.56	Well Volume (gal): 1.8
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:	OK		Repair Required:			
Cap Condition:	OK		Repair Required:			
Paint Condition:	OK		Repair Required:			
Lock Condition:	OK		Repair Required:			
Inner Casing Condition:	OK		Repair Required:			
Concrete Pad Condition:	OK		Repair Required:			
Other:	/		Repair Required:			

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 9.5 | Well Screen Interval Depth (ft) 7-12

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) 0.14 = 0 + (0.0006 x 12.5) + 0.13

One well volume (gal): 1.8 | Purge Rate (gpm): 460 mL/min 0.12 gpm

Time	1135	1138	1141			
Cumulative Volume Purged (gal)	0.60	0.96	1.32			
Drawdown (ft)	3.21	3.21	3.21			
Temperature (C)	15.53	15.62	15.85			
pH (s.u.)	6.23	6.17	6.00			
Conductivity (µS/cm)	1666	1859	2153			
Diss. Oxygen (mg/L)	2.12	1.70	1.13			
Redox (ORP)	-31.8	-33.5	-38.9			
Turbidity (NTU)	33.8	27.9	26.1			
Odor	NONE →					
Sheen/Color	NONE / LIGHT	BROWN →				

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1145		Field Personnel: LAUREN WARGO					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.12	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-20 (01-19-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - Wilmington		Project Number: 979007.Co-01	
Monitoring Well I.D.: MW-20A	Date: 1-17-2012	Time Started: 1344	
Weather Conditions: P. Cloudy Windy 60		Time Ended: 1422	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 2.86	Riser Pipe Diameter (in): 2"
Measured Well Depth (TOC-ft): 32.86	Well Volume (gal): 4.89
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	OK	Repair Required:					
Cap Condition:	OK	Repair Required:					
Paint Condition:	OK	Repair Required:					
Lock Condition:	OK	Repair Required:					
Inner Casing Condition:	OK	Repair Required:					
Concrete Pad Condition:	OK	Repair Required:					
Other:		Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 30.36	Well Screen Interval Depth (ft) 32.86/27.86

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"
(only fill out if applicable) .0006 X 33.36 * = .15

One well volume (gal): 4.89	Purge Rate (gpm): 480 ml/m = 0.13 GPM

Time	1354	1357	1400			
Cumulative Volume Purged (gal)	1.02	1.41	1.80			
Drawdown (ft)	2.93	2.93	2.93			
Temperature (C)	17.9	17.9	17.9			
pH (s.u.)	6.82	6.80	6.78			
Conductivity (µS/cm)	361	361	361			
Diss. Oxygen (mg/L)	1.00	0.97	0.69			
Redox (ORP)	-144.6	-150.0	-149.6			
Turbidity (NTU)	2.3	2.2	2.0			
Odor	None	None	None			
Sheen/Color	None/Clear	None/Clear	None/Clear			

Comments:

Sampling Information

Date: 1-17-2012	Time Sampled: 1405	Field Personnel: Danny Rawl					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes	(No)	Sampling Flow Rate (gpm):
Field Filtered:	Yes	(No)	Field Decontamination: (Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-21	Date: 1-17-2012	Time Started: 1145 PUMP START: 1203	
Weather Conditions: PARTLY CLOUDY, 54°F		Time Ended: 1235	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 3.12	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 9.85	Well Volume (gal): 1.1
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	OK		Repair Required:
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:	✓		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 4.5 | Well Screen Interval Depth (ft) 2-7

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'")
(only fill out if applicable) 0.13 = 0 + (0.0006 x 7.5) + 0.13

One well volume (gal): 1.1 | Purge Rate (gpm): 460 ml/min 0.12 gpm

Time	1208	1211	1214			
Cumulative Volume Purged (gal)	0.60	0.96	1.32			
Drawdown (ft)	3.38	3.38	3.39			
Temperature (C)	14.38	14.39	14.38			
pH (s.u.)	6.27	6.24	6.22			
Conductivity (µS/cm)	1073	1078	1081			
Diss. Oxygen (mg/L)	4.50	3.87	3.11			
Redox (ORP)	-54.3	-56.2	-56.3			
Turbidity (NTU)	4.11	3.82	3.19			
Odor	NONE →					
Sheen/Color	NONE/CLEAR →					

Comments:

Sampling Information

Date: 1-17-2012	Time Sampled: 1215		Field Personnel: LAUREN WARGO					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.12	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-21 (01-17-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP- WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-22A	Date: 1-18-2012	Time Started: 1035 PUMP START: 1048	
Weather Conditions: OVERCAST, LIGHT RAIN 58 °F		Time Ended: 1135	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 2.98	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 33.74	Well Volume (gal): 4.9
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:		✓	Repair Required: LOCK CUT DURING GW MEASUREMENTS ON
Inner Casing Condition:	OK		Repair Required: 1-16-2012, NEEDS REPLACEMENT
Concrete Pad Condition:	OK		Repair Required:
Other:	✓		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 28.5 | Well Screen Interval Depth (ft) 26-31

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'')
(only fill out if applicable) 0.15 = 0 + (0.0006 x 31.5) + 0.13

One well volume (gal): 4.9 | Purge Rate (gpm): 480 mL/min 0.13 gpm

Time	1057	1100	1103			
Cumulative Volume Purged (gal)	1.17	1.56	1.95			
Drawdown (ft)	3.09	3.09	3.09			
Temperature (C)	17.50	17.51	17.54			
pH (s.u.)	5.43	5.41	5.40			
Conductivity (µS/cm)	231	232	234			
Diss. Oxygen (mg/L)	2.11	1.92	1.70			
Redox (ORP)	-36.7	-38.0	-37.9			
Turbidity (NTU)	2.96	1.59	1.22			
Odor	SLIGHT →	→	→			
Sheen/Color	NONE / LIGHT BROWN →	→	→			

Comments:

Sampling Information

Date: 1-18-2012	Time Sampled: 1105			Field Personnel: LAUREN WARGO				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

BATCH METALS QC

~~Duplicate~~ Taken: (Yes) No | Sampling Flow Rate (gpm): 0.13

Field Filtered: Yes (No) | Field Decontamination: (Yes) No

Comments: MW-22A (01-18-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-18-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-22B	Date: 1-19-2012	Time Started: 1210 PUMP START: 1220	
Weather Conditions: PARTLY CLOUDY, 49 °F		Time Ended: 1250	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 3.96	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 66.70	Well Volume (gal): 10.0
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:	OK		Repair Required:			
Cap Condition:	OK		Repair Required:			
Paint Condition:	OK		Repair Required:			
Lock Condition:	OK		Repair Required:			
Inner Casing Condition:	OK		Repair Required:			
Concrete Pad Condition:	OK		Repair Required:			
Other:	✓		Repair Required:			

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 61.5 | Well Screen Interval Depth (ft) 59-64

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''
(only fill out if applicable) 0.17 = 0 + (0.0006 x 64.5) + 0.13

One well volume (gal): 10.0 | Purge Rate (gpm): 460 ml/min 0.12 gpm

Time	1225	1228	1231			
Cumulative Volume Purged (gal)	0.60	0.96	1.32			
Drawdown (ft)	4.13	4.13	4.13			
Temperature (C)	18.52	18.52	18.45			
pH (s.u.)	6.82	6.94	6.93			
Conductivity (µS/cm)	268	246	242			
Diss. Oxygen (mg/L)	1.73	1.01	0.72			
Redox (ORP)	-84.0	-69.1	-55.0			
Turbidity (NTU)	3.50	2.56	1.93			
Odor	NONE →	→	→			
Sheen/Color	NONE / CLEAR →	→	→			

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1235		Field Personnel: LAUREN WARGO					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.12	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-22B (01-19-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.00	
Monitoring Well I.D.: MW-23	Date: 1-18-2012	Time Started: 0745 START PUMP: 0815	
Weather Conditions: OVERCAST, LIGHT RAIN 59°F		Time Ended: 0900	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 2.63	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 11.71	Well Volume (gal): 1.5
Notes:	

Well Condition

Well Riser Type (place an X in one box)			Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:		X	Repair Required: WELL CASING HINGE NEEDS REPLACEMENT				
Cap Condition:	OK		Repair Required:				
Paint Condition:	OK		Repair Required:				
Lock Condition:	OK		Repair Required:				
Inner Casing Condition:	OK		Repair Required:				
Concrete Pad Condition:		X	Repair Required: WELL PAD IS BROKEN				
Other:	✓		Repair Required: WELL DAMAGED DUE TO IT BEING HIT				

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 6.5 | Well Screen Interval Depth (ft) 4-9

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''')
(only fill out if applicable) 0.14 = 0 + (0.0006 x 9.5) + 0.13

One well volume (gal): 1.5 | Purge Rate (gpm): 500 ml/min 0.13 gpm

Time	0820	0823	0826			
Cumulative Volume Purged (gal)	0.65	1.04	1.43			
Drawdown (ft)	2.70	2.70	2.70			
Temperature (C)	14.74	14.80	14.91			
pH (s.u.)	5.83	5.89	5.92			
Conductivity (µS/cm)	4388	4461	4502			
Diss. Oxygen (mg/L)	2.67	2.55	2.37			
Redox (ORP)	-64.3	-65.1	-65.7			
Turbidity (NTU)	* →		→			
Odor	SLIGHT →		→			
Sheen/Color	NONE/LIGHT	BROWN →	→			

Comments: * TURBIDITY METER MALFUNCTION

Sampling Information

Date: 1-18-2012	Time Sampled: 0830			Field Personnel: LAUREN WARGO			
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.13	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-23 (01-18-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-18-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-Wilmington	Project Number: 979007.CO-01
Monitoring Well I.D.: MW-24R Date: 1-19-2012	Time Started: 1536
Weather Conditions: Clear 55°	Time Ended: 1614
Field Personnel: Danny Rawl	

Initial Readings

Measured Water Level (TOC-ft): 3.84	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 15.39	Well Volume (gal): 1.97
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK	Repair Required:
Cap Condition:	OK	Repair Required:
Paint Condition:	OK	Repair Required:
Lock Condition:	OK	Repair Required:
Inner Casing Condition:	OK	Repair Required:
Concrete Pad Condition:	OK	Repair Required:
Other:		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in)	Tubing Depth in Well (ft) 12.89	Well Screen Interval Depth (ft) 5.39/10.39

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume")
(only fill out if applicable) .0006 x 15.89 = 0.14

One well volume (gal): 1.97 Purge Rate (gpm): 480 ML/M = 0.13GPM

Time	1544	1547	1550	1553		
Cumulative Volume Purged (gal)	1.04	1.43	1.82	2.21		
Drawdown (ft)	3.92	3.92	3.92	3.92		
Temperature (C)	16.0	16.0	16.0	16.0		
pH (s.u.)	6.04	6.02	5.96	5.92		
Conductivity (µS/cm)	2409	2407	2385	2380		
Diss. Oxygen (mg/L)	1.09	1.01	0.63	0.48		
Redox (ORP)	-59.7	-60.2	-57.1	-57.0		
Turbidity (NTU)	20.0	9.8	9.4	8.7		
Odor	mod.	mod.	mod.	mod.		
Sheen/Color	Clear	Clear	Clear	Clear		

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1600	Field Personnel: Danny Rawl

Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes (No)	Sampling Flow Rate (gpm): 0.13
Field Filtered: Yes (No)	Field Decontamination: (Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-Wilmington		Project Number: 979007.Co-01	
Monitoring Well I.D.: MW-24A	Date: 1-18-2012	Time Started: 0908	
Weather Conditions: Cloudy 58		Time Ended: 0944	
Field Personnel: DANNY RAWL			

Initial Readings

Measured Water Level (TOC-ft):	3.47	Riser Pipe Diameter (in):	2"
Measured Well Depth (TOC-ft):	36.01	Well Volume (gal):	5.30
Notes:			

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	OK	Repair Required:					
Cap Condition:	OK	Repair Required:					
Paint Condition:	OK	Repair Required:					
Lock Condition:	OK	Repair Required:					
Inner Casing Condition:	OK	Repair Required:					
Concrete Pad Condition:	OK	Repair Required:					
Other:		Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in)	0.13	Tubing Depth in Well (ft)	33.51	Well Screen Interval Depth (ft)	36.01/31.01

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) .0006 x 36.51 + .13 = 0.15

One well volume (gal):	5.30	Purge Rate (gpm):	400 ml/m = 0.11

Time	0920	0923	0926			
Cumulative Volume Purged (gal)	1.32	1.65	1.98			
Drawdown (ft)	3.64	3.64	3.64			
Temperature (C)	17.2	17.2	17.2			
pH (s.u.)	5.81	5.78	5.80			
Conductivity (µS/cm)	347	346	344			
Diss. Oxygen (mg/L)	0.52	0.44	0.41			
Redox (ORP)	-64.1	-66.4	-69.4			
Turbidity (NTU)	2.4	3.4	4.3			
Odor	None	None	None			
Sheen/Color	none clear	none clear	none clear			

Comments:

Sampling Information

Date: 1-18-2012		Time Sampled: 0930		Field Personnel: Danny Rawl			
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes	(No)	Sampling Flow Rate (gpm):	0.11
Field Filtered:	Yes	(No)	Field Decontamination:	(Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-18-12

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP- Wilmington		Project Number: 979007.Co-01	
Monitoring Well I.D.: MW-24B	Date: 1-18-12	Time Started: 0808	
Weather Conditions: Cloudy 58°		Time Ended: ~~0817~~ 0841	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 2.96	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 66.52	Well Volume (gal): 10.36
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	

Protective Casing Condition:	OK	Repair Required:
Cap Condition:	OK	Repair Required:
Paint Condition:	OK	Repair Required:
Lock Condition:	OK	Repair Required:
Inner Casing Condition:	OK	Repair Required:
Concrete Pad Condition:	OK	Repair Required:
Other:		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 59.02 | Well Screen Interval Depth (ft) 66.52/51.52

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) .0006 x 62.02 + .13 = 0.17

One well volume (gal): 10.36 | Purge Rate (gpm): 440 ml/m = 0.12 GPM

Time	0817	0820	0823	0826		
Cumulative Volume Purged (gal)	1.05	1.41	1.77	2.13		
Drawdown (ft)	3.14	3.14	3.14	3.14		
Temperature (C)	17.1	17.2	17.2	17.2		
pH (s.u.)	7.74	7.72	7.72	7.72		
Conductivity (µS/cm)	296	294	293	293		
Diss. Oxygen (mg/L)	1.02	0.66	0.59	0.50		
Redox (ORP)	-173.7	-186.6	-192.3	-197.7		
Turbidity (NTU)	9.5	9.9	9.5	9.8		
Odor	None	None	None	None		
Sheen/Color	None/Clear	None/Clear	None/Clear	None/Clear		

Comments:

Sampling Information

Date: 1-18-2012	Time Sampled: 0830		Field Personnel: Danny Rawl				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes (No)	Sampling Flow Rate (gpm): 0.12 GPM
Field Filtered: Yes (No)	Field Decontamination: (Yes) No
Comments:	

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-18-12

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - Wilmington		Project Number: 979007.CO-01	
Monitoring Well I.D.: MW-25	Date: 1-20-2012	Time Started: 1056	
Weather Conditions: Clear 55		Time Ended: 1118	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 2.12	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 15.21	Well Volume (gal): 2.13
Notes: Does not Recover Well Very Slow	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	ok	Repair Required:					
Cap Condition:	ok	Repair Required:					
Paint Condition:	ok	Repair Required:					
Lock Condition:	ok	Repair Required:					
Inner Casing Condition:	ok	Repair Required:					
Concrete Pad Condition:	ok	Repair Required:					
Other:	/	Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 12.71	Well Screen Interval Depth (ft) 15.21 / 10.21

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'')
(only fill out if applicable) .0006 x 15.71 + .13 = 0.14

One well volume (gal): 2.13	Purge Rate (gpm): 0.11

Time	1115					
Cumulative Volume Purged (gal)	2.09					
Drawdown (ft)						
Temperature (C)	15.6					
pH (s.u.)	6.28					
Conductivity (µS/cm)	269					
Diss. Oxygen (mg/L)	0.50					
Redox (ORP)	3605					
Turbidity (NTU)	15					
Odor	None					
Sheen/Color	none/clear					

Comments:

Sampling Information

Date: 1-20-2012	Time Sampled: 1230	Field Personnel: Danny Rawl					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump	/	Grundfos Pump	Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump	Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.11	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: VOC + Metals taken Semi Volatiles 1/4 Liter Amber

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-20-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-28	Date: 1-18-2012	Time Started: 1235 PUMP START: 1254	
Weather Conditions: OVERCAST, 57 °F		Time Ended: 1330	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 3.90	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 15.15	Well Volume (gal): 1.8
Notes:	

Well Condition

Well Riser Type (place an X in one box)			Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:	OK		Repair Required:				
Cap Condition:	OK		Repair Required:				
Paint Condition:	OK		Repair Required:				
Lock Condition:	OK		Repair Required:				
Inner Casing Condition:	OK		Repair Required:				
Concrete Pad Condition:	OK		Repair Required:				
Other:	✓		Repair Required:				

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 10.5 | Well Screen Interval Depth (ft) 8-13

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''')
(only fill out if applicable) 0.14 = 0 + (0.0006 x 13.5) + 0.13

One well volume (gal): 1.8 | Purge Rate (gpm): 460 mL/min 0.12 gpm

Time	1300	1303	1306			
Cumulative Volume Purged (gal)	0.72	1.08	1.44			
Drawdown (ft)	5.70	5.70	5.70			
Temperature (C)	16.92	16.97	17.01			
pH (s.u.)	6.13	6.14	6.16			
Conductivity (µS/cm)	1940	1917	1879			
Diss. Oxygen (mg/L)	1.58	1.18	0.96			
Redox (ORP)	-53.8	-56.5	-57.5			
Turbidity (NTU)	10.0	13.0	8.4			
Odor	NONE →					
Sheen/Color	NONE/CLEAR →					

Comments:

Sampling Information

Date: 1-18-2012	Time Sampled: 1310		Field Personnel: LAUREN WARGO				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

METALS BATCH QC

~~Duplicate~~ Taken: (Yes) No | Sampling Flow Rate (gpm): 0.12

Field Filtered: Yes (No) | Field Decontamination: (Yes) No

Comments: MW-28 (01-18-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-18-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - Wilmington		Project Number: 979007.Co-01	
Monitoring Well I.D.: MW-28A	Date: 1-18-12	Time Started: 1250	
Weather Conditions: Cloudy 60 Windy		Time Ended: 1326	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 3.98	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 27.55	Well Volume (gal): 3.84
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	OK	Repair Required:					
Cap Condition:	OK	Repair Required:					
Paint Condition:	OK	Repair Required:					
Lock Condition:	OK	Repair Required:					
Inner Casing Condition:	OK	Repair Required:					
Concrete Pad Condition:	OK	Repair Required:					
Other:		Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 25.05 | Well Screen Interval Depth (ft) 27.55/22.55

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''')
(only fill out if applicable) .0006 x 28.05 + .13 = 0.15

One well volume (gal): 3.84 | Purge Rate (gpm): 490 mL/m = 0.12 GPM

Time	1301	1304	1307			
Cumulative Volume Purged (gal)	1.32	1.68	2.04			
Drawdown (ft)	4.30	4.30	4.30			
Temperature (C)	18.1	18.1	18.2			
pH (s.u.)	6.58	6.55	6.53			
Conductivity (µS/cm)	230	227	226			
Diss. Oxygen (mg/L)	2.12	1.88	1.42			
Redox (ORP)	-29.2	-28.8	-28.4			
Turbidity (NTU)	4.7	2.9	2.7			
Odor	None	None	None			
Sheen/Color	none Clear	None Clear	none Clear			

Comments:

Sampling Information

Date: 1-18-2012	Time Sampled: 1310	Field Personnel: Danny Rawl					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes (No)	Sampling Flow Rate (gpm): 0.12
Field Filtered: Yes (No)	Field Decontamination: (Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-18-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - Wilmington		Project Number: 979007.00-01	
Monitoring Well I.D.: MW-29	Date: 1-19-2012	Time Started: 1016	
Weather Conditions: Clear 40		Time Ended: 1056	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft):	4.37	Riser Pipe Diameter (in):	2
Measured Well Depth (TOC-ft):	9.21	Well Volume (gal):	0.79
Notes:			

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	OK	Repair Required:					
Cap Condition:	OK	Repair Required:					
Paint Condition:	OK	Repair Required:					
Lock Condition:	OK	Repair Required:					
Inner Casing Condition:	OK	Repair Required:					
Concrete Pad Condition:	OK	Repair Required:					
Other:	/	Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 4.71 | Well Screen Interval Depth (ft) 9.21 / 4.21

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) .0006 x 9.71 + .13 = 0.14

One well volume (gal): 0.79 | Purge Rate (gpm): 440 ml/m = 0.12 GPM

Time	1034	1037	1040			
Cumulative Volume Purged (gal)	2.16	2.52	2.88			
Drawdown (ft)	7.43	7.43	7.43			
Temperature (C)	14.9	15.0	15.0			
pH (s.u.)	5.81	5.80	5.79			
Conductivity (µS/cm)	2833	2836	2843			
Diss. Oxygen (mg/L)	0.76	0.56	0.57			
Redox (ORP)	-12.8	-12.0	-11.3			
Turbidity (NTU)	8.0	5.0	3.6			
Odor	None	None	None			
Sheen/Color	None stained	None stained	None stained			

Comments: Stained Color Very Light Gold

Sampling Information

Date: 1-19-2012	Time Sampled: 1045		Field Personnel: Danny Rawl				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm):	0.12 GPM
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No
Comments:			

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-Wilmington		Project Number: 979007.Co-01	
Monitoring Well I.D.: MW-29A	Date: 1-19-2012	Time Started: 1341	
Weather Conditions: Clear 40		Time Ended: 1428	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 3.41	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 40.40	Well Volume (gal): 6.03
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	OK	Repair Required:					
Cap Condition:	OK	Repair Required:					
Paint Condition:	OK	Repair Required:					
Lock Condition:	OK	Repair Required:					
Inner Casing Condition:	OK	Repair Required:					
Concrete Pad Condition:	OK	Repair Required:					
Other:	/	Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump	Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump	Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 37.90	Well Screen Interval Depth (ft) 40.40/35.40

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume")
(only fill out if applicable) .0006 to 40.90 + .13 = 0.15

One well volume (gal): 6.03 Purge Rate (gpm): 520 mL/M = 0.14

Time	1358	1401	1404			
Cumulative Volume Purged (gal)	2.38	2.80	3.22			
Drawdown (ft)	4.89	4.89	4.89			
Temperature (C)	17.4	17.6	17.5			
pH (s.u.)	6.95	6.98	6.94			
Conductivity (µS/cm)	380	380	381			
Diss. Oxygen (mg/L)	0.56	0.51	0.45			
Redox (ORP)	-89.7	-93.2	-93.4			
Turbidity (NTU)	1.7	1.7	1.6			
Odor	Moderate Creosote	Moderate Creosote	Moderate Creosote			
Sheen/Color	None Clear	None Clear	None Clear			

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1410	Field Personnel: Danny Rawl

Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump	Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump	Other

Duplicate Taken:	(Yes) No	Sampling Flow Rate (gpm):	0.14
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: Dup.03 ~~01-2~~ (01-19-2012) Taken

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-30	Date: 1-18-2012	Time Started: 1540 PUMP START: 1550	
Weather Conditions: PARTLY CLOUDY, 54°F		Time Ended: 1635	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 4.85	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 11.17	Well Volume (gal): 1.0
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:	OK	Repair Required:				
Cap Condition:	OK	Repair Required:				
Paint Condition:	OK	Repair Required:				
Lock Condition:	OK	Repair Required:				
Inner Casing Condition:	OK	Repair Required:				
Concrete Pad Condition:	OK	Repair Required:				
Other:	OK	Repair Required:				

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 6.5 | Well Screen Interval Depth (ft) 4-9

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''
(only fill out if applicable) 0.14 = 0 + (0.0006 x 9.5) + 0.13

One well volume (gal): 1.0 | Purge Rate (gpm): 460 mL/min 0.12 gpm

Time	1555	1558	1601			
Cumulative Volume Purged (gal)	0.60	0.96	1.32			
Drawdown (ft)	4.93	4.93	4.93			
Temperature (C)	14.58	14.67	14.82			
pH (s.u.)	6.07	5.95	5.92			
Conductivity (µS/cm)	719	707	771			
Diss. Oxygen (mg/L)	3.18	2.66	2.42			
Redox (ORP)	-40.7	-39.1	-37.8			
Turbidity (NTU)	7.12	2.25	1.83			
Odor	NONE →					
Sheen/Color	NONE | LIGHT	BROWN →				

Comments:

Sampling Information

Date: 1-18-2012	Time Sampled: 1610		Field Personnel: LAUREN WARGO					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes	No	Sampling Flow Rate (gpm): 0.12	
Field Filtered: Yes	No	Field Decontamination:	Yes No

Comments: MW-30 (01-18-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-18-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - Wilmington		Project Number: 979007.C0-01	
Monitoring Well I.D.: MW-31	Date: 1-17-2012	Time Started: 1205	
Weather Conditions: P. Sunny 65 windy		Time Ended: 1239	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 5.05	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 16.23	Well Volume (gal): 1.82
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	NO	X	Repair Required: New Lock
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:			Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 11.23	Well Screen Interval Depth (ft) 16.23 to 6.23

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) .0006 X 14.23 + .13 = 0.14

One well volume (gal):	Purge Rate (gpm): 440 ml/m = 0.12 GPM

Time	1214	1217	1220	1223		
Cumulative Volume Purged (gal)	1.05	1.41	1.77	2.13		
Drawdown (ft)	5.39	5.39	5.39	5.39		
Temperature (C)	17.4	17.4	17.4	17.4		
pH (s.u.)	6.48	6.46	6.46	6.46		
Conductivity (µS/cm)	3483	3479	3477	3474		
Diss. Oxygen (mg/L)	1.25	1.17	0.88	0.77		
Redox (ORP)	-127.6	-120.1	-105.4	-100.4		
Turbidity (NTU)	23.0	25.0	17.0	15.0		
Odor	None	None	None	None		
Sheen/Color	None/Sturb.	None/Stained	None/Stained	None/Stained		

Comments:

Sampling Information

Date: 1-17-2012	Time Sampled: 1225	Field Personnel: Danny Rawl

Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm):	0.12
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - Wilmington	Project Number: 979007.CO-01
Monitoring Well I.D.: MW-32 Date: 1-17-2012	Time Started: 1300
Weather Conditions: P. Cloudy 68 Windy	Time Ended: 1329
Field Personnel: Danny Rawl	

Initial Readings

Measured Water Level (TOC-ft): 4.35	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 46.50	Well Volume (gal): 6.87
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	ok	Repair Required:
Cap Condition:	ok	Repair Required:
Paint Condition:	ok	Repair Required:
Lock Condition:	ok	Repair Required:
Inner Casing Condition:	ok	Repair Required:
Concrete Pad Condition:	ok	Repair Required:
Other:	✓	Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 44.0 | Well Screen Interval Depth (ft) 46.50/41.50

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''))
(only fill out if applicable) .0006 x 47.0 + .13 = 0.16

One well volume (gal): 6.87 | Purge Rate (gpm): 440 ml/m = 0.12 GPM

Time	1307	1312	1315			
Cumulative Volume Purged (gal)	0.84	1.44	2.04			
Drawdown (ft)	4.44	4.44	4.44			
Temperature (C)	18.0	18.0	18.0			
pH (s.u.)	7.57	7.58	7.57			
Conductivity (µS/cm)	530	526	5.27			
Diss. Oxygen (mg/L)	1.23	1.04	0.99			
Redox (ORP)	-156.7	-163.8	-176.2			
Turbidity (NTU)	7.9	4.5	4.3			
Odor	slight	slight	slight			
Sheen/Color	none/clear	none/clear	none/clear			

Comments:

Sampling Information

Date: 1-17-2012	Time Sampled: 1315	Field Personnel: Danny Rawl

Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes (No)	Sampling Flow Rate (gpm): 0.12
Field Filtered: Yes (No)	Field Decontamination: (Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-Wilmington		Project Number: 979007.00-01	
Monitoring Well I.D.: MW-33	Date: 1-19-2012	Time Started: 1130	
Weather Conditions: Clear 50		Time Ended: 1203	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 3.77	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 55.97	Well Volume (gal): 8.51
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	O/K	Repair Required:					
Cap Condition:	OK	Repair Required:					
Paint Condition:	OK	Repair Required:					
Lock Condition:	OK	Repair Required:					
Inner Casing Condition:	OK	Repair Required:					
Concrete Pad Condition:	OK	Repair Required:					
Other:		Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 53.45 | Well Screen Interval Depth (ft) 55.95 / 50.95

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) .0006 x 56.45 + .13 = 0.16

One well volume (gal): 8.51 | Purge Rate (gpm): 440 ml/m = 0.12 GPM

Time	1140	1143	1146			
Cumulative Volume Purged (gal)	1.20	1.56	1.92			
Drawdown (ft)	4.21	4.21	4.21			
Temperature (C)	17.4	17.3	17.3			
pH (s.u.)	7.72	7.75	7.76			
Conductivity (µS/cm)	547	547	543			
Diss. Oxygen (mg/L)	1.20	1.03	0.92			
Redox (ORP)	-146.9	-149.1	-170.9			
Turbidity (NTU)	5.0	4.9	3.1			
Odor	Slight	Slight	Slight			
Sheen/Color	None Clear	None/Clear	None Clear			

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1150		Field Personnel: Danny Rawl				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes (No)	Sampling Flow Rate (gpm): 0.12 GPM
Field Filtered: Yes (No)	Field Decontamination: (Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location:		Project Number:	
Monitoring Well I.D.: MW-34	Date: 1-19-2012	Time Started: 1251	
Weather Conditions: Clear 55°		Time Ended: 1328	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft):	7.98	Riser Pipe Diameter (in):	2
Measured Well Depth (TOC-ft):	16.75	Well Volume (gal):	1.43
Notes:			

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	

Protective Casing Condition:	OK	Repair Required:
Cap Condition:	OK	Repair Required:
Paint Condition:	OK	Repair Required:
Lock Condition:	OK	Repair Required:
Inner Casing Condition:	OK	Repair Required:
Concrete Pad Condition:	OK	Repair Required:
Other:	/	Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 16.75 | Well Screen Interval Depth (ft) 6.75 / 6.75

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) .0006 X 14.75 + .13 = 0.14

One well volume (gal): 1.43 | Purge Rate (gpm): 400 ml/m = 0.11 GPM

Time	12:58	1301	1304	1307	1310	
Cumulative Volume Purged (gal)	0.77	1.10	1.43	1.76	2.09	
Drawdown (ft)	8.19	8.19	8.19	8.19	8.19	
Temperature (C)	18.3	18.2	18.1	18.1	18.2	
pH (s.u.)	6.06	6.06	6.05	6.04	6.02	
Conductivity (µS/cm)	935	917	866	828	806	
Diss. Oxygen (mg/L)	0.71	0.62	0.52	0.46	0.43	
Redox (ORP)	-77.0	-76.9	-76.9	-76.2	-75.5	
Turbidity (NTU)	8.0	7.7	7.0	5.8	5.5	
Odor	Slight	Slight	Slight	Slight	Slight	
Sheen/Color	None/Clear	None/Clear	None Clear	None Clear	None Clear	

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1315		Field Personnel: Danny Rawl				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes	(No)	Sampling Flow Rate (gpm):	0.11	
Field Filtered:	Yes	(No)	Field Decontamination:	(Yes)	No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-Wilmington		Project Number: 979007.00-01	
Monitoring Well I.D.: MW-35	Date: 1-19-2012	Time Started: 1215	
Weather Conditions: 55 Clear		Time Ended: 1246	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 5.58	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 38.82	Well Volume (gal): 5.42
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	OK	Repair Required:					
Cap Condition:	OK	Repair Required:					
Paint Condition:	OK	Repair Required:					
Lock Condition:	OK	Repair Required:					
Inner Casing Condition:	OK	Repair Required:					
Concrete Pad Condition:	OK	Repair Required:					
Other:		Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 36.32 | Well Screen Interval Depth (ft) 38.82 / 38.82

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) .0006 X 39.32 + .13 = 0.15

One well volume (gal): 5.42 | Purge Rate (gpm): 440 ml/m = 0.12 GPM

Time	1223	1226	1229			
Cumulative Volume Purged (gal)	0.96	1.32	1.68			
Drawdown (ft)	5.68	5.68	5.68			
Temperature (C)	18.2	18.2	18.2			
pH (s.u.)	7.08	7.07	7.05			
Conductivity (µS/cm)	373	375	376			
Diss. Oxygen (mg/L)	0.52	0.41	0.35			
Redox (ORP)	-112.1	-109.9	-111.0			
Turbidity (NTU)	3.2	2.9	2.2			
Odor	mod.	Mod.	mod.			
Sheen/Color	None/clear	None/clear	None/Clear			

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1235	Field Personnel: Danny Rawl					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm):	0.12
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP-GW-1/MW-36		Project Number: 979007.C0-01	
Monitoring Well I.D.: MW-36	Date: 1-20-2012	Time Started: 0937	
Weather Conditions: Clear 40°F		Time Ended: 1019	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft):	5.65	Riser Pipe Diameter (in):	2"
Measured Well Depth (TOC-ft):	51.36	Well Volume (gal):	7.45
Notes:			

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	OK	Repair Required:					
Cap Condition:	OK	Repair Required:					
Paint Condition:	OK	Repair Required:					
Lock Condition:	OK	Repair Required:					
Inner Casing Condition:	OK	Repair Required:					
Concrete Pad Condition:	OK	Repair Required:					
Other:	/	Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump	Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump	Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 48.86 | Well Screen Interval Depth (ft) 51.36/46.36

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''
(only fill out if applicable) .0006 to 51.86 + .13 = 0.16

One well volume (gal): 7.45 | Purge Rate (gpm): 400 ml/m = 0.11 GPM

Time	0944	0947	0950			
Cumulative Volume Purged (gal)	0.77	1.10	1.43			
Drawdown (ft)	5.81	5.81	5.81			
Temperature (C)	17.9	17.9	17.8			
pH (s.u.)	7.71	7.71	7.71			
Conductivity (µS/cm)	326	326	326			
Diss. Oxygen (mg/L)	0.54	0.47	0.41			
Redox (ORP)	-122.3	-120.1	-124.9			
Turbidity (NTU)	5.7	3.1	2.5			
Odor	Mod.	Mod.	Moderate			
Sheen/Color	none/clear	none/clear	none/clear			

Comments:

Sampling Information

Date: 1-20-2012	Time Sampled: 0955		Field Personnel: Danny Rawl				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump	Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump	Other

Duplicate Taken:	Yes (circled) No	Sampling Flow Rate (gpm):	0.11 GPM
Field Filtered:	Yes No (circled)	Field Decontamination:	Yes (circled) No

Comments: Dup. 04 (01-20-2012) Taken

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-20-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP-Wilmington		Project Number: 979007.Co-01	
Monitoring Well I.D.: MW-37	Date: 1-20-2012	Time Started: 0748	
Weather Conditions: Clear 32		Time Ended: 0831	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 4.61	Riser Pipe Diameter (in): 2"
Measured Well Depth (TOC-ft): 17.19	Well Volume (gal): 2.05
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	ok	Repair Required: Could use trimming around well					
Cap Condition:	ok	Repair Required:					
Paint Condition:	ok	Repair Required:					
Lock Condition:	ok	Repair Required:					
Inner Casing Condition:	ok	Repair Required:					
Concrete Pad Condition:	ok	Repair Required:					
Other:	/	Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 12.19 | Well Screen Interval Depth (ft) 17.19 / 7.19

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) .0006 X 15.19 + 0.13 = 0.14

One well volume (gal): 2.05 | Purge Rate (gpm): 440 ml/m = 0.12

Time	0800	0803	0806	0809	0812	
Cumulative Volume Purged (gal)	1.44	1.80	2.16	2.52	2.88	
Drawdown (ft)	4.90	4.90	4.90	4.90	4.90	
Temperature (C)	17.9	18.0	18.1	18.1	18.1	
pH (s.u.)	6.55	6.53	6.51	6.50	6.50	
Conductivity (µS/cm)	1053	1006	972	946	936	
Diss. Oxygen (mg/L)	1.10	0.86	0.94	0.92	0.83	
Redox (ORP)	-66.9	-74.6	-82.6	-85.9	-87.7	
Turbidity (NTU)	3.9	4.5	3.5	3.8	3.4	
Odor	None	None	None	None	None	
Sheen/Color	None/clear	None/clear	None/clear	None/clear	None/clear	

Comments:

Sampling Information

Date: 1-20-12	Time Sampled: 0815	Field Personnel: Danny Rawl					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes (No)		Sampling Flow Rate (gpm): 0.12	
Field Filtered: Yes (No)		Field Decontamination: (Yes)	No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-20-12

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - Wilmington		Project Number: 979007. Co-01	
Monitoring Well I.D.: MW-38	Date: 1-17-2012	Time Started: 1004	
Weather Conditions: Cloudy 60		Time Ended: 1033	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 4.51	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 27.08	Well Volume (gal): 3.68
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	OK		Repair Required:
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:	/		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	Y	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 24.58	Well Screen Interval Depth (ft) 27.08 / 22.08

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) .0006 X 27.58 + 0.13 = 0.15 OK

One well volume (gal): 3.68 Purge Rate (gpm): ~~27~~ 40 ml/m = ~~0.06~~ 0.12

Time	1011	1014	10:17			
Cumulative Volume Purged (gal)	0.82	1.18	1.54			
Drawdown (ft)	4.65	4.65	4.65			
Temperature (C)	18.9	19.0	19.0			
pH (s.u.)	6.12	6.07	6.07			
Conductivity (µS/cm)	280	278	279			
Diss. Oxygen (mg/L)	1.20	1.15	0.98			
Redox (ORP)	-92.0	-100.4	-109.3			
Turbidity (NTU)	10.0	5.2	7.3			
Odor	None	None	None			
Sheen/Color	None/Clear	None/Clear	None/Clear			

Comments:

Sampling Information

Date: 1-17-2012	Time Sampled: 1020	Field Personnel: Danny Rawl

Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm):	0.12
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-Wilmington		Project Number: 979007.Co-01	
Monitoring Well I.D.: MW-39	Date: 1-17-12	Time Started: 0850	
Weather Conditions: P. Cloudy 60		Time Ended: 0924	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft):	0.29	Riser Pipe Diameter (in):	2
Measured Well Depth (TOC-ft):	52.51	Well Volume (gal):	8.51
Notes:			

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	OK	Repair Required:					
Cap Condition:	OK	Repair Required:					
Paint Condition:	OK	Repair Required:					
Lock Condition:	OK	Repair Required:					
Inner Casing Condition:	OK	Repair Required:					
Concrete Pad Condition:	OK	Repair Required:					
Other:	—	Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 50.0	Well Screen Interval Depth (ft) 52.51 - 47.51

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''))
(only fill out if applicable) .0006 x 55.0 + .13 = 0.16

One well volume (gal): 8.51 Purge Rate (gpm): 520 = 0.14

Time	0901	0904	0907	0910		
Cumulative Volume Purged (gal)	1.52	1.94	2.36	2.78		
Drawdown (ft)	1.78	1.78	1.78	1.78		
Temperature (C)	18.5	18.6	18.6	18.7		
pH (s.u.)	7.63	7.64	7.65	7.65		
Conductivity (µS/cm)	308	309	308	308		
Diss. Oxygen (mg/L)	0.81	0.67	0.55	0.46		
Redox (ORP)	-207	-216.2	-212.2	-214.6		
Turbidity (NTU)	21.0	14.0	12.0	9.8		
Odor	None	None	None	None		
Sheen/Color	None/clear	None/clear	None/clear	None/clear		

Comments:

Sampling Information

Date: 1-17-2012	Time Sampled: 0915	Field Personnel: Danny Rawl					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm):	0.14
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-40	Date: 1-19-2012	Time Started: 1300 PUMP START: 1310	
Weather Conditions: PARTLY CLOUDY, 49 °F		Time Ended: 1340	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 5.33	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 16.67	Well Volume (gal): 1.8
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	OK		Repair Required:
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:	/		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 12 | Well Screen Interval Depth (ft) 6.97 - 16.67

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume''')
(only fill out if applicable) 0.14 = 0 + (0.0006 x 15) + 0.13 9.7' FOOTAGE ON WELL TAG

One well volume (gal): 1.8 | Purge Rate (gpm): 460 mL/min 0.12 gpm

Time	1315	1318	1321			
Cumulative Volume Purged (gal)	0.60	0.96	1.32			
Drawdown (ft)	5.87	5.87	5.87			
Temperature (C)	16.70	16.87	16.89			
pH (s.u.)	6.36	6.23	6.19			
Conductivity (µS/cm)	699	831	961			
Diss. Oxygen (mg/L)	1.07	0.83	0.75			
Redox (ORP)	-63.7	-58.2	-59.4			
Turbidity (NTU)	10.04	8.68	7.63			
Odor	NONE →					
Sheen/Color	NONE / LIGHT BROWN, CLOUDY →					

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1325		Field Personnel: LAUREN WARGO					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.12	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-40 (01-19-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-41	Date: 1-19-2012	Time Started: 0900 PUMP START: 0901	
Weather Conditions: PARTLY CLOUDY, 36 °F		Time Ended: 0930	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 4.72	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 40.30	Well Volume (gal): 5.7
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	OK		Repair Required:
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:	-		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 38 | Well Screen Interval Depth (ft) 35.6 - 40.3

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume''')
(only fill out if applicable) 0.15 = 0 + (0.0006 x 41) + 0.13 4.7' FOOTAGE ON WELL TAG

One well volume (gal): 5.7 | Purge Rate (gpm): 440 mL/min 0.12 gpm

Time	0907	0910	0913			
Cumulative Volume Purged (gal)	0.72	1.08	1.44			
Drawdown (ft)	4.99	4.99	4.99			
Temperature (C)	16.11	16.24	16.28			
pH (s.u.)	6.12	6.05	5.96			
Conductivity (µS/cm)	300	301	301			
Diss. Oxygen (mg/L)	2.39	2.17	1.65			
Redox (ORP)	-22.0	-22.2	-22.5			
Turbidity (NTU)	1.11	0.84	0.96			
Odor	YES →	→	→			
Sheen/Color	NONE / CLEAR →	→	→			

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 0915			Field Personnel: LAUREN WARGO				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes	(No)	Sampling Flow Rate (gpm): 0.12		
Field Filtered:	Yes	(No)	Field Decontamination:	(Yes)	No

Comments: MW-41 (01-19-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP- WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-42	Date: 1-19-2012	Time Started: 0800 PUMP START: 0824	
Weather Conditions: PARTLY CLOUDY, 34°F		Time Ended: 0855	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 4.41	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 67.23	Well Volume (gal): 10.1
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:		X	Repair Required: HINGE NEEDS REPLACEMENT				
Cap Condition:	OK		Repair Required:				
Paint Condition:	OK		Repair Required:				
Lock Condition:	OK		Repair Required:				
Inner Casing Condition:	OK		Repair Required:				
Concrete Pad Condition:	OK		Repair Required:				
Other:	/		Repair Required:				

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 65 | Well Screen Interval Depth (ft) 62.53 - 67.23

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) 0.17 = 0+(0.0006 x 68)+0.13 4.7' FOOTAGE ON WELL TAG

One well volume (gal): 10.1 | Purge Rate (gpm): 480 mL/min 0.13 gpm

Time	0830	0833	0836			
Cumulative Volume Purged (gal)	0.78	1.17	1.56			
Drawdown (ft)	4.55	4.55	4.55			
Temperature (C)	15.80	15.89	15.88			
pH (s.u.)	7.02	7.00	7.03			
Conductivity (µS/cm)	337	338	338			
Diss. Oxygen (mg/L)	1.88	1.52	1.38			
Redox (ORP)	-58.7	-60.2	-59.1			
Turbidity (NTU)	2.51	0.44	0.22			
Odor	NONE →	→	→			
Sheen/Color	NONE/CLEAR →	→	→			

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 0840		Field Personnel: LAUREN WARGO				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.13	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-42 (01-19-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-Wilmington		Project Number: 979007.Co-01	
Monitoring Well I.D.: MW-46A	Date: 1-18-2012	Time Started: 1004	
Weather Conditions: Cloudy 50 windy		Time Ended: 1042	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft):	3.78	Riser Pipe Diameter (in):	2
Measured Well Depth (TOC-ft):	44.57	Well Volume (gal):	6.65
Notes:			

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:	
Cap Condition:	OK		Repair Required:	
Paint Condition:	OK		Repair Required:	
Lock Condition:	X	NO	Repair Required:	Need Replaced
Inner Casing Condition:	OK		Repair Required:	
Concrete Pad Condition:	OK		Repair Required:	
Other:			Repair Required:	

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 42.07 | Well Screen Interval Depth (ft) 44.57/37.57

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume''')
(only fill out if applicable) .0006 X 45.07 + 0.13 = 0.16

One well volume (gal): 6.65 | Purge Rate (gpm): 440 ml/M = 0.12 GPM

Time	1014	1017	1020	1023		
Cumulative Volume Purged (gal)	1.20	1.56	1.92	2.28		
Drawdown (ft)	4.18	4.18	4.18	4.18		
Temperature (C)	17.6	17.7	17.8	17.8		
pH (s.u.)	7.09	7.09	7.03	7.02		
Conductivity (µS/cm)	425	426	429	430		
Diss. Oxygen (mg/L)	1.02	0.71	0.57	0.48		
Redox (ORP)	-95.7	-100.7	-111.1	-116.9		
Turbidity (NTU)	1.7	1.6	1.7	1.5		
Odor	V. Slight	V. Slight	V. Slight	V. Slight		
Sheen/Color	None/clear	None/clear	None clear	None clear		

Comments: Lock Broken

Sampling Information

Date: 1-18-2012	Time Sampled: 1025	Field Personnel: Danny Rawl						
Sampling Method: (place X in box)		Stainless Steel Bailer		X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer			Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes	(No)	Sampling Flow Rate (gpm):	0.12 GPM
Field Filtered:	Yes	(No)	Field Decontamination:	(Yes) No
Comments:				

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-18-12

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP-WILMINGTON, NC		Project Number: 00979007.00	
Monitoring Well I.D.: MW-46B	Date: 1-19-2012	Time Started: 1345 PUMP START: 1350	
Weather Conditions: SUNNY, 49 °F		Time Ended: 1430	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 3.15	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 68.14	Well Volume (gal): 10.4
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	OK		Repair Required:
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:	/		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 62.5 | Well Screen Interval Depth (ft) 60-65

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'')
(only fill out if applicable) 0.17 = 0 + (0.0006 x 65.5) + 0.13

One well volume (gal): 10.4 | Purge Rate (gpm): 480 mL/min 0.13 gpm

Time	1357	1400	1403			
Cumulative Volume Purged (gal)	0.91	1.30	1.69			
Drawdown (ft)	3.30	3.30	3.30			
Temperature (C)	17.94	17.99	18.09			
pH (s.u.)	6.90	6.92	6.96			
Conductivity (µS/cm)	230	229	230			
Diss. Oxygen (mg/L)	0.76	0.70	0.63			
Redox (ORP)	-67.1	-57.8	-49.3			
Turbidity (NTU)	4.96	4.52	3.79			
Odor	NONE →	→	→			
Sheen/Color	NONE / LIGHT	BROWN TO	CLEAR →			

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 1405		Field Personnel: LAUREN WARGO					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

BATCH METALS QC

~~Duplicate~~ Taken: (Yes) No | Sampling Flow Rate (gpm): 0.13

Field Filtered: Yes (No) | Field Decontamination: (Yes) No

Comments: MW-46B (01-19-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - Wilmington	Project Number: 979007.Co - 01
Monitoring Well I.D.: MW-47A / Date: 1-20-12	Time Started: 0849
Weather Conditions: Clear 36	Time Ended: 0922
Field Personnel: Danny Rawl	

Initial Readings

Measured Water Level (TOC-ft): 3.94	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 43.59	Well Volume (gal): 6.46
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	ok		Repair Required:				
Cap Condition:	ok		Repair Required:				
Paint Condition:	ok		Repair Required:				
Lock Condition:	ok		Repair Required:				
Inner Casing Condition:	ok		Repair Required:				
Concrete Pad Condition:	ok		Repair Required:				
Other:	/		Repair Required:				

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 41.09 | Well Screen Interval Depth (ft) 43.59/38.59

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''
(only fill out if applicable) .0006 x 44.09 + 0.13 = 0.16

One well volume (gal): 6.46 | Purge Rate (gpm): 440 ml/m = 0.12 GPM

Time	0858	0901	0904			
Cumulative Volume Purged (gal)	1.32	1.68	2.04			
Drawdown (ft)	4.02	4.02	4.02			
Temperature (C)	16.4	16.4	16.4			
pH (s.u.)	6.72	6.70	6.70			
Conductivity (µS/cm)	412	408	408			
Diss. Oxygen (mg/L)	1.23	1.05	0.89			
Redox (ORP)	-94.4	-96.3	-96.9			
Turbidity (NTU)	2.6	2.6	2.0			
Odor	Slight	Slight	Slight			
Sheen/Color	None/Clear	None/Clear	None/Clear			

Comments:

Sampling Information

Date: 1-20-2012	Time Sampled: 0910		Field Personnel: Danny Rawl				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes (No)	Sampling Flow Rate (gpm): 0.12 GPM
Field Filtered: Yes (No)	Field Decontamination: (Yes) No
Comments:	

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-20-12

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-Wilmington		Project Number: 979007.CO-01	
Monitoring Well I.D.: MW-47B	Date: 1-18-2012	Time Started: 1555	
Weather Conditions: P. Sunny 55		Time Ended: 1627	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 1.73'	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 64.66	Well Volume (gal):
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel	Carbon Steel	X PVC

Protective Casing Condition:	OK	Repair Required:
Cap Condition:	OK	Repair Required:
Paint Condition:	OK	Repair Required:
Lock Condition:	OK	Repair Required:
Inner Casing Condition:	OK	Repair Required:
Concrete Pad Condition:	OK	Repair Required:
Other:	/	Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 62.16 | Well Screen Interval Depth (ft) 64.66/59.66

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) .0006 x 65.16 + 0.13 = 0.17

One well volume (gal): | Purge Rate (gpm): 400 ml/m = 0.11 GPM

Time	1604	1607	1610			
Cumulative Volume Purged (gal)	0.99	1.32	1.65			
Drawdown (ft)	1.79	1.79	1.79			
Temperature (C)	16.6	16.6	16.6			
pH (s.u.)	7.67	7.67	7.67			
Conductivity (µS/cm)	318	319	320			
Diss. Oxygen (mg/L)	0.70	0.63	0.61			
Redox (ORP)	-154.9	-164.6	-160.1			
Turbidity (NTU)	7.3	7.4	4.9			
Odor	none	none	none			
Sheen/Color	none Clear	None Clear	None Clear			

Comments:

Sampling Information

Date: 1-18-2012	Time Sampled: 1615	Field Personnel:						
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm):	0.11
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature) Danny Rawl	Date: 1-18-12

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - Wilmington		Project Number: 97979007.60-01	
Monitoring Well I.D.: MW-48	Date: 1-19-2012	Time Started: 0930	
Weather Conditions: Clear 38		Time Ended: 1002	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft):	7.42	Riser Pipe Diameter (in):	2
Measured Well Depth (TOC-ft):	15.20	Well Volume (gal):	1.27
Notes:			

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	OK	Repair Required:					
Cap Condition:	OK	Repair Required:					
Paint Condition:	OK	Repair Required:					
Lock Condition:	OK	Repair Required:					
Inner Casing Condition:	OK	Repair Required:					
Concrete Pad Condition:	OK	Repair Required:					
Other:	✓	Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 10.20	Well Screen Interval Depth (ft) 15.20 / 5.20

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume(")
(only fill out if applicable) .00016 x 13.20 + 0.13 = 0.14

One well volume (gal): 1.27 Purge Rate (gpm): 440 ml/m = 0.12 GPM

Time	0939	0942	0945	0948		
Cumulative Volume Purged (gal)	1.08	1.44	1.80	2.16		
Drawdown (ft)	7.45	7.45	7.45	7.45		
Temperature (C)	16.3	16.3	16.3	16.3		
pH (s.u.)	6.15	6.13	6.12	6.13		
Conductivity (µS/cm)	3013	2733	2683	2625		
Diss. Oxygen (mg/L)	1.02	0.89	0.80	0.73		
Redox (ORP)	-55.7	-49.9	-47.1	-44.0		
Turbidity (NTU)	14.0	11.0	11.0	10.0		
Odor	None	None	None	None		
Sheen/Color	None / Stained	None / Stained	None / Stained	None / Stained		

Comments: Stained Color V. Light Gold

Sampling Information

Date: 1-19-2012	Time Sampled: 0950	Field Personnel: Danny Rawl					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm):	0.12
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No
Comments:			

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-19-12

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP-Wilmington		Project Number: 979007.CO-01	
Monitoring Well I.D.: MW-48A	Date: 1-19-2012	Time Started: 0842	
Weather Conditions: Clear 35		Time Ended: 0926	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 4.99	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 47.88	Well Volume (gal): 6.93
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	ok	Repair Required:					
Cap Condition:	ok	Repair Required:					
Paint Condition:	ok	Repair Required:					
Lock Condition:	ok	Repair Required:					
Inner Casing Condition:	ok	Repair Required:					
Concrete Pad Condition:	ok	Repair Required:					
Other:	/	Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 44.98 | Well Screen Interval Depth (ft) 47.88 / 42.88

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume(")
(only fill out if applicable) .0006 x 47.98 + 0.13 = 0.16

One well volume (gal): 6.93 | Purge Rate (gpm): 440 ml/m = 0.12 GPM

Time	0907	0910	0913			
Cumulative Volume Purged (gal)	3.0	3.36	3.72			
Drawdown (ft)	10.10	10.10	10.10			
Temperature (C)	18.2	18.3	18.3			
pH (s.u.)	6.94	6.98	6.98			
Conductivity (µS/cm)	349	349	3.49			
Diss. Oxygen (mg/L)	0.56	0.47	0.45			
Redox (ORP)	-81.0	-87.5	-94.0			
Turbidity (NTU)	1.8	1.8	1.7			
Odor	None	None	None			
Sheen/Color	none/clear	none/clear	none/clear			

Comments:

Sampling Information

Date: 1-18-2012	Time Sampled: 0915	Field Personnel: Danny Rawl					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes	(No)	Sampling Flow Rate (gpm): 0.12	
Field Filtered: Yes	(No)	Field Decontamination:	(Yes) No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP - Wilmington		Project Number: 979007.CO-01	
Monitoring Well I.D.: MW-48B	Date: 1-19-12	Time Started: 0804	
Weather Conditions: Clear 35		Time Ended: 0835	
Field Personnel: Danny Rawl			

Initial Readings

Measured Water Level (TOC-ft): 4.06	Riser Pipe Diameter (in): 2
Measured Well Depth (TOC-ft): 66.25	Well Volume (gal): 10.14
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC	
Protective Casing Condition:	ok	Repair Required:					
Cap Condition:	ok	Repair Required:					
Paint Condition:	ok	Repair Required:					
Lock Condition:	ok	Repair Required:					
Inner Casing Condition:	ok	Repair Required:					
Concrete Pad Condition:	ok	Repair Required:					
Other:		Repair Required:					

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 63.75 | Well Screen Interval Depth (ft) 66.25/61.25

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) .00006 x 66.75 + 0.13 = 0.17

One well volume (gal): 10.14 | Purge Rate (gpm): 440 ml/m 0.12 GPM

Time	0811	0814	0817	0820		
Cumulative Volume Purged (gal)	0.84	1.20	1.56	1.92		
Drawdown (ft)	4.65	4.65	4.65	4.65		
Temperature (C)	17.6	17.8	17.8	17.8		
pH (s.u.)	7.89	7.89	7.89	7.89		
Conductivity (µS/cm)	308	309	305	302		
Diss. Oxygen (mg/L)	1.09	0.97	0.74	0.73		
Redox (ORP)	-126.3	-135.0	-141.0	-138.7		
Turbidity (NTU)	1.7	1.7	1.6	1.6		
Odor	Slight Creosote	Slight Creosote	Slight Creosote	Slight Creosote		
Sheen/Color	None Clear	None Clear	None Clear	None Clear		

Comments:

Sampling Information

Date: 1-19-2012	Time Sampled: 0825		Field Personnel: Danny Rawl				
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes (No)		Sampling Flow Rate (gpm): 0.12	
Field Filtered: Yes (No)		Field Decontamination: (Yes)	No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-19-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-49	Date: 1-17-2012	Time Started: 0945 PUMP START: 1050	
Weather Conditions: OVERCAST, LIGHT RAIN 54°F		Time Ended: 1125	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 1.40	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 7.32	Well Volume (gal): 0.9
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:	OK		Repair Required:			
Cap Condition:	OK		Repair Required:			
Paint Condition:	OK		Repair Required:			
Lock Condition:	OK		Repair Required:			
Inner Casing Condition:	OK		Repair Required:			
Concrete Pad Condition:	OK		Repair Required:			
Other:	/		Repair Required:			

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 4.5	Well Screen Interval Depth (ft) 2-7

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'")
(only fill out if applicable) 0.13 = 0 + (0.0006 x 7.5) + 0.13

One well volume (gal): 0.9 Purge Rate (gpm): 460 mL/min 0.12 gpm

Time	1057	1100	1103			
Cumulative Volume Purged (gal)	0.84	1.20	1.56			
Drawdown (ft)	1.96	1.96	1.96			
Temperature (C)	12.41	12.39	12.44			
pH (s.u.)	6.40	6.41	6.43			
Conductivity (µS/cm)	989	979	973			
Diss. Oxygen (mg/L)	2.37	2.31	2.28			
Redox (ORP)	-77.7	-77.9	-77.7			
Turbidity (NTU)	1.17	1.14	1.54			
Odor	NONE →	→	→			
Sheen/Color	NONE/CLEAR →	→	→			

Comments:

Sampling Information

Date: 1-17-2012	Time Sampled: 1105		Field Personnel: LAUREN WARGO					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes (No)	Sampling Flow Rate (gpm): 0.12	
Field Filtered:	Yes (No)	Field Decontamination:	(Yes) No

Comments: MW-49 (01-17-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-49A	Date: 1-17-2012	Time Started: 0830 PUMP START: 0845	
Weather Conditions: OVERCAST, LIGHT RAIN 54°F		Time Ended: 0930	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 1.27	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 25.51	Well Volume (gal): 3.9
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC
Protective Casing Condition:	OK		Repair Required:			
Cap Condition:	OK		Repair Required:			
Paint Condition:	OK		Repair Required:			
Lock Condition:	OK		Repair Required:			
Inner Casing Condition:	OK		Repair Required:			
Concrete Pad Condition:	OK		Repair Required:			
Other:	✓		Repair Required:			

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 22.5	Well Screen Interval Depth (ft) 20-25

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) 0.15 = 0 + (0.0006 x 25.5) + 0.13

One well volume (gal): 3.9 Purge Rate (gpm): 480 mL/min 0.13 gpm

Time	0850	0855	0900	0905	0910	
Cumulative Volume Purged (gal)	0.65	1.30	1.95	2.60	3.25	
Drawdown (ft)	1.33	1.33	1.34	1.34	1.34	
Temperature (C)	19.09	19.28	19.43	19.44	19.54	
pH (s.u.)	5.81	5.96	6.01	6.05	6.07	
Conductivity (µS/cm)	212	211	211	211	211	
Diss. Oxygen (mg/L)	2.70	1.85	1.70	1.61	1.80	
Redox (ORP)	-99.2	-98.0	-96.4	-94.2	-93.2	
Turbidity (NTU)	1.78	1.38	1.39	0.98	0.52	
Odor	NONE →					
Sheen/Color	NONE/CLEAR →					

Comments:

Sampling Information

Date: 1-17-2012	Time Sampled: 0915		Field Personnel: LAUREN WARGO					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken:	Yes	(No)	Sampling Flow Rate (gpm): 0.13		
Field Filtered:	Yes	(No)	Field Decontamination:	(Yes)	No

Comments: MW-49A (01-17-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-17-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

GROUNDWATER SAMPLING FIELD FORM

Schnabel ENGINEERING

Site Name and Location: SWP - WILMINGTON, NC		Project Number: 00979007.C0	
Monitoring Well I.D.: MW-50	Date: 1-18-2012	Time Started: 1400	PUMP START: 1420
Weather Conditions: PARTLY CLOUDY, 57 °F		Time Ended: 1500	
Field Personnel: LAUREN WARGO			

Initial Readings

Measured Water Level (TOC-ft): 3.71	Riser Pipe Diameter (in): 2.0
Measured Well Depth (TOC-ft): 10.33	Well Volume (gal): 1.1
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel		Carbon Steel	X	PVC

Protective Casing Condition:	OK		Repair Required:
Cap Condition:	OK		Repair Required:
Paint Condition:	OK		Repair Required:
Lock Condition:	OK		Repair Required:
Inner Casing Condition:	OK		Repair Required:
Concrete Pad Condition:	OK		Repair Required:
Other:	/		Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Tubing Diameter (in) 0.13 | Tubing Depth in Well (ft) 4.5 | Well Screen Interval Depth (ft) 2-7

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume"')
(only fill out if applicable) 0.13 = 0 + (0.0006 x 7.5) + 0.13

One well volume (gal): 1.1 | Purge Rate (gpm): 460 ml/min 0.12 gpm

Time	1425	1428	1431			
Cumulative Volume Purged (gal)	0.60	0.96	1.32			
Drawdown (ft)	3.93	3.93	3.93			
Temperature (C)	13.38	13.44	13.58			
pH (s.u.)	5.97	5.95	5.91			
Conductivity (µS/cm)	6979	7074	7197			
Diss. Oxygen (mg/L)	1.45	1.29	1.00			
Redox (ORP)	-5.9	-11.9	-21.9			
Turbidity (NTU)	85	60	23			
Odor	NONE →	→	→			
Sheen/Color	NONE / CLEAR →	→	→			

Comments:

Sampling Information

Date: 1-18-2012	Time Sampled: 1435		Field Personnel: LAUREN WARGO					
Sampling Method: (place X in box)		Stainless Steel Bailer	X	Peristaltic Pump		Grundfos Pump		Teflon Bailer
		Polyethylene Bailer		Bladder Pump		DC Pump		Other

Duplicate Taken: Yes	(No)	Sampling Flow Rate (gpm): 0.12	
Field Filtered: Yes	(No)	Field Decontamination:	(Yes) No

Comments: MW-50 (01-18-2012)

Signature

Sampler (Print): LAUREN WARGO	Sampler (signature): Lauren Wargo	Date: 1-18-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

Schnabel ENGINEERING

GROUNDWATER SAMPLING FIELD FORM

Site Name and Location: SWP-Wilmington		Project Number: ~~99~~ 08 979007.Co-01	
Monitoring Well I.D.: MW-50A	Date: 1-18-2012	Time Started: 1422	
Weather Conditions: P. Sunny 55		Time Ended: 1457	
Field Personnel:			

Initial Readings

Measured Water Level (TOC-ft): 2.92	Riser Pipe Diameter (in): 2"
Measured Well Depth (TOC-ft): 36.27	Well Volume (gal): 5.44
Notes:	

Well Condition

Well Riser Type (place an X in one box)		Stainless Steel	Carbon Steel	X PVC

Protective Casing Condition:	ok	Repair Required:
Cap Condition:	ok	Repair Required:
Paint Condition:	ok	Repair Required:
Lock Condition:	X	Repair Required: Needs Lock
Inner Casing Condition:	ok	Repair Required:
Concrete Pad Condition:	ok	Repair Required:
Other:	/	Repair Required:

Purge Information

Purging Method: (place an X in one box)		Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
		Polyethylene Bailer	Bladder Pump	DC Pump	Other

Tubing Diameter (in) 0.13	Tubing Depth in Well (ft) 33.77	Well Screen Interval Depth (ft) 36.27/31.27

Equipment Volume Purge: 1 Equipment Vol. = Pump Volume + (Tubing Capacity X Tubing Length)+ Flow Cell Volume'''')
(only fill out if applicable) .0006 X 36.77 + 0.13 = 0.15

One well volume (gal): 5.44 Purge Rate (gpm): 400 ml/m = 0.11 GPM

Time	1436	1439	1442			
Cumulative Volume Purged (gal)	1.54	1.87	2.20			
Drawdown (ft)	6.0	6.0	6.0			
Temperature (C)	16.9	16.8	16.9			
pH (s.u.)	6.14	6.12	6.11			
Conductivity (µS/cm)	571	568	566			
Diss. Oxygen (mg/L)	0.65	0.54	0.45			
Redox (ORP)	-100.4	-93.2	-93.1			
Turbidity (NTU)	2.2	1.8	2.1			
Odor	None	None	None			
Sheen/Color	None Clear	None Clear	None Clear			

Comments:

Sampling Information

Date: 1-18-2012	Time Sampled: 1445	Field Personnel: Danny Rawl		
Sampling Method: (place X in box)	Stainless Steel Bailer	Peristaltic Pump X	Grundfos Pump	Teflon Bailer
	Polyethylene Bailer	Bladder Pump	DC Pump	Other

Duplicate Taken:	Yes No	Sampling Flow Rate (gpm):	0.11
Field Filtered:	Yes No	Field Decontamination:	Yes No

Comments:

Signature

Sampler (Print): Danny Rawl	Sampler (signature): Danny Rawl	Date: 1-18-2012

Well Capacity (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Tubing Inside Dia. Capacity (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

February 15, 2012

Project: SWP Wilmington, NC

Submittal Date: 01/18/2012
Group Number: 1285470
PO Number: 1685
State of Sample Origin: NC

Client Sample Description	Lancaster Labs (LLI) #
MW-49A(01-17-2012) Grab Water	6524518
MW-49(01-17-2012) Grab Water	6524519
MW-21(01-17-2012) Grab Water	6524520
MW-08A(01-17-2012) Grab Water	6524521
MW-08(01-17-2012) Grab Water	6524522
MW-07(01-17-2012) Grab Water	6524523
MW-39(01-17-2012) Grab Water	6524524
MW-38(01-17-2012) Grab Water	6524525
MW-31(01-17-2012) Grab Water	6524526
MW-32(01-17-2012) Grab Water	6524527
MW-20A(01-17-2012) Grab Water	6524528
MW-16(01-17-2012) Grab Water	6524529
DUP-01(01-17-2012) Grab Water	6524530
TB-01(01-17-2012) Water	6524531
EB-01(01-17-2012) Grab Water	6524532

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Arcadis	Attn: Keith Stang
ELECTRONIC COPY TO	Arcadis	Attn: Crystal Foster
ELECTRONIC COPY TO	ARCADIS U.S., Inc.	Attn: Valerie Kull

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Analysis Report

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ELECTRONIC COPY TO Schnabel Engineering Attn: Greg Kuntz

Questions? Contact your Client Services Representative
Wendy A Kozma at (717) 656-2300 Ext. 1522

Respectfully Submitted,

Mark A. Ratcliff
Senior Specialist

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Analysis Report

Sample Description: MW-49A(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524518
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 09:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI49A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-49A(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524518
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 09:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI49A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0012 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0042 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120231AA	01/23/2012 16:32	Lauren C Temple	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120231AA	01/23/2012 16:32	Lauren C Temple	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/23/2012 21:32	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/20/2012 20:27	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 07:35	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 07:35	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 07:35	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-49(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524519
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 11:05 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL49

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-49(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524519
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 11:05 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL49

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0025 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120231AA	01/23/2012 16:54	Lauren C Temple	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120231AA	01/23/2012 16:54	Lauren C Temple	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/23/2012 21:57	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/20/2012 20:58	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 07:58	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 07:58	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 07:58	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-21(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524520
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 12:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL21

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.00055	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.00019	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	0.000057	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-21(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524520
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 12:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL21

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0016 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120231AA	01/23/2012 17:16	Lauren C Temple	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120231AA	01/23/2012 17:16	Lauren C Temple	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/23/2012 22:22	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/20/2012 21:29	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 08:02	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 08:02	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 08:02	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-08A(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524521
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 13:20 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI08A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	0.5 J	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.000014 J	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.000011 J	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-08A(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524521
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 13:20 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI08A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0014 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0013 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120231AA	01/23/2012 17:38	Lauren C Temple	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120231AA	01/23/2012 17:38	Lauren C Temple	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/23/2012 22:47	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/20/2012 22:00	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 08:13	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 08:13	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 08:13	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-08(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524522
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 14:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.000096	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.000015 J	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.000015 J	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000052	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000052	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-08(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524522
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 14:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0025 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0012 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120231AA	01/23/2012 18:00	Lauren C Temple	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120231AA	01/23/2012 18:00	Lauren C Temple	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/23/2012 23:11	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/20/2012 22:32	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 08:17	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 08:17	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 08:17	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-07(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524523
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 15:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.000082	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	0.000022 J	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.00069	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	0.000017 J	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	0.000011 J	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.000078	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.000019 J	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000052	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000052	1
08357	Pyrene	129-00-0	0.000063	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-07(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524523
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 15:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0030 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120231AA	01/23/2012 18:22	Lauren C Temple	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120231AA	01/23/2012 18:22	Lauren C Temple	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/23/2012 23:36	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/20/2012 23:03	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 08:21	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 08:21	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 08:21	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-39(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524524
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 09:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL39

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.000018 J	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-39(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524524
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 09:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL39

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0014 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120241AA	01/24/2012 14:13	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120241AA	01/24/2012 14:13	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/24/2012 00:01	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/20/2012 23:34	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 08:25	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 08:25	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 08:25	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-38(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524525
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 10:20 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL38

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-38(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524525
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 10:20 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL38

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0013 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0013 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120241AA	01/24/2012 14:36	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120241AA	01/24/2012 14:36	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/24/2012 00:26	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/21/2012 00:05	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 08:28	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 08:28	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 08:28	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-31(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524526
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 12:25 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL31

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	30	50	10
02898	Benzene	71-43-2	N.D.	1.0	5.0	10
02898	Bromodichloromethane	75-27-4	N.D.	1.0	5.0	10
02898	2-Butanone	78-93-3	N.D.	10	50	10
02898	Chloroform	67-66-3	N.D.	1.0	5.0	10
02898	1,2-Dichloropropane	78-87-5	N.D.	1.0	5.0	10
02898	Ethylbenzene	100-41-4	N.D.	1.0	5.0	10
02898	Methylene Chloride	75-09-2	N.D.	2.0	5.0	10
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.0	5.0	10
02898	Toluene	108-88-3	N.D.	1.0	5.0	10
02898	1,1,2-Trichloroethane	79-00-5	N.D.	1.0	5.0	10
02898	Xylene (Total)	1330-20-7	N.D.	1.0	5.0	10
Reporting limits were raised due to sample foaming.						
GC/MS Semivolatiles	**SW-846 8270D**		mg/l	mg/l	mg/l	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		mg/l	mg/l	mg/l	
08357	Acenaphthene	83-32-9	0.00019	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.000033 J	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	0.000016 J	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.000011 J	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.000014 J	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.000033 J	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-31(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524526
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 12:25 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL31

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Pyrene	129-00-0	0.000091	0.000010	0.000051	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0063 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120241AA	01/24/2012 14:58	Angela D Sneeringer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120241AA	01/24/2012 14:58	Angela D Sneeringer	10
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/24/2012 00:50	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/21/2012 00:36	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 08:32	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 08:32	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 08:32	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-32(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524527
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 13:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL32

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	1.7	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.056	0.00020	0.0010	20
08357	Acenaphthylene	208-96-8	0.00016	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.00010	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.00011	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.00020	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.00025	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	0.00076	0.000031	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-32(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524527
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 13:15 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL32

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0015 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120241AA	01/24/2012 15:20	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120241AA	01/24/2012 15:20	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/24/2012 01:16	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/21/2012 01:07	Gregory J Drahovsky	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/25/2012 15:13	Dale R Stoneroad	20
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 08:36	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 08:36	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 08:36	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-20A(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524528
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 14:05 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI20A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.1 J	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	0.2 J	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.000087	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.00029	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.000044 J	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	0.000012 J	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-20A(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524528
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 14:05 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI20A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0012 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.00094 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120241AA	01/24/2012 15:42	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120241AA	01/24/2012 15:42	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/24/2012 01:41	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/21/2012 01:38	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 08:40	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 08:40	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 08:40	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-16(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524529
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 15:05 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	13	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.000032 J	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	0.000023 J	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.00061	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	0.000022 J	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	0.000010 J	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	0.000027 J	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.000012 J	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.000053	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	0.000062	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-16(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524529
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 15:05 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WIL16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0161 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0024 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 20:01	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 20:01	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/24/2012 02:06	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/21/2012 02:10	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 08:44	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 08:44	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 08:44	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: DUP-01(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524530
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 15:05 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WILD1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	13	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.000040 J	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	0.000019 J	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.00062	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	0.000013 J	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.000023 J	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	0.000048 J	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: DUP-01(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524530
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 15:05 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WILD1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0124 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0023 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 20:23	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 20:23	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/24/2012 02:30	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/21/2012 02:41	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 08:48	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 08:48	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 08:48	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: TB-01(01-17-2012) Water
SWP Wilmington, NC

LLI Sample # WW 6524531
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/15/2012

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WILT1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 18:54	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 18:54	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: EB-01(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524532
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 16:00 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WILE1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: EB-01(01-17-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6524532
LLI Group # 1285470
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/17/2012 16:00 by DR

Submitted: 01/18/2012 09:15
Reported: 02/15/2012 16:16

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WILE1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 19:16	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 19:16	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12018WAH026	01/24/2012 02:55	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12018WAG026	01/21/2012 03:12	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12018WAG026	01/19/2012 10:00	Kerrie A Freeburn	1
11010	8270D BNA Extraction	SW-846 3510C	1	12018WAH026	01/19/2012 10:00	Kerrie A Freeburn	1
07035	Arsenic	SW-846 6010C	1	120180651001	01/19/2012 09:05	Joanne M Gates	1
07051	Chromium	SW-846 6010C	1	120180651001	01/19/2012 09:05	Joanne M Gates	1
07053	Copper	SW-846 6010C	1	120180651001	01/19/2012 09:05	Joanne M Gates	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120180651001	01/18/2012 13:10	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285470
Reported: 02/15/12 at 04:16 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: C120231AA	Sample number(s): 6524518-6524523								
Acetone	N.D.	3.0	5.0	ug/l	100	96	74-137	4	30
Benzene	N.D.	0.1	0.5	ug/l	100	102	80-120	2	30
Bromodichloromethane	N.D.	0.1	0.5	ug/l	112	112	80-120	0	30
2-Butanone	N.D.	1.0	5.0	ug/l	104	102	70-130	2	30
Chloroform	N.D.	0.1	0.5	ug/l	107	107	80-120	0	30
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	101	103	80-120	2	30
Ethylbenzene	N.D.	0.1	0.5	ug/l	103	104	80-120	1	30
Methylene Chloride	N.D.	0.2	0.5	ug/l	102	102	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	101	104	80-125	3	30
Toluene	N.D.	0.1	0.5	ug/l	98	101	80-120	2	30
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	105	107	80-120	2	30
Xylene (Total)	N.D.	0.1	0.5	ug/l	103	104	80-120	0	30
Batch number: C120241AA	Sample number(s): 6524524-6524528								
Acetone	N.D.	3.0	5.0	ug/l	88		74-137		
Benzene	N.D.	0.1	0.5	ug/l	99		80-120		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	109		80-120		
2-Butanone	N.D.	1.0	5.0	ug/l	96		70-130		
Chloroform	N.D.	0.1	0.5	ug/l	106		80-120		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	101		80-120		
Ethylbenzene	N.D.	0.1	0.5	ug/l	100		80-120		
Methylene Chloride	N.D.	0.2	0.5	ug/l	103		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	102		80-125		
Toluene	N.D.	0.1	0.5	ug/l	98		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	105		80-120		
Xylene (Total)	N.D.	0.1	0.5	ug/l	101		80-120		
Batch number: C120242AA	Sample number(s): 6524529-6524532								
Acetone	N.D.	3.0	5.0	ug/l	95	93	74-137	2	30
Benzene	N.D.	0.1	0.5	ug/l	103	103	80-120	0	30
Bromodichloromethane	N.D.	0.1	0.5	ug/l	111	111	80-120	0	30
2-Butanone	N.D.	1.0	5.0	ug/l	99	99	70-130	0	30
Chloroform	N.D.	0.1	0.5	ug/l	109	108	80-120	1	30
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	105	105	80-120	0	30
Ethylbenzene	N.D.	0.1	0.5	ug/l	106	105	80-120	0	30
Methylene Chloride	N.D.	0.2	0.5	ug/l	103	104	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	103	105	80-125	2	30
Toluene	N.D.	0.1	0.5	ug/l	102	102	80-120	0	30
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	107	105	80-120	2	30
Xylene (Total)	N.D.	0.1	0.5	ug/l	105	105	80-120	0	30
Batch number: 12018WAG026	Sample number(s): 6524518-6524530,6524532								
Acenaphthene	N.D.	0.00001	0.00005	mg/l	101	97	74-109	4	30
		0	0						
Acenaphthylene	N.D.	0.00001	0.00005	mg/l	108	103	70-110	5	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285470
Reported: 02/15/12 at 04:16 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Anthracene	N.D.	0.000010	0.00005	mg/l	102	97	66-111	5	30
Benzo(a)anthracene	N.D.	0.000010	0.00005	mg/l	92	87	72-114	5	30
Benzo(a)pyrene	N.D.	0.000050	0.00005	mg/l	104	100	60-127	4	30
Benzo(b)fluoranthene	N.D.	0.000010	0.00005	mg/l	99	97	58-151	2	30
Benzo(g,h,i)perylene	N.D.	0.000010	0.00005	mg/l	83	80	57-131	4	30
Benzo(k)fluoranthene	N.D.	0.000010	0.00005	mg/l	105	100	59-130	5	30
Dibenz(a,h)anthracene	N.D.	0.000050	0.00005	mg/l	81	78	55-134	4	30
Fluoranthene	N.D.	0.000010	0.00005	mg/l	100	96	75-116	4	30
Fluorene	N.D.	0.000010	0.00005	mg/l	103	98	75-114	5	30
Hexachlorobenzene	N.D.	0.000010	0.00005	mg/l	99	97	66-106	3	30
Indeno(1,2,3-cd)pyrene	N.D.	0.000010	0.00005	mg/l	83	79	53-158	5	30
2-Methylnaphthalene	N.D.	0.000010	0.00005	mg/l	98	94	75-115	5	30
Naphthalene	N.D.	0.000030	0.00005	mg/l	97	92	72-109	6	30
Phenanthrene	N.D.	0.000030	0.00005	mg/l	96	93	76-111	4	30
Pyrene	N.D.	0.000010	0.00005	mg/l	100	94	69-118	5	30
Batch number: 12018WAH026	Sample number(s): 6524518-6524530,6524532								
Di-n-butylphthalate	N.D.	0.002	0.005	mg/l	101	95	76-115	6	30
Carbazole	N.D.	0.0005	0.001	mg/l	96	92	75-120	5	30
2-Chloronaphthalene	N.D.	0.0004	0.001	mg/l	98	93	54-132	5	30
2-Chlorophenol	N.D.	0.0005	0.001	mg/l	95	96	71-114	1	30
Chrysene	N.D.	0.0001	0.0005	mg/l	95	91	76-116	5	30
Dibenzofuran	N.D.	0.0005	0.001	mg/l	95	89	75-117	6	30
2,4-Dimethylphenol	N.D.	0.0005	0.001	mg/l	90	87	72-110	4	30
bis(2-Ethylhexyl)phthalate	N.D.	0.002	0.005	mg/l	100	96	78-117	4	30
2-Methylphenol	N.D.	0.0005	0.001	mg/l	93	93	58-110	0	30
3-Methylphenol, 4-Methylphenol	N.D.	0.0005	0.001	mg/l	89	85	49-108	4	30
Pentachlorophenol	N.D.	0.001	0.005	mg/l	103	97	53-110	6	30
Phenol	N.D.	0.0005	0.001	mg/l	58	59	21-67	1	30
2,3,4,6-Tetrachlorophenol	N.D.	0.0005	0.001	mg/l	99	93	66-129	7	30
Batch number: 120180651001	Sample number(s): 6524518-6524530,6524532								
Arsenic	N.D.	0.0051	0.0400	mg/l	103		80-120		
Chromium	N.D.	0.0011	0.0300	mg/l	100		80-120		
Copper	N.D.	0.00094	0.0200	mg/l	103		80-120		

Sample Matrix Quality Control

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285470
Reported: 02/15/12 at 04:16 PM
Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: C120231AA	Sample number(s): 6524518-6524523 BKG: P527280								
Acetone						N.D.	N.D.	0 (1)	30
Benzene						N.D.	N.D.	0 (1)	30
Bromodichloromethane						N.D.	N.D.	0 (1)	30
2-Butanone						N.D.	N.D.	0 (1)	30
Chloroform						N.D.	N.D.	0 (1)	30
1,2-Dichloropropane						N.D.	N.D.	0 (1)	30
Ethylbenzene						N.D.	N.D.	0 (1)	30
Methylene Chloride						N.D.	N.D.	0 (1)	30
1,1,2,2-Tetrachloroethane						N.D.	N.D.	0 (1)	30
Toluene						N.D.	N.D.	0 (1)	30
1,1,2-Trichloroethane						N.D.	N.D.	0 (1)	30
Xylene (Total)						N.D.	N.D.	0 (1)	30
Batch number: C120241AA	Sample number(s): 6524524-6524528 UNSPK: P527133								
Acetone	108	100	57-163	8	30				
Benzene	115	111	87-126	4	30				
Bromodichloromethane	123	117	82-133	5	30				
2-Butanone	108	103	58-168	5	30				
Chloroform	126	112	86-136	5	30				
1,2-Dichloropropane	114	110	83-126	4	30				
Ethylbenzene	131	119	80-140	5	30				
Methylene Chloride	112	92	84-122	4	30				
1,1,2,2-Tetrachloroethane	105	101	70-125	4	30				
Toluene	121	111	83-127	5	30				
1,1,2-Trichloroethane	113	110	85-129	3	30				
Xylene (Total)	119	113	84-125	5	30				
Batch number: C120242AA	Sample number(s): 6524529-6524532 BKG: 6524529								
Acetone						13	13	1 (1)	30
Benzene						N.D.	N.D.	0 (1)	30
Bromodichloromethane						N.D.	N.D.	0 (1)	30
2-Butanone						N.D.	N.D.	0 (1)	30
Chloroform						N.D.	N.D.	0 (1)	30
1,2-Dichloropropane						N.D.	N.D.	0 (1)	30
Ethylbenzene						N.D.	N.D.	0 (1)	30
Methylene Chloride						N.D.	N.D.	0 (1)	30
1,1,2,2-Tetrachloroethane						N.D.	N.D.	0 (1)	30
Toluene						N.D.	N.D.	0 (1)	30
1,1,2-Trichloroethane						N.D.	N.D.	0 (1)	30
Xylene (Total)						N.D.	N.D.	0 (1)	30
Batch number: 120180651001	Sample number(s): 6524518-6524530,6524532 UNSPK: 6524518 BKG: 6524518								
Arsenic	98	97	81-123	1	20	N.D.	N.D.	0 (1)	20
Chromium	93	94	81-120	2	20	0.0012 J	0.0011 J	8 (1)	20
Copper	96	97	86-122	1	20	0.0042 J	0.0027 J	43* (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285470
Reported: 02/15/12 at 04:16 PM

Surrogate Quality Control

Analysis Name: EPA SW846/8260 (water-25ml) #1
Batch number: C120231AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6524518	110	106	96	93
6524519	111	108	95	92
6524520	110	106	95	92
6524521	108	104	96	93
6524522	111	107	95	92
6524523	111	106	95	93
Blank	107	106	94	93
DUP	112	110	95	92
LCS	103	103	99	102
LCSD	103	103	99	101
Limits:	77-114	74-113	77-110	78-110

Analysis Name: EPA SW846/8260 (water-25ml) #1
Batch number: C120241AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6524524	110	107	94	92
6524525	110	105	94	92
6524526	111	105	94	91
6524527	113	107	93	101
6524528	101	102	96	97
Blank	108	108	95	93
LCS	105	103	98	108
MS	107	102	98	102
MSD	105	103	98	101
Limits:	77-114	74-113	77-110	78-110

Analysis Name: EPA SW846/8260 (water-25ml) #1
Batch number: C120242AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6524529	109	107	96	97
6524530	108	108	96	98
6524531	105	106	97	96
6524532	106	104	96	95
Blank	106	105	96	95
DUP	107	108	95	97
LCS	103	102	100	103
LCSD	103	103	99	103
Limits:	77-114	74-113	77-110	78-110

Analysis Name: PAHs in waters by SIM
Batch number: 12018WAG026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6524518	96	98	111
6524519	103	99	107
6524520	105	100	109
6524521	104	101	108

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285470
Reported: 02/15/12 at 04:16 PM

Surrogate Quality Control

6524522	99	99	105
6524523	102	98	101
6524524	93	90	100
6524525	99	94	102
6524526	101	92	92
6524527	105	94	109
6524528	144	100	109
6524529	104	98	101
6524530	106	97	104
6524532	102	99	109
Blank	105	115	129
LCS	102	107	109
LCSD	94	98	104
Limits:	64-147	68-132	53-129

Analysis Name: TCL Semivolatiles (8270D)
Batch number: 12018WAH026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6524518	39	60	84	82	82	92
6524519	48	63	88	80	82	86
6524520	46	58	83	82	83	90
6524521	40	61	86	81	84	91
6524522	46	58	79	79	81	88
6524523	39	56	84	84	88	89
6524524	39	61	87	76	81	93
6524525	41	61	88	84	86	89
6524526	42	61	89	86	89	97
6524527	39	61	81	85	88	93
6524528	31	47	81	88	92	98
6524529	44	61	83	88	88	91
6524530	45	63	82	88	85	94
6524532	41	63	91	82	84	102
Blank	47	64	93	93	92	106
LCS	50	69	88	89	91	97
LCSD	53	72	83	88	85	92
Limits:	10-74	10-98	22-150	52-120	63-114	34-118

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Case Narrative

Project Name: SWP Wilmington, NC
LLI Group #: 1285470

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260B 25mL purge, GC/MS Volatiles

Sample #s: 6524526

Reporting limits were raised due to sample foaming.

SW-846 6010C, Metals

Batch #: 120180651001 (Sample number(s): 6524518-6524530, 6524532 UNSPK: 6524518 BKG: 6524518)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Copper

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 12858 Group# 1285470 Sample # 6524518-32

COC # 278150 1/2

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: SOUTHERN WOOD PIEDMONT Acct. #:

Project Name/#: WILMINGTON PWSID #:

Project Manager: P.O.#:

Sampler: D. RAWL & L. WARGO Quote #:

Name of state where samples were collected: NORTH CAROLINA

For Lab Use Only
FSC:
SCR#: 115831

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	Composite	Matrix: Soil	Water (☐ Potable ☐ NPDES Check if Applicable)	Other	(4) Total # of Containers	(5) Analyses Requested / Preservation Codes: METALS: ARSENIC, CHROMIUM, COPPER	8240 STANDARD WATER MASTER	TCL SEMIVOLATILES (8270D)	TCL SEMIVOLATILES (8270D SIM)					Remarks	(6) Temperature of samples upon receipt (if requested)
MW-49A (01-17-2012)	1/17/12	0915	✓			✓		8	1	3	2	2						1.9-3.2°C
MW-49 (01-17-2012)	1/17/12	1105	✓			✓		8	1	3	2	2						
MW-21 (01-17-2012)	1/17/12	1215	✓			✓		8	1	3	2	2						
MW-08A (01-17-2012)	1/17/12	1320	✓			✓		8	1	3	2	2						
MW-08 (01-17-2012)	1/17/12	1415	✓			✓		8	1	3	2	2						
MW-07 (01-17-2012)	1/17/12	1515	✓			✓		8	1	3	2	2						
MW-39 (01-17-2012)	1/17/12	0915	✓			✓		8	1	3	2	2						
MW-38 (01-17-2012)	1/17/12	1020	✓			✓		8	1	3	2	2						
MW-31 (01-17-2012)	1/17/12	1225	✓			✓		8	1	3	2	2						
MW-32 (01-17-2012)	1/17/12	1315	✓			✓		8	1	3	2	2						

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	1/16/12	9:30	Lauren Wargo		
Lauren Wargo	1/17/2012	16:15			
			[signature]	1/18/12	0915

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

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2102.05

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 12858 Group# 1285470 Sample # 6524518-32

COC # 278151 2/2

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: SOUTHERN WOOD PIEDMONT Acct. #:

Project Name/#: WILMINGTON PWSID #:

Project Manager: P.O.#:

Sampler: D. RAWL & L. WARGO Quote #:

Name of state where samples were collected: NORTH CAROLINA

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	Composite	Matrix: Soil	Water (Potable / NPDES Check if Applicable)	Other	(4) Total # of Containers	(5) Analyses Requested / Preservation Codes: AR METALS: ARSENIC, CHROMIUM, COPPER	8260 STANDARD WATER MASTER	TCL SEMIVOLATILES (8270 D)	TCL SEMIVOLATILES (8270D SIM)					Remarks (6) Temperature of samples upon receipt (if requested)
MW-20A (01-17-2012)	1/17/12	1405	✓			✓		8	1	3	2	2					1.9-3.7°C
MW-16 (01-17-2012)	1/17/12	1505	✓			✓		8	1	3	2	2					
DUP. 01 (01-17-2012)	1/17/12	1505	✓			✓		8	1	3	2	2					
TRIP BLANK	1/15/12	-				✓		2									
EQUIP. 01 (01-17-2012)	1/17/12	1600	✓			✓		8	1	3	2	2					

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
Lauren Wargo	1/17/12	1615			
			Harry [illegible]	1/18/12	0915

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Environmental Sample Administration
Receipt Documentation Log

Client/Project: Southern Wood Piedmont

Date of Receipt: 1/18/12

Time of Receipt: 0915

Source Code: 501

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	2737	3.4°C	TB	WI	Y	B	
2	↓	3.7°C	↓	↓	↓	↓	
3	↓	2.2°C	↓	↓	↓	↓	
4	↓	3.1°C	↓	↓	↓	↓	
5	↓	3.6°C	↓	↓	↓	↓	
6	↓	1.9°C	↓	↓	↓	↓	

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Rcvd 1 amber broken for DUP 01.

Unpacker Signature/Emp#: [signature] 2316 **Date/Time:** 1/18/12 1055

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Environmental Sample Administration
Receipt Documentation Log

Client/Project: Southern Wood Piedmont

Date of Receipt: 1/18/12

Time of Receipt: 0915

Source Code: 501

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	2737	3.7°C	TB	WI	Y	B	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [illegible] 2316 **Date/Time:** 1/18/12 1055

Issued by Dept. 6042 Management

2174.06

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

January 31, 2012

Project: SWP Wilmington, NC

Submittal Date: 01/19/2012
Group Number: 1285691
PO Number: 1685
State of Sample Origin: NC

Client Sample Description	Lancaster Labs (LLI) #
MW-23(01-18-2012) Grab Water	6526371
MW-19A(01-18-2012) Grab Water	6526372
MW-22A(01-18-2012) Grab Water	6526373
MW-24B(01-18-2012) Grab Water	6526374
MW-24A(01-18-2012) Grab Water	6526375
MW-46A(01-18-2012) Grab Water	6526376
MW-17(01-18-2012) Grab Water	6526377
DUP-02(01-18-2012) Grab Water	6526378
MW-28A(01-18-2012) Grab Water	6526379
MW-28(01-18-2012) Grab Water	6526380
MW-50(01-18-2012) Grab Water	6526381
MW-50A(01-18-2012) Grab Water	6526382
TB-01(01-18-2012) Water	6526383
MW-30(01-18-2012) Grab Water	6526384
MW-47B(01-18-2012) Grab Water	6526385

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Arcadis	Attn: Keith Stang
ELECTRONIC COPY TO	Arcadis	Attn: Crystal Foster
ELECTRONIC COPY TO	ARCADIS U.S., Inc.	Attn: Valerie Kull

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Analysis Report

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ELECTRONIC COPY TO Schnabel Engineering Attn: Greg Kuntz

Questions? Contact your Client Services Representative
Wendy A Kozma at (717) 656-2300 Ext. 1522

Respectfully Submitted,

Lawrence M. Taylor
Senior Specialist

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Analysis Report

Sample Description: MW-23(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526371
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 08:30 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI23-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	15	25	5
02898	Benzene	71-43-2	N.D.	0.5	2.5	5
02898	Bromodichloromethane	75-27-4	N.D.	0.5	2.5	5
02898	2-Butanone	78-93-3	N.D.	5.0	25	5
02898	Chloroform	67-66-3	N.D.	0.5	2.5	5
02898	1,2-Dichloropropane	78-87-5	N.D.	0.5	2.5	5
02898	Ethylbenzene	100-41-4	N.D.	0.5	2.5	5
02898	Methylene Chloride	75-09-2	N.D.	1.0	2.5	5
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	2.5	5
02898	Toluene	108-88-3	N.D.	0.5	2.5	5
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	2.5	5
02898	Xylene (Total)	1330-20-7	N.D.	0.5	2.5	5
	Reporting limits were raised due to sample foaming.					
GC/MS Semivolatiles	**SW-846 8270D**		mg/l	mg/l	mg/l	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		mg/l	mg/l	mg/l	
08357	Acenaphthene	83-32-9	0.00091	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	0.000015 J	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.00082	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	0.000019 J	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.000028 J	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.000013 J	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	0.000031 J	0.000030	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-23(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526371
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 08:30 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI23-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Pyrene	129-00-0	0.000038 J	0.000010	0.000051	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0046 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/25/2012 01:50	Sara E Johnson	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/25/2012 01:50	Sara E Johnson	5
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 13:59	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/23/2012 10:58	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 21:26	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/19/2012 22:52	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/19/2012 22:52	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-19A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526372
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 10:10 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-19A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.0028	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.000024 J	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.000020 J	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.000039 J	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000030	0.000051	1
08357	Pyrene	129-00-0	0.000012 J	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-19A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526372
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 10:10 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-19A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0016 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 20:45	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 20:45	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 14:25	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/23/2012 11:30	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 21:48	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/19/2012 23:16	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/19/2012 23:16	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-22A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526373
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 11:05 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-22A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	0.3 J	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.0017	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.000017 J	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.000030 J	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.00012	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	0.000043 J	0.000030	0.000051	1
08357	Pyrene	129-00-0	0.000016 J	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-22A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526373
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 11:05 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-22A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0022 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 21:28	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 21:28	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 14:50	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/23/2012 12:02	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 21:52	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/19/2012 23:20	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/19/2012 23:20	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: MW-24B(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526374
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 08:30 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-24B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000030	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-24B(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526374
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 08:30 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-24B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0016 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0011 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 21:50	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 21:50	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 15:15	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/23/2012 12:34	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 22:03	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/19/2012 23:32	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/19/2012 23:32	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-24A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526375
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 09:30 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-24A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	0.5 J	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.000027 J	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.000017 J	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.000014 J	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.000013 J	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	0.000045 J	0.000030	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-24A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526375
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 09:30 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-24A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 22:12	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 22:12	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 15:40	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/23/2012 13:06	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 22:07	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/19/2012 23:35	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/19/2012 23:35	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-46A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526376
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 10:25 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-46A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	0.5 J	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.4 J	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	1.8	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.0020	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	0.000012 J	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.00074	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	0.000019 J	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.00092	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.00016	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.00064	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.0020	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	0.000041 J	0.000030	0.000051	1
08357	Pyrene	129-00-0	0.00043	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-46A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526376
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 10:25 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-46A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	0.00094 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 22:33	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 22:33	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 16:06	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/23/2012 13:38	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 22:11	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/19/2012 23:39	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/19/2012 23:39	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: MW-17(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526377
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 11:20 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI-17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	50	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	0.0006 J	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.00098	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	0.00011	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.00067	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	0.000022 J	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	0.0000060 J	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.00013	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.00018	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.000036 J	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000030	0.000051	1
08357	Pyrene	129-00-0	0.000066	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-17(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526377
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 11:20 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI-17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0099 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0064 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0085 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 22:55	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 22:55	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 20:58	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/23/2012 14:11	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 22:14	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/19/2012 23:43	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/19/2012 23:43	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: DUP-02(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526378
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 11:20 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WID2-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	50	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.0011	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	0.00013	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.00068	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	0.000018 J	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.00014	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.00019	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.000038 J	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000030	0.000051	1
08357	Pyrene	129-00-0	0.000070	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: DUP-02(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526378
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 11:20 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WID2-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0071 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0057 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0074 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 23:17	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 23:17	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 21:23	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/23/2012 14:43	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 22:19	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/19/2012 23:47	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/19/2012 23:47	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-28A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526379
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 13:10 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-28A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	14	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.016	0.00010	0.00051	10
08357	Acenaphthylene	208-96-8	0.000058	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.000048 J	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.00089	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.000073	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.00022	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000030	0.000051	1
08357	Pyrene	129-00-0	0.00094	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-28A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526379
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 13:10 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-28A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0016 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 23:38	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 23:38	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 21:48	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/23/2012 15:15	Joseph M Gambler	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/24/2012 02:10	Gregory J Drahovsky	10
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 22:23	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/19/2012 23:51	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/19/2012 23:51	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-28(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526380
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 13:10 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI28-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.011	0.00010	0.00051	10
08357	Acenaphthylene	208-96-8	0.000069	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.00051	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	0.000032 J	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.0026	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.0094	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	0.0069	0.000030	0.000051	1
08357	Pyrene	129-00-0	0.00098	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-28(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526380
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 13:10 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI28-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0065 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/25/2012 00:00	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/25/2012 00:00	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 22:13	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/23/2012 15:48	Joseph M Gambler	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/24/2012 02:42	Gregory J Drahovsky	10
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 22:26	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/19/2012 23:55	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/19/2012 23:55	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-50(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526381
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 14:35 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI-50

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	15	25	5
02898	Benzene	71-43-2	N.D.	0.5	2.5	5
02898	Bromodichloromethane	75-27-4	N.D.	0.5	2.5	5
02898	2-Butanone	78-93-3	N.D.	5.0	25	5
02898	Chloroform	67-66-3	N.D.	0.5	2.5	5
02898	1,2-Dichloropropane	78-87-5	N.D.	0.5	2.5	5
02898	Ethylbenzene	100-41-4	N.D.	0.5	2.5	5
02898	Methylene Chloride	75-09-2	N.D.	1.0	2.5	5
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	2.5	5
02898	Toluene	108-88-3	N.D.	0.5	2.5	5
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	2.5	5
02898	Xylene (Total)	1330-20-7	N.D.	0.5	2.5	5
	Reporting limits were raised due to sample foaming.					
GC/MS Semivolatiles	**SW-846 8270D**		mg/l	mg/l	mg/l	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		mg/l	mg/l	mg/l	
08357	Acenaphthene	83-32-9	0.0015	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.000039 J	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.00012	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.00064	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000030	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-50(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526381
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 14:35 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI-50

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Pyrene	129-00-0	0.00013	0.000010	0.000051	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0037 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/25/2012 02:12	Sara E Johnson	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/25/2012 02:12	Sara E Johnson	5
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 22:39	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/24/2012 03:14	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 22:30	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/19/2012 23:59	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/19/2012 23:59	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-50A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526382
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 14:45 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-50A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000030	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-50A(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526382
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 14:45 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-50A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0014 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/25/2012 00:22	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/25/2012 00:22	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 23:04	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/24/2012 03:46	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 22:34	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/20/2012 00:03	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/20/2012 00:03	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: TB-01(01-18-2012) Water
SWP Wilmington, NC

LLI Sample # WW 6526383
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/12/2012

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WILMT

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/24/2012 19:39	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/24/2012 19:39	Sara E Johnson	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-30(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526384
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 16:10 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI-30

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	39	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.001	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	0.002	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.022	0.00010	0.00051	10
08357	Acenaphthylene	208-96-8	0.000050 J	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.00032	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	0.000033 J	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.0011	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.0039	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.000013 J	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	0.00071	0.000030	0.000051	1
08357	Pyrene	129-00-0	0.00070	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-30(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526384
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 16:10 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WI-30

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0014 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/25/2012 00:44	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/25/2012 00:44	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 23:29	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/24/2012 04:19	Gregory J Drahovsky	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/24/2012 05:23	Gregory J Drahovsky	10
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 22:38	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/20/2012 00:07	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/20/2012 00:07	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-47B(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526385
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 16:15 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-47B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000030	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-47B(01-18-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6526385
LLI Group # 1285691
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/18/2012 16:15 by DR

Submitted: 01/19/2012 09:45
Reported: 01/31/2012 14:46

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

W-47B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0063 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/25/2012 01:06	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/25/2012 01:06	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12019WAD026	01/24/2012 23:54	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12019WAB026	01/24/2012 04:51	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12019WAB026	01/19/2012 18:30	Nicholas W Shroyer	1
11010	8270D BNA Extraction	SW-846 3510C	1	12019WAD026	01/20/2012 08:30	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120190651001	01/20/2012 22:50	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120190651001	01/20/2012 00:18	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120190651001	01/20/2012 00:18	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120190651001	01/19/2012 14:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285691
Reported: 01/31/12 at 02:46 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: C120242AA	Sample number(s): 6526371-6526385								
Acetone	N.D.	3.0	5.0	ug/l	95	93	74-137	2	30
Benzene	N.D.	0.1	0.5	ug/l	103	103	80-120	0	30
Bromodichloromethane	N.D.	0.1	0.5	ug/l	111	111	80-120	0	30
2-Butanone	N.D.	1.0	5.0	ug/l	99	99	70-130	0	30
Chloroform	N.D.	0.1	0.5	ug/l	109	108	80-120	1	30
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	105	105	80-120	0	30
Ethylbenzene	N.D.	0.1	0.5	ug/l	106	105	80-120	0	30
Methylene Chloride	N.D.	0.2	0.5	ug/l	103	104	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	103	105	80-125	2	30
Toluene	N.D.	0.1	0.5	ug/l	102	102	80-120	0	30
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	107	105	80-120	2	30
Xylene (Total)	N.D.	0.1	0.5	ug/l	105	105	80-120	0	30
Batch number: 12019WAB026	Sample number(s): 6526371-6526382,6526384-6526385								
Acenaphthene	N.D.	0.000010	0.000050	mg/l	92	95	74-109	3	30
Acenaphthylene	N.D.	0.000010	0.000050	mg/l	98	101	70-110	3	30
Anthracene	N.D.	0.000010	0.000050	mg/l	94	96	66-111	2	30
Benzo(a)anthracene	N.D.	0.000010	0.000050	mg/l	87	84	72-114	3	30
Benzo(a)pyrene	N.D.	0.0000050	0.000050	mg/l	96	97	60-127	1	30
Benzo(b)fluoranthene	N.D.	0.000010	0.000050	mg/l	83	84	58-151	1	30
Benzo(g,h,i)perylene	N.D.	0.000010	0.000050	mg/l	87	90	57-131	4	30
Benzo(k)fluoranthene	N.D.	0.000010	0.000050	mg/l	95	97	59-130	2	30
Dibenz(a,h)anthracene	N.D.	0.0000050	0.000050	mg/l	88	91	55-134	3	30
Fluoranthene	N.D.	0.000010	0.000050	mg/l	94	96	75-116	2	30
Fluorene	N.D.	0.000010	0.000050	mg/l	96	99	75-114	3	30
Hexachlorobenzene	N.D.	0.000010	0.000050	mg/l	92	97	66-106	6	30
Indeno(1,2,3-cd)pyrene	N.D.	0.000010	0.000050	mg/l	88	91	53-158	4	30
2-Methylnaphthalene	N.D.	0.000010	0.000050	mg/l	89	90	75-115	2	30
Naphthalene	N.D.	0.000030	0.000050	mg/l	89	90	72-109	1	30
Phenanthrene	N.D.	0.00003	0.00005	mg/l	91	91	76-111	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285691
Reported: 01/31/12 at 02:46 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
		0	0						
Pyrene	N.D.	0.00001	0.00005	mg/l	90	91	69-118	1	30
		0	0						
Batch number: 12019WAD026	Sample number(s): 6526371-6526382,6526384-6526385								
Di-n-butylphthalate	N.D.	0.002	0.005	mg/l	110	108	76-115	2	30
Carbazole	N.D.	0.0005	0.001	mg/l	105	105	75-120	0	30
2-Chloronaphthalene	N.D.	0.0004	0.001	mg/l	93	93	54-132	1	30
2-Chlorophenol	N.D.	0.0005	0.001	mg/l	106	106	71-114	0	30
Chrysene	N.D.	0.0001	0.0005	mg/l	107	104	76-116	3	30
Dibenzofuran	N.D.	0.0005	0.001	mg/l	101	100	75-117	1	30
2,4-Dimethylphenol	N.D.	0.0005	0.001	mg/l	103	100	72-110	4	30
bis(2-Ethylhexyl)phthalate	N.D.	0.002	0.005	mg/l	117	113	78-117	4	30
2-Methylphenol	N.D.	0.0005	0.001	mg/l	103	102	58-110	1	30
3-Methylphenol, 4-Methylphenol	N.D.	0.0005	0.001	mg/l	97	97	49-108	0	30
Pentachlorophenol	N.D.	0.001	0.005	mg/l	107	112*	53-110	5	30
Phenol	N.D.	0.0005	0.001	mg/l	61	68*	21-67	11	30
2,3,4,6-Tetrachlorophenol	N.D.	0.0005	0.001	mg/l	103	103	66-129	0	30
Batch number: 120190651001	Sample number(s): 6526371-6526382,6526384-6526385								
Arsenic	N.D.	0.0051	0.0400	mg/l	103		80-120		
Chromium	N.D.	0.0011	0.0150	mg/l	97		80-120		
Copper	N.D.	0.00094	0.0100	mg/l	97		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: C120242AA	Sample number(s): 6526371-6526385 BKG: P524529								
Acetone						13	13	1 (1)	30
Benzene						N.D.	N.D.	0 (1)	30
Bromodichloromethane						N.D.	N.D.	0 (1)	30
2-Butanone						N.D.	N.D.	0 (1)	30
Chloroform						N.D.	N.D.	0 (1)	30
1,2-Dichloropropane						N.D.	N.D.	0 (1)	30
Ethylbenzene						N.D.	N.D.	0 (1)	30
Methylene Chloride						N.D.	N.D.	0 (1)	30
1,1,2,2-Tetrachloroethane						N.D.	N.D.	0 (1)	30
Toluene						N.D.	N.D.	0 (1)	30
1,1,2-Trichloroethane						N.D.	N.D.	0 (1)	30
Xylene (Total)						N.D.	N.D.	0 (1)	30
Batch number: 120190651001	Sample number(s): 6526371-6526382,6526384-6526385 UNSPK: 6526371 BKG: 6526371								
Arsenic	96		81-123			N.D.	N.D.	0 (1)	20
Chromium	89	92	81-120	3	20	0.0046 J	0.0048 J	4 (1)	20
Copper	91	95	86-122	4	20	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285691
Reported: 01/31/12 at 02:46 PM

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA SW846/8260 (water-25ml) #1
Batch number: C120242AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6526371	105	103	97	96
6526372	108	104	95	95
6526373	108	101	96	98
6526374	106	103	96	96
6526375	107	103	95	96
6526376	101	99	98	99
6526377	107	108	95	102
6526378	106	107	95	102
6526379	105	104	97	96
6526380	106	103	97	97
6526381	106	105	97	97
6526382	105	105	97	96
6526383	107	103	96	95
6526384	106	103	96	98
6526385	104	102	96	96
Blank	106	105	96	95
DUP	107	108	95	97
LCS	103	102	100	103
LCSD	103	103	99	103
Limits:	77-114	74-113	77-110	78-110

Analysis Name: PAHs in waters by SIM
Batch number: 12019WAB026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6526371	97	95	104
6526372	101	97	112
6526373	102	98	111
6526374	96	97	113
6526375	137	98	114
6526376	145	95	118
6526377	103	89	106
6526378	111	87	104
6526379	104	98	111
6526380	103	98	114
6526381	99	91	107
6526382	102	97	115
6526384	105	93	109
6526385	86	83	97
Blank	94	102	114
LCS	97	101	108
LCSD	94	103	110
Limits:	64-147	68-132	53-129

Analysis Name: TCL Semivolatiles (8270D)
Batch number: 12019WAD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285691
Reported: 01/31/12 at 02:46 PM

Surrogate Quality Control

6526371	59	77	96	92	92	101
6526372	45	62	97	93	93	99
6526373	49	60	96	91	91	101
6526374	37	60	93	89	90	100
6526375	44	57	93	89	90	102
6526376	41	63	95	90	92	104
6526377	49	62	94	93	90	98
6526378	50	61	97	99	93	101
6526379	35	58	99	93	94	103
6526380	54	62	103	98	96	103
6526381	56	63	99	98	97	101
6526382	43	64	102	93	94	103
6526384	49	60	95	92	91	100
6526385	40	65	100	96	97	105
Blank	48	63	94	90	91	108
LCS	55	75	96	100	96	105
LCSD	64	84	98	97	99	102
Limits:	10-74	10-98	22-150	52-120	63-114	34-118

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Case Narrative

Project Name: SWP Wilmington, NC
LLI Group #: 1285691

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260B 25mL purge, GC/MS Volatiles

Sample #s: 6526371, 6526381

Reporting limits were raised due to sample foaming.

SW-846 8270D, GC/MS Semivolatiles

Batch #: 12019WAD026 (Sample number(s): 6526371-6526382, 6526384-6526385)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Phenol, Pentachlorophenol

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 12858 Group# 1285691 Sample # 6526371-85

COC # 278152

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: SOUTHERN WOOD PIEDMONT Acct. #:

Project Name/#: WILMINGTON PWSID #:

Project Manager: P.O.#:

Sampler: DANNY RAWL & LAUREN WARGO Quote #:

Name of state where samples were collected: NORTH CAROLINA

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	Composite	Matrix (4) Soil	Water (☐ Potable ☐ NPDES Check if Applicable)	Other	Total # of Containers	(5) Analyses Requested / Preservation Codes: METALS: ARSENIC, CHROMIUM, COPPER	8240 STANDARD WATER MASTER	8270D - TCL SEMIVOLATILES	8270D SIM - TCL SEMIVOLATILES	METALS BATCH QC					Remarks (6) Temperature of samples upon receipt (if requested)
MW-23 (01-18-2012)	1-18-12	0830	✓			✓		8	1	3	2	2						0.4-2.6°C
MW-19A (01-18-2012)	1-18-12	1010	✓			✓		8	1	3	2	2						
MW-22A (01-18-2012)	1-18-12	1105	✓			✓		9 ~~8~~	1	3	2	2	1					
MW-24B (01-18-2012)	1-18-12	0830	✓			✓		8	1	3	2	2						
MW-24A (01-18-2012)	1-18-12	0930	✓			✓		8	1	3	2	2						
MW-46A (01-18-2012)	1-18-12	1025	✓			✓		8	1	3	2	2						
MW-17 (01-18-2012)	1-18-12	1120	✓			✓		8	1	3	2	2						
DUP. 02 (01-18-2012)	1-18-12	1120	✓			✓		8	1	3	2	2						
MW-28A (01-18-2012)	1-18-12	1310	✓			✓		8	1	3	2	2						
MW-28 (01-18-2012)	1-18-12	1310	✓			✓		9	1	3	2	2	1					

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)
Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

SDG Complete? Yes No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
Lauren Wargo	1-18-12	1700			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by: Danny Rawl	1/19/12	0945

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 12858 Group# 1285691 Sample # 6526371-85

COC # 278153

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: SOUTHERN WOOD PIEDMONT Acct. #:

Project Name/#: WILMINGTON PWSID #:

Project Manager: P.O.#:

Sampler: DANNY RAWL & LAUREN WARGO Quote #:

Name of state where samples were collected: NORTH CAROLINA

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) (3) (4) (5) (6)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water (☐ Potable ☐ NPDES Check if Applicable)	Matrix: Other	Total # of Containers	METALS: ARSENIC CHROMIUM COPPER	8260 STANDARD WATER MASTER	8270D - TCL SEMIVOLATILES	8270D-SIM - TCL SEMIVOLATILES						Remarks	Temperature of samples upon receipt (if requested)
MW-50 (01-18-2012)	1-18-12	1435	✓			✓		8	1	3	2	2							0.4-2.6°C
MW-50A (01-18-2012)	~~1-14~~ 1-18-12	1445	✓			✓		8	1	3	2	2							
TRIP BLANKS	1-12-12					✓		2											
MW-30 (01-18-2012)	1-18-12	1610	✓			✓		8	1	3	2	2							
MW-47B (01-18-2012)	1-18-12	1615	✓			✓		8	1	3	2	2							

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ) Site-specific QC (MS/MSD/Dup)? Yes No
Type IV (CLP SOW) (If yes, indicate QC sample and submit triplicate volume.)
Type VI (Raw Data Only) Internal COC Required? Yes / No

SDG Complete? Yes No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
Lauren Wargo	1-18-12	1700			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	1/19/12	0945

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Environmental Sample Administration
Receipt Documentation Log

Client/Project: Southern Wood Piedmont

Date of Receipt: 1/19/12

Time of Receipt: 0945

Source Code: S01

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	2737	2.4°C	TB	WI	Y	B	
2	↓	1.4°C	↓	↓	↓	↓	
3	↓	1.6°C	↓	↓	↓	↓	
4	↓	0.4°C	↓	↓	↓	↓	
5	↓	1.2°C	↓	↓	↓	↓	
6	↓	2.6°C	↓	↓	↓	↓	

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [illegible] 2316 **Date/Time:** 1/19/12 1040

Issued by Dept. 6042 Management

2174.06

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Environmental Sample Administration
Receipt Documentation Log

Client/Project: Southern Wood Piedmont

Date of Receipt: 1/19/12

Time of Receipt: 0945

Source Code: SO-1

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	2737	2.2°C	TB	WI	Y	B	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [signature] 2316 **Date/Time:** 1/19/12 1040

Issued by Dept. 6042 Management

2174.06

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Analysis Report

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ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

February 01, 2012

Project: SWP Wilmington, NC

Submittal Date: 01/20/2012
Group Number: 1285903
PO Number: 1685
State of Sample Origin: NC

Client Sample Description	Lancaster Labs (LLI) #
MW-42(01-19-2012) Grab Water	6527596
MW-41(01-19-2012) Grab Water	6527597
MW-09(01-19-2012) Grab Water	6527598
MW-10(01-19-2012) Grab Water	6527599
MW-20(01-19-2012) Grab Water	6527600
MW-22B(01-19-2012) Grab Water	6527601
MW-40(01-19-2012) Grab Water	6527602
MW-46B(01-19-2012) Grab Water	6527603
MW-19(01-19-2012) Grab Water	6527604
MW-11A(01-19-2012) Grab Water	6527605
MW-48B(01-19-2012) Grab Water	6527606
MW-48A(01-19-2012) Grab Water	6527607
MW-48(01-19-2012) Grab Water	6527608
MW-29(01-19-2012) Grab Water	6527609
MW-33(01-19-2012) Grab Water	6527610
MW-35(01-19-2012) Grab Water	6527611
MW-34(01-19-2012) Grab Water	6527612
MW-29A(01-19-2012) Grab Water	6527613
DUP-03(01-19-2012) Grab Water	6527614
MW-14A(01-19-2012) Grab Water	6527615
MW-24R(01-19-2012) Grab Water	6527616
EB-02(01-19-2012) Grab Water	6527617
TB-01(01-19-2012) Water	6527618

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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ELECTRONIC COPY TO	Arcadis	Attn: Keith Stang
ELECTRONIC COPY TO	Arcadis	Attn: Crystal Foster
ELECTRONIC COPY TO	ARCADIS U.S., Inc.	Attn: Valerie Kull
ELECTRONIC COPY TO	Schnabel Engineering	Attn: Greg Kuntz

Questions? Contact your Client Services Representative
Wendy A Kozma at (717) 656-2300 Ext. 1522

Respectfully Submitted,

Matthew E. Barton
Senior Specialist

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Analysis Report

Sample Description: MW-42(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527596
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 08:40 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-42

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000052	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000053	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000053	0.000052	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000052	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.000023 J	0.000010	0.000052	1
08357	Naphthalene	91-20-3	0.000038 J	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000052	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-42(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527596
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 08:40 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-42

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120242AA	01/25/2012 01:28	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120242AA	01/25/2012 01:28	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 03:20	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/24/2012 18:11	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 23:14	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 23:14	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 23:14	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-41(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527597
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 09:15 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-41

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	30	50	10
02898	Benzene	71-43-2	720	10	50	100
02898	Bromodichloromethane	75-27-4	N.D.	1.0	5.0	10
02898	2-Butanone	78-93-3	N.D.	10	50	10
02898	Chloroform	67-66-3	N.D.	1.0	5.0	10
02898	1,2-Dichloropropane	78-87-5	N.D.	1.0	5.0	10
02898	Ethylbenzene	100-41-4	N.D.	1.0	5.0	10
02898	Methylene Chloride	75-09-2	N.D.	2.0	5.0	10
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.0	5.0	10
02898	Toluene	108-88-3	3.8 J	1.0	5.0	10
02898	1,1,2-Trichloroethane	79-00-5	N.D.	1.0	5.0	10
02898	Xylene (Total)	1330-20-7	8.4	1.0	5.0	10
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.000029 J	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.000016 J	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.000014 J	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.00042	0.000010	0.000052	1
08357	Naphthalene	91-20-3	0.0066	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000052	1
08357	Pyrene	129-00-0	0.000023 J	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-41(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527597
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 09:15 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-41

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 12:34	Jason M Long	10
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 13:39	Jason M Long	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 12:34	Jason M Long	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	C120251AA	01/25/2012 13:39	Jason M Long	100
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 03:45	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/24/2012 20:58	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 23:18	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 23:18	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 23:18	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-09(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527598
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 10:00 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	81	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.000038 J	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.00016	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.000012 J	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.000015 J	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.000019 J	0.000010	0.000052	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000052	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-09(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527598
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 10:00 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0339 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 14:01	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 14:01	Jason M Long	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 04:09	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/24/2012 21:31	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 22:53	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 22:53	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 22:53	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-10(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527599
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 10:40 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.0047	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	0.000027 J	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.00027	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	0.000012 J	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.000069	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.000046 J	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.000012 J	0.000010	0.000052	1
08357	Naphthalene	91-20-3	0.000043 J	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	0.00034	0.000031	0.000052	1
08357	Pyrene	129-00-0	0.00022	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-10(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527599
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 10:40 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0061 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0013 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0013 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 14:23	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 14:23	Jason M Long	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 04:35	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/24/2012 22:04	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 23:28	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 23:28	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 23:28	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-20(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527600
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 11:45 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.027	0.00010	0.00052	10
08357	Acenaphthylene	208-96-8	0.000084	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.00019	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	0.000017 J	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.000050 J	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.000085	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.000013 J	0.000010	0.000052	1
08357	Naphthalene	91-20-3	0.000037 J	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	0.000034 J	0.000031	0.000052	1
08357	Pyrene	129-00-0	0.000096	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-20(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527600
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 11:45 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-20

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0068 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 14:45	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 14:45	Jason M Long	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 05:00	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/24/2012 22:37	Gregory J Drahovsky	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 14:04	Dale R Stoneroad	10
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 23:32	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 23:32	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 23:32	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-22B(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527601
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 12:35 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC22B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.00021	0.000011	0.000053	1
08357	Acenaphthylene	208-96-8	N.D.	0.000011	0.000053	1
08357	Anthracene	120-12-7	N.D.	0.000011	0.000053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000011	0.000053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000053	0.000053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000011	0.000053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000011	0.000053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000011	0.000053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000053	0.000053	1
08357	Fluoranthene	206-44-0	0.000015 J	0.000011	0.000053	1
08357	Fluorene	86-73-7	0.000025 J	0.000011	0.000053	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000011	0.000053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000011	0.000053	1
08357	2-Methylnaphthalene	91-57-6	0.000026 J	0.000011	0.000053	1
08357	Naphthalene	91-20-3	0.000069	0.000032	0.000053	1
08357	Phenanthrene	85-01-8	N.D.	0.000032	0.000053	1
08357	Pyrene	129-00-0	N.D.	0.000011	0.000053	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-22B(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527601
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 12:35 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC22B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 15:07	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 15:07	Jason M Long	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 05:25	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/24/2012 23:10	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 23:35	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 23:35	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 23:35	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-40(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527602
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 13:25 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-40

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	7.9	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.0014	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	0.000050 J	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.00098	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	0.000023 J	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	0.000012 J	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.000038 J	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.000022 J	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000052	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000052	1
08357	Pyrene	129-00-0	0.000038 J	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-40(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527602
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 13:25 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-40

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0869	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0013 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0023 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 15:29	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 15:29	Jason M Long	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 05:50	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/24/2012 23:42	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 23:39	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 23:39	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 23:39	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-46B(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527603
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 14:05 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC46B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000052	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.000018 J	0.000010	0.000052	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.000016 J	0.000010	0.000052	1
08357	Naphthalene	91-20-3	0.000040 J	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000052	1
08357	Pyrene	129-00-0	0.000011 J	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-46B(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527603
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 14:05 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC46B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 15:51	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 15:51	Jason M Long	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 08:58	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 00:15	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 23:42	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 23:42	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 23:42	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-19(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527604
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 15:10 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	4.1 J	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	0.4 J	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	0.0001 J	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.024	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.11	0.00021	0.0010	20
08357	Acenaphthylene	208-96-8	0.0012	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.0067	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	0.00013	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	0.000012 J	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.0080	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.051	0.00021	0.0010	20
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.000053	0.000010	0.000052	1
08357	Naphthalene	91-20-3	0.00058	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	0.036	0.00062	0.0010	20
08357	Pyrene	129-00-0	0.0036	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-19(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527604
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 15:10 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0067 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0012 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 16:13	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 16:13	Jason M Long	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 09:23	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 00:47	Gregory J Drahovsky	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 14:38	Dale R Stoneroad	20
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 23:46	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 23:46	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 23:46	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-11A(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527605
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 15:50 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC11A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	6.0	10	2
02898	Benzene	71-43-2	1.7	0.2	1.0	2
02898	Bromodichloromethane	75-27-4	N.D.	0.2	1.0	2
02898	2-Butanone	78-93-3	N.D.	2.0	10	2
02898	Chloroform	67-66-3	N.D.	0.2	1.0	2
02898	1,2-Dichloropropane	78-87-5	N.D.	0.2	1.0	2
02898	Ethylbenzene	100-41-4	3.8	0.2	1.0	2
02898	Methylene Chloride	75-09-2	N.D.	0.4	1.0	2
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1.0	2
02898	Toluene	108-88-3	0.3 J	0.2	1.0	2
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1.0	2
02898	Xylene (Total)	1330-20-7	5.5	0.2	1.0	2
	Reporting limits were raised due to interference from the sample matrix.					
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.045	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.027	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.088	0.00021	0.0010	20
08357	Acenaphthylene	208-96-8	0.00037	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.0037	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	0.000085	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.0028	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.043	0.00021	0.0010	20
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.13	0.00021	0.0010	20
08357	Naphthalene	91-20-3	0.29	0.0031	0.0052	100
08357	Phenanthrene	85-01-8	0.024	0.00062	0.0010	20

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-11A(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527605
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 15:50 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC11A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Pyrene	129-00-0	0.0013	0.000010	0.000052	1
	The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 19:51	Sara E Johnson	2
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 19:51	Sara E Johnson	2
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 09:48	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 01:20	Gregory J Drahovsky	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 15:47	Dale R Stoneroad	20
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 19:08	Dale R Stoneroad	100
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 23:50	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 23:50	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 23:50	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-48B(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527606
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 08:25 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC48B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.0007 J	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.0034	0.000011	0.000053	1
08357	Acenaphthylene	208-96-8	0.00011	0.000011	0.000053	1
08357	Anthracene	120-12-7	N.D.	0.000011	0.000053	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000011	0.000053	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000053	0.000053	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000011	0.000053	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000011	0.000053	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000011	0.000053	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000053	0.000053	1
08357	Fluoranthene	206-44-0	0.000011 J	0.000011	0.000053	1
08357	Fluorene	86-73-7	0.00018	0.000011	0.000053	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000011	0.000053	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000011	0.000053	1
08357	2-Methylnaphthalene	91-57-6	0.0051	0.000011	0.000053	1
08357	Naphthalene	91-20-3	0.031	0.00032	0.00053	10
08357	Phenanthrene	85-01-8	N.D.	0.000032	0.000053	1
08357	Pyrene	129-00-0	N.D.	0.000011	0.000053	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-48B(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527606
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 08:25 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC48B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 16:34	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 16:34	Jason M Long	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 10:13	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 01:52	Gregory J Drahovsky	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 16:21	Dale R Stoneroad	10
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 23:53	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 23:53	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 23:53	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-48A(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527607
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 09:15 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC48A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.000077	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000052	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000053	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	0.000015 J	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000053	0.000052	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.000014 J	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.000018 J	0.000010	0.000052	1
08357	Naphthalene	91-20-3	0.000054	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000052	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-48A(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527607
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 09:15 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC48A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 16:56	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 16:56	Jason M Long	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 10:38	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 02:25	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/22/2012 23:57	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/22/2012 23:57	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/22/2012 23:57	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-48(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527608
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 09:50 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-48

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	15	25	5
02898	Benzene	71-43-2	N.D.	0.5	2.5	5
02898	Bromodichloromethane	75-27-4	N.D.	0.5	2.5	5
02898	2-Butanone	78-93-3	N.D.	5.0	25	5
02898	Chloroform	67-66-3	N.D.	0.5	2.5	5
02898	1,2-Dichloropropane	78-87-5	N.D.	0.5	2.5	5
02898	Ethylbenzene	100-41-4	N.D.	0.5	2.5	5
02898	Methylene Chloride	75-09-2	N.D.	1.0	2.5	5
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	2.5	5
02898	Toluene	108-88-3	N.D.	0.5	2.5	5
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	2.5	5
02898	Xylene (Total)	1330-20-7	N.D.	0.5	2.5	5
	Reporting limits were raised due to sample foaming.					
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.0026	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.000039 J	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	0.000011 J	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.000030 J	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.00037	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000052	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	0.00018	0.000031	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-48(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527608
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 09:50 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-48

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Pyrene	129-00-0	0.00014	0.000010	0.000052	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0067 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0036 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 17:18	Jason M Long	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 17:18	Jason M Long	5
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 11:03	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 11:17	Dale R Stoneroad	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/23/2012 00:00	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/23/2012 00:00	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/23/2012 00:00	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-29(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527609
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 10:45 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-29

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	15	25	5
02898	Benzene	71-43-2	N.D.	0.5	2.5	5
02898	Bromodichloromethane	75-27-4	N.D.	0.5	2.5	5
02898	2-Butanone	78-93-3	N.D.	5.0	25	5
02898	Chloroform	67-66-3	N.D.	0.5	2.5	5
02898	1,2-Dichloropropane	78-87-5	N.D.	0.5	2.5	5
02898	Ethylbenzene	100-41-4	N.D.	0.5	2.5	5
02898	Methylene Chloride	75-09-2	N.D.	1.0	2.5	5
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	2.5	5
02898	Toluene	108-88-3	N.D.	0.5	2.5	5
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	2.5	5
02898	Xylene (Total)	1330-20-7	N.D.	0.5	2.5	5
	Reporting limits were raised due to sample foaming.					
GC/MS Semivolatiles	**SW-846 8270D**		mg/l	mg/l	mg/l	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		mg/l	mg/l	mg/l	
08357	Acenaphthene	83-32-9	0.00031	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.000028 J	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.000035 J	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.000056	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000052	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-29(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527609
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 10:45 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-29

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Pyrene	129-00-0	0.000019 J	0.000010	0.000052	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0082 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.239	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0030 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 17:40	Jason M Long	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 17:40	Jason M Long	5
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 11:28	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 11:50	Dale R Stoneroad	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/23/2012 00:11	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/23/2012 00:11	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/23/2012 00:11	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-33(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527610
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 11:50 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-33

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	0.1 J	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	0.1 J	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	2.1	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.058	0.00021	0.0010	20
08357	Acenaphthylene	208-96-8	0.00022	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.00021	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.000011 J	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.00039	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.00036	0.000010	0.000052	1
08357	Naphthalene	91-20-3	0.00094	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	0.0035	0.000031	0.000052	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-33(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527610
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 11:50 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-33

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 18:02	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 18:02	Jason M Long	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 11:53	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 13:30	Dale R Stoneroad	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 16:54	Dale R Stoneroad	20
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/23/2012 00:14	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/23/2012 00:14	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/23/2012 00:14	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-35(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527611
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 12:35 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-35

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	0.9	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	12	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.4 J	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	11	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.063	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	0.0002 J	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.28	0.003	0.005	5
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	0.0005 J	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.45	0.0021	0.010	200
08357	Acenaphthylene	208-96-8	0.0024	0.00021	0.0010	20
08357	Anthracene	120-12-7	0.013	0.00021	0.0010	20
08357	Benzo(a)anthracene	56-55-3	0.00028 J	0.00021	0.0010	20
08357	Benzo(a)pyrene	50-32-8	N.D.	0.00010	0.0010	20
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.00021	0.0010	20
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00021	0.0010	20
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.00021	0.0010	20
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00010	0.0010	20
08357	Fluoranthene	206-44-0	0.013	0.00021	0.0010	20
08357	Fluorene	86-73-7	0.20	0.00021	0.0010	20
08357	Hexachlorobenzene	118-74-1	N.D.	0.00021	0.0010	20
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00021	0.0010	20
08357	2-Methylnaphthalene	91-57-6	0.24	0.0021	0.010	200
08357	Naphthalene	91-20-3	0.44	0.0062	0.010	200
08357	Phenanthrene	85-01-8	0.15	0.00062	0.0010	20
08357	Pyrene	129-00-0	0.0064	0.00021	0.0010	20

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-35(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527611
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 12:35 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-35

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Reporting limits were raised due to interference from the sample matrix.						
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 18:24	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 18:24	Jason M Long	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 12:19	Linda M Hartenstine	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 16:57	Linda M Hartenstine	5
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 17:28	Dale R Stoneroad	20
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12021WAA026	01/25/2012 18:34	Dale R Stoneroad	200
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12021WAA026	01/22/2012 18:30	Elaine F Stoltzfus	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/23/2012 00:18	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/23/2012 00:18	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/23/2012 00:18	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-34(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527612
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 13:15 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-34

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	7.0	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	0.001	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.004	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.089	0.00020	0.0010	20
08357	Acenaphthylene	208-96-8	0.00025	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.0019	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	0.00049	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	0.000093	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	0.00020	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.000017 J	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	0.000070	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.0046	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.016	0.00020	0.0010	20
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.000017 J	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.00050	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.00020	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	0.013	0.00061	0.0010	20
08357	Pyrene	129-00-0	0.0030	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-34(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527612
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 13:15 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-34

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0062 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0012 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 03:43	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 03:43	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 12:44	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/30/2012 15:34	Dale R Stoneroad	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/31/2012 05:42	Mark A Clark	20
10470	BNA Water Extraction (SIM)	SW-846 3510C	2	12025WAC026	01/25/2012 16:45	JoElla L Rice	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/23/2012 00:21	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/23/2012 00:21	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/23/2012 00:21	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-29A(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527613
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 14:10 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC29A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	1.7	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	0.3 J	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.1 J	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	7.3	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.0005 J	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.076	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.22	0.00051	0.0026	50
08357	Acenaphthylene	208-96-8	0.00084	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.0062	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.0034	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.086	0.00051	0.0026	50
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.00011	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.0013	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	0.088	0.0015	0.0026	50
08357	Pyrene	129-00-0	0.0019	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-29A(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527613
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 14:10 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC29A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 19:07	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 19:07	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 13:09	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/30/2012 16:05	Dale R Stoneroad	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/31/2012 06:13	Dale R Stoneroad	50
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/31/2012 06:13	Mark A Clark	50
10470	BNA Water Extraction (SIM)	SW-846 3510C	2	12025WAC026	01/25/2012 16:45	JoElla L Rice	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/23/2012 00:25	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/23/2012 00:25	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/23/2012 00:25	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: DUP-03(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527614
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 14:10 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WCFD3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	1.8	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	0.3 J	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	7.4	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.0006 J	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.076	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.21	0.00051	0.0025	50
08357	Acenaphthylene	208-96-8	0.0010	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.0063	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.0035	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.083	0.00051	0.0025	50
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.00010	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.0012	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	0.074	0.0015	0.0025	50
08357	Pyrene	129-00-0	0.0019	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: DUP-03(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527614
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 14:10 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WCFD3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 19:29	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 19:29	Sara E Johnson	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12021WAH026	01/24/2012 13:34	Linda M Hartenstine	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/30/2012 16:37	Dale R Stoneroad	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/31/2012 07:15	Mark A Clark	50
10470	BNA Water Extraction (SIM)	SW-846 3510C	2	12025WAC026	01/25/2012 16:45	JoElla L Rice	1
11010	8270D BNA Extraction	SW-846 3510C	2	12021WAH026	01/23/2012 09:00	Olivia Arosemena	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/23/2012 00:28	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/23/2012 00:28	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/23/2012 00:28	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-14A(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527615
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 15:15 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC14A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	4.3	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	0.4 J	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.4 J	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	3.7	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.015	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	0.0002 J	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.022	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.17	0.00021	0.0010	20
08357	Acenaphthylene	208-96-8	0.00044	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.0078	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	0.00026	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	0.000022 J	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	0.000040 J	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	0.000013 J	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	0.000017 J	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.010	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.082	0.00021	0.0010	20
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.14	0.00021	0.0010	20
08357	Naphthalene	91-20-3	0.0059	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	0.095	0.00062	0.0010	20
08357	Pyrene	129-00-0	0.0054	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-14A(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527615
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 15:15 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC14A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.						
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 04:05	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 04:05	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 00:19	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/30/2012 17:08	Dale R Stoneroad	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/31/2012 07:46	Dale R Stoneroad	20
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/31/2012 07:46	Mark A Clark	20
10470	BNA Water Extraction (SIM)	SW-846 3510C	2	12025WAC026	01/25/2012 16:45	JoElla L Rice	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120200651001	01/23/2012 00:32	Tara L Snyder	1
07051	Chromium	SW-846 6010C	1	120200651001	01/23/2012 00:32	Tara L Snyder	1
07053	Copper	SW-846 6010C	1	120200651001	01/23/2012 00:32	Tara L Snyder	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651001	01/20/2012 13:15	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-24R(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527616
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 16:00 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC24R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	0.5 J	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	11	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.3 J	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	4.6	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.059	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.16	0.001	0.002	2
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.42	0.00051	0.0025	50
08357	Acenaphthylene	208-96-8	0.0012	0.000051	0.00025	5
08357	Anthracene	120-12-7	0.0041	0.000051	0.00025	5
08357	Benzo(a)anthracene	56-55-3	0.000059 J	0.000051	0.00025	5
08357	Benzo(a)pyrene	50-32-8	N.D.	0.000025	0.00025	5
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000051	0.00025	5
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000051	0.00025	5
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000051	0.00025	5
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.000025	0.00025	5
08357	Fluoranthene	206-44-0	0.00073	0.000051	0.00025	5
08357	Fluorene	86-73-7	0.16	0.00051	0.0025	50
08357	Hexachlorobenzene	118-74-1	N.D.	0.000051	0.00025	5
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000051	0.00025	5
08357	2-Methylnaphthalene	91-57-6	0.020	0.000051	0.00025	5
08357	Naphthalene	91-20-3	0.061	0.0015	0.0025	50
08357	Phenanthrene	85-01-8	0.076	0.0015	0.0025	50
08357	Pyrene	129-00-0	0.00044	0.000051	0.00025	5

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-24R(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527616
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 16:00 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC24R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Reporting limits were raised due to interference from the sample matrix.						
Metals		**SW-846 6010C**	mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0109 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0031 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0014 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 04:27	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 04:27	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 00:43	Jennifer R Riggs	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 09:48	Linda M Hartenstine	2
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/31/2012 06:44	Mark A Clark	5
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/31/2012 08:17	Mark A Clark	50
10470	BNA Water Extraction (SIM)	SW-846 3510C	2	12025WAC026	01/25/2012 16:45	JoElla L Rice	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120200651003	01/21/2012 00:05	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120200651003	01/21/2012 00:05	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120200651003	01/21/2012 00:05	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651003	01/20/2012 13:21	James L Mertz	1

*=This limit was used in the evaluation of the final result

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2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: EB-02(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527617
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 16:45 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WCEB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.000054	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.000022 J	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: EB-02(01-19-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6527617
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/19/2012 16:45 by DR

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WCEB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 04:49	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 04:49	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 01:08	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12025WAC026	01/30/2012 18:11	Dale R Stoneroad	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	2	12025WAC026	01/25/2012 16:45	JoElla L Rice	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120200651003	01/21/2012 00:27	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120200651003	01/21/2012 00:27	John W Yanzuk II	1
07053	Copper	SW-846 6010C	1	120200651003	01/21/2012 00:27	John W Yanzuk II	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120200651003	01/20/2012 13:21	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: TB-01(01-19-2012) Water
SWP Wilmington, NC

LLI Sample # WW 6527618
LLI Group # 1285903
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/12/2012

Submitted: 01/20/2012 09:05
Reported: 02/01/2012 16:02

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WC-TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120251AA	01/25/2012 12:12	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120251AA	01/25/2012 12:12	Jason M Long	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285903
Reported: 02/01/12 at 04:02 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: C120242AA	Sample number(s): 6527596								
Acetone	N.D.	3.0	5.0	ug/l	95	93	74-137	2	30
Benzene	N.D.	0.1	0.5	ug/l	103	103	80-120	0	30
Bromodichloromethane	N.D.	0.1	0.5	ug/l	111	111	80-120	0	30
2-Butanone	N.D.	1.0	5.0	ug/l	99	99	70-130	0	30
Chloroform	N.D.	0.1	0.5	ug/l	109	108	80-120	1	30
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	105	105	80-120	0	30
Ethylbenzene	N.D.	0.1	0.5	ug/l	106	105	80-120	0	30
Methylene Chloride	N.D.	0.2	0.5	ug/l	103	104	80-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	103	105	80-125	2	30
Toluene	N.D.	0.1	0.5	ug/l	102	102	80-120	0	30
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	107	105	80-120	2	30
Xylene (Total)	N.D.	0.1	0.5	ug/l	105	105	80-120	0	30
Batch number: C120251AA	Sample number(s): 6527597-6527611,6527613-6527614,6527618								
Acetone	N.D.	3.0	5.0	ug/l	85		74-137		
Benzene	N.D.	0.1	0.5	ug/l	104		80-120		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	112		80-120		
2-Butanone	N.D.	1.0	5.0	ug/l	94		70-130		
Chloroform	N.D.	0.1	0.5	ug/l	109		80-120		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	106		80-120		
Ethylbenzene	N.D.	0.1	0.5	ug/l	103		80-120		
Methylene Chloride	N.D.	0.2	0.5	ug/l	105		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	105		80-125		
Toluene	N.D.	0.1	0.5	ug/l	100		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	106		80-120		
Xylene (Total)	N.D.	0.1	0.5	ug/l	104		80-120		
Batch number: C120261AA	Sample number(s): 6527612,6527615-6527617								
Acetone	N.D.	3.0	5.0	ug/l	92		74-137		
Benzene	N.D.	0.1	0.5	ug/l	105		80-120		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	110		80-120		
2-Butanone	N.D.	1.0	5.0	ug/l	98		70-130		
Chloroform	N.D.	0.1	0.5	ug/l	105		80-120		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	108		80-120		
Ethylbenzene	N.D.	0.1	0.5	ug/l	106		80-120		
Methylene Chloride	N.D.	0.2	0.5	ug/l	107		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	120		80-125		
Toluene	N.D.	0.1	0.5	ug/l	103		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	111		80-120		
Xylene (Total)	N.D.	0.1	0.5	ug/l	107		80-120		
Batch number: 12021WAA026	Sample number(s): 6527596-6527611								
Acenaphthene	N.D.	0.00001	0.00005	mg/l	100	102	74-109	2	30
		0	0						
Acenaphthylene	N.D.	0.00001	0.00005	mg/l	108	110	70-110	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285903
Reported: 02/01/12 at 04:02 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Anthracene	N.D.	0.000010	0.00005	mg/l	105	107	66-111	2	30
Benzo(a)anthracene	N.D.	0.000010	0.00005	mg/l	95	96	72-114	1	30
Benzo(a)pyrene	N.D.	0.000050	0.00005	mg/l	106	108	60-127	1	30
Benzo(b)fluoranthene	N.D.	0.000010	0.00005	mg/l	104	105	58-151	2	30
Benzo(g,h,i)perylene	N.D.	0.000010	0.00005	mg/l	103	104	57-131	1	30
Benzo(k)fluoranthene	N.D.	0.000010	0.00005	mg/l	101	101	59-130	0	30
Dibenz(a,h)anthracene	N.D.	0.000050	0.00005	mg/l	106	108	55-134	1	30
Fluoranthene	N.D.	0.000010	0.00005	mg/l	104	105	75-116	1	30
Fluorene	N.D.	0.000010	0.00005	mg/l	105	106	75-114	1	30
Hexachlorobenzene	N.D.	0.000010	0.00005	mg/l	105	107*	66-106	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.000010	0.00005	mg/l	105	106	53-158	1	30
2-Methylnaphthalene	N.D.	0.000010	0.00005	mg/l	99	101	75-115	2	30
Naphthalene	N.D.	0.000030	0.00005	mg/l	99	101	72-109	2	30
Phenanthrene	N.D.	0.000030	0.00005	mg/l	99	101	76-111	2	30
Pyrene	N.D.	0.000010	0.00005	mg/l	99	101	69-118	2	30
Batch number: 12021WAH026	Sample number(s): 6527596-6527614								
Di-n-butylphthalate	N.D.	0.002	0.005	mg/l	106	104	76-115	2	30
Carbazole	N.D.	0.0005	0.001	mg/l	107	103	75-120	4	30
2-Chloronaphthalene	N.D.	0.0004	0.001	mg/l	94	91	54-132	3	30
2-Chlorophenol	N.D.	0.0005	0.001	mg/l	97	100	71-114	3	30
Chrysene	N.D.	0.0001	0.0005	mg/l	102	102	76-116	0	30
Dibenzofuran	N.D.	0.0005	0.001	mg/l	97	97	75-117	0	30
2,4-Dimethylphenol	N.D.	0.0005	0.001	mg/l	98	99	72-110	1	30
bis(2-Ethylhexyl)phthalate	N.D.	0.002	0.005	mg/l	109	108	78-117	0	30
2-Methylphenol	N.D.	0.0005	0.001	mg/l	89	95	58-110	6	30
3-Methylphenol, 4-Methylphenol	N.D.	0.0005	0.001	mg/l	81	83	49-108	4	30
Pentachlorophenol	N.D.	0.001	0.005	mg/l	107	104	53-110	4	30
Phenol	N.D.	0.0005	0.001	mg/l	46	48	21-67	2	30
2,3,4,6-Tetrachlorophenol	N.D.	0.0005	0.001	mg/l	102	104	66-129	2	30
Batch number: 12023WAG026	Sample number(s): 6527615-6527617								
Di-n-butylphthalate	N.D.	0.002	0.005	mg/l	108	106	76-115	1	30
Carbazole	N.D.	0.0005	0.001	mg/l	105	105	75-120	0	30
2-Chloronaphthalene	N.D.	0.0004	0.001	mg/l	95	96	54-132	1	30
2-Chlorophenol	N.D.	0.0005	0.001	mg/l	101	102	71-114	1	30
Chrysene	N.D.	0.0001	0.0005	mg/l	100	101	76-116	1	30
Dibenzofuran	N.D.	0.0005	0.001	mg/l	99	101	75-117	1	30
2,4-Dimethylphenol	N.D.	0.0005	0.001	mg/l	101	101	72-110	0	30
bis(2-Ethylhexyl)phthalate	N.D.	0.002	0.005	mg/l	108	109	78-117	1	30
2-Methylphenol	N.D.	0.0005	0.001	mg/l	99	100	58-110	1	30
3-Methylphenol, 4-Methylphenol	N.D.	0.0005	0.001	mg/l	92	91	49-108	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285903
Reported: 02/01/12 at 04:02 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Pentachlorophenol	N.D.	0.001	0.005	mg/l	107	107	53-110	1	30
Phenol	N.D.	0.0005	0.001	mg/l	62	59	21-67	5	30
2,3,4,6-Tetrachlorophenol	N.D.	0.0005	0.001	mg/l	102	104	66-129	2	30
Batch number: 12025WAC026	Sample number(s): 6527612-6527617								
Acenaphthene	N.D.	0.00001 0	0.00005 0	mg/l	94	96	74-109	2	30
Acenaphthylene	N.D.	0.00001 0	0.00005 0	mg/l	104	105	70-110	0	30
Anthracene	N.D.	0.00001 0	0.00005 0	mg/l	102	100	66-111	1	30
Benzo(a)anthracene	N.D.	0.00001 0	0.00005 0	mg/l	98	94	72-114	4	30
Benzo(a)pyrene	N.D.	0.00000 50	0.00005 0	mg/l	101	99	60-127	2	30
Benzo(b)fluoranthene	N.D.	0.00001 0	0.00005 0	mg/l	96	102	58-151	6	30
Benzo(g,h,i)perylene	N.D.	0.00001 0	0.00005 0	mg/l	101	98	57-131	3	30
Benzo(k)fluoranthene	N.D.	0.00001 0	0.00005 0	mg/l	107	97	59-130	10	30
Dibenz(a,h)anthracene	N.D.	0.00000 50	0.00005 0	mg/l	96	93	55-134	3	30
Fluoranthene	N.D.	0.00001 0	0.00005 0	mg/l	100	97	75-116	2	30
Fluorene	N.D.	0.00001 0	0.00005 0	mg/l	97	98	75-114	2	30
Hexachlorobenzene	N.D.	0.00001 0	0.00005 0	mg/l	97	95	66-106	2	30
Indeno(1,2,3-cd)pyrene	N.D.	0.00001 0	0.00005 0	mg/l	98	96	53-158	2	30
2-Methylnaphthalene	N.D.	0.00001 0	0.00005 0	mg/l	94	92	75-115	2	30
Naphthalene	N.D.	0.00003 0	0.00005 0	mg/l	92	91	72-109	2	30
Phenanthrene	N.D.	0.00003 0	0.00005 0	mg/l	97	96	76-111	1	30
Pyrene	N.D.	0.00001 0	0.00005 0	mg/l	104	102	69-118	2	30
Batch number: 120200651001	Sample number(s): 6527596-6527615								
Arsenic	N.D.	0.0051	0.0400	mg/l	99		80-120		
Chromium	N.D.	0.0011	0.0300	mg/l	96		80-120		
Copper	N.D.	0.00094	0.0200	mg/l	97		80-120		
Batch number: 120200651003	Sample number(s): 6527616-6527617								
Arsenic	N.D.	0.0051	0.0400	mg/l	99		80-120		
Chromium	0.0013 J	0.0011	0.0300	mg/l	98		80-120		
Copper	0.00095 J	0.00094	0.0200	mg/l	99		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285903
Reported: 02/01/12 at 04:02 PM

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: C120242AA	Sample number(s): 6527596 BKG: P524529								
Acetone						13	13	1 (1)	30
Benzene						N.D.	N.D.	0 (1)	30
Bromodichloromethane						N.D.	N.D.	0 (1)	30
2-Butanone						N.D.	N.D.	0 (1)	30
Chloroform						N.D.	N.D.	0 (1)	30
1,2-Dichloropropane						N.D.	N.D.	0 (1)	30
Ethylbenzene						N.D.	N.D.	0 (1)	30
Methylene Chloride						N.D.	N.D.	0 (1)	30
1,1,2,2-Tetrachloroethane						N.D.	N.D.	0 (1)	30
Toluene						N.D.	N.D.	0 (1)	30
1,1,2-Trichloroethane						N.D.	N.D.	0 (1)	30
Xylene (Total)						N.D.	N.D.	0 (1)	30
Batch number: C120251AA	Sample number(s): 6527597-6527611,6527613-6527614,6527618 UNSPK: 6527597								
Acetone	92	93	57-163	1	30				
Benzene	9 (2)	8 (2)	87-126	0	30				
Bromodichloromethane	111	111	82-133	0	30				
2-Butanone	86	86	58-168	0	30				
Chloroform	106	107	86-136	1	30				
1,2-Dichloropropane	107	105	83-126	1	30				
Ethylbenzene	105	105	80-140	0	30				
Methylene Chloride	106	105	84-122	1	30				
1,1,2,2-Tetrachloroethane	106	104	70-125	1	30				
Toluene	101	100	83-127	1	30				
1,1,2-Trichloroethane	107	106	85-129	1	30				
Xylene (Total)	105	105	84-125	0	30				
Batch number: C120261AA	Sample number(s): 6527612,6527615-6527617 UNSPK: P527741								
Acetone	90	89	57-163	1	30				
Benzene	109	111	87-126	1	30				
Bromodichloromethane	110	112	82-133	1	30				
2-Butanone	93	93	58-168	0	30				
Chloroform	109	109	86-136	0	30				
1,2-Dichloropropane	111	112	83-126	1	30				
Ethylbenzene	110	111	80-140	1	30				
Methylene Chloride	112	112	84-122	0	30				
1,1,2,2-Tetrachloroethane	111	112	70-125	1	30				
Toluene	107	109	83-127	2	30				
1,1,2-Trichloroethane	111	111	85-129	0	30				
Xylene (Total)	110	111	84-125	1	30				
Batch number: 120200651001	Sample number(s): 6527596-6527615 UNSPK: 6527598 BKG: 6527598								
Arsenic	96	101	81-123	4	20	0.0339 J	0.0370 J	9 (1)	20
Chromium	94	95	81-120	0	20	N.D.	N.D.	0 (1)	20
Copper	97	98	86-122	1	20	N.D.	N.D.	0 (1)	20
Batch number: 120200651003	Sample number(s): 6527616-6527617 UNSPK: 6527616 BKG: 6527616								
Arsenic	97	97	81-123	0	20	0.0109 J	0.0072 J	40* (1)	20
Chromium	93	93	81-120	1	20	0.0031 J	0.0028 J	9 (1)	20
Copper	97	97	86-122	0	20	0.0014 J	0.0013 J	1 (1)	20

Surrogate Quality Control

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285903
Reported: 02/01/12 at 04:02 PM

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA SW846/8260 (water-25ml) #1
Batch number: C120242AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6527596	106	103	97	97
Blank	106	105	96	95
DUP	107	108	95	97
LCS	103	102	100	103
LCSD	103	103	99	103
Limits:	77-114	74-113	77-110	78-110

Analysis Name: EPA SW846/8260 (water-25ml) #1
Batch number: C120251AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6527597	100	105	97	100
6527598	104	103	96	97
6527599	104	103	96	95
6527600	105	107	97	97
6527601	104	103	97	96
6527602	105	103	97	96
6527603	106	103	96	96
6527604	107	108	96	104
6527605	99	101	98	101
6527606	104	102	97	97
6527607	103	103	97	97
6527608	103	101	97	97
6527609	104	103	97	97
6527610	104	103	97	103
6527611	103	103	96	105
6527613	100	103	97	101
6527614	100	102	97	103
6527618	105	103	96	95
Blank	103	104	96	96
LCS	103	103	98	103
MS	101	102	99	102
MSD	101	102	99	102
Limits:	77-114	74-113	77-110	78-110

Analysis Name: EPA SW846/8260 (water-25ml) #1
Batch number: C120261AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6527612	100	102	97	98
6527615	98	100	98	101
6527616	100	105	97	102
6527617	99	100	98	99
Blank	100	102	97	98
LCS	100	102	98	107
MS	100	102	98	102
MSD	100	103	99	102

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285903
Reported: 02/01/12 at 04:02 PM

Surrogate Quality Control

Limits: 77-114 74-113 77-110 78-110

Analysis Name: PAHs in waters by SIM
Batch number: 12021WAA026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6527596	105	100	121
6527597	136	101	122
6527598	112	101	116
6527599	109	104	117
6527600	94	86	101
6527601	110	102	121
6527602	109	100	112
6527603	109	101	120
6527604	119	95	113
6527605	165*	96	118
6527606	109	98	118
6527607	121	102	119
6527608	108	99	116
6527609	111	103	117
6527610	109	96	114
6527611	96	101	118
Blank	114	117	145*
LCS	104	104	120
LCSD	107	106	120
Limits:	64-147	68-132	53-129

Analysis Name: TCL Semivolatiles (8270D)
Batch number: 12021WAH026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6527596	34	57	98	94	90	107
6527597	36	56	91	86	82	97
6527598	44	57	98	91	89	108
6527599	37	60	97	94	90	98
6527600	48	60	93	86	81	92
6527601	31	53	95	87	86	106
6527602	36	55	96	88	83	94
6527603	33	55	95	90	85	102
6527604	51	62	94	86	82	97
6527605	36	57	95	90	83	88
6527606	32	53	90	81	80	99
6527607	35	58	101	81	77	97
6527608	43	57	95	88	82	104
6527609	44	54	92	82	82	99
6527610	34	56	95	87	79	103
6527611	36	54	94	87	83	89
6527612	43	57	99	86	84	101
6527613	38	62	94	90	84	98
6527614	35	56	99	86	84	96
Blank	36	59	96	92	86	108
LCS	40	65	95	96	96	105
LCSD	43	67	97	98	94	105
Limits:	10-74	10-98	22-150	52-120	63-114	34-118

Analysis Name: TCL Semivolatiles (8270D)

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1285903
Reported: 02/01/12 at 04:02 PM

Surrogate Quality Control

Batch number: 12023WAG026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6527615	46	65	97	95	96	104
6527616	58	65	94	95	91	103
6527617	39	64	104	99	98	115
Blank	50	67	94	92	92	107
LCS	58	75	98	98	98	103
LCSD	55	73	98	101	97	104
Limits:	10-74	10-98	22-150	52-120	63-114	34-118

Analysis Name: PAHs in waters by SIM
Batch number: 12025WAC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6527612	101	90	111
6527613	109	79	95
6527614	111	78	109
6527615	150*	75	113
6527616	104	78	105
6527617	104	100	115
Blank	101	98	116
LCS	101	98	114
LCSD	100	99	111
Limits:	64-147	68-132	53-129

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Project Name: SWP Wilmington, NC
LLI Group #: 1285903

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260B 25mL purge, GC/MS Volatiles

Batch #: C120251AA (Sample number(s): 6527597-6527611, 6527613-6527614, 6527618 UNSPK: 6527597)

The recovery(ies) for the following analyte(s) in the MS and/or MSD was outside the acceptance window: Benzene

Sample #s: 6527605

Reporting limits were raised due to interference from the sample matrix.

Sample #s: 6527608, 6527609

Reporting limits were raised due to sample foaming.

SW-846 8270D SIM, GC/MS Semivolatiles

Batch #: 12021WAA026 (Sample number(s): 6527596-6527611)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: Hexachlorobenzene

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 6527605, Blank

Batch #: 12025WAC026 (Sample number(s): 6527612-6527617)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 6527615

Sample #s: 6527611, 6527616

Reporting limits were raised due to interference from the sample matrix.

Sample #s: 6527605, 6527615

The surrogate data is outside the QC limits due to unresolvable matrix problems
evident in the sample chromatogram.

SW-846 6010C, Metals

Batch #: 120200651003 (Sample number(s): 6527616-6527617 UNSPK: 6527616 BKG: 6527616)

The duplicate RPD for the following analyte(s) exceeded the acceptance window:
Arsenic

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 12859 Group# 1295903 Sample # 6527596-618

COC # 278154

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: SOUTHERN WOOD PIEDMONT Acct. #:

Project Name/#: WILMINGTON PWSID #:

Project Manager: P.O.#:

Sampler: DANNY RAWL & LAUREN WAGO Quote #:

Name of state where samples were collected: NORTH CAROLINA

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) (3) (4) (5) (6)

Sample identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water (Potable / NPDES)	Matrix: Other	Total # of Containers	METALS: ARSENIC, CHROMIUM, COPPER	8260 STANDARD WATER MASTER	8270D TCL SEMIVOLATILES	8270D-SIM TCL SEMIVOLATILES	BATCH METALS QC						Remarks (Temperature of samples upon receipt (if requested))
MW-42 (01-19-2012)	1/19/12	0840	✓			✓		8	1	3	2	2							cooler temp 0.8-1.8°C
MW-41 (01-19-2012)	1/19/12	0915	✓			✓		8	1	3	2	2							
MW-09 (01-19-2012)	1/19/12	1000	✓			✓		9	1	3	2	2	1						
MW-10 (01-19-2012)	1/19/12	1040	✓			✓		8	1	3	2	2							
MW-20 (01-19-2012)	1/19/12	1145	✓			✓		8	1	3	2	2							
MW-22B (01-19-2012)	1/19/12	1235	✓			✓		8	1	3	2	2							
MW-40 (01-19-2012)	1/19/12	1325	✓			✓		8	1	3	2	2							
MW-46B (01-19-2012)	1/19/12	1405	✓			✓		9	1	3	2	2	1						
MW-19 (01-19-2012)	1/19/12	1510	✓			✓		8	1	3	2	2							
MW-11A (01-19-2012)	1/19/12	1550	✓			✓		8	1	3	2	2							

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ) Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Type IV (CLP SOW) Internal COC Required? Yes / No
Type VI (Raw Data Only)

SDG Complete? Yes No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
Lauren Wago	1-19-12	1700			

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Issued by Dept. 6042 Management
2102.05

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 12858 Group# 1285903 Sample # 6527596-619

COC # 278155

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: SOUTHERN WOOD PIEDMONT Acct. #:

Project Name/#: WILMINGTON PWSID #:

Project Manager: P.O.#:

Sampler: DANNY RAWL & LAUREN WARGO Quote #:

Name of state where samples were collected: NORTH CAROLINA

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	Composite	Matrix: Soil	Water (Potable / NPDES)	Other	(4) Total # of Containers	(5) Analyses Requested / Preservation Codes: METALS: ARSENIC CHROMIUM COPPER	8260 STANDARD WATER MASTER	8270D TCL SEMIVOLATILES	8270D-SIM TCL SEMIVOLATILES							Remarks	(6) Temperature of samples upon receipt (if requested)
MW-48B (01-19-2012)	1/19/12	0825	✓			✓		8	1	3	2	2								
MW-48A (01-19-2012)	1/19/12	0915	✓			✓		8	1	3	2	2								
MW-48 (01-19-2012)	1/19/12	0950	✓			✓		8	1	3	2	2								
MW-29 (01-19-2012)	1/19/12	1045	✓			✓		8	1	3	2	2								
MW-33 (01-19-2012)	1/19/12	1150	✓			✓		8	1	3	2	2								
MW-35 (01-19-2012)	1/19/12	1235	✓			✓		8	1	3	2	2								
MW-34 (01-19-2012)	1/19/12	1315	✓			✓		8	1	3	2	2								
MW-29A (01-19-2012)	1/19/12	1410	✓			✓		8	1	3	2	2								
DUP. 03 (01-19-2012)	1/19/12	1410	✓			✓		8	1	3	2	2								
MW-14A (01-19-2012)	1/19/12	1515	✓			✓		8	1	3	2	2								

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
Lauren Wargo	1-19-12	1700			

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 12858 Group# 1285903 Sample # 6527596618 **COC #** 278156

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: SOUTHERN WOOD PIEDMONT Acct. #:

Project Name/#: WILMINGTON PWSID #:

Project Manager: P.O.#:

Sampler: DANNY RAWL & LAUREN WARGO Quote #:

Name of state where samples were collected: NORTH CAROLINA

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) (3) (4) (5) (6)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water (Check if Applicable: Potable, NPDES)	Matrix: Other	Total # of Containers	Analyses Requested / Preservation Codes: METALS: ARSENIC, CHROMIUM, COPPER	8260 STANDARD WATER MASTER	8270D TCL SEMIVOLATILES	8270D-SIM TCL SEMIVOLATILES						Remarks	Temperature of samples upon receipt (if requested)
MW-24R (01-19-2012)	1/19/12	1600	✓			✓		8	1	3	2	2							
~~MW~~ EQUIP. 02 (01-19-2012)	1/19/12	1645	✓			✓		8	1	3	2	2							
TRIP BLANKS	1/12					✓		2											

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed:

Rush results requested by (please circle): Phone Fax E-mail

Phone #: Fax #:

E-mail address:

(8) **Data Package Options** (please circle if required)

Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)

Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
Lauren Wargo	1-19-12	1700			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	1/20/12	0905

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Environmental Sample Administration
Receipt Documentation Log

Client/Project: SWP

Date of Receipt: 1/20/12

Time of Receipt: 0905

Source Code: 50

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	429951	1.1°C	TB	WI	Y	B	
2	↓	1.4	↓	↓	↓	↓	
3	↓	1.7	↓	↓	↓	↓	
4	↓	1.3	↓	↓	↓	↓	
5	↓	1.2	↓	↓	↓	↓	
6	↓	1.4	↓	↓	↓	↓	

Number of Trip Blanks received NOT listed on chain of custody: Ø

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [signature] 964 **Date/Time:** 1/20/12 0945

Issued by Dept. 6042 Management

2174.06

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Environmental Sample Administration
Receipt Documentation Log

Client/Project: SWP

Date of Receipt: 1/20/12

Time of Receipt: 0905

Source Code: 50

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
~~1~~ 7	429951	1.3	TB	WI	Y	B	
~~2~~ 8	↓	1.4	↓	↓	↓	↓	
~~3~~ 9	↓	1.8	↓	↓	↓	↓	
~~4~~ 10	↓	0.8	↓	↓	↓	↓	
5 11	↓	1.0	↓	↓	↓	↓	
~~6~~							

Number of Trip Blanks received NOT listed on chain of custody: Ø

Paperwork Discrepancy/Unpacking Problems:

Unpacker Signature/Emp#: [signature] 964 **Date/Time:** 1/20/12 0945

Issued by Dept. 6042 Management

2174.06

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

February 02, 2012

Project: SWP Wilmington, NC

Submittal Date: 01/21/2012
Group Number: 1286039
PO Number: 1685
State of Sample Origin: NC

Client Sample Description	Lancaster Labs (LLI) #
MW-15(01-20-2012) Grab Water	6528392
MW-13(01-20-2012) Grab Water	6528393
MW-18(01-20-2012) Grab Water	6528394
MW-12(01-20-2012) Grab Water	6528395
MW-37(01-20-2012) Grab Water	6528396
MW-47A(01-20-2012) Grab Water	6528397
MW-36(01-20-2012) Grab Water	6528398
DUP-04(01-20-2012) Grab Water	6528399
MW-25(01-20-2012) Grab Water	6528400
EB-03(01-20-2012) Grab Water	6528401
TB-01(01-20-2012) Water	6528402

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Arcadis	Attn: Keith Stang
ELECTRONIC COPY TO	Arcadis	Attn: Crystal Foster
ELECTRONIC COPY TO	ARCADIS U.S., Inc.	Attn: Valerie Kull
ELECTRONIC COPY TO	Schnabel Engineering	Attn: Greg Kuntz

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Questions? Contact your Client Services Representative
Wendy A Kozma at (717) 656-2300 Ext. 1522

Respectfully Submitted,

Mark A. Ratcliff
Senior Specialist

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Analysis Report

Sample Description: MW-15(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528392
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 08:00 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	11	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.0060	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	0.000052	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.00017	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.000034 J	0.000010	0.000051	1
08357	Fluorene	86-73-7	0.000030 J	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.000013 J	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.000033 J	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	0.000020 J	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-15(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528392
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 08:00 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	0.0269 J	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0057 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0031 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 05:11	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 05:11	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 01:33	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/28/2012 00:52	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12024WAF026	01/25/2012 09:20	Catherine R Wiker	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120220651002	01/24/2012 23:49	John W Yanzuk II	1
07051	Chromium	SW-846 6010C	1	120220651002	01/23/2012 12:02	Damary Valentin	1
07053	Copper	SW-846 6010C	1	120220651002	01/23/2012 12:02	Damary Valentin	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120220651002	01/22/2012 23:00	Annamaria Stipkovits	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-13(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528393
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 08:45 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	2.3	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	11	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.6	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	8.0	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.027	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.062	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.32	0.0021	0.010	200
08357	Acenaphthylene	208-96-8	0.0016	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.0072	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	0.00013	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	0.000031 J	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	0.000062	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	0.000044 J	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	0.000021 J	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.0000060 J	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.012	0.00010	0.00052	10
08357	Fluorene	86-73-7	0.025	0.00010	0.00052	10
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.000035 J	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.0010	0.000010	0.000052	1
08357	Naphthalene	91-20-3	0.066	0.00031	0.00052	10
08357	Phenanthrene	85-01-8	0.024	0.00031	0.00052	10
08357	Pyrene	129-00-0	0.0039	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-13(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528393
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 08:45 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0196 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0016 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 05:33	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 05:33	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 01:58	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/28/2012 01:24	Gregory J Drahovsky	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/30/2012 09:30	Joseph M Gambler	10
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/30/2012 13:19	Joseph M Gambler	200
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12024WAF026	01/25/2012 09:20	Catherine R Wiker	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120220651002	01/23/2012 12:26	Damary Valentin	1
07051	Chromium	SW-846 6010C	1	120220651002	01/23/2012 12:26	Damary Valentin	1
07053	Copper	SW-846 6010C	1	120220651002	01/23/2012 12:26	Damary Valentin	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120220651002	01/22/2012 23:00	Annamaria Stipkovits	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-18(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528394
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 09:35 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	270	30	50	10
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.00049	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.000034 J	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000051	1
08357	Naphthalene	91-20-3	N.D.	0.000030	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000030	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-18(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528394
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 09:35 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.215	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0043 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 05:55	Angela D Sneeringer	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 11:17	Angela D Sneeringer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 05:55	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	C120261AA	01/26/2012 11:17	Angela D Sneeringer	10
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 02:23	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/28/2012 01:56	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12024WAF026	01/25/2012 09:20	Catherine R Wiker	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120220651002	01/23/2012 12:30	Damary Valentin	1
07051	Chromium	SW-846 6010C	1	120220651002	01/23/2012 12:30	Damary Valentin	1
07053	Copper	SW-846 6010C	1	120220651002	01/23/2012 12:30	Damary Valentin	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120220651002	01/22/2012 23:00	Annamaria Stipkovits	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-12(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528395
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 10:20 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	0.1 J	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.001	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.005	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	0.003	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.0063	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	0.00017	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.00040	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	0.00010	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	0.000063	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	0.000094	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	0.000065	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	0.000034 J	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	0.000017 J	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.0016	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.0045	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	0.000073	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	0.00068	0.000010	0.000052	1
08357	Naphthalene	91-20-3	0.0012	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	0.0022	0.000031	0.000052	1
08357	Pyrene	129-00-0	0.00069	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-12(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528395
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 10:20 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0014 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0020 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 06:17	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 06:17	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 02:48	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/28/2012 02:28	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12024WAF026	01/25/2012 09:20	Catherine R Wiker	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120220651002	01/23/2012 12:42	Damary Valentin	1
07051	Chromium	SW-846 6010C	1	120220651002	01/23/2012 12:42	Damary Valentin	1
07053	Copper	SW-846 6010C	1	120220651002	01/23/2012 12:42	Damary Valentin	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120220651002	01/22/2012 23:00	Annamaria Stipkovits	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-37(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528396
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 08:15 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM37

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.0059	0.000010	0.000052	1
08357	Acenaphthylene	208-96-8	0.000019 J	0.000010	0.000052	1
08357	Anthracene	120-12-7	0.000034 J	0.000010	0.000052	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000052	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000052	0.000052	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000052	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000052	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000052	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000052	0.000052	1
08357	Fluoranthene	206-44-0	0.000075	0.000010	0.000052	1
08357	Fluorene	86-73-7	0.000014 J	0.000010	0.000052	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000052	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000052	1
08357	2-Methylnaphthalene	91-57-6	N.D.	0.000010	0.000052	1
08357	Naphthalene	91-20-3	N.D.	0.000031	0.000052	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000052	1
08357	Pyrene	129-00-0	0.000012 J	0.000010	0.000052	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-37(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528396
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 08:15 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM37

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0017 J	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 06:39	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 06:39	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 03:13	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/28/2012 03:01	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12024WAF026	01/25/2012 09:20	Catherine R Wiker	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120220651002	01/23/2012 12:45	Damary Valentin	1
07051	Chromium	SW-846 6010C	1	120220651002	01/23/2012 12:45	Damary Valentin	1
07053	Copper	SW-846 6010C	1	120220651002	01/23/2012 12:45	Damary Valentin	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120220651002	01/22/2012 23:00	Annamaria Stipkovits	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-47A(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528397
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 09:10 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM47

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	3.8 J	3.0	5.0	1
02898	Benzene	71-43-2	0.5	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	2.8	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.2 J	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	2.7	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.007	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.19	0.001	0.002	2
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.39	0.0021	0.010	200
08357	Acenaphthylene	208-96-8	0.0014	0.000010	0.000051	1
08357	Anthracene	120-12-7	0.013	0.00010	0.00051	10
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	0.017	0.00010	0.00051	10
08357	Fluorene	86-73-7	0.21	0.0021	0.010	200
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.013	0.00010	0.00051	10
08357	Naphthalene	91-20-3	0.0022	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	0.19	0.0062	0.010	200
08357	Pyrene	129-00-0	0.0069	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: MW-47A(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528397
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 09:10 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM47

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 07:00	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 07:00	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 03:38	Jennifer R Riggs	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 10:14	Linda M Hartenstine	2
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/28/2012 03:34	Gregory J Drahovsky	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/30/2012 10:02	Joseph M Gambler	10
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/30/2012 13:52	Joseph M Gambler	200
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12024WAF026	01/25/2012 09:20	Catherine R Wiker	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120220651002	01/23/2012 12:49	Damary Valentin	1
07051	Chromium	SW-846 6010C	1	120220651002	01/23/2012 12:49	Damary Valentin	1
07053	Copper	SW-846 6010C	1	120220651002	01/23/2012 12:49	Damary Valentin	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120220651002	01/22/2012 23:00	Annamaria Stipkovits	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-36(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528398
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 09:55 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM36

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	30	50	10
02898	Benzene	71-43-2	N.D.	1.0	5.0	10
02898	Bromodichloromethane	75-27-4	N.D.	1.0	5.0	10
02898	2-Butanone	78-93-3	N.D.	10	50	10
02898	Chloroform	67-66-3	N.D.	1.0	5.0	10
02898	1,2-Dichloropropane	78-87-5	N.D.	1.0	5.0	10
02898	Ethylbenzene	100-41-4	5.5	1.0	5.0	10
02898	Methylene Chloride	75-09-2	N.D.	2.0	5.0	10
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.0	5.0	10
02898	Toluene	108-88-3	N.D.	1.0	5.0	10
02898	1,1,2-Trichloroethane	79-00-5	N.D.	1.0	5.0	10
02898	Xylene (Total)	1330-20-7	11	1.0	5.0	10
	Reporting limits were raised due to interference from the sample matrix.					
GC/MS Semivolatiles	**SW-846 8270D**		mg/l	mg/l	mg/l	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.16	0.003	0.005	5
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	0.0004 J	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.34	0.003	0.005	5
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		mg/l	mg/l	mg/l	
08357	Acenaphthene	83-32-9	0.57	0.0051	0.025	500
08357	Acenaphthylene	208-96-8	0.0026	0.00010	0.00051	10
08357	Anthracene	120-12-7	0.020	0.00010	0.00051	10
08357	Benzo(a)anthracene	56-55-3	0.00051	0.00010	0.00051	10
08357	Benzo(a)pyrene	50-32-8	0.000067 J	0.000051	0.00051	10
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.00010	0.00051	10
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00010	0.00051	10
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.00010	0.00051	10
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.000051	0.00051	10
08357	Fluoranthene	206-44-0	0.026	0.00010	0.00051	10
08357	Fluorene	86-73-7	0.33	0.0051	0.025	500
08357	Hexachlorobenzene	118-74-1	N.D.	0.00010	0.00051	10
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00010	0.00051	10
08357	2-Methylnaphthalene	91-57-6	1.0	0.0051	0.025	500
08357	Naphthalene	91-20-3	4.2	0.015	0.025	500
08357	Phenanthrene	85-01-8	0.31	0.015	0.025	500

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: MW-36(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528398
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 09:55 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM36

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Pyrene	129-00-0	0.013	0.00010	0.00051	10
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 07:22	Angela D Sneeringer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 07:22	Angela D Sneeringer	10
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 04:03	Jennifer R Riggs	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 10:39	Linda M Hartenstine	5
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/30/2012 10:35	Joseph M Gambler	10
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/30/2012 14:24	Joseph M Gambler	500
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12024WAF026	01/25/2012 09:20	Catherine R Wiker	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120220651002	01/23/2012 12:53	Damary Valentin	1
07051	Chromium	SW-846 6010C	1	120220651002	01/23/2012 12:53	Damary Valentin	1
07053	Copper	SW-846 6010C	1	120220651002	01/23/2012 12:53	Damary Valentin	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120220651002	01/22/2012 23:00	Annamaria Stipkovits	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: DUP-04(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528399
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 09:55 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLMD4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	7.2	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	0.7	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	14	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	0.15	0.003	0.005	5
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	0.0003 J	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	0.32	0.003	0.005	5
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.46	0.0051	0.026	500
08357	Acenaphthylene	208-96-8	0.0024	0.00010	0.00051	10
08357	Anthracene	120-12-7	0.018	0.00010	0.00051	10
08357	Benzo(a)anthracene	56-55-3	0.00043 J	0.00010	0.00051	10
08357	Benzo(a)pyrene	50-32-8	0.000062 J	0.000051	0.00051	10
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.00010	0.00051	10
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00010	0.00051	10
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.00010	0.00051	10
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.000051	0.00051	10
08357	Fluoranthene	206-44-0	0.024	0.00010	0.00051	10
08357	Fluorene	86-73-7	0.28	0.0051	0.026	500
08357	Hexachlorobenzene	118-74-1	N.D.	0.00010	0.00051	10
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00010	0.00051	10
08357	2-Methylnaphthalene	91-57-6	0.83	0.0051	0.026	500
08357	Naphthalene	91-20-3	3.4	0.015	0.026	500
08357	Phenanthrene	85-01-8	0.26	0.015	0.026	500
08357	Pyrene	129-00-0	0.012	0.00010	0.00051	10

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: DUP-04(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528399
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 09:55 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLMD4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	N.D.	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 07:44	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 07:44	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 04:28	Jennifer R Riggs	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 11:05	Linda M Hartenstine	5
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/30/2012 11:07	Joseph M Gambler	10
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/30/2012 14:58	Joseph M Gambler	500
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12024WAF026	01/25/2012 09:20	Catherine R Wiker	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120220651002	01/23/2012 12:57	Damary Valentin	1
07051	Chromium	SW-846 6010C	1	120220651002	01/23/2012 12:57	Damary Valentin	1
07053	Copper	SW-846 6010C	1	120220651002	01/23/2012 12:57	Damary Valentin	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120220651002	01/22/2012 23:00	Annamaria Stipkovits	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-25(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528400
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 12:30 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM25

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	5.6	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		mg/l	mg/l	mg/l	
10461	Acenaphthene	83-32-9	0.001	0.0001	0.0006	1
10461	Acenaphthylene	208-96-8	N.D.	0.0001	0.0006	1
10461	Anthracene	120-12-7	0.0006 J	0.0001	0.0006	1
10461	Benzo(a)anthracene	56-55-3	0.001	0.0001	0.0006	1
10461	Benzo(a)pyrene	50-32-8	0.0004 J	0.0001	0.0006	1
10461	Benzo(b)fluoranthene	205-99-2	0.0007	0.0001	0.0006	1
10461	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0001	0.0006	1
10461	Benzo(k)fluoranthene	207-08-9	0.0003 J	0.0001	0.0006	1
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.006	1
10461	Carbazole	86-74-8	N.D.	0.0006	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0005	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0006	0.001	1
10461	Chrysene	218-01-9	0.001	0.0001	0.0006	1
10461	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0001	0.0006	1
10461	Dibenzofuran	132-64-9	0.0006 J	0.0006	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0006	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.006	1
10461	Fluoranthene	206-44-0	0.006	0.0001	0.0006	1
10461	Fluorene	86-73-7	0.001	0.0001	0.0006	1
10461	Hexachlorobenzene	118-74-1	N.D.	0.0001	0.0006	1
10461	Indeno(1,2,3-cd)pyrene	193-39-5	0.0001 J	0.0001	0.0006	1
10461	2-Methylnaphthalene	91-57-6	N.D.	0.0001	0.0006	1
10461	2-Methylphenol	95-48-7	N.D.	0.0006	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0006	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Naphthalene	91-20-3	0.0003 J	0.0001	0.0006	1
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.006	1
10461	Phenanthrene	85-01-8	0.0008	0.0001	0.0006	1
10461	Phenol	108-95-2	N.D.	0.0006	0.001	1
10461	Pyrene	129-00-0	0.004	0.0001	0.0006	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0006	0.001	1
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-25(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528400
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 12:30 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLM25

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	0.0017 J	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0015 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 08:06	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 08:06	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12024WAB026	01/25/2012 11:30	Linda M Hartenstine	1
11010	8270D BNA Extraction	SW-846 3510C	1	12024WAB026	01/24/2012 22:00	Elaine F Stoltzfus	1
07035	Arsenic	SW-846 6010C	1	120220651002	01/23/2012 13:01	Damary Valentin	1
07051	Chromium	SW-846 6010C	1	120220651002	01/23/2012 13:01	Damary Valentin	1
07053	Copper	SW-846 6010C	1	120220651002	01/23/2012 13:01	Damary Valentin	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120220651002	01/22/2012 23:00	Annamaria Stipkovits	1

*=This limit was used in the evaluation of the final result

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2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: EB-03(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528401
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 12:00 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLME3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	0.2 J	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		**mg/l**	**mg/l**	**mg/l**	
10461	Di-n-butylphthalate	84-74-2	N.D.	0.002	0.005	1
10461	Carbazole	86-74-8	N.D.	0.0005	0.001	1
10461	2-Chloronaphthalene	91-58-7	N.D.	0.0004	0.001	1
10461	2-Chlorophenol	95-57-8	N.D.	0.0005	0.001	1
10461	Chrysene	218-01-9	N.D.	0.0001	0.0005	1
10461	Dibenzofuran	132-64-9	N.D.	0.0005	0.001	1
10461	2,4-Dimethylphenol	105-67-9	N.D.	0.0005	0.001	1
10461	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	0.002	0.005	1
10461	2-Methylphenol	95-48-7	N.D.	0.0005	0.001	1
10461	3-Methylphenol, 4-Methylphenol	65794-96-9	N.D.	0.0005	0.001	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10461	Pentachlorophenol	87-86-5	N.D.	0.001	0.005	1
10461	Phenol	108-95-2	N.D.	0.0005	0.001	1
10461	2,3,4,6-Tetrachlorophenol	58-90-2	N.D.	0.0005	0.001	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/l**	**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.000010	0.000051	1
08357	Acenaphthylene	208-96-8	N.D.	0.000010	0.000051	1
08357	Anthracene	120-12-7	N.D.	0.000010	0.000051	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.000010	0.000051	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000051	0.000051	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.000010	0.000051	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.000010	0.000051	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.000010	0.000051	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000051	0.000051	1
08357	Fluoranthene	206-44-0	N.D.	0.000010	0.000051	1
08357	Fluorene	86-73-7	N.D.	0.000010	0.000051	1
08357	Hexachlorobenzene	118-74-1	N.D.	0.000010	0.000051	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.000010	0.000051	1
08357	2-Methylnaphthalene	91-57-6	0.000022 J	0.000010	0.000051	1
08357	Naphthalene	91-20-3	0.000073	0.000031	0.000051	1
08357	Phenanthrene	85-01-8	N.D.	0.000031	0.000051	1
08357	Pyrene	129-00-0	N.D.	0.000010	0.000051	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: EB-03(01-20-2012) Grab Water
SWP Wilmington, NC

LLI Sample # WW 6528401
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012 12:00 by DR

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLME3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		mg/l	mg/l	mg/l	
07035	Arsenic	7440-38-2	N.D.	0.0051	0.0400	1
07051	Chromium	7440-47-3	N.D.	0.0011	0.0300	1
07053	Copper	7440-50-8	0.0010 J	0.00094	0.0200	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 08:28	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 08:28	Angela D Sneeringer	1
10461	TCL Semivolatiles (8270D)	SW-846 8270D	1	12023WAG026	01/25/2012 04:53	Jennifer R Riggs	1
08357	PAHs in waters by SIM	SW-846 8270D SIM	1	12024WAF026	01/28/2012 05:08	Gregory J Drahovsky	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	12024WAF026	01/25/2012 09:20	Catherine R Wiker	1
11010	8270D BNA Extraction	SW-846 3510C	1	12023WAG026	01/24/2012 07:15	Catherine R Wiker	1
07035	Arsenic	SW-846 6010C	1	120220651002	01/23/2012 13:04	Damary Valentin	1
07051	Chromium	SW-846 6010C	1	120220651002	01/23/2012 13:04	Damary Valentin	1
07053	Copper	SW-846 6010C	1	120220651002	01/23/2012 13:04	Damary Valentin	1
10651	3030C (IV) Acid-Extract Metals	SM20 3030C	1	120220651002	01/22/2012 23:00	Annamaria Stipkovits	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: TB-01(01-20-2012) Water
SWP Wilmington, NC

LLI Sample # WW 6528402
LLI Group # 1286039
Account # 12858

Project Name: SWP Wilmington, NC

Collected: 01/20/2012

Submitted: 01/21/2012 10:30
Reported: 02/02/2012 13:45

Rayonier Inc.
1301 Riverplace Blvd.
Suite 2300
Jacksonville FL 32207

WLMTR

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	5.0	1
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	0.5	1
02898	2-Butanone	78-93-3	N.D.	1.0	5.0	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	0.5	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	0.5	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	0.5	1
02898	Toluene	108-88-3	N.D.	0.1	0.5	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	0.5	1
02898	Xylene (Total)	1330-20-7	N.D.	0.1	0.5	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	C120261AA	01/26/2012 08:50	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	C120261AA	01/26/2012 08:50	Angela D Sneeringer	1

*=This limit was used in the evaluation of the final result

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Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1286039
Reported: 02/02/12 at 01:45 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: C120261AA	Sample number(s): 6528392-6528402								
Acetone	N.D.	3.0	5.0	ug/l	92		74-137		
Benzene	N.D.	0.1	0.5	ug/l	105		80-120		
Bromodichloromethane	N.D.	0.1	0.5	ug/l	110		80-120		
2-Butanone	N.D.	1.0	5.0	ug/l	98		70-130		
Chloroform	N.D.	0.1	0.5	ug/l	105		80-120		
1,2-Dichloropropane	N.D.	0.1	0.5	ug/l	108		80-120		
Ethylbenzene	N.D.	0.1	0.5	ug/l	106		80-120		
Methylene Chloride	N.D.	0.2	0.5	ug/l	107		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	0.5	ug/l	120		80-125		
Toluene	N.D.	0.1	0.5	ug/l	103		80-120		
1,1,2-Trichloroethane	N.D.	0.1	0.5	ug/l	111		80-120		
Xylene (Total)	N.D.	0.1	0.5	ug/l	107		80-120		
Batch number: 12023WAG026	Sample number(s): 6528392-6528399,6528401								
Di-n-butylphthalate	N.D.	0.002	0.005	mg/l	108	106	76-115	1	30
Carbazole	N.D.	0.0005	0.001	mg/l	105	105	75-120	0	30
2-Chloronaphthalene	N.D.	0.0004	0.001	mg/l	95	96	54-132	1	30
2-Chlorophenol	N.D.	0.0005	0.001	mg/l	101	102	71-114	1	30
Chrysene	N.D.	0.0001	0.0005	mg/l	100	101	76-116	1	30
Dibenzofuran	N.D.	0.0005	0.001	mg/l	99	101	75-117	1	30
2,4-Dimethylphenol	N.D.	0.0005	0.001	mg/l	101	101	72-110	0	30
bis(2-Ethylhexyl)phthalate	N.D.	0.002	0.005	mg/l	108	109	78-117	1	30
2-Methylphenol	N.D.	0.0005	0.001	mg/l	99	100	58-110	1	30
3-Methylphenol, 4-Methylphenol	N.D.	0.0005	0.001	mg/l	92	91	49-108	1	30
Pentachlorophenol	N.D.	0.001	0.005	mg/l	107	107	53-110	1	30
Phenol	N.D.	0.0005	0.001	mg/l	62	59	21-67	5	30
2,3,4,6-Tetrachlorophenol	N.D.	0.0005	0.001	mg/l	102	104	66-129	2	30
Batch number: 12024WAB026	Sample number(s): 6528400								
Acenaphthene	N.D.	0.0001	0.0005	mg/l	104	103	75-114	1	30
Acenaphthylene	N.D.	0.0001	0.0005	mg/l	111	107	80-122	4	30
Anthracene	N.D.	0.0001	0.0005	mg/l	107	104	76-115	3	30
Benzo(a)anthracene	N.D.	0.0001	0.0005	mg/l	101	99	75-116	3	30
Benzo(a)pyrene	N.D.	0.0001	0.0005	mg/l	112	108	64-126	4	30
Benzo(b)fluoranthene	N.D.	0.0001	0.0005	mg/l	115	113	66-125	2	30
Benzo(g,h,i)perylene	N.D.	0.0001	0.0005	mg/l	111	106	66-132	4	30
Benzo(k)fluoranthene	N.D.	0.0001	0.0005	mg/l	103	103	66-131	0	30
Di-n-butylphthalate	N.D.	0.002	0.005	mg/l	110	108	76-115	2	30
Carbazole	N.D.	0.0005	0.001	mg/l	103	99	75-120	4	30
2-Chloronaphthalene	N.D.	0.0004	0.001	mg/l	103	101	54-132	3	30
2-Chlorophenol	N.D.	0.0005	0.001	mg/l	96	87	71-114	11	30
Chrysene	N.D.	0.0001	0.0005	mg/l	98	98	76-116	1	30
Dibenz(a,h)anthracene	N.D.	0.0001	0.0005	mg/l	112	106	67-131	5	30
Dibenzofuran	N.D.	0.0005	0.001	mg/l	103	100	75-117	3	30
2,4-Dimethylphenol	N.D.	0.0005	0.001	mg/l	104	100	72-110	4	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1286039
Reported: 02/02/12 at 01:45 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
bis(2-Ethylhexyl)phthalate	N.D.	0.002	0.005	mg/l	111	111	78-117	0	30
Fluoranthene	N.D.	0.0001	0.0005	mg/l	105	102	76-119	3	30
Fluorene	N.D.	0.0001	0.0005	mg/l	109	106	76-116	3	30
Hexachlorobenzene	N.D.	0.0001	0.0005	mg/l	102	101	75-119	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.0001	0.0005	mg/l	111	106	69-121	5	30
2-Methylnaphthalene	N.D.	0.0001	0.0005	mg/l	98	96	69-108	2	30
2-Methylphenol	N.D.	0.0005	0.001	mg/l	90	88	58-110	3	30
3-Methylphenol, 4-Methylphenol	N.D.	0.0005	0.001	mg/l	79	75	49-108	5	30
Naphthalene	N.D.	0.0001	0.0005	mg/l	95	96	70-111	1	30
Pentachlorophenol	N.D.	0.001	0.005	mg/l	107	103	53-110	4	30
Phenanthrene	N.D.	0.0001	0.0005	mg/l	99	97	76-113	2	30
Phenol	N.D.	0.0005	0.001	mg/l	41	41	21-67	1	30
Pyrene	N.D.	0.0001	0.0005	mg/l	103	103	75-119	0	30
2,3,4,6-Tetrachlorophenol	N.D.	0.0005	0.001	mg/l	107	104	66-129	3	30
Batch number: 12024WAF026	Sample number(s): 6528392-6528399,6528401								
Acenaphthene	N.D.	0.000010	0.000050	mg/l	84	95	74-109	12	30
Acenaphthylene	N.D.	0.000010	0.000050	mg/l	83	95	70-110	13	30
Anthracene	N.D.	0.000010	0.000050	mg/l	82	94	66-111	14	30
Benzo(a)anthracene	N.D.	0.000010	0.000050	mg/l	73	85	72-114	16	30
Benzo(a)pyrene	N.D.	0.0000050	0.000050	mg/l	80	91	60-127	13	30
Benzo(b)fluoranthene	N.D.	0.000010	0.000050	mg/l	81	90	58-151	11	30
Benzo(g,h,i)perylene	N.D.	0.000010	0.000050	mg/l	80	90	57-131	12	30
Benzo(k)fluoranthene	N.D.	0.000010	0.000050	mg/l	89	102	59-130	14	30
Dibenz(a,h)anthracene	N.D.	0.0000050	0.000050	mg/l	82	93	55-134	13	30
Fluoranthene	N.D.	0.000010	0.000050	mg/l	88	99	75-116	12	30
Fluorene	N.D.	0.000010	0.000050	mg/l	92	105	75-114	13	30
Hexachlorobenzene	N.D.	0.000010	0.000050	mg/l	93	104	66-106	11	30
Indeno(1,2,3-cd)pyrene	N.D.	0.000010	0.000050	mg/l	80	91	53-158	13	30
2-Methylnaphthalene	N.D.	0.000010	0.000050	mg/l	84	94	75-115	11	30
Naphthalene	N.D.	0.000030	0.000050	mg/l	80	88	72-109	9	30
Phenanthrene	N.D.	0.000030	0.000050	mg/l	88	100	76-111	14	30
Pyrene	N.D.	0.000010	0.000050	mg/l	80	90	69-118	12	30
Batch number: 120220651002	Sample number(s): 6528392-6528401								
Arsenic	N.D.	0.0051	0.0400	mg/l	103		80-120		
Chromium	N.D.	0.0011	0.0300	mg/l	102		80-120		
Copper	N.D.	0.00094	0.0200	mg/l	103		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc. Group Number: 1286039
Reported: 02/02/12 at 01:45 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: C120261AA	Sample number(s): 6528392-6528402 UNSPK: P527741								
Acetone	90	89	57-163	1	30				
Benzene	109	111	87-126	1	30				
Bromodichloromethane	110	112	82-133	1	30				
2-Butanone	93	93	58-168	0	30				
Chloroform	109	109	86-136	0	30				
1,2-Dichloropropane	111	112	83-126	1	30				
Ethylbenzene	110	111	80-140	1	30				
Methylene Chloride	112	112	84-122	0	30				
1,1,2,2-Tetrachloroethane	111	112	70-125	1	30				
Toluene	107	109	83-127	2	30				
1,1,2-Trichloroethane	111	111	85-129	0	30				
Xylene (Total)	110	111	84-125	1	30				
Batch number: 120220651002	Sample number(s): 6528392-6528401 UNSPK: 6528392 BKG: 6528392								
Arsenic	103	107	81-123	3	20	0.0269 J	0.0291 J	8 (1)	20
Chromium	94	99	81-120	4	20	0.0057 J	0.0064 J	11 (1)	20
Copper	99	105	86-122	6	20	0.0031 J	0.0040 J	26* (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA SW846/8260 (water-25ml) #1
Batch number: C120261AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6528392	100	105	96	98
6528393	101	109	96	104
6528394	100	104	97	100
6528395	99	100	98	99
6528396	100	101	97	98
6528397	99	101	97	102
6528398	100	101	98	100
6528399	100	103	96	102
6528400	98	101	98	99
6528401	99	100	97	98
6528402	99	101	98	99
Blank	100	102	97	98
LCS	100	102	98	107
MS	100	102	98	102
MSD	100	103	99	102
Limits:	77-114	74-113	77-110	78-110

Analysis Name: TCL Semivolatiles (8270D)

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Rayonier Inc.
Reported: 02/02/12 at 01:45 PM

Group Number: 1286039

Surrogate Quality Control

Batch number: 12023WAG026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6528392	43	56	84	96	95	76
6528393	54	66	95	98	97	101
6528394	41	56	78	94	92	102
6528395	39	61	102	95	96	107
6528396	56	64	100	98	95	101
6528397	39	60	91	92	90	94
6528398	42	62	92	111	87	95
6528399	40	61	96	110	89	93
6528401	40	66	103	100	98	111
Blank	50	67	94	92	92	107
LCS	58	75	98	98	98	103
LCSD	55	73	98	101	97	104
Limits:	10-74	10-98	22-150	52-120	63-114	34-118

Analysis Name: TCL Semivolatiles (8270D)
Batch number: 12024WAB026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6528400	23	35	78	94	94	98
Blank	40	59	97	95	96	109
LCS	37	54	94	100	100	104
LCSD	37	49	93	99	97	105
Limits:	10-74	10-98	22-150	52-120	63-114	34-118

Analysis Name: PAHs in waters by SIM
Batch number: 12024WAF026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6528392	114	103	110
6528393	113	98	105
6528394	117	102	112
6528395	115	97	107
6528396	114	99	112
6528397	111	72	110
6528398	205*	94	111
6528399	189*	84	101
6528401	116	105	117
Blank	122	118	133*
LCS	98	91	97
LCSD	108	102	109
Limits:	64-147	68-132	53-129

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Case Narrative

Project Name: SWP Wilmington, NC
LLI Group #: 1286039

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260B 25mL purge, GC/MS Volatiles

Sample #s: 6528398

Reporting limits were raised due to interference from the sample matrix.

SW-846 8270D SIM, GC/MS Semivolatiles

Batch #: 12024WAF026 (Sample number(s): 6528392-6528399, 6528401)

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 6528398, 6528399, Blank

SW-846 6010C, Metals

Batch #: 120220651002 (Sample number(s): 6528392-6528401 UNSPK: 6528392 BKG: 6528392)

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Copper

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 12858 Group# 1286039 Sample # 6528392-402

COC # 277839

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: SOUTHERN WOOD PIEDMONT Acct. #:

Project Name/#: WILMINGTON PWSID #:

Project Manager: P.O.#:

Sampler: DANNY KAWL & LAUREN WARGO Quote #:

Name of state where samples were collected: NORTH CAROLINA

For Lab Use Only
FSC:
SCR#: 116249

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) (3) (4) (5)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water (☐ Potable ☐ NPDES Check if Applicable)	Matrix: Other	Total # of Containers	8260 STANDARD WATER MASTER	METALS: ARSENIC CHROMIUM COPPER	8270D TCL SEMIVOLATILES	8270D SIM-TCL SEMIVOLATILES	METALS BATCH QC					Remarks (6)	Temperature of samples upon receipt (if requested)
MW-15 (01-20-2012)	1-20-12	0800	✓			✓		9	3	1	2	2	1					2 TRIP BLANKS ALSO INCLUDED IN SHIPMENT	0.5-1.7°C
MW-13 (01-20-2012)	1-20-12	0845	✓			✓		8	3	1	2	2							
MW-18 (01-20-2012)	1-20-12	0935	✓			✓		9	3	1	2	2	1						
MW-12 (01-20-2012)	1-20-12	1020	✓			✓		9	3	1	2	2	1						
MW-37 (01-20-2012)	1-20-12	0815	✓			✓		8	3	1	2	2							
MW-47A (01-20-2012)	1-20-12	0910	✓			✓		8	3	1	2	2							
MW-36 (01-20-2012)	1-20-12	0955	✓			✓		8	3	1	2	2							
DUP. 04 (01-20-2012)	1-20-12	0955	✓			✓		8	3	1	2	2							
MW-25 (01-20-2012)	1-20-12	1230	✓			✓	6 ~~8~~	3	1	~~2~~	~~2~~							1¼ AMBER BOTTLES, IN-	
EQUIP. 03 (01-20-2012)	1-20-12	1200	✓			✓		8	3	1	2	2						ADEQUATE WATER	

(7) **Turnaround Time Requested** (TAT) (please circle): (Normal) Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No
Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	1-12-12	1079	Lauren Wargo	1-18-12	1800
Lauren Wargo	1-20-12				
			Brandy Bard	1-21-12	0810

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Issued by Dept. 6042 Management
2102.05

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Environmental Sample Administration
Receipt Documentation Log

Client/Project: Southern Wood Piedmont

Date of Receipt: 1-21-12

Time of Receipt: 1030

Source Code: 50-1

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	2783	1.7	TB	WI	Y	B	
2	↓	0.8	↓	↓	↓	↓	
3	↓	1.7	↓	↓	↓	↓	
4	↓	0.5	↓	↓	↓	↓	
5	↓	1.1	↓	↓	↓	↓	
6							

Number of Trip Blanks received NOT listed on chain of custody: 2

Paperwork Discrepancy/Unpacking Problems:

Rec 1 Amber for MW25 a little under half full

Unpacker Signature/Emp#: Brandy Bauchy 2299 **Date/Time:** 1-21-12 11:13

Issued by Dept. 6042 Management

2174.06

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

FedEx Express **NEW Package US Airbill**

FedEx Tracking Number 8987 6533 8076

From *Please print and press hard.*

Date 1-17-12 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name LAUREN WARGO Phone (803) 796-6240

Company SCHNABEL ENGINEERING

Address 104 CORPORATE BLVD. SUITE 420 Dept./Floor/Suite/Room

City W. COLUMBIA State SC ZIP 29169

Your Internal Billing Reference First 24 characters will appear on invoice. OPTIONAL

To

Recipient's Name SAMPLE RECEIVING Phone (717) 656-2300

Company LANCASTER LABORATORIES

Address 2425 NEW HOLLAND PIKE Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City LANCASTER State PA ZIP 17601

☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

The FedEx US Airbill has changed. See Section 4.
For shipments over 150 lbs., order the new FedEx Express Freight US Airbill.

Form No. 0200 Sender's Copy

4 Express Package Service • To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day

☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

☐ NEW FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging • Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☒ SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods? One box must be checked.

☒ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender Acct. No. in Section 1 will be billed. ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

FedEx Acct. No. Credit Card No. Exp. Date

Total Packages 1 Total Weight 43 lbs. Total Declared Value† $ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

612

Rev. Date 11/10 • Part #163196 • ©1994-2010 FedEx • PRINTED IN U.S.A. SRY

FedEx Express **NEW Package US Airbill**

FedEx Tracking Number 8987 6533 8087

From *Please print and press hard.*

Date 1-17-12 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name LAUREN WARGO Phone (803) 796-6240

Company SCHNABEL ENGINEERING

Address 104 CORPORATE BLVD SUITE 420 Dept./Floor/Suite/Room

City W. COLUMBIA State SC ZIP 29169

Your Internal Billing Reference First 24 characters will appear on invoice. OPTIONAL

To

Recipient's Name SAMPLE RECEIVING Phone (717) 656-2300

Company LANCASTER LABORATORIES

Address 2425 NEW HOLLAND PIKE Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City LANCASTER State PA ZIP 17601

☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

The FedEx US Airbill has changed. See Section 4.
For shipments over 150 lbs., order the new FedEx Express Freight US Airbill.

Form No. 0200 Sender's Copy

4 Express Package Service • To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day

☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

☐ NEW FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging • Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☒ SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods? One box must be checked.

☒ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender Acct. No. in Section 1 will be billed. ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

FedEx Acct. No. Credit Card No. Exp. Date

Total Packages 1 Total Weight 56 lbs. Total Declared Value† $ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

612

FedEx Express *Expanded Billable Stamp*

Use only for shipments within the U.S.
Saturday delivery available.

1 From
ORDER: 00762091

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

(____) ____ – _____

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is altered.*
SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.

8753298631 95

fedex.com 1800 GoFedEx 1800 463 3339

FedEx Express *Expanded Billable Stamp*

Use only for shipments within the U.S.
Saturday delivery available.

1 From
ORDER: 00762091

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

(____) ____ – _____

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is altered.*
SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.

8753298632 76

fedex.com 1800 GoFedEx 1800 463 3339

FedEx Express *Expanded Billable Stamp*

Use only for shipments within the U.S.
Saturday delivery available.

1 From
ORDER: 00762091

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

(____) ____ – _____

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is altered.*
SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.

8753298632 54

FedEx Express *Expanded Billable Stamp*

Use only for shipments within the U.S.
Saturday delivery available.

1 From
ORDER: 00762091

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

(____) ____ – _____

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is altered.*
SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.

8753298632 98

FedEx Express *Expanded Billable Stamp*

Use only for shipments within the U.S.
Saturday delivery available.

1 From

ORDER: 00762091

( ) -

Package Weight

NONREDEEMABLE
If you require a different amo of declared value, please use FedEx US Airbill.

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is altered.*

SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.

8753298632 32

fedex.com 1.800.GoFedEx 1.800.463.3339

0200

Recipient's Copy

FedEx Express *NEW Package* *US Airbill*

FedEx Tracking Number 8987 6533 8113

From

Date 1/18/2012

Sender's Name LAUREN WARGO Phone 803 796 6240

Company SCHNABEL ENGINEERING

Address 104 CORPORATE BLVD SUITE 420 Dept./Floor/Suite/Room

City W. COLUMBIA State SC ZIP 29169

Your Internal Billing Reference

To

Recipient's Name SAMPLE RECEIVING Phone 717 656-2300

Company LANCASTER LABORATORIES

Address 2425 NEW HOLLAND PIKE Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City LANCASTER State PA ZIP 17601

☐ **HOLD Weekday** FedEx location address REQUIRED. NOT available for FedEx First Overnight.

☐ **HOLD Saturday** FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

8987 6533 8113

4 Express Package Service *To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. *For packages over 150 lbs., use the new FedEx Express Freight US Airbill.*

Next Business Day

☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

☐ NEW FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging *Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

☐ Sender — Acct. No. in Section 1 will be billed. ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages 1 Total Weight ____ lbs. Total Declared Value† $ ____ .00 Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

612

FedEx Express **NEW Package US Airbill**

FedEx Tracking Number 8987 6533 8113

0200 Sender's Copy

From *Please print and press hard.*

Date 1/18/2012 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name LAUREN WARGO Phone (803) 796-6240

Company SCHNABEL ENGINEERING

Address 104 CORPORATE BLVD SUITE 420 Dept./Floor/Suite/Room

City W. COLUMBIA State SC ZIP 29169

Your Internal Billing Reference First 24 characters will appear on invoice. OPTIONAL

To

Recipient's Name SAMPLE RECEIVING Phone (717) 656-2300

Company LANCASTER LABORATORIES

Address 2425 NEW HOLLAND PIKE Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City LANCASTER State PA ZIP 17601

☐ HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

☐ HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

The FedEx US Airbill has changed. See Section 4.
For shipments over 150 lbs, order the new FedEx Express Freight US Airbill.

4 Express Package Service *To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. *For packages over 150 lbs., use the new FedEx Express Freight US Airbill.*

Next Business Day

☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

☐ NEW FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging *Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☒ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender Acct. No. in Section 1 will be billed. ☒ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

FedEx Acct. No. Credit Card No. 1077 8526-4 Exp. Date

Total Packages 7 Total Weight 375 lbs. Total Declared Value† $ 100 .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

612

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FedEx
1106 N 23RD ST
WILMINGTON, NC 28405

Location: ILMA
Device ID: ILMA-POS2
Employee: 69247
Transaction: 770429472 78

PRIORITY OVERNIGHT
898765338113 375.75 lb (S) ***
795542926541
795542926552
795542926563
795542926574
795542926585
795542926596

Scheduled Delivery Date 01/19/2012

Bill Recipient/Third Party

*** See payer invoice

M = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

FedEx

1106 N 23RD ST
WILMINGTON, NC 28405

Location:	ILMA
Device ID:	ILMA-POS1
Employee:	212303
Transaction:	77043057905

PRIORITY OVERNIGHT
875329863770 56.45 lb (S) ***

Scheduled Delivery Date 01/20/2012

Billable Stamp

M = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

January 19, 2012 6:24:37 PM

FedEx

1106 N 23RD ST
WILMINGTON, NC 28405

Location:	ILMA
Device ID:	ILMA-POS1
Employee:	212303
Transaction:	77043058173

PRIORITY OVERNIGHT
875329863780 56.20 lb (S) ***

Scheduled Delivery Date 01/20/2012

Billable Stamp

M = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

January 19, 2012 6:25:52 PM

FedEx Express — Expanded Billable Stamp

Use only for shipments within the U.S. Saturday delivery available

1 From
ORDER: 00762071

( ) - -

Package Weight

NONREDEEMABLE
If you assume a different amount of declared value, please use a FedEx US Airbill.

DECLARED VALUE $100

Do not put this receipt on your package.

2 To Shipment Number provided / Address never alerted
SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.
fedex.com 1.800.GoFedEx 1.800.463.3339

875329863770

FedEx Express **Expanded Billable Stamp**

Use only for shipments within the U.S.
Saturday delivery available.

1 From
ORDER: 00762091

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

( ) -

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is altered.*
SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.

875329863769

fedex.com 1800.GoFedEx 1800.463.3339

FedEx

1106 N 23RD ST
WILMINGTON, NC 28405

Location:	ILMA
Device ID:	ILMA-POS1
Employee:	212303
Transaction:	77043057575

PRIORITY OVERNIGHT
875329863769 58.05 lb (S) ***

Scheduled Delivery Date 01/20/2012

Billable Stamp

M = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

January 19, 2012 6:23:07 PM

FedEx Express **Expanded Billable Stamp**

Use only for shipments within the U.S.
Saturday delivery available.

1 From
ORDER: 00762091

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

( ) -

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is altered.*
SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.

875329863780

fedex.com

FedEx Express **Expanded Billable Stamp**

Use only for shipments within the U.S.
Saturday delivery available.

1 From
ORDER: 00762091

( ) -

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is altered.*
SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.

875329863714

fedex.com 1.800.GoFedEx 1.800.463.3339

FedEx

1106 N 23RD ST
WILMINGTON, NC 28405

Location:	ILMA
Device ID:	ILMA-POS1
Employee:	212303
Transaction:	77043059912

PRIORITY OVERNIGHT
875329863714 38.25 lb (S) ***

Scheduled Delivery Date 01/20/2012

Billable Stamp

M = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

January 19, 2012 6:34:03 PM

FedEx Express **Expanded Billable Stamp**

Use only for shipments within the U.S.
Saturday delivery available.

1 From

ORDER: 00762091

( ) -

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

DECLARED VALUE $100

Do not put this receipt on your package

2 To *Shipment will not be accepted if address below is altered.*

SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.

875329863703

fedex.com 1.800.GoFedEx 1.800.463.3339

FedEx®

1106 N 23RD ST
WILMINGTON, NC 28405

Location:	ILMA
Device ID:	ILMA-POS1
Employee:	212303
Transaction:	77043059611

PRIORITY OVERNIGHT
875329863703 59.40 lb (S) ***

Scheduled Delivery Date 01/20/2012

Billable Stamp

M = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

January 19, 2012 6:32:47 PM

FedEx Express **Expanded Billable Stamp**

Use only for shipments within the U.S.
Saturday delivery available.

1 From
ORDER: 00762091

Package Weight

NONREDEEMABL
If you require a different or declared value, please FedEx US Airbill.

( ) -

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is cleared.*

SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.

875329863725

fedex.com 1.800.GoFedEx 1.800.463.3339

FedEx

1106 N 23RD ST
WILMINGTON, NC 28405

Location:	ILMA
Device ID:	ILMA-POS1
Employee:	212303
Transaction:	77043059434

PRIORITY OVERNIGHT
875329863725 56.35 lb (S) ***

Scheduled Delivery Date 01/20/2012

Billable Stamp

M = Weight entered manually
S = Weight read from scale
T = Taxable item

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Or call 1.800.GoFedEx
1.800.463.3339

January 19, 2012 6:32:00 PM

FedEx Express **Expanded Billable Stamp**

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Saturday delivery available.

1 From
ORDER: 00762091

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

( ) -

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is altered.*
SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

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875329863736

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FedEx®

1106 N 23RD ST
WILMINGTON, NC 28405

Location:	ILMA
Device ID:	ILMA-POS1
Employee:	212303
Transaction:	77043059212

PRIORITY OVERNIGHT
875329863736 56.00 lb (S) ***

Scheduled Delivery Date 01/20/2012

Billable Stamp

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S = Weight read from scale
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Saturday delivery available.

1 From

ORDER: 00762091

Package Weight

NONREDEEMABLE
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( ) -

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is altered.*

SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

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875329863699

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FedEx

1106 N 23RD ST
WILMINGTON, NC 28405

Location:	ILMA
Device ID:	ILMA-POS1
Employee:	212303
Transaction:	77043059007

PRIORITY OVERNIGHT
875329863699 58.25 lb (S) ***

Scheduled Delivery Date 01/20/2012

Billable Stamp

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T = Taxable item

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1 From

ORDER: 00762091

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

(____) ____ - _____

DECLARED VALUE $100

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2 To *Shipment will not be accepted if address below is altered.*

SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

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875329863747

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FedEx

1106 N 23RD ST
WILMINGTON, NC 28405

Location:	ILMA
Device ID:	ILMA-POS1
Employee:	212303
Transaction:	77043058723

PRIORITY OVERNIGHT
875329863747 43.75 lb (S) ***

Scheduled Delivery Date 01/20/2012

Billable Stamp

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FedEx Express **Expanded Billable Stamp**

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Saturday delivery available.

1 From
ORDER: 00762091

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

( ) -

DECLARED VALUE $100

Do not put this receipt on your package.

2 To Shipment will not be accepted if address below is altered.
SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight®

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875329863758

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FedEx

1106 N 23RD ST
WILMINGTON, NC 28405

Location:	ILMA
Device ID:	ILMA-POS1
Employee:	212303
Transaction:	77043058562

PRIORITY OVERNIGHT
875329863758 51.30 lb (S) ***

Scheduled Delivery Date 01/20/2012

Billable Stamp

M = Weight entered manually
S = Weight read from scale
T = Taxable item

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January 19, 2012 6:27:41 PM

FedEx Express **Expanded Billable Stamp**

Use only for shipments within the U.S.
Saturday delivery available.

1 From
ORDER: 00762091

Package Weight

NONREDEEMABLE
If you require a different amount of declared value, please use a FedEx US Airbill.

(____) ____-_____

DECLARED VALUE $100

Do not put this receipt on your package.

2 To *Shipment will not be accepted if address below is altered.*
SAMPLE RECEIVING
LANCASTER LABORATORIES
2425 NEW HOLLAND PIKE
LANCASTER PA 17601
(717) 656-2300

FedEx Priority Overnight

Next business morning by 10:30 a.m. Not available to all locations. Please consult the current FedEx Service Guide for specific commitments. Please see the back of this receipt for important terms and conditions.

875329863791

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FedEx

1106 N 23RD ST
WILMINGTON, NC 28405

Location:	ILMA
Device ID:	ILMA-POS1
Employee:	212303
Transaction:	77043058336

PRIORITY OVERNIGHT
875329863791 58.15 lb (S) ***

Scheduled Delivery Date 01/20/2012

Billable Stamp

M = Weight entered manually
S = Weight read from scale
T = Taxable item

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January 19, 2012 6:26:40 PM

APPENDIX B
2001 GROUNDWATER SUMMARY TABLES

TABLE 6-1. PRELIMINARY REMEDIATION GOALS FOR DETECTED SHALLOW GROUNDWATER CONSTITUENTS - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters Extractable Organics (mg/L)	2001 MDL	2003 MDL	PQL	PRG	MW-6 2/13/2001	MW-7 2/13/2001	MW-8 2/13/2001	MW-8-Dup 2/13/2001	MW-9 2/13/2001	MW-10 2/13/2001	MW-12 2/15/2001	MW-13 2/14/2001	MW-15 2/15/2001	MW-16 2/14/2001
2,4-Dimethylphenol	0.00039	0.0011	0.010	0.140	ND	ND	ND	ND	ND	ND	**0.15**	ND	0.021J	ND
2-Chlorophenol	0.00024	0.00079	0.010	0.0001	ND	ND	ND	ND	ND	ND	**0.0012J**	ND	ND	ND
2-Methylnaphthalene	0.00033	0.0021	0.010	0.014	ND	ND	ND	ND	ND	ND	**0.15**	**0.22**	**0.2**	ND
Acenaphthene	0.00025	0.001	0.010	0.080	ND	ND	ND	ND	ND	ND	**0.16**	**0.38**	**0.15**	ND
Anthracene	0.00033	0.00050	0.010	2.10	ND	ND	ND	ND	ND	ND	0.012	0.0073J	0.0026J	ND
Benz(a)anthracene	0.00030	0.00080	0.010	0.0000479	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.0043J**
Benzo(a)Pyrene	0.00041	0.00059	0.010	0.00000479	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)Fluoranthene	0.00028	0.002	0.010	0.0000479	ND	ND	ND	ND	ND	ND	**0.00069J**	**0.0038J**	ND	ND
Benzo(g,h,i)Perylene	0.00068	0.00062	0.010	0.210	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)Fluoranthene	0.00072	0.0012	0.010	0.000479	ND	ND	ND	ND	ND	ND	**0.00079J**	ND	ND	ND
Bis(2-ethylhexyl)Phthalate	0.00048	0.0024	0.010	0.003	ND	ND	0.00083J	ND	ND	ND	ND	ND	ND	ND
Carbazole	0.00054	0.00054	0.010	0.0034**	ND	ND	ND	ND	ND	ND	**0.038**	**0.11**	**0.043J**	ND
Chrysene	0.00044	0.00078	0.010	0.00479	ND	ND	ND	ND	ND	ND	0.0019J	**0.048J**	**0.0052J**	**0.0095J**
Cresol (o) (2-Methylphenol)	0.00029	0.0059	0.010	0.18**	ND	ND	ND	ND	ND	ND	0.07	ND	ND	ND
Cresol (m&p) (3&4-Methylphenol)	0.00071	0.001	0.010	0.0035	ND	ND	ND	ND	ND	ND	**0.12**	ND	ND	ND
Dibenzo(a,h)Anthracene	0.00080	0.00064	0.010	0.0000047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	0.00029	0.001	0.010	0.028	ND	ND	ND	ND	ND	ND	**0.11**	**0.19**	**0.073**	ND
Di-n-butyl Phthalate	0.00026	0.001	0.010	0.70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	0.00033	0.00061	0.010	0.280	ND	ND	ND	ND	ND	ND	0.031	0.0051J	ND	ND
Fluorene	0.00038	0.001	0.010	0.280	ND	ND	ND	ND	ND	ND	0.12	0.15	0.057	ND
Indeno(1,2,3-cd)Pyrene	0.00056	0.00085	0.010	0.0000479	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.00036	0.001	0.010	0.021	ND	ND	ND	ND	ND	ND	**0.27**	**1.7**	**0.88**	ND
Pentachlorophenol	0.0040	0.002	0.050	0.0003	ND	ND	ND	ND	ND	ND	**0.016J**	ND	ND	ND
Phenanthrene	0.00033	0.001	0.010	0.21	ND	ND	ND	ND	ND	ND	0.15	0.091J	0.028J	ND
Phenol	0.00028	0.001	0.010	0.30	ND	ND	ND	ND	ND	ND	0.048	ND	ND	ND
Pyrene	0.00053	0.001	0.010	0.210	ND	ND	ND	ND	ND	ND	0.016	ND	ND	ND
Tetrachlorophenols	0.00061	0.0013	0.010	0.210	ND	ND	ND	ND	ND	ND	0.014	ND	ND	ND

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
J Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard. if no standard then is the lower of the MCL, MCLG, or Region IX Tap water PRG.
** Region IX PRG tap water concentration adjusted for non-carcinogenicity.
Exceeds PRG

TABLE 6-1. PRELIMINARY REMEDIATION GOALS FOR DETECTED SHALLOW GROUNDWATER CONSTITUENTS - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters Extractable Organics (mg/L)	2001 MDL	2003 MDL	PQL	PRG	MW-17 2/14/2001	MW-18 5/21/2003	MW-19 2/15/2001	MW-20 2/13/2001	MW-21 2/13/2001	MW-23 2/13/2001	MW-24R 2/15/2001	MW-25 2/14/2001	MW-27 2/13/2001	MW-28 5/21/2003
2,4-Dimethylphenol	0.00039	0.0011	0.010	0.140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	0.00024	0.00079	0.010	0.0001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	0.00033	0.0021	0.010	0.014	ND	ND	0.0067J	ND	ND	ND	**0.037**	ND	ND	ND
Acenaphthene	0.00025	0.001	0.010	0.080	0.0052J	ND	**0.17**	0.03	ND	ND	**0.17**	0.0037J	ND	0.0061J
Anthracene	0.00033	0.00050	0.010	2.10	ND	ND	0.0022J	ND	ND	ND	ND	0.0026J	ND	ND
Benz(a)anthracene	0.00030	0.00080	0.010	0.0000479	**0.0040J**	ND	**0.00032J**	ND	ND	ND	**0.00043J**	**0.0025J**	ND	ND
Benzo(a)Pyrene	0.00041	0.00059	0.010	0.00000479	ND	ND	ND	ND	ND	ND	ND	**0.00051J**	ND	ND
Benzo(b)Fluoranthene	0.00028	0.002	0.010	0.0000479	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)Perylene	0.00068	0.00062	0.010	0.210	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)Fluoranthene	0.00072	0.0012	0.010	0.000479	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)Phthalate	0.00048	0.0024	0.010	0.003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	0.00054	0.00054	0.010	0.0034**	ND	ND	0.0016J	ND	ND	ND	**0.013**	ND	ND	ND
Chrysene	0.00044	0.00078	0.010	0.00479	**0.0092J**	ND	ND	ND	ND	ND	ND	**0.0051J**	ND	ND
Cresol (o) (2-Methylphenol)	0.00029	0.0059	0.010	0.18**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cresol (m&p) (3&4-Methylphenol)	0.00071	0.001	0.010	0.0035	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)Anthracene	0.00080	0.00064	0.010	0.0000047	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	0.00029	0.001	0.010	0.028	0.0010J	ND	0.0080J	ND	ND	ND	**0.045**	0.0021J	ND	ND
Di-n-butyl Phthalate	0.00026	0.001	0.010	0.70	0.00079J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	0.00033	0.00061	0.010	0.280	0.00092J	ND	0.0015J	ND	ND	ND	0.00088J	0.0058J	ND	0.0012J
Fluorene	0.00038	0.001	0.010	0.280	0.0048J	ND	0.036	ND	ND	ND	0.058	0.0033J	ND	0.0053J
Indeno(1,2,3-cd)Pyrene	0.00056	0.00085	0.010	0.0000479	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.00036	0.001	0.010	0.021	ND	ND	**0.14**	ND	ND	ND	**0.033**	ND	ND	ND
Pentachlorophenol	0.0040	0.002	0.050	0.0003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	0.00033	0.001	0.010	0.21	ND	ND	0.024	ND	ND	ND	0.022	0.0045J	ND	0.0053J
Phenol	0.00028	0.001	0.010	0.30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	0.00053	0.001	0.010	0.210	ND	ND	0.00079J	ND	ND	ND	ND	0.0040J	ND	ND
Tetrachlorophenols	0.00061	0.0013	0.010	0.210	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
J Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard. if no standard then is the lower of the MCL, MCLG, or Region IX Tap water PRG.
** Region IX PRG tap water concentration adjusted for non-carcinogenicity.
Exceeds PRG

TABLE 6-1. PRELIMINARY REMEDIATION GOALS FOR DETECTED SHALLOW GROUNDWATER CONSTITUENTS - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters Extractable Organics (mg/L)	2001 MDL	2003 MDL	PQL	PRG	MW-29 2/15/2001	MW-30 2/13/2001	MW-31 2/13/2001	MW-34 2/15/2001	MW-37 5/21/2003	MW-40 5/21/2003	MW-48 5/21/2003	MW-49 5/21/2003	MW-50 5/21/2003
2,4-Dimethylphenol	0.00039	0.0011	0.010	0.140	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	0.00024	0.00079	0.010	0.0001	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	0.00033	0.0021	0.010	0.014	ND	ND	ND	0.00048J	ND	ND	ND	ND	ND
Acenaphthene	0.00025	0.001	0.010	0.080	ND	0.012	ND	0.064	0.048	ND	0.0018J	ND	0.0018J
Anthracene	0.00033	0.00050	0.010	2.10	ND	ND	ND	0.0016J	0.00085J	0.0012J	ND	ND	ND
Benz(a)anthracene	0.00030	0.00080	0.010	0.0000479	**0.0011J**	ND	ND	**0.0012J**	ND	ND	ND	ND	ND
Benzo(a)Pyrene	0.00041	0.00059	0.010	0.00000479	**0.0011J**	ND	ND	ND	ND	**0.00075J**	**0.00077J**	ND	**0.00064J**
Benzo(b)Fluoranthene	0.00028	0.002	0.010	0.0000479	**0.00074J**	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)Perylene	0.00068	0.00062	0.010	0.210	0.0025J	ND	ND	0.00070J	ND	0.00078J	0.00073J	ND	0.00088J
Benzo(k)Fluoranthene	0.00072	0.0012	0.010	0.000479	**0.0011J**	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl)Phthalate	0.00048	0.0024	0.010	0.003	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	0.00054	0.00054	0.010	0.0034**	0.0011J	ND	ND	0.00077J	ND	ND	ND	ND	ND
Chrysene	0.00044	0.00078	0.010	0.00479	0.0012J	ND	ND	0.0012J	ND	ND	ND	ND	ND
Cresol (o) (2-Methylphenol)	0.00029	0.0059	0.010	0.18**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cresol (m&p) (3&4-Methylphenol)	0.00071	0.001	0.010	0.0035	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)Anthracene	0.00080	0.00064	0.010	0.0000047	**0.0024J**	ND	ND	ND	ND	**0.00079J**	ND	ND	**0.00086J**
Dibenzofuran	0.00029	0.001	0.010	0.028	ND	ND	ND	0.0030J	0.0011J	ND	ND	ND	ND
Di-n-butyl Phthalate	0.00026	0.001	0.010	0.70	0.00026J	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	0.00033	0.00061	0.010	0.280	0.0011J	ND	ND	0.011	ND	ND	ND	ND	ND
Fluorene	0.00038	0.001	0.010	0.280	ND	ND	ND	0.014	0.0018J	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	0.00056	0.00085	0.010	0.0000479	**0.0025J**	ND	ND	ND	ND	**0.00093J**	**0.00080J**	ND	**0.00094J**
Naphthalene	0.00036	0.001	0.010	0.021	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.0040	0.002	0.050	0.0003	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	0.00033	0.001	0.010	0.21	ND	ND	ND	0.0064J	0.0053J	ND	ND	ND	ND
Phenol	0.00028	0.001	0.010	0.30	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	0.00053	0.001	0.010	0.210	0.0011J	ND	ND	0.0061J	ND	ND	ND	ND	ND
Tetrachlorophenols	0.00061	0.0013	0.010	0.210	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
J Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard. if no standard then is the lower of the MCL, MCLG, or Region IX Tap water PRG.
** Region IX PRG tap water concentration adjusted for non-carcinogenicity.
Exceeds PRG

TABLE 6-2. PRELIMINARY REMEDIATION GOALS FOR DETECTED SHALLOW GROUNDWATER CONSTITUENTS - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters Purgeable Organics (mg/L)	2001 MDL	2003 MDL	PQL	PRG	MW-6 2/13/2001	MW-7 2/13/2001	MW-8 2/13/2001	MW-8-Dup 2/13/2001	MW-9 2/13/2001	MW-10 2/13/2001	MW-12 2/15/2001	MW-13 2/14/2001	MW-15 2/15/2001	MW-16 2/14/2001
Acetone	0.0099	0.0023	0.05	0.70	ND	ND	ND	ND	ND	ND	ND	0.012J	ND	ND
Benzene	0.00027	0.000096	0.005	0.001	ND	ND	ND	ND	ND	ND	**0.0026J**	**0.014**	**0.0045J**	ND
Dichloromethane (Methylene Chloride)	0.00031	0.00061	0.0050	0.005	0.00049J	0.00038J	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	0.00083	0.00011	0.0050	0.029	ND	ND	ND	ND	ND	ND	0.00089J	**0.029**	0.014	ND
Toluene	0.00051	0.000065	0.0050	1.0	ND	ND	ND	ND	ND	ND	0.0022J	0.0024J	0.0029J	ND
Total Xylenes	0.0019	0.000050	0.010	0.53	ND	ND	ND	ND	ND	ND	ND	0.030	0.019	ND

Parameters Purgeable Organics (mg/L)	2001 MDL	2003 MDL	PQL	PRG	MW-17 2/14/2001	MW-18 2/14/2001	MW-19 2/15/2001	MW-20 2/13/2001	MW-21 2/13/2001	MW-23 2/13/2001	MW-24R 2/15/2001	MW-25 2/14/2001	MW-27 2/13/2001	MW-28 2/14/2001
Acetone	0.0099	0.0023	0.05	0.70	ND	ND	ND	ND	ND	ND	ND	0.011J	ND	ND
Benzene	0.00027	0.000096	0.005	0.001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene Chloride)	0.00031	0.00061	0.0050	0.005	ND	ND	ND	0.0010J	ND	ND	ND	ND	ND	ND
Ethyl Benzene	0.00083	0.00011	0.0050	0.029	ND	0.0019J	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	0.00051	0.000065	0.0050	1.0	ND	ND	ND	ND	ND	ND	ND	ND	0.0021J	ND
Total Xylenes	0.0019	0.000050	0.010	0.53	ND	0.00092J	ND	ND	ND	ND	ND	ND	ND	ND

Parameters Purgeable Organics (mg/L)	2001 MDL	2003 MDL	PQL	PRG	MW-29 2/15/2001	MW-30 2/13/2001	MW-31 2/13/2001	MW-34 2/15/2001	MW-37* 2/14/2001	MW-37-Dup 2/14/2001	MW-40 2/14/2001	MW-48 5/21/2003	MW-49 5/21/2003	MW-50 5/21/2003
Acetone	0.0099	0.0023	0.05	0.70	ND	ND	ND	ND	ND	ND	0.014J	ND	0.0045J	0.0082J
Benzene	0.00027	0.000096	0.005	0.001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene Chloride)	0.00031	0.00061	0.0050	0.005	ND	0.00059J	0.00059J	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	0.00083	0.00011	0.0050	0.029	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00013J
Toluene	0.00051	0.000065	0.0050	1.0	ND	ND	ND	ND	ND	ND	ND	ND	0.00015J	0.00018J
Total Xylenes	0.0019	0.000050	0.010	0.53	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
J Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard or if no standard then is the lower of the MCL, MCLG, or Region IX Tap water PRG.
** USEPA Region IX PRG tap water concentration adjusted for non-carcinogenicity.
Exceeds PRG

TABLE 6-3. PRELIMINARY REMEDIATION GOALS FOR DETECTED SHALLOW GROUNDWATER CONSTITUENTS - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters Inorganics (mg/L)	BKGD	2001 MDL	2003 MDL	PQL	PRG	MW-6 2/13/2001	MW-7 2/13/2001	MW-8 2/13/2001	MW-8-Dup 2/13/2001	MW-9 2/13/2001	MW-10 2/13/2001	MW-12 2/15/2001	MW-13 2/14/2001	MW-15 2/15/2001	MW-16 2/14/2001
Arsenic (Total)	ND	0.0032	0.0050	0.010	0.010	ND	ND	ND	ND	**0.025**	**0.045**	0.0088B	0.0040B	**0.33**	ND
Arsenic (Dissolved)	-	0.0032		0.010	0.010	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	0.011	0.0017	0.0011	0.010	0.050	ND	0.0035B	0.0075B	0.0049B	0.0024B	0.0026B	ND	0.013	0.0067B	0.0030B
Chromium (Dissolved)	-	0.0017		0.0067	0.050	-	-	-	-	-	-	-	-	-	-
Copper (Total)	0.0033B	0.00090	0.0027	0.020	1.0	0.0018B	ND	0.0031B	0.0031B	0.0012B	0.0098B	0.0026B	0.0032	0.0098B	0.0026B

Parameters Inorganics (mg/L)	BKGD	2001 MDL	2003 MDL	PQL	PRG	MW-17 2/14/2001	MW-18 2/14/2001	MW-19 2/15/2001	MW-20 2/13/2001	MW-21 2/13/2001	MW-23 2/13/2001	MW-24R 2/15/2001	MW-25 2/14/2001	MW-27 2/13/2001	MW-28 2/14/2001
Arsenic (Total)	ND	0.0032	0.0050	0.010	0.010	0.0058B	**0.032**	0.0034B	ND	ND	0.0055B	ND	ND	ND	0.0039B
Arsenic (Dissolved)	-	0.0032		0.010	0.010	-	ND	-	-	-	-	-	-	-	ND
Chromium (Total)	0.011	0.0017	0.0011	0.010	0.050	ND	**6.7**	0.0051B	0.0026B	ND	0.0047B	ND	0.0072B	0.0031B	0.0035B
Chromium (Dissolved)	-	0.0017		0.0067	0.050	-	0.010	-	-	-	-	-	-	-	ND
Copper (Total)	0.0033B	0.00090	0.0027	0.020	1.0	0.0080B	0.16	0.0031B	0.092	ND	0.0027B	0.0017B	0.0040B	0.0016B	0.0073B

Parameters Inorganics (mg/L)	BKGD	2001 MDL	2003 MDL	PQL	PRG	MW-29 2/15/2001	MW-30 2/13/2001	MW-31 2/13/2001	MW-34 2/15/2001	MW-37* 2/14/2001	MW-37-Dup 2/14/2001	MW-40 2/14/2001	MW-48 5/21/2003	MW-49 5/21/2003	MW-50 5/21/2003
Arsenic (Total)	ND	0.0032	0.0050	0.010	0.010	0.0061B	ND	ND	ND	ND	ND	**0.12**	ND	ND	0.0062B
Arsenic (Dissolved)	-	0.0032		0.010	0.010	-	-	-	-	-	-	**0.085**	-	-	-
Chromium (Total)	0.011	0.0017	0.0011	0.010	0.050	0.029	0.0082B	0.0020B	0.0023B	0.011	0.011	ND	0.0098B	0.0040B	0.012
Chromium (Dissolved)	-	0.0017		0.0067	0.050	-	-	-	-	-	-	ND	-	-	-
Copper (Total)	0.0033B	0.00090	0.0027	0.020	1.0	0.0045B	0.0014B	ND	0.0033B	0.0033B	0.0014B	0.0016B	0.0031B	0.013B	0.0046B

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
B Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard or if no standard then is the lower of the MCL, MCLG, or Region IX Tap water PRG.
** USEPA Region IX PRG tap water concentration adjusted for non-carcinogenicity.
Exceeds PRG

TABLE 6-5. PRELIMINARY REMEDIATION GOALS FOR DETECTED INTERMEDIATE GROUNDWATER CONSTITUENTS - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters (mg/L) Extractable Organics	2001 MDL	2003 MDL	PQL	PRG	MW-8A 2/13/2001	MW-11A 2/15/2001	MW-14A 2/15/2001	MW-19A 2/15/2001	MW-20A 2/13/2001	MW-22A 2/14/2001	MW-24A 2/15/2001	MW-28A 5/21/2003	MW-29A 2/15/2001	MW-32 2/13/2001
2-Methylnaphthalene	0.00033	0.0021	0.010	0.014	ND	**0.040**	**0.024**	ND	ND	ND	0.00047J	ND	ND	ND
Acenaphthene	0.00025	0.001	0.010	0.080	ND	0.039	0.027	0.0013J	ND	0.0012J	0.00074J	0.017	**0.12**	ND
Anthracene	0.00033	0.00050	0.010	2.10	ND	0.0022J	0.0012J	ND	ND	ND	ND	ND	0.0020J	ND
Benz(a)anthracene	0.00030	0.00080	0.010	0.0000479	ND	**0.00083J**	ND	ND	ND	**0.0020J**	ND	ND	**0.00083J**	ND
Benzo(a)Pyrene	0.00041	0.00059	0.010	0.00000479	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)Perylene	0.00068	0.00062	0.010	0.210	ND	ND	ND	ND	ND	ND	ND	ND	0.0014J	ND
Benzo(k)Fluoranthene	0.00072	0.0012	0.010	0.000479	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-Ethylhexyl)Phthalate	0.00048	0.0024	0.010	0.003	ND	ND	ND	ND	ND	ND	ND	ND	0.00064J	ND
Carbazole	0.00054	0.00054	0.010	0.0034**	ND	0.00095J	**0.012**	ND	ND	ND	ND	ND	**0.0072J**	ND
Chrysene	0.00044	0.00078	0.010	0.00479	ND	0.00097J	ND	ND	ND	0.0047J	ND	ND	0.00094J	ND
Dibenzo(a,h)Anthracene	0.00080	0.00064	0.010	0.0000047	ND	ND	ND	ND	ND	ND	ND	ND	**0.0012J**	ND
Dibenzofuran	0.00029	0.001	0.010	0.028	ND	0.020	0.017	ND	ND	ND	0.00073J	ND	**0.048**	ND
Di-n-Butyl-Phthalate	0.00026	0.001	0.010	0.70	ND	ND	ND	ND	ND	0.00080J	ND	ND	ND	ND
Fluoranthene	0.00033	0.00061	0.010	0.280	ND	0.0021J	0.0014J	ND	ND	ND	0.00050J	0.0027J	0.0016J	ND
Fluorene	0.00038	0.001	0.010	0.280	ND	0.020	0.015	ND	ND	ND	ND	0.0010J	0.056	ND
Indeno(1,2,3-Cd)Pyrene	0.00056	0.00085	0.010	0.0000479	ND	ND	ND	ND	ND	ND	ND	ND	**0.0010J**	ND
Naphthalene	0.00036	0.001	0.010	0.021	ND	**0.036**	**0.057**	ND	ND	0.00084J	ND	ND	ND	ND
Phenanthrene	0.00033	0.001	0.010	0.21	ND	0.014	0.014	0.00080J	ND	ND	0.0024J	ND	0.0015J	ND
Pyrene	0.00053	0.001	0.010	0.210	ND	0.0010J	0.00076J	ND	ND	ND	ND	ND	0.00087J	ND

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
J Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard. If no standard then is lower of the MCL, MCLG, or Region IX Tap water PRG.
** Region IX PRG tap water concentration adjusted for non-carcinogenicity.
Exceeds PRG

TABLE 6-5. PRELIMINARY REMEDIATION GOALS FOR DETECTED INTERMEDIATE GROUNDWATER CONSTITUENTS - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters (mg/L) Extractable Organics	2001 MDL	2003 MDL	PQL	PRG	MW-35 2/15/2001	MW-38* 5/21/2003	MW-41 5/21/2003	MW-46A 5/21/2003	MW-47A 5/21/2003	MW-47A-DUP 5/21/2003	MW-48A 5/21/2003	MW-49A 5/21/2003	MW-50A 5/21/2003
2-Methylnaphthalene	0.00033	0.0021	0.010	0.014	ND	ND	ND	ND	**0.12**	**0.13**	ND	ND	ND
Acenaphthene	0.00025	0.001	0.010	0.080	0.050	ND	ND	ND	**0.32**	**0.33**	ND	ND	ND
Anthracene	0.00033	0.00050	0.010	2.10	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benz(a)anthracene	0.00030	0.00080	0.010	0.0000479	**0.00090J**	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	0.00041	0.00059	0.010	0.00000479	ND	ND	ND	**0.00089J**	**0.0018J**	**0.0011J**	**0.00069J**	ND	ND
Benzo(g,h,i)Perylene	0.00068	0.00062	0.010	0.210	ND	ND	0.0010J	0.0013J	ND	ND	0.00077J	0.00061J	0.00071J
Benzo(k)Fluoranthene	0.00072	0.0012	0.010	0.000479	ND	ND	ND	ND	**0.0022J**	ND	ND	ND	ND
Bis(2-Ethylhexyl)Phthalate	0.00048	0.0024	0.010	0.003	ND	ND	0.0023J	ND	ND	ND	ND	ND	ND
Carbazole	0.00054	0.00054	0.010	0.0034**	ND	ND	ND	ND	**0.062**	**0.066**	ND	ND	ND
Chrysene	0.00044	0.00078	0.010	0.00479	0.00087J	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)Anthracene	0.00080	0.00064	0.010	0.0000047	ND	ND	**0.00091J**	**0.0012J**	ND	ND	**0.00061J**	ND	ND
Dibenzofuran	0.00029	0.001	0.010	0.028	0.0029J	ND	ND	ND	**0.11**	**0.12**	ND	ND	ND
Di-n-Butyl-Phthalate	0.00026	0.001	0.010	0.70	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	0.00033	0.00061	0.010	0.280	0.0046J	ND	ND	ND	0.0011J	ND	ND	ND	ND
Fluorene	0.00038	0.001	0.010	0.280	0.0025J	ND	ND	ND	0.12	0.13	ND	ND	ND
Indeno(1,2,3-Cd)Pyrene	0.00056	0.00085	0.010	0.0000479	ND	ND	**0.0012J**	**0.0012J**	ND	ND	ND	ND	ND
Naphthalene	0.00036	0.001	0.010	0.021	ND	ND	ND	ND	0.0039J	0.0035J	ND	ND	ND
Phenanthrene	0.00033	0.001	0.010	0.21	0.00097J	ND	ND	ND	0.055	0.060	ND	ND	ND
Pyrene	0.00053	0.001	0.010	0.210	0.0027J	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
J Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard. If no standard then is lower of the MCL, MCLG, or Region IX Tap water PRG.
** Region IX PRG tap water concentration adjusted for non-carcinogenicity.
Exceeds PRG

TABLE 6-6. PRELIMINARY REMEDIATION GOALS FOR DETECTED INTERMEDIATE GROUNDWATER CONSTITUENTS - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters (mg/L) Purgeable Organics	2001 MDL	2003 MDL	PQL	PRG	MW-8A 2/13/2001	MW-11A 2/15/2001	MW-14A 2/15/2001	MW-19A 2/15/2001	MW-20A 2/13/2001	MW-22A 2/14/2001	MW-24A 2/15/2001
Acetone	0.0099	0.0023	0.05	0.07	ND	ND	ND	ND	ND	ND	ND
Benzene	0.00027	0.000096	0.005	0.001	ND	ND	ND	0.00040J	ND	ND	ND
Chloroform (Trichloromethane)	0.0009	0.00012	0.0050	0.00019	ND	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene Chloride)	0.00031	0.00061	0.0050	0.005	ND	ND	ND	ND	0.00049J	ND	ND
Ethyl Benzene	0.00083	0.00011	0.0050	0.029	ND	ND	ND	ND	ND	ND	ND
Toluene	0.00051	0.000065	0.0050	1	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	0.0019	0.00005	0.010	0.530	ND	ND	ND	ND	ND	ND	ND

Parameters (mg/L) Purgeable Organics	2001 MDL	2003 MDL	PQL	PRG	MW-28A 2/14/2001	MW-29A 2/15/2001	MW-32 2/13/2001	MW-35 2/15/2001	MW-38* 2/14/2001	MW-41 2/14/2001
Acetone	0.0099	0.0023	0.05	0.07	ND	ND	ND	ND	0.011J	0.011J
Benzene	0.00027	0.000096	0.005	0.001	ND	ND	ND	0.00038J	ND	ND
Chloroform (Trichloromethane)	0.0009	0.00012	0.0050	0.00019	ND	ND	ND	ND	ND	ND
Dichloromethane (Methylene Chloride)	0.00031	0.00061	0.0050	0.005	ND	ND	0.00055J	ND	ND	ND
Ethyl Benzene	0.00083	0.00011	0.0050	0.029	ND	ND	ND	0.0036J	ND	ND
Toluene	0.00051	0.000065	0.0050	1	ND	ND	ND	ND	ND	ND
Total Xylenes	0.0019	0.00005	0.010	0.530	ND	ND	ND	ND	ND	ND

Parameters (mg/L) Purgeable Organics	2001 MDL	2003 MDL	PQL	PRG	MW-46A 5/21/2003	MW-47A 5/21/2003	MW-47A-DUP 5/21/2003	MW-48A 5/21/2003	MW-49A 5/21/2003	MW-50A 5/21/2003
Acetone	0.0099	0.0023	0.05	0.07	0.0079J	0.011J	0.0056J	0.0039J	0.0025J	0.0023J
Benzene	0.00027	0.000096	0.005	0.001	ND	**0.0034J**	**0.0034J**	ND	ND	ND
Chloroform (Trichloromethane)	0.0009	0.00012	0.0050	0.00019	ND	**0.0037J**	**0.0034J**	**0.00045J**	ND	0.00013J
Dichloromethane (Methylene Chloride)	0.00031	0.00061	0.0050	0.005	ND	ND	ND	ND	ND	ND
Ethyl Benzene	0.00083	0.00011	0.0050	0.029	0.00050J	0.012	0.011	0.00018J	ND	ND
Toluene	0.00051	0.000065	0.0050	1	0.00025J	0.0017J	0.0017J	0.00018J	0.000086J	0.000084J
Total Xylenes	0.0019	0.00005	0.010	0.530	0.0013J	0.0086J	0.0082J	0.00070J	ND	ND

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
J Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard or if no standard then is the lower of the MCL, MCLG, or Region IX Tap water PRG.
** USEPA Region IX PRG tap water concentration adjusted for non-carcinogenicity.
Exceeds PRG

TABLE 6-7. PRELIMINARY REMEDIATION GOALS FOR DETECTED INTERMEDIATE GROUNDWATER CONSTITUENTS - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters (mg/L) Inorganics	BKGD	2001 MDL	2003 BDL	PQL	PRG	MW-8A 2/13/2001	MW-11A 2/15/2001	MW-14A 2/15/2001	MW-19A 2/15/2001	MW-20A 2/13/2001	MW-22A 2/14/2001	MW-24A 2/15/2001
Arsenic (Total)	ND	0.0032	0.0050	0.010	0.010	ND	0.0036B	ND	ND	ND	ND	ND
Chromium (Total)	0.0039B	0.0017	0.0011	0.010	0.050	ND	ND	ND	ND	ND	0.0026B	ND
Copper (Total)	ND	0.00090	0.0027	0.020	1.0	ND	0.0030B	0.0025B	0.0017B	0.0094B	0.0023B	0.0019B

Parameters (mg/L) Inorganics	BKGD	2001 MDL	2003 BDL	PQL	PRG	MW-28A 2/14/2001	MW-29A 2/15/2001	MW-32 2/13/2001	MW-35 2/15/2001	MW-38* 2/14/2001	MW-41 2/14/2001
Arsenic (Total)	ND	0.0032	0.0050	0.010	0.010	ND	ND	ND	ND	ND	ND
Chromium (Total)	0.0039B	0.0017	0.0011	0.010	0.050	ND	ND	ND	0.0029B	0.0039B	0.0055B
Copper (Total)	ND	0.00090	0.0027	0.020	1.0	ND	0.0035B	0.0020B	0.0051B	ND	0.0035B

Parameters (mg/L) Inorganics	BKGD	2001 MDL	2003 BDL	PQL	PRG	MW-46A 5/21/2003	MW-47A 5/21/2003	MW-47A-DUP 5/21/2003	MW-48A 5/21/2003	MW-49A 5/21/2003	MW-50A 5/21/2003
Arsenic (Total)	ND	0.0032	0.0050	0.010	0.010	ND	0.0077B	0.0073B	ND	ND	ND
Chromium (Total)	0.0039B	0.0017	0.0011	0.010	0.050	0.0016B	0.0039B	0.0035B	0.0013B	0.0021B	0.0037B
Copper (Total)	ND	0.00090	0.0027	0.020	1.0	0.0032B	0.0068B	0.0052B	ND	ND	ND

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
B Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard or if no standard then is the lower of the MCL, MCLG, or Region IX Tap water PRG
** USEPA Region IX PRG tap water concentration adjusted for non-carcinogenicity.
Exceeds PRG

TABLE 6-8. PRELIMINARY REMEDIATION GOALS FOR DETECTED DEEP GROUNDWATER CONSTITUENTS - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters (mg/L) Extractable Organics	2001 MDL	2003 MDL	PQL	PRG	AW-01 1/7/1985	MW-22B 5/21/2003	MW-24B 5/21/2003	MW-33 2/13/2001	MW-36 2/15/2001	MW-36-Dup 2/15/2001	MW-39* 5/21/2003	MW-42 5/21/2003	MW-46B 5/21/2003	MW-47B 5/21/2003	MW-48B 5/21/2003
2 - Methylnaphthalene	0.00033	0.0021	0.010	0.014	ND	ND	ND	ND	**0.77**	**0.97**	ND	ND	ND	ND	ND
Acenaphthene	0.00033	0.001	0.010	0.080	ND	ND	ND	0.052	**0.48**	**0.54**	ND	ND	0.0028J	ND	ND
Anthracene	0.00033	0.00050	0.010	2.10	ND	ND	ND	ND	0.022J	ND	ND	ND	ND	ND	ND
Benz(a)anthracene	0.00030	0.00080	0.010	0.0000479	ND	ND	ND	ND	**0.0031J**	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	0.00041	0.00059	0.010	4.79E-06	ND	**0.0011J**	**0.0015J**	ND	ND	ND	**0.0022J**	ND	**0.00078J**	ND	**0.00080J**
Benzo(b)Fluoranthene	0.00028	0.002	0.010	0.0000479	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	0.00068	0.00062	0.010	0.000479	-	**0.0006J**	**0.0020J**	ND	ND	ND	**0.0014J**	**0.00064J**	**0.0014J**	ND	**0.00095J**
Benzo(k)Fluoranthene	0.00072	0.0012	0.010	0.210	-	0.0023J	0.0019J	ND	ND	ND	0.0020J	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	0.00048	0.0024	0.010	0.003	ND	ND	**0.0058J**	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	0.00054	0.00054	0.010	0.0034**	-	ND	ND	ND	**0.20**	**0.20J**	ND	ND	ND	ND	ND
Chrysene	0.00044	0.00078	0.010	0.00479	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	0.00064	0.00064	0.010	0.0000047	ND	ND	**0.0019J**	ND	ND	ND	**0.0013J**	**0.00062J**	**0.0010J**	ND	**0.00074J**
Dibenzofuran	0.00029	0.001	0.010	0.028	ND	ND	ND	ND	**0.33**	**0.37**	ND	ND	0.0010J	ND	ND
Di-n-Butyl Phthalate	0.00026	0.001	0.010	0.70	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	0.00033	0.00061	0.010	0.28	ND	ND	ND	ND	0.023J	0.019J	ND	ND	ND	ND	ND
Fluorene	0.00038	0.001	0.010	0.28	ND	ND	ND	ND	**0.29**	**0.30**	ND	ND	0.0025J	ND	ND
Indeno(1,2,3-cd)pyrene	0.00056	0.00085	0.010	0.0000479	ND	ND	**0.0022J**	ND	ND	ND	**0.0017J**	ND	**0.0010J**	ND	**0.00089J**
Naphthalene	0.00036	0.001	0.010	0.021	ND	ND	ND	ND	**2.6**	**4.4**	ND	ND	ND	ND	ND
Phenanthrene	0.00033	0.001	0.010	0.21	ND	ND	ND	ND	**0.25**	**0.28**	ND	ND	0.0062J	ND	ND
Pyrene	0.00053	0.001	0.010	0.210	ND	ND	ND	ND	0.011J	ND	ND	ND	ND	ND	ND

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
J Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard or if no standard then is the lower of the MCL, MCLG, or Region IX Tap water PRG.
** USEPA Region IX PRG tap water concentration adjusted for non-carcinogenicity.
AW-01 is an Artesian Well located in Greenfield Park. Well depth unknown, but bedrock (sandy limestone) is the only artesian aquifer present.
Exceeds PRG

TABLE 6-9. PRELIMINARY REMEDIATION GOALS FOR DETECTED DEEP GROUNDWATER CONSTITUENTS - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters (mg/L) Purgeable Organics	2001 MDL	2003 MDL	PQL	PRG	MW-22B 5/21/2003	MW-24B 5/21/2003	MW-33 2/13/2001	MW-36 2/15/2001	MW-36-Dup 2/15/2001	MW-39* 2/14/2001	MW-42 2/14/2001	MW-46B 5/21/2003	MW-47B 5/21/2003	MW-48B 5/21/2003
2-Butanone (MEK)	0.011	0.00048	0.025	0.17	ND	ND	ND	ND	ND	ND	ND	ND	0.00064J	ND
Acetone	0.0099	0.0023	0.050	0.070	**0.26**	0.011J	ND	ND	ND	0.011J	0.010J	**0.17**	0.0039J	0.0042J
Benzene	0.00027	0.000096	0.0050	0.001	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0011J
Bromodichloromethane	0.00035	0.00018	0.0050	0.00041	**0.00060J**	ND	ND	ND	ND	ND	ND	ND	ND	**0.0022J**
Chloroform	0.00090	0.00012	0.0050	0.00019	**0.00092J**	0.00017J	ND	ND	ND	ND	ND	**0.0014J**	**0.0013J**	**0.0093**
Dichloromethane (Methylene Chloride)	0.00031	0.00061	0.0050	0.005	ND	ND	0.00052J	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	0.00083	0.00011	0.0050	0.029	ND	ND	ND	ND	ND	ND	ND	0.00020J	0.0013J	0.0017J
Toluene	0.00051	0.000065	0.0050	1.0	0.00026J	0.000096J	ND	ND	ND	ND	ND	0.00025J	0.0018J	ND
Total Xylenes	0.0019	0.000050	0.010	0.530	ND	ND	0.0027J	ND	ND	ND	ND	0.00060J	ND	ND

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
J Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard or if no standard then is the lower of the MCL, MCLG, or Region IX Tap water PRG.
** USEPA Region IX PRG tap water concentration adjusted for non-carcinogenicity.
Exceeds PRG

TABLE 6-10. PRELIMINARY REMEDIATION GOALS FOR DETECTED DEEP GROUNDWATER CONSTITUENTS - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters (mg/L) Inorganics	BKGD	2001 MDL	2003 MDL	PQL	PRG	MW-22B 5/21/2003	MW-24B 5/21/2003	MW-33 2/13/2001	MW-36 2/15/2001	MW-36-Dup 2/15/2001	MW-39* 2/14/2001	MW-42 2/14/2001	MW-46B 5/21/2003	MW-47B 5/21/2003	MW-48B 5/21/2003
Chromium (Total)	0.0022B	0.0017	0.0011	0.010	0.050	0.0012B	ND	ND	0.0019B	ND	0.0022B	0.0022B	0.0015B	0.0022B	ND
Copper (Total)	0.0071B	0.00090	0.0027	0.020	1.0	0.012B	0.0042B	ND	0.0051B	0.0055B	0.0071B	0.0024B	0.0067B	0.0055B	0.0065B

Notes:
Units are mg/L (ppm). Most recent analytical data for each well is presented.
* Background Location
\- Constituent Not Analyzed
B Estimated Value. Occurs when the analytical result is between the MDL and the PQL.
N Presumptive Evidence for Presence of Material.
ND Not Detected. Constituent if present is below the MDL.
PQL Practical Quantitation Limit. If the PQL is greater than the NCAC 2L Standard, then the PQL becomes the standard (PRG).
MDL Method Detection Limit
PRG Preliminary Remediation Goal. The 15A NCAC 2L standard or if no standard then is the lower of the MCL, MCLG, or Region IX Tap water PRG.
** USEPA Region IX PRG tap water concentration adjusted for non-carcinogenicity.
Exceeds PRG

APPENDIX C
WASTE GENERATION RECORD

WASTE GENERATION/TEMPORARY STORAGE RECORD

LOCATION SWP - Wilmington Log # _____

1. Accumulation Start Date	01-16-2012

2. Description of Waste (Waste Type)	Min %	Max %
Nitrile gloves		
1/8" tubing plastic		
plastic tubing		
glass Containers		

3. Are there free liquids in the container(s)? NO	

4. Method of Waste Generation (Source) Well Sampling & Purging
Personal Protection Equipment
Purge 1/8" tubing
plastic ground Sheeting

5. Container Type/Size DOT 17H 55 Gal. Steel drum		

6. Number of Containers 1	

7. Empty space remaining in container(3/4, 1/2, 1/4, None) 1/4	

8. If additional waste is added to the container, describe the date of addition, waste type, and waste source (Modify items 2, 3, and 7 if necessary)
1-17, 1-18, 1-19, & 1-20, Same as # 2 + #4

Weekly Container Inspection Record															
Name	DKR														
Date	1-20-12														
Time	1500														
Leaks	None														
Cover	Yes														
Label	Yes														

Date/Description of any corrective action to container(s).

Date of Shipment	

This form should be updated each day a hazardous waste is generated and placed in the container. Send the form to SWP's Manager of Environmental Compliance on the accumulation start date, at the end of each month, and when the container is shipped.

Sample Grabbed		Log Number		Analysis Results Returned	